

# 2017-2018

## ACADEMIC CATALOG



**Illinois Community College District No.518**  
**[www.sandburg.edu](http://www.sandburg.edu)**

**Main Campus**

2400 Tom L. Wilson Blvd.  
Galesburg, IL 61401  
309.344.2518

**Branch Campus**

305 Sandburg Dr.  
Carthage, IL 62321  
217.357.2129

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# ABOUT SANDBURG

## Illinois Community College District No. 518

www.sandburg.edu

### Main Campus

2400 Tom L. Wilson Blvd.  
Galesburg, IL 61401  
Phone 309.344.2518  
877.236.1862  
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### Branch Campus

305 Sandburg Dr.  
Carthage, IL 62321  
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Published by Carl Sandburg College  
Galesburg, IL 61401

### Approved By

Illinois Board of Higher Education; Illinois Community College Board; Illinois Department of Adult, Vocational, and Technical Education; Illinois Department of Financial and Professional Regulation; Illinois State Scholarship Commission; United States Department of Education.

### Accredited By

North Central Association of Colleges and Schools  
Commission on Institutions of Higher Education  
Phone 312.263.0456  
<http://www.ncahlc.org/>

### Membership and Recognition

Carl Sandburg College is a member of: Alliance Library System; American Association of Collegiate Registrars and Admissions Officers; American Association of Community and Junior Colleges; American Board of Funeral Service Education; American Library Association; American Technical Education Association; Arrowhead Athletic Conference; Association of College and Research Libraries; Association of Community College Trustees; Central Illinois Association for Developmental Education; Consortium of Academic and Research Libraries in Illinois; Council for Opportunity in Education; Council of North Central Junior Colleges; Heart of Illinois Library Consortium; Illinois Association of Beauty Culture Schools; Illinois Association of College Admissions Counselors; Illinois Association of Collegiate Registrars and Admissions Officers; Illinois Committee on Black Concerns in Higher Education; Illinois Community College Admissions and Records Officers Organization; Illinois Community College Faculty Association; College Placement Council; Illinois Community College Student Activities Association; Illinois Community College Trustees Association; Illinois Consortium of International Studies and Programs; Illinois Library Association; Illinois Mathematics Association of Community Colleges; Illinois Online Community Colleges; Illinois Online Network; Illinois State Historical Society; Illinois Virtual Campus; National Association for Developmental Education; National Association of Foreign Student Advisors; National Association of Public Schools of Adult Education; National Junior College Athletic Association; National League for

Nursing; National League for Nursing Accrediting Commission; Northern Illinois Learning Resources Cooperative; National Association of Student Financial Aid Administrators; Online Computer Library Center.

### Student Responsibility

All students are expected to familiarize themselves with the provisions of this Catalog. Enrollment at Carl Sandburg College implies an understanding and acceptance by the student of an obligation to abide by the academic, administrative and social regulations of the College. Failure to read and comply with college regulations does not exempt a student from such responsibility. Keep this catalog as a reference for graduation requirements in Associate Degree Programs and Certificates.

Any student who wishes to examine the policies of the College should see the Vice President of Student Services.

### Nondiscrimination Statement

Carl Sandburg College, an equal opportunity/affirmative action employer and educator, complies with all applicable federal, state and/or local laws prohibiting discrimination. It is the policy of the College that no person shall be discriminated against in employment, educational programs and activities, or in admissions on the basis of race, color, religious affiliation, gender (sex), sexual orientation, gender identity or expression, national orientation, ancestry, genetic information, disability, age, arrest record status, marital or family status, citizenship status (*with regard to employment*), military status, unfavorable military discharge, sexual harassment, order of protection status and status in any group protected by applicable federal, state and/or local laws.

The College reserves the right to change, without notice, any information in this catalog.

This catalog is for information purposes and does not constitute a contract.

## President's Message

As we celebrate Carl Sandburg College's 50th anniversary, I continue to be amazed at how we have grown.

Our first classes were held in various locations in downtown Galesburg. It was not long before we moved to our Main Campus along Lake Storey Road, with the initial courses taking place in temporary buildings, which served as our first classrooms. In the 1970s, our district roughly tripled in size to 3,000 square miles, making a college education more accessible to the people of west-central Illinois than ever before. Around the same time, 120,000 square feet of permanent buildings were erected, effectively creating our Main Campus. We quickly transformed from a few trailers in a field to the beautiful, inviting college campus we have today. Along the way, we also expanded our offerings with the Branch Campus in Carthage, to the Center for Manufacturing Excellence on the Main Campus and to the Annex in downtown Galesburg, which provides a dedicated home for some of our career and health education programs.

Nearly 20,000 students have graduated from the College since we opened our doors. I often tell people that no matter where they go in our communities — whether it be to a hospital, a doctor's office, a dentist office, an auto repair facility or one of the many businesses downtown — there's a good chance that at least one person they encounter took classes at Sandburg. The scope of our alumni network stretches far and wide, well beyond the borders of our district, and it continues to grow each year.

And throughout these 50 years, one central focus has been at the forefront of every decision we made – the students we serve. Just a couple of years ago, our Board of Trustees made our mission statement even more succinct: “to provide all students with opportunities for success.” We see evidence every day of how we carry out that mission. Classes going textbook-free to help students save money. Classes that afford students the option of attending in person or studying online. New skilled labor programs that include the opportunity for a paid internship. A student who uses a robot to be next to her classmates via Skype.

Take a moment to think about the strides education has made and how much Sandburg has changed in 50 years. We have gone from holding some of our first classes in the basement of local churches to having students 75 miles away from the classroom using a robot to interact with their peers. Education is an ever-changing environment, and we’re making every effort to move in step with it. It has been a remarkable 50 years for Carl Sandburg College. I cannot wait to see what is in store for the next 50!

Dr. Lori L. Sundberg, President  
Carl Sandburg College

## Board of Trustees

**Chairperson Sandra L. Wood**, Galesburg

**Vice Chairperson Lee E. Johnson**, Galesburg

**Secretary Thomas H. Colclasure**, Galesburg

**Gayla J. Pacheco**, Galesburg

**William C. Robinson**, Galesburg

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**Dave Kellogg**, Faculty Representative

**Cindy Arthur**, Staff Representative

**Lisa Zucco**, Secretary to the Board of Trustees

**Lisa Blake**, Board Treasurer/Chief Financial Officer

**Doug Mustain**, Attorney

## History

Carl Sandburg College is named for Pulitzer Prize-winning poet and Lincoln biographer Carl Sandburg, who was born and raised in Galesburg. The son of Swedish immigrant parents, Sandburg was born Jan. 6, 1878, in a small cottage near the rail yards where his father worked. The cottage, on Galesburg’s south side, is preserved today as an Illinois historical site.

Sandburg published numerous volumes, including “Chicago Poems”; “Cornhuskers”; “Rootabaga Stories”; “The People, Yes”; “Abraham Lincoln: The Prairie Years and The War Years”; and “Always the Young Strangers.” He received two Pulitzer Prizes – in history, for his “Abraham Lincoln: The War Years” (1939), and in poetry, for his “Collected Poems” (1951). The central theme throughout Sandburg’s works is his belief in the essential

goodness and drive of the common man and woman. His writing is full of optimism for the future of the human race.

Carl Sandburg and his mentor, Professor Philip Green Wright of Lombard College, also located in Galesburg, envisioned the establishment of “a People’s Industrial College, where people of all ages would be taught, in addition to literature, philosophy, sociology, science, music, and art, something about industry and farming, such as agriculture, horticulture, bee culture, cabinet-making, metalworking, pottery, architecture, printing and publishing, and bookbinding.” (From Margaret Sandburg’s unpublished manuscript *Biography of Carl Sandburg*.) The two men felt that this “People’s College” should be located by a river or on a lake.

Though Sandburg died in 1967, the College’s ties with its namesake remain strong. In 1979, the late Helga Sandburg, Carl’s youngest daughter, was awarded the College’s first honorary associate degree. She returned to the campus in 1987, 1994 and in 2006 as the commencement speaker at graduation exercises. Additionally, Helga was a guest of honor at the annual community celebration, the Sandburg Days Festival, from its inception in 1996 to 2005. Both Helga and Penelope Niven, who was Sandburg’s biographer, helped to formulate and develop the annual festival. Sadly, both Helga and Penelope passed away in 2014, leaving the College without two of the people most closely associated with its namesake.

The referendum creating what is now Carl Sandburg College was passed by the voters of Knox and Warren counties on Sept. 24, 1966. The first classes were held the same day the following year, Sept. 24, 1967, in a variety of facilities in downtown Galesburg. Since then the College has expanded considerably, both in the scope of course offerings and in territory, in an effort to meet the educational needs of the residents of west-central Illinois.

In 1969, the College occupied the site on South Lake Storey Road in Galesburg on which the permanent Main Campus would be constructed. The permanent facilities were opened in 1976. In the meantime, the College annexed 16 additional high school districts in 1974, which eventually resulted in the establishment of additional facilities to ensure the delivery of services for all residents of what is officially Illinois Community College District 518.

What is now the Branch Campus in Carthage offered its first classes in the winter of 1974. The Main Campus has also undergone major recent renovations to keep Carl Sandburg College on the cutting edge of the technological revolution. In 2015, the College for the third straight year was named national champion in the small colleges category of the Digital Community Colleges Survey by e.Republic’s Center for Digital Education, continuing its reputation as one of the leading community colleges in the country for technology.

The College continues to serve its 3,000-square-mile district and fulfill its mission and vision and remain true to its core values for excellence, collaboration, integrity and respect.

## District Map

# ACADEMIC CALENDAR

Academic calendar dates may change.

Please check online at [www.sandburg.edu](http://www.sandburg.edu).

## Fall Semester 2017

Event	Date
Registration Begins	Monday, April 3
Fall Tuition Due	Tuesday, August 8
Registration Ends	Sunday, August 20 (midnight online)
CLASSES BEGIN	Monday, August 21
LABOR DAY – NO CLASSES – OFFICES CLOSED	Monday, September 4
Midterm for Fall	Thursday, October 12
FALL BREAK – NO CLASSES	Friday, October 13
THANKSGIVING VACATION – NO CLASSES – OFFICES CLOSED	Thursday-Friday, November 23 & 24
Last Day to Withdraw	Tuesday, November 21
EMERGENCY DAY/NO CLASSES UNLESS NECESSARY	Friday, December 8
FINAL EXAMS	Monday-Thursday, December 11,12,13,14
Offices Closed	Saturday, December 23-Monday, January 1

## Spring Semester 2018

Event	Date
Registration Begins	Monday, November 6
Spring Tuition Due	Tuesday, December 12
Registration Ends	Monday, January 15 (midnight online)
CLASSES BEGIN	Tuesday, January 16
MARTIN LUTHER KING JR.'S BIRTHDAY – NO CLASSES – OFFICES CLOSED	Monday, January 15
Midterm for Spring	Thursday, March 8
SPRING BREAK – NO CLASSES	Friday - Sunday, March 9-18
NO CLASSES – OFFICES CLOSED	Friday, March 30
Registration for Fall Begins	Monday, April 2
Last Day to Withdraw	Tuesday, April 24
EMERGENCY DAY/NO CLASSES UNLESS NECESSARY	Thursday, May 10
FINAL EXAMS	Friday, Monday, Tuesday, Wednesday, 11,14,15,16
GRADUATION	Thursday, May 17

## 3 Week Summer Session 2018

Event	Date
Registration Begins	Monday, November 6
Pre-Summer Tuition Due	Monday, May 8
Registration Ends	Sunday, May 20 (midnight online)
CLASSES BEGIN	Monday, May 21

MEMORIAL DAY – NO CLASSES – OFFICES CLOSED Monday, May 28

Midterm for Summer 3 Week Session	Wednesday, May 30
Last Day to Withdraw	Wednesday, June 6
Pre-Summer Session Ends	Friday, June 8

## 8 Week Summer Session 2018

Event	Date
Registration Begins	Monday, November 6
Summer Tuition Due	Tuesday, May 8
Registration Ends	Sunday, June 10 (midnight online)
CLASSES BEGIN	Monday, June 11
Midterm for 8 Week Summer Session	Friday, July 6
JULY 4 BREAK – NO CLASSES – OFFICES CLOSED	Wednesday, July 4
Last Day to Withdraw	Wednesday, July 25
Summer Session Ends	Friday, August 3

## 11 Week Summer Session 2018

Event	Date
Registration Begins	Monday, November 6, 2017
Registration Ends	Sunday, May 20 (midnight online)
Classes Begin	Monday, May 21
Midterm for 11 Week Summer Session	Wednesday, June 20
July 4-No Classes/Offices Closed	Wednesday, July 4
Last Day to Withdraw from 11 Week Session	Wednesday, July 25
Summer 11 Week Session Ends	Friday, August 3
Grades Due to Admissions by 3 p.m.	Monday, August 6

# MISSION AND STATEMENTS

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## Mission Statement

The mission of Carl Sandburg College is to provide all students with opportunities for success.

## Vision Statement

Where dreams come to life, and lives come to change.

## Core Values

- Excellence
- Collaboration
- Integrity
- Respect

## Nondiscrimination Statement

Carl Sandburg College, an equal opportunity/affirmative action employer and educator, complies with all applicable federal, state and/or local laws prohibiting discrimination. It is the policy of the College that no person shall be discriminated against in employment, educational programs and activities, or in admissions on the basis of race, color, religious affiliation, gender (sex), sexual orientation, gender identity or expression, national orientation, ancestry, genetic information, disability, age, arrest record status, marital or family status, citizenship status (*with regard to employment*), military status, unfavorable military discharge, sexual harassment, order of protection status and status in any group protected by applicable federal, state and/or local laws.

# PRIORITIES & PURPOSES

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## Priorities & Goals

1. Student Access and Success
    - a. Create, market, and implement educational programs to meet the needs of our district.
    - b. Create opportunities for students to have access to higher education.
    - c. Prepare students for their educational goals (i.e. adult and developmental education, financial aid, counseling, employability skills).
    - d. Provide student support services to ensure student success.
    - e. Create opportunities for lifelong learning.
  2. Teaching and Learning
    - a. Ensure student learning and outcomes are achieved at all program levels (i.e. class, course, and program levels including general education outcomes).
    - b. Ensure and increase student retention and success.
    - c. Re-affirm a commitment which recognizes the need for diversity.
    - d. Create opportunities for all within the College community to interact with understanding, appreciation and respect for others.
    - e. Ensure quality of educational programs, learning environments and support services through continuous improvement.
  3. Community Alliances
    - a. Expand partnerships with four-year colleges and universities.
    - b. Work collaboratively with K-12 school districts.
    - c. Develop programs in cooperation with neighboring institutions.
    - d. Work with local industry and workforce partners to build relationships to strengthen the workforce.
  4. Operational Sustainability and Excellence
    - a. Embed the use of data into the culture for decision-making.
    - b. Develop and utilize an enrollment management plan to stabilize and guide the institution's enrollment.
    - c. Establish and maintain effective technology in academic programs and support functions.
    - d. Ensure the financial stability of the College.
    - e. Continue to lead the way in technology.
    - f. Maintain a competitive compensation program to enable the College to attract and retain a quality workforce.
    - g. Maintain and refresh all college facilities.
    - h. Commit to all feasible sustainability efforts.
    - i. Insure compliance with accrediting bodies and governmental agencies.
- upgrading of skills to meet current and emerging employment needs and trends;
3. Provide courses and programs designed to assist academically underprepared students to be successful in their next level of education;
  4. Provide activities designed to meet the lifelong educational needs and interests of individuals throughout the district;
  5. Provide services designed to meet the needs of the student population including recruitment, admissions, registration, assessment, counseling, tutoring, career planning, academic advisement, financial aid, job placement, co-curricular activities, and inter-collegiate athletics;
  6. Provide programs and services designed to meet the customized continuing education and technical assistance needs of individuals, businesses, industries, and community organizations;
  7. Serve as a center for cultural and intellectual development.

## Educational Purposes

In its efforts to be a premiere learning and teaching institution, Carl Sandburg College is dedicated to fulfilling the following major functions:

1. Provide associate degree-level education consisting of liberal arts, sciences, and pre-professional fields designed to prepare students for transfer to baccalaureate-granting institutions;
2. Provide business, technical, and professional education that offers associate degrees, certificates, courses, workshops, and seminars designed for career, entry-level employment, retraining, and/or



# GENERAL EDUCATION OUTCOMES

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## **Communication**

Demonstrate proficiency in speaking, writing, reading and listening.

## **Critical Thinking**

Demonstrate critical thinking skills and problem solving skills.

## **Cultural Diversity**

Demonstrate an awareness of human values and diverse cultures.

## **Information Technology**

Demonstrate understanding and skills to function in a technological society.

## **Quantitative Skills**

Demonstrate use of quantitative analytical skills and processes to interpret, evaluate and solve problems.



# ADMISSION & REGISTRATION

## Admissions Policy

Admission is open to all in-district residents of Community College District 518 who are high school graduates or the equivalent (GED), or non-graduates who are at least 18 years of age. Admission to the College does not ensure admission to a particular course or program of study.

Admission is also open to people in the following categories:

1. Out-of-district, out-of-state, and international residents.
2. Students whose connection with a secondary school is severed. Any student who is 16 or 17 years of age and has severed connection with a secondary school, as certified in writing by the chief executive officer of the secondary school in which the student has legal residence, is eligible to attend Carl Sandburg College.
3. Students currently enrolled in a secondary school program. Students currently enrolled in a secondary school program may be accepted into college course(s). If such courses are offered during the regular school day established by the secondary school or are offered for secondary school credit, prior approval of the chief executive officer of the secondary school must be received.
4. Admission of students in programs for special groups.
5. Students less than 16 years of age who have the approval of the chief executive officer of their school and/or the chief student services officer of Carl Sandburg College.

Should it be necessary to limit enrollment, priority will be given to residents of Carl Sandburg College District 518 or to residents of a community college district involved in a cooperative agreement with Carl Sandburg College. The College reserves the right to establish selective admission requirements for any or all programs. All programs and their respective admission requirements will be identified in the College catalog.

An eighth grade reading level as demonstrated by a standardized test approved by the college is required for admission to developmental and credit classes. This requirement does not apply to Corporate and Leisure classes.

Carl Sandburg College will not discriminate in the admission of students on the basis of the student's sex, color, race, religion, creed, ancestry, national origin, physical or mental disability, sexual orientation, sexual identity or other protected group status.

## Admission to AA/AS/AFA Programs (Baccalaureate Transfer)

Students enrolling in the Associate in Arts, Associate in Science, or Associate in Fine Arts degree programs (baccalaureate transfer) must have completed the following college preparatory courses as outlined in the Illinois Public Act 86-0954:

Subject	Years of Coursework	Explanatory Notes
English	4	Written & oral communications, literature
Mathematics	3	Minimum of one year of Algebra I, one year of geometry, & one year of Algebra II

Science	2	Laboratory science
Social Studies	2	History and/or government
Electives	2	Foreign language, music, art, or vocational education
Flexible Academic Units	2	Two additional courses from any one or two of the science, social studies, or electives categories in addition to approved courses in math & English such as advanced math, computer science, journalism, speech, & creative writing
<b>Total Academic Units</b>	<b>15</b>	

College preparatory course requirements for admission to the AA/AS/AFA degree programs as outlined above will be waived for students who have completed 32 semester hours of college coursework (100 level or above) with grades of "C" or better.

The Illinois Board of Education requires that students who wish to enter into a transfer program (AA/AS/AFA) must meet the requirements listed in the above chart (Illinois Public Act 86-0954). Carl Sandburg College is an open admissions community college, students will be admitted to the college without these courses. Students who enroll in certain programs will be required to meet prerequisites to enroll in some courses.

## Health Career Program Admissions

Admission to many of Carl Sandburg College's Health Career programs (Associate Degree Nursing, Practical Nursing, Radiologic Technology, Computed Tomography, Magnetic Resonance Imaging, Dental Hygiene, Mortuary Science, Medical Assisting, and Paramedic) is limited and, therefore, competitive. Selection is based on candidates' overall academic performance. The most qualified applicants who are residents of the Carl Sandburg College District or of community college districts involved in a cooperative agreement with Carl Sandburg College will be given preference for admission to these programs. Students who have not fulfilled these requirements when they initially enroll at Carl Sandburg College will be admitted on a provisional basis to the Associate in Arts, Associate in Science, or Associate in Fine Arts degree programs. Carl Sandburg College will incorporate in those students' curriculum courses to compensate for course deficiencies.

## International Admissions

International students are welcome at Carl Sandburg College. The College is authorized under federal law to enroll students who require an F-1 VISA. Prospective international students should contact the director of admissions and records (309.341.5234) to discuss their eligibility for admission.

Each student is encouraged to consult with a professional counselor at Carl Sandburg College in the selection of a program consistent with the student's interests and abilities.

## International Student Admission Steps

New full-time international students need to obtain a Form I-20 to receive a student visa through the U.S. Consul or Embassy in their country. The I-20 indicates that all admission requirements have been met to enter the College. This document is issued through SEVIS, the Student Exchange Visitor Information System. The U.S. Consulates make the final decision regarding whether students will be allowed to enter the United States to study.

All international students must report to Carl Sandburg College on or before the date stated on the Form I-20. Late-arriving students will not be able to register for class.

International students requesting admission and issuance of a Form I-20 must provide:

- A completed Carl Sandburg College Application for Admission. (<http://www.sandburg.edu/Admissions/International-Student-Admissions/International-Application.html>)
- A Financial Resource Statement verifying the ability of the student or the student's sponsor to meet all educational and living expenses for one year while attending Carl Sandburg College. This must be signed and sealed by a notary public and accompanied by a letter or bank statement dated within six months of the application. Financial support of approximately \$21,000 (USD) is needed per year.
- An official transcript that provides evidence of graduation from a secondary school and transcripts from all postsecondary institutions attended. Photocopies may be accepted if they are properly notarized as true copies. Transcripts must be translated into English.
- Official evidence of English proficiency. All full-time and part-time students whose native language is NOT English are required to: take TOEFL (Test of English as a Foreign Language) and earn a score of 68 on the Internet-based exam, or 190 on the Computer-based exam or 520 on the Paper-based exam.  
OR  
submit official transcripts from an accredited United States college or university showing successful completion ('C' or better grade) of a college-level writing course and 6 hours of college-level academic course work requiring reading  
OR  
complete ACT with a score of 19/ SAT 890 or higher in Reading and Writing Completion of any additional entry requirements for the program of study.

The College will issue an Form I-20 Certificate of Eligibility form after students complete the steps above and qualify for admission.

## Readmission

Students who have previously attended Carl Sandburg College and want to return after an absence of one semester or more must notify the Admissions and Records Office of any changes in name, address, phone number, academic program, etc. Some academic programs have special readmission policies and procedures.

## Steps to Enroll

### Step 1: Discover your options at Sandburg

- Learn more about what Sandburg has to offer. Visit the Welcome Center in building B at the Galesburg campus; or speak with an

advisor at the Carthage campus. Take a tour of campus and explore the various educational programs.

### Step 2: Submit an application

- Complete and submit an application at [recruiter.sandburg.edu](http://recruiter.sandburg.edu)
- You will receive a welcome letter about 1 week after with your student ID, email and *mySandburg* login.

### Step 3: Apply for financial aid

- Go to [fafsa.ed.gov](http://fafsa.ed.gov) (<http://fafsa.ed.gov>) to complete the Free Application for Federal Student Aid (FAFSA) to apply for both federal and state financial aid.
- If possible, apply before November 15th to ensure the aid that you qualify for is available.
- Carl Sandburg College's code is 007265.

### Step 4: Request official transcripts

- High school, GED and all educational institutions.
- Send to: Carl Sandburg College Attn: Admissions 2400 Tom L Wilson Blvd. Galesburg, IL 61401.

### Step 5: Take the Placement Test\*

\*An eighth grade reading level as demonstrated by a standardized test approved by the College is required for admission to developmental and credit classes. This requirement does not apply to Corporate and Leisure classes.

- This untimed assessment test covers reading, writing and math, and will determine the level of classes you may begin.
- Prepare for this test before you take it. Go to [sandburg.edu/placement](http://sandburg.edu/placement) for practice tests, sample questions.
- If you would like reading assistance to complete the test, please contact Disability Support Services at 309.341.5262.
- Register at [sandburg.edu/placement](http://sandburg.edu/placement); [welcomecenter@sandburg.edu](mailto:welcomecenter@sandburg.edu) or 309.345.3500.
- Students with documentation of an ACT score of 20 in reading and English, an ACT score of 25 in Math, or a PARCC score of 4 or 5 in math or English may opt out of taking the placement test. (ACT scores must be less than 2 years old)

### Step 6: Register for classes

- Schedule an appointment with an advisor to register for courses. Call 309.341.5237 at the Galesburg campus or 217.357.3129 at Carthage campus.

For additional assistance contact the Welcome Center [welcomecenter@sandburg.edu](mailto:welcomecenter@sandburg.edu) 309.345.3500

## Online/Blended Courses

Online courses offer the same high quality instruction as their equivalent on-campus counterparts. These instructor-led courses are delivered through the Internet. By using the Internet students are able to link to faculty and other students in the class.

With Sandburg Online, learning can be accessible and flexible. If students have a busy schedule, they are able to "attend" class at times that best fit their schedule.

While the courses begin and end on specific dates and the course work has assigned deadlines, you can work at your own pace within the

deadlines. For more information, please check our Web site at <http://www.sandburg.edu/Academics/Online-Learning/index.html>

Blended learning combines both traditional (face-to-face) classrooms with online coursework. This type of class can be structured a variety of ways, but typically it meets in the classroom once a week, and then the student completes the rest of the week's activities online. This provides a more flexible schedule, but keeps the personal touch of face-to-face meeting time. Because of the added online coursework, students can finish the same hours and the same course rigors with half the time or less being spent in the classroom.

## Dual Credit Opportunities for High School Students

Carl Sandburg College works cooperatively with the various high schools within the Sandburg district that wish to provide college-level courses for their students during the junior and senior years. Dual credit allows eligible students to receive both high school and college credit for successfully completing college-level courses. These college courses may be offered at the high school location or the student may attend at one of the Carl Sandburg College campuses. Students must have the permission of the high school and obtain sufficient scores on a placement test to enroll in college courses. For detailed information, please contact the Welcome Center 309-345-3500 or [welcomecenter@sandburg.edu](mailto:welcomecenter@sandburg.edu).

## Illinois Articulation Initiative (IAI)

Carl Sandburg College is a participant in the Illinois Articulation Initiative. The General Education Core Curriculum was incorporated into the Associate in Arts and Associate in Science degrees effective Summer 1998. Since completion of the Associate in Fine Arts (A.F.A.) degrees does not complete the Illinois Transferable General Education Core Curriculum (IAI GECC), students will need to complete the general education requirements of the school to which they transfer. For further information about IAI, go to the Web site at [www.itransfer.org](http://www.itransfer.org) (<http://www.itransfer.org>).

## Study Abroad

Carl Sandburg College works in conjunction with the Illinois Consortium for International Studies and Programs (ICISP) and other Illinois community colleges in order to provide semester study abroad programs for its students to Canterbury, England; Carlow, Ireland; Salzburg, Austria; Seville, Spain; and Xi'an, China, and to offer summer study abroad to Salzburg, Austria; San Jose, Costa Rica; Dijon, France; Hyderabad, India. These programs are intended to provide students with a better understanding of the world via living and studying in different cultural environments around the world. Students reside with host families for all programs except Australia, China, and Ireland, where students stay in apartment or residence hall accommodations. For all programs requiring language courses, no prior experience is required. However, students with previous language experience will be tested and placed in the appropriate classes. During their study abroad, students are registered as Carl Sandburg College students and receive course credit directly through the College. Students are required to have a 2.75 or higher GPA, a "C" or better in English 101, and 12-15 hours of college credit in order to participate in ICISP Study Abroad programs. In addition to these regular opportunities, other opportunities for short term study abroad are available from year to year.

## Partnership Agreements

### Community College Partnership with Bellevue University

Carl Sandburg College and Bellevue University (Neb.) have entered into an Articulation and Community College Partnership. Any Carl Sandburg College student who attends Bellevue University and has earned their Associate Degree will have all of their credits accepted at Bellevue and will have all of their General Education requirements fulfilled but must satisfy the Kirkpatrick Signature Series requirement (specific to Bellevue University).

### Chamberlain College of Nursing

Chamberlain College of Nursing is a not for profit Nursing college, offering degrees ranging from Bachelor's degrees through Doctoral degrees in Nursing. Sandburg's agreement offers students who receive their RN degree from Sandburg to transfer into their BSN program.

### Community College Educational Agreement

The Board of Trustees of Carl Sandburg College and the Illinois Community Colleges listed below have entered into an agreement for the purpose of providing additional educational programs to the citizens of each district involved in this agreement. Students will pay the resident tuition and fees of the institution they attend. Details for eligibility to participate in this cooperative agreement are available by contacting the Admissions Office, 309.341.5234.

#### Participating Colleges

- Black Hawk College
- Carl Sandburg College
- Danville Community College
- Elgin Community College
- Heartland Community College
- Highland Community College
- Illinois Central College
- Illinois Valley Community College
- John Wood Community College
- Joliet Junior College
- Kankakee Community College
- Kaskaskia College
- Kishwaukee Community College
- Lake Land College
- Lewis & Clark Community College
- Lincoln Land Community College
- McHenry County College
- Moraine Valley Community College
- Morton College
- Prairie State College
- Rend Lake College
- Richland Community College
- Rock Valley College
- Sauk Valley Community College
- South Suburban College
- Southwestern Illinois College
- Spoon River College
- Waubesa Community College

## **Culver-Stockton College**

Carl Sandburg College has signed an agreement with Culver-Stockton College (Canton, MO) designed to ease the concerns of Sandburg students who wish to transfer to Culver-Stockton. The partnership involves the articulation of all of Carl Sandburg's classes to a course equivalent at Culver-Stockton. This agreement should create seamless transfer opportunities for our students.

## **Community College Alliance with Franklin University**

The Community College Alliance (CCA) is a unique educational agreement between Carl Sandburg College and Franklin University of Columbus, Ohio. This agreement allows Carl Sandburg College graduates to complete a bachelor's degree without leaving the Sandburg campus. After earning an associate degree or completing at least 60 transferable semester hours credit, students can earn a bachelor's degree through a combination of on-campus and online classes at Sandburg and online classes through Franklin University. There are 13+ majors in an online format that fit the students' career and lifestyle needs without the barriers of time and location. Beyond the bachelor's degree, students may also pursue the Vantage MBA in a completely online format in as few as 17 months. For detailed information, please contact the Admissions Office.

## **Dual Enrollment with Knox College**

Carl Sandburg College and Knox College have partnered on a dual enrollment program for students who intend to pursue a bachelor's degree at Knox upon completing an associate degree at Sandburg. Students can apply for the dual admission program as early as their senior year in high school through the beginning of their sophomore year of college (30 semester hours). Students accepted to the program must maintain a minimum 3.0 cumulative grade point average.

## **Illinois College**

Carl Sandburg College and Illinois College in (Jacksonville, IL) have an articulation agreement for students who wish to transfer to Illinois College upon completion at Sandburg. All of Sandburg's transferrable classes have been articulated at Illinois College and those who receive their degree, with a qualifying GPA, will enter Illinois College at Junior status.

## **Indiana Wesleyan University**

Indiana Wesleyan University is giving Carl Sandburg College students the opportunity to continue their education through online studies. The primary program in the partnership benefits those who are wishing to pursue their B.S.N. at Indiana Wesleyan but there are several other degrees available through the agreement.

## **Monmouth College Pipeline Program**

Carl Sandburg College has partnered with Monmouth College to create a program for students who desire to obtain a Bachelor's degree at Monmouth but earn their Associate's degree at Carl Sandburg prior to transferring. The program allows for students to meet with advisors from both institutions each semester and allows students access to various events and facilities on the Monmouth College campus. Inquiries can be directed to the Welcome Center, at 309.345-3500 or [welcomecenter@sandburg.edu](mailto:welcomecenter@sandburg.edu).

## **Dual Admissions with Saint Ambrose University**

Carl Sandburg College has entered into a dual admissions agreement, which permits students who intend to transfer to Saint Ambrose upon completion of their Associate Degree access to facilities, student events

and other resources while attending Sandburg. Students must apply at both institutions upon entry into college and must work with an advisor from both institutions at the beginning of each semester.

## **Transfer Agreement with University of Illinois at Urbana-Champaign (ACES)**

Carl Sandburg College and the College of Agricultural, Consumer and Environmental Sciences (ACES) if the University of Illinois at Urbana-Champaign (UIUC) have a cooperative agreement to help facilitate transfer students who wish to pursue a degree in one of the Agricultural Science programs at UIUC. Sandburg students who pursue the Associate in Science degree, with an emphasis in Agriculture, will be required to complete 12 semester hours of online work from UIUC and travel to their campus a couple of times per semester as part of their class requirements.

## **BOT/BA Degree Program with Western Illinois University**

Carl Sandburg College signed a partnership agreement with Western Illinois University (WIU) to facilitate the transfer of students who have earned or are pursuing an associate degree at Sandburg and who wish to enroll in the WIU Board of Trustees BA degree program. This flexible program enables the mature place-bound student to earn a bachelor's degree with as few as 40 semester hours taken through WIU in an online format or on campus. Once a student is accepted into the BOT/BA program, the tuition and fees rate is frozen for four years (if the student maintains continuous enrollment). Although a major may not be earned, a minor may be achieved by completing the exact academic requirements listed in the WIU Undergraduate Catalog. For detailed information, please contact the Admissions Office.



# TUITION & FINANCIAL ASSISTANCE

Tuition and fees are subject to change without notice.

## Tuition

### Tuition for District Residents

Tuition for residents of Community College District 518 is charged at an in-district rate per semester hour for tuition in the 2017-2018 academic year. Check with the Carl Sandburg College Business Office for current tuition rate.

### Tuition for Out-of-District Residents

Students who are residents of Illinois but who live outside of Community College District 518 pay a higher tuition rate. Check with the Sandburg Business Office for current tuition rate.

### Tuition for Out-of-State Residents

All students who do not maintain a legal residence in the State of Illinois pay a higher tuition rate. Check with the Sandburg Business Office for current tuition rate.

### International Student Tuition

International students who attend Carl Sandburg College on a temporary visa will pay the out-of-state tuition rate. Students under this category are not eligible to qualify for in-district rates.

### Proof of Residence

Students who move from outside the state or district and who obtain residence in the state or district for reasons other than attending the community college shall be exempt from the 30-day requirement if they demonstrate through documentation a verifiable interest in establishing permanent residency. Students must be able to provide one or more of the following:

1. Voter registration in District 518
2. Evidence of tax, utility, or rent receipt, or a signed lease contract in District 518
3. Driver's license and/or vehicle registration showing an address in District 518
4. Other documentation which can help certify residency in District 518

A student who resides with his or her parents or guardian in Community College District 518 is a resident student. An emancipated student who is completely self-supporting and who has resided in Community College District 518 for at least 30 days prior to the beginning of the semester at Carl Sandburg College shall be considered a resident of the District. Students who are enrolled in an approved cooperative program between Carl Sandburg College and another college may be eligible to receive in-district rates. Students who qualify under other ICCB regulations are eligible to receive in-district tuition rates. Students cannot qualify for in-district tuition rates while on a temporary visa.

### Tuition Waivers for Senior Citizens

District 518 residents 65 years of age or older are permitted to participate in credit-bearing courses at no charge for tuition (No Credit Awarded), provided there are spaces in the classes and that tuition-paying students constitute the minimum number required for enrollment in those classes.

Verification of age is required by presenting an Illinois driver's license or other appropriate documentation at the time of enrollment. Payment is required for all fees, books and supplies.

### Tuition Charge-Backs for Carl Sandburg College District Residents Attending Other Community Colleges

Residents of Community College District 518 may enroll in a vocational program, as opposed to an occasional course, at another Illinois community college and pay only resident tuition at that institution providing that program is not offered at Carl Sandburg College.

A charge-back application must be obtained from Carl Sandburg College, completed and returned 30 days prior to the beginning of the school term for which the application is being made. See the Student Services Office for additional information.

### Payment of Tuition and Fees

Students may pay tuition and fees in cash, by check, or debit/credit card. The College accepts VISA, MasterCard, Discover, or American Express for tuition and fees payment. Credit card payment may also be used for Phone and Online Registration. For a small fee, students enrolling in semester classes can defer a portion of their tuition and fee charges (see Deferment Policy below). Check with the Sandburg Business Office for current rates.

### Deferment Policy

An interest-free monthly payment plan through Nelnet Business Solutions (formerly FACTS Management Co.) is available. This monthly payment plan enables you to spread tuition payments equally over several months without interest or finance charges. By paying monthly, you limit borrowing and keep the overall costs of education down. The monthly payment plan is available to all families regardless of financial need. There is a minimal enrollment fee to cover administrative costs. The registration for the Monthly Payment Plan will be via the Internet and students must possess either a debit/credit card or maintain a checking or savings account from which to withdraw the payments. Nelnet accepts MasterCard, Visa, Discover and American Express.

### Refund Schedule

Tuition refunds will be issued to eligible students based upon effective date of withdrawals. The date that a written request for withdrawal is received by the Admissions and Records Office determines the effective date of withdrawal.

Full refund of tuition and fees will be made if the College cancels a course.

Refunds will be determined on the basis of the following schedule:

Length of Class	Refund Period*	% Refund
9-16 Weeks	1st 9 calendar days of term	100%
	Thereafter	0%
5-8 Weeks	1st 5 calendar days of term	100%
	Thereafter	0%
4 Weeks	1st 3 calendar days of term	100%
	Thereafter	0%

2-3 Weeks	1st 2 calendar days of term	100%
	Thereafter	0%
Less than 2 Weeks	Prior to Day 1	100%
	Thereafter	0%

\* Refund period refers to the number of calendar days beginning with the first day of the term.

## Important Note for Financial Aid Recipients – Return of Title IV Policy

Federal financial aid (Title IV student aid) funds are awarded to a student under the assumption that the student will attend school for the entire period for which the assistance is awarded. When a student withdraws, the student may no longer be eligible for the full amount of Title IV funds that the student was originally scheduled to receive. When a student receiving Title IV student financial aid withdraws from all courses, the aid must be adjusted in accordance with rules established by the U.S. Department of Education. These calculations may result in the student owing an institutional balance. Students who do not complete at least 60% of a period of enrollment may be required to return federal student aid received. These rules apply to both students who formally withdraw from classes as well as students who receive a zero grade point average (GPA) (grades of "W" and "F") for a semester and/or any period of enrollment less than a semester if enrolled in four- or eight-week courses.

The last date of attendance is determined to be the withdrawal date or the last recorded date of activity as documented by the institution. If the student ceases attendance without providing official notification of withdrawal to the institution, the mid-point of the payment period or period of enrollment, or the last recorded day of activity will be the withdrawal date for the purpose of returning Title IV funds. A copy of this policy is available in the Financial Aid Office. If you have any questions about how this law may affect you, please contact the Financial Aid Office prior to withdrawing from the College.

## Obligations to the College

Students must meet all financial obligations to the College and return all materials owned by the College before they will be allowed to re-register and to receive grade reports, diplomas, certificates, and transcripts. If you should have any uncollected balances, we may use any and all means necessary to collect this debt in accordance with state and federal laws.

## Financial Assistance

Carl Sandburg College participates in federal, state and institutional financial aid programs to assist students in meeting the costs of higher education. Financial aid is available in the form of grants, loans, scholarships and work study.

## How to Apply for Financial Aid

1. Apply for admission.
2. Complete the Free Application for Federal Student Aid (FAFSA). Sandburg's Federal School code is 007265. You may complete the FAFSA online via the Internet at [www.fafsa.gov](http://www.fafsa.gov) (<http://www.fafsa.gov>). The FAFSA is used to award federal, state and some institutional aid.
3. Monitor your Financial Aid status at: [mySANDBURG/Webadvisor](http://mySANDBURG/Webadvisor) for students/My Financial Aid.
4. Complete and submit any Required Documents on My Financial Aid.

5. Continue to monitor the process for additional requests and when processing is complete to view your Award Letter.
6. Once your award letter is posted, you may apply for a student loan. If you are interested in a loan, complete the three steps found under Helpful Links: Loan Request Form, Entrance Counseling, and Master Promissory Note.

## Standards of Academic Progress

Students receiving financial aid are required to meet Satisfactory Academic Progress (SAP) standards according to federal and state regulations. Academic records are reviewed for all students receiving financial aid and those being considered for financial aid from the following sources: Federal Pell Grant, Federal Work Study Program, Federal Supplemental Educational Opportunity Grant, Illinois Monetary Award Program (MAP), Federal Direct Parent PLUS Loan, and Federal Direct Stafford Loan (Subsidized and Unsubsidized). The student's status is evaluated at the end of each semester.

Students will be considered to have an eligible SAP status if they:

- Maintain a cumulative grade point average (GPA) of 2.0 or better
- Satisfactorily complete 67% or more of credit hours attempted
- Graduate within 150% of the credit hours required to complete the student's program

A student who has not met the minimum GPA requirement of 2.0 or higher, or has not completed the minimum credit hours will be assigned a classification of Warning for one semester, after which the student will be assigned a classification of Dismissal if SAP requirements are not met.

If a student does not meet SAP requirements at the conclusion of the Warning semester, the student will be placed on Dismissal. A student with a Dismissal status is no longer eligible for the financial aid programs listed above.

## Reinstatement of Financial Aid / Right to Appeal / Academic Plan

A student who is eligible for financial aid can regain eligibility for financial aid by fulfilling one of the following conditions:

1. Eliminate all academic deficiencies by completing the number of credit hours necessary, at the student's own expense, to meet the 67% requirement and attain the minimum 2.0 cumulative GPA.
2. Appeal and be granted Probationary Reinstatement of Aid. Appeals may only be granted where it is statistically possible for the student to meet the 67% requirement and attain the minimum 2.0 cumulative GPA by the end of the next semester of enrollment.
3. Appeal and be granted an Academic Improvement Plan where they can continue to receive financial aid to complete their program as long as they meet the terms of the plan.

## Academic Improvement Plan

Students who appeal and who need more than one semester to complete their academic goals, may be reinstated under an Academic Improvement Plan. This plan requires that students meet the following stipulations each semester until they attain good standing:

- Successfully complete 75% or more of credit hours attempted each semester
- Obtain a semester GPA of 2.2 or higher each semester

Students who fail to meet any of the above requirements while under the Academic Improvement Plan will have their financial aid terminated.

The complete SAP policy, including examples, is available on the College website or by visiting the Financial Aid Office.

### Developmental Hours

A student is limited to 30 developmental credit hours while receiving financial aid. Federal financial aid will not cover any developmental courses taken after the student has reached the maximum 30 hours. These courses include, but are not limited to:

MAT.080	Basic Mathematics W/Geometry	4
MAT.083	Beginning Algebra W Geometry	4
MAT.086	Math Literacy	6
MAT.098	Gen Ed Preparatory Math	4
MAT.099	Intermediate Algebra	4
BIO.090	Foundation for Biology	2
BIO.095	Foundation for Anatomy & Physiology	2
ENG.095	Esst. Reading & Writing Strategies	4
ENG.097	Introduction to Composition	3
ENG.099	Writing Lab	1

### Repeated Courses

Students may receive financial aid for repeating courses. However, if retaking a previously passed course, financial aid can only be used for one repeat of the course. Any courses that are repeated will be used in the calculation of a student's Satisfactory Academic Progress status. Each repetition will count toward the enrolled hours; however, only the course(s) being counted in the GPA calculation will be counted in completed hours for SAP.

Note: All information is subject to change based on changes to federal law, regulation, or College policy and procedure. If changes are made, students must abide by the new policy.

## Student Financial Assistance Programs

(Unless otherwise specified, follow the steps under "How to Apply for Financial Aid" for the programs listed.)

### Grants

#### Federal PELL Grant

Federal grants that offer from \$595 - \$5775 per year based on financial need. Eligibility is based on financial need and enrollment.

#### Federal Supplemental Educational Opportunity Grant (FSEOG)

These federal grant funds are awarded by Carl Sandburg College based on need, income, and application date. Award amounts vary. Students must be Pell eligible to receive FSEOG funds.

#### Monetary Award Program (MAP)

An Illinois program that will pay a portion of tuition, the award is based on financial need. Illinois residency is required and students must be enrolled in at least three credit hours. Maximum award is \$2400 per year.

### Student Loans

#### Federal Direct Loan

The Federal Direct Loan Program is administered by the federal government and offers freshman students up to \$3500 and sophomores up to \$4500 per year. THIS MONEY MUST BE REPAYED. You may qualify for a Subsidized Direct Loan and/or an Unsubsidized Direct Loan up to the maximum amounts listed above. First-time Carl Sandburg College

loan recipients must complete loan counseling prior to the first loan disbursement.

Carl Sandburg College evaluates all loans on a case-by-case basis. Federal regulations allow an institution to refuse to certify a student loan or certify a loan amount that is less than the student's determination of need. Students will be notified in writing of the institution's decision. Carl Sandburg College will not discriminate against any borrower or applicant in obtaining a loan on the basis of race, national origin, religion, sex, marital status, age, or disability status. Loan checks are distributed 30 days after each semester begins. Students who are placed on Financial Aid Probation or Dismissal may be denied student loans.

#### Subsidized Direct Loan

These loans are based on financial need; therefore, all students may not qualify. With a Subsidized Direct Loan, no interest accumulates and no repayment is required as long as the student is enrolled in college at least half-time. Students have six months after they drop below half-time before repayment is required and interest begins to accrue. The interest rate for loans disbursed after July 1, 2015, is currently at 4.29%.

#### Unsubsidized Direct Loan

Students who do not qualify for maximum Subsidized Direct Loans may borrow up to the maximum amounts above less Subsidized Loans through the Unsubsidized Direct Loan program. The interest rate for loans changes annually on July 1, and is capped at 6.8%. The current rate is available at [www.studentaid.ed.gov](http://www.studentaid.ed.gov). (<http://www.studentaid.ed.gov>)

#### Federal Direct PLUS Loans

A loan in which parents of dependent students may borrow to pay for educational expenses. Family income is not taken into consideration; therefore, the program is open to almost any family who qualifies based on credit. The family can borrow up to the cost of education, less other aid received. Interest rate is fixed at 6.84%. Repayment begins immediately. To determine eligibility, you must apply for federal student aid as outlined in this Financial Aid section of the catalog.

### Other Programs

#### Federal Work-Study Program (FWS)

These federal funds are awarded to students interested in working to help meet their financial need. An FWS award allows the student to work on campus to earn money. An award does not guarantee a job will be available or that the student will earn the entire award.

#### Illinois National Guard

Tuition and fees are paid by the National Guard for students who have completed one year of service and who are currently enrolled in the National Guard. The student must be an Illinois resident, have a grade point average 2.0 or higher and submit a Notification of Eligibility annually to the Coordinator of Veterans and Military Personnel Student Services. Eligibility is limited to eight semesters of full-time attendance. Apply online at [www.isac.org](http://www.isac.org).

#### Illinois Veterans Grants (IVG)

This program will pay all tuition and fees for students who qualify. The student must:

1. be a veteran,
2. have resided in Illinois six months before entering the armed services,
3. have at least a year of active duty and receive an honorable discharge,
4. return to Illinois within six months after discharge from the service,



5. maintain a grade point average of 2.0 or higher.

IVG applications are available at [www.isac.org](http://www.isac.org).

### Western Illinois Works

Persons who are interested in training/retraining may consider applying for WIA. For more information contact your local WIA Office:

Hancock County  
71 S. Adams St., Suite F  
Carthage, IL 62321  
217.357.6749

Knox County  
311 East Main Street, Suite 612  
Galesburg, IL 61401  
309.343.9832

McDonough County  
440 North Lafayette  
P.O. Box 298  
Macomb, IL 61455  
309.837.1280

Warren County  
88A Public Square  
Monmouth, IL 61462  
309.734.4745

### Department of Rehabilitation Services (DORS)

Financial Assistance is available, as a grant, for students with a disability which is considered a substantial vocational handicap to employment. For additional information contact your local DORS office. The Galesburg office is located at 477 E. Main St., Suite A, Galesburg, IL 61401, or phone 309.343.2193.

## College-Sponsored Programs

### Carl Sandburg College Foundation Scholarships

Carl Sandburg College Foundation establishes and cultivates transformative relationships for support of Sandburg students, programs and capital needs. A volunteer board of directors governs the Foundation, providing policy direction for the non-profit, 501(c)(3) tax-exempt organization established to secure additional funds for the College. Contributions to the Foundation provide scholarships and financial support that enable Carl Sandburg College to offer more programs and enhance what is already an outstanding institution of higher education. Contributions are accepted from our generous giving community comprised of individuals, businesses, organizations and foundations. These combined resources enhance the College's educational mission of providing all students with opportunities for success.

The Foundation provides academic, program-specific, veterans, financial need, and geographic-based scholarships. These scholarships support Sandburg students of all ages in occupational and transfer curricula. Scholarship awards are based on individual scholarship guidelines. Distribution of payment is determined solely by the Foundation's Scholarship Review Committee and is not subject to change by outside departments.

For further information regarding scholarships, please contact the Foundation Office or the Financial Aid Office on The Main Campus.

At The Branch Campus or The Extension Center, contact the Student Services Generalist.

Visit the Foundation web site at [www.cscfoundation.org](http://www.cscfoundation.org) (<http://www.cscfoundation.org>) or go to [stars.sandburg.edu](http://stars.sandburg.edu) to apply.

## Other Forms of Assistance

### Presidential Scholarships

Presidential Scholarships are available for students who excel academically in high school. The full scholarship will be awarded to a maximum of 20 students on a first-come, first-served basis and will pay up to 64 credits over two years at Sandburg as long as the student maintains 3.25 cumulative GPA. The award is tentatively based on a student's sixth- and seventh-semester high school transcripts. Final award is contingent upon the student meeting all requirements with their final high school transcript. Full-tuition scholarships will be available for students with an ACT score of 27 or higher, and with a grade point average of at least 3.75. Half-tuition scholarships will be available for students with an ACT score of 25 or higher with at least a 3.5 GPA. Applications are accepted the year the student graduates from high school only, and limited to accredited high schools within the Sandburg district.

### Talent Scholarships

Talent Scholarships are available for students with exceptional talent in the areas of creative writing, journalism, music, theatre, art, or athletics. Students may receive a scholarship waiving in-district tuition for up to 18 credit hours per semester. Recipients are selected by a committee from the Student Services Division. Interested students should contact the Student Services Office for details.

### Crisis Grants/Loans

Carl Sandburg College Foundation offers emergency financial assistance for Sandburg students in crisis experiencing a non-academic, non-recurring expense that jeopardizes the applicant's ability to remain enrolled at Carl Sandburg College. A one-time crisis grant or loan could be approved if the student meets all the eligibility requirements, subject to available funding. (Student must document their financial crisis and submit a letter explaining specific circumstances.) For information, students should request a Crisis Grant/Loan application from the Foundation Office. If eligible, students will receive a response within 72 hours.

### Illinois National Guard

Illinois National Guard grant pays tuition and certain fees for students who have completed one year of service and who are current members of the National Guard. The student must be an Illinois resident and have a grade point average 2.0 or higher. Eligible students must re-apply for Illinois National Guard grant each year. Eligibility is limited to eight semesters of full-time attendance. Apply online at [www.isac.org](http://www.isac.org). (<http://www.isac.org>)

### Illinois Veterans Grants (IVG)

Illinois Veterans Grant pays tuition and certain fees for students who qualify. The student must:

1. be a veteran,
2. have resided in Illinois six months before entering the armed services,
3. have at least a year of active duty and receive an honorable discharge,
4. return to Illinois within six months after discharge from the service,
5. maintain a grade point average of 2.0 or higher.

IVG applications are available at [www.isac.org](http://www.isac.org). (<http://www.isac.org>)

## Veterans' Assistance

State and Federal assistance is available at Carl Sandburg College for qualified veterans, military personnel and the children and spouses of veterans who died or are permanently and totally disabled as the result of a service-connected disability. For information on eligibility, contact the Coordinator of Veterans and Military Personnel Student Services in the Financial Aid Office. Academic programs listed in the catalog as "Pending ICCB Approval" are not eligible for VA Certification until the approval is received from ICCB and approved by the Department of Veterans Affairs.

### Certification Information

- Students receive VA educational benefits only for those courses that apply to their declared academic major.
- Students receiving educational benefits from the VA must complete all of the semester hours for which they are certified. Students who do not complete their semester hours may be responsible to repay funds to the VA received for that semester.

## Tuition for Eligible Veterans and Families

In-district tuition will be charged to eligible Post 9/11 Veterans, spouses, and/or children and Montgomery GI Bill Recipients regardless of residency. Check with the Coordinator of Veterans and Military Personnel Student Services with any questions.

### State Assistance

The State of Illinois provides tuition assistance to veterans through the Illinois Veteran Grant and military personnel through the Illinois National Guard Scholarship. Eligible veterans and/or military personnel will receive credit for full tuition and for registration fees for approved courses at any Illinois state-controlled college, university or community college. To maintain eligibility for either of the grants listed above, students must maintain a 2.0 grade point average and meet any other eligibility requirements.

### Federal Assistance

The Veteran's Administration offers a variety of federal entitlement programs through the GI Bill and other VA programs. Eligible veterans may receive a monthly check to cover school-related and other expenses while attending college in an approved program of study.

### The Montgomery GI Bill, Active Duty, Chapter 30

Veterans who possess an honorable discharge may be eligible to receive up to 36 months of educational benefits through this program. The monthly benefits a veteran may receive is based on the veteran's military training, category, length of service, and any applicable "kickers" provided by the Department of Defense. Most eligible veterans are permitted 10 years from the point of discharge to use his/her benefits; however, exceptions may exist that could shorten or extend that period of entitlement. For specific information, visit [www.benefits.va.gov](http://www.benefits.va.gov). (<http://www.benefits.va.gov/benefits>)

### The Montgomery GI Bill, Selected Reserve, Chapter 1606

Montgomery GI Bill - Selected Reserve program is for members who are actively participating in the Selective Reserve. The selected reserve include the Army Reserve, Navy Reserve, Air Force Reserve, Marine Corps Reserve, Coast Guard Reserve, the Army National Guard, and the Air National Guard. Eligible reservists may receive up to 36 months of educational benefits through this program. In certain cases involving mobilization, the period of eligibility may be extended. For specific information, visit [www.benefits.va.gov](http://www.benefits.va.gov). (<http://www.benefits.va.gov/benefits>)

### The Post-9/11 Veterans Education Assistance Act of 2008

The Post-9/11 GI Bill is a benefit providing educational assistance to individuals who have served on active duty after September 10, 2001. For specific information regarding eligibility requirements, the length for which assistance is available, and the amount of the entitlement allotment, please visit [www.benefits.va.gov](http://www.benefits.va.gov). (<http://www.benefits.va.gov/benefits>)

### Reserve Educational Assistance Program (REAP)/Chapter 1607

REAP is an educational benefit program designed to provide educational assistance to members of the Reserve components called or ordered to active duty in response to a war or national emergency (contingency operation) as declared by the President or Congress.

### Change in REAP Eligibility

The National Defense Authorization Act of 2016 ended REAP on November 25, 2015. Some individuals will remain eligible for REAP benefits until November 25, 2019, while others are no longer eligible for REAP benefits.

The Post 9/11 GI Bill in many ways has replaced REAP because it also provides educational assistance benefits for Reserve and National Guard members called to active duty after September 10, 2001, and in many cases provides a greater benefit than REAP. For specific information regarding eligibility requirements, please visit [www.benefits.va.gov](http://www.benefits.va.gov). (<http://www.benefits.va.gov/benefits>)

### Chapter 31

Vocational Rehabilitation for Veterans with Service-Connected Disabilities. If it is determined that you are classified as a Service-Disabled Veteran, you may be eligible to receive assistance with the cost of tuition, fees, books, equipment and supplies at an approved college or university. For specific information, please visit <http://www.benefits.va.gov/vocrehab/index.asp>.

### Chapter 32 (VEAP)

The Veteran's Administration provides financial assistance for Post-Vietnam era veterans through the Veterans' Educational Assistance Program (VEAP). To be eligible, veterans must have entered active duty on or after January 1, 1977 and before July 1, 1985 and have contributed to the educational fund before April 1, 1987.

### Chapter 35

Dependents Educational Assistance is for eligible Children and Spouses of Veterans who died or are permanently and totally disabled as a result of a service-connected disability. For specific information on eligibility, please visit [www.benefits.va.gov](http://www.benefits.va.gov). (<http://www.benefits.va.gov/benefits>)

## Carl Sandburg College Standards for Veterans' Satisfactory Progress

Carl Sandburg College students who are receiving federal educational benefits through the Veteran's Administration (VA) must make Satisfactory Progress in order to continue receiving benefits. This applies to Illinois Veteran's Grant (IVG), National Guard (NG), Chapter 30, 31, 33, 35, 1606, and 1607 benefits.

VA Satisfactory Progress requires the student to maintain a cumulative GPA of 2.0 or greater after their first semester of attendance. Students who fall below a 2.0 GPA will be placed on Warning. Students on Warning will have one semester to raise their cumulative GPA so that it satisfies the requirement. Students who do not satisfy the cumulative GPA after the warning period will be placed on Carl Sandburg College VA Dismissal and will no longer qualify for VA educational benefits.

Students will go back to satisfactory status when their cumulative GPA rises to a 2.0 or above. Students placed on Carl Sandburg College VA Dismissal may file a written appeal to reinstate their benefits for an additional semester. Appeals are to be completed by the student and returned to the Coordinator of Veterans & Military Personnel Student Services in the Financial Aid Office. Appeals will be reviewed by the Veterans satisfactory progress committee within 30 calendar days. Students are encouraged to file their appeals early to avoid disruption in benefits.

# ACADEMIC INFORMATION

## Academic Credit

### Credit Earned at Carl Sandburg College

The unit of credit measure is the semester hour which approximates the effort expended in 50 minutes of class work and 100 minutes of study during each week of the semester.

### Credit for Courses Completed at Other Colleges and Universities

Credit will be granted for courses taken at other accredited institutions in which the student has earned a grade of "C" or better. Credit also will be awarded for courses in which a grade of "D" has been earned, providing the student's overall average from the institution is a "C" or better, unless otherwise stated by specific Carl Sandburg College program requirements. Transfer credit is evaluated and awarded by the Admissions and Records Office.

Credit will be granted toward specific Associate in Applied Science and vocational certificate programs through articulation agreements with Delabar Vocational Education System and Western Area Career System. Check with the Admissions and Records Office for specific applications.

The College will accept as transfer credit all appropriate hours earned at accredited institutions. Regardless of the number of hours accepted, a student must meet the College's residency requirement for graduation. See "Graduation Policies and Procedures" for additional information regarding residency. The Admissions & Records office will evaluate the academic program that was listed on the application to the College. Students may change their academic program at any time with the Admissions & Records office..

### Credit for Military Service

Credit for 3 semester hours of physical education and 3 semester hours of health education credit will be awarded to members or former members of the U.S. Armed Forces who have completed six months or more of basic or recruit training and have been honorably discharged or have transferred to the reserve component (includes the Army, the Air National Guard, and the Coast Guard). To receive this credit, the student must submit a petition to the Admissions and Records Office along with separation papers (DD214).

Certain experiences in military service may be submitted to the Admissions and Records Office for evaluation. The recommendations contained in "A Guide to the Evaluation of Educational Experiences in the Armed Services" by the American Council on Education are used as a basis for such evaluations.

Credit may be given for coursework applicable to a Carl Sandburg College curriculum which was taken through the Defense Activity for Non-Traditional Education Support (DANTES) or under the United States Armed Forces Institute (USAFI), provided the course is recommended by the American Council on Education. The student must submit official transcripts of satisfactory completion of the work to the Admissions and Records Office.

### Credit for College Level Examination Program

The College recognizes undergraduate achievement as measured by both the general and subject examinations of the College Level Examination Program (CLEP). Scores may be submitted to the Admissions and

Records Office for evaluation, and if the level of achievement is at or above the minimum standards and score levels established by the College, credit may be granted. Carl Sandburg College follows the guidelines of the American Council on Education in accepting CLEP credit. Students may earn up to 24 hours of credit from the general examinations of the College Level Examination Program in the areas of humanities, mathematics, natural sciences and social sciences. In addition, many of the CLEP subject examinations may be accepted for credit based upon the score recommendations of the American Council on Education.

Students should discuss the CLEP options with a Student Services counselor prior to registering for any of the examinations.

Regardless of the number of hours earned through CLEP, the student must meet the College's residency requirement for graduation. See "Graduation Policies and Procedures" for additional information.

NOTE: If results of CLEP examinations are to be sent to another school for credit recognition, students are advised to check with the transfer school to determine its policy toward credit by examination.

### Departmental Proficiency Examinations

Students may receive credit for a course at Carl Sandburg College by passing institutional proficiency examinations with a grade of "C" or better. The decision as to whether or not any particular course may be eligible for proficiency is made by the instructional department offering the course. The fee for each proficiency exam is equivalent to the cost of CLEP exams. Regardless of the number of hours earned through proficiency exams, a student must meet the College's residency requirement for graduation. See "Graduation Policies and Procedures" for additional information. Additional information about proficiency examinations may be obtained from the Admissions and Records Office.

### Advanced Placement Program

This program and associated tests are offered only in high schools. Students who have participated in the AP program may be eligible to receive credit and advanced placement on the basis of tests in certain subjects determined by Carl Sandburg College.

Students wishing such credit or placement should request the College Entrance Examination Board to send their AP scored examinations to the Admissions and Records Office. Upon notification from the Registrar, students can then have any credit which was awarded placed upon their transcript.

### Illinois Community Colleges Online

Illinois Community Colleges Online (ILCCO) is a consortium of Illinois community colleges working together to provide leadership, facilitate collaboration and share resources in online and technology-enhanced education. This program allows students to enroll in online courses at other Illinois community colleges while maintaining their Sandburg enrollment status. Students will participate in another college's online course but will receive billing, financial aid and transcripts from Sandburg. Students can search for eligible ILCCO courses, by clicking on "Full Course Listings" on the Internet Course Exchange System (<http://ice.ilcco.net/>) or go to "Online Learning" under "Academics" on the main Sandburg website. To enroll in an ILCCO course, students need to contact their counselor as early as possible prior to the beginning of a semester as the enrollment process takes time and is not guaranteed.

## Records

### Academic Record Appeal

In accordance with the provisions of the Family Education Rights and Privacy Act of 1974 (FERPA), students may appeal the accuracy of their permanent record (transcript). This right permits the student to appeal only the accuracy of the record which contains the grade; it does not permit the student to appeal the grade given by the instructor. (See "Framework for Addressing Student Concerns, Grievances, Sexual Harassment, and Discrimination" for information about appealing grades.)

Academic record appeals must be filed by the student with the Admissions and Records Office within 60 days of the closing of the academic term.

### Policy on Program Guarantees

The educational programs offered through Carl Sandburg College are of the highest quality. The Board of Trustees directs the administration to develop guidelines that guarantee graduates the following:

1. Within proper circumstances, as articulated by the administration, transfer course work taken at Carl Sandburg College will be honored at educational institutions within the State of Illinois either as program requirements or as electives.
2. Within proper circumstances, graduates of occupational programs offered through Carl Sandburg College will have the appropriate mastery of entry level skills.

In the event that graduates fail to have course work transfer or fail to have entry level technical skills, an opportunity to repeat or take additional educational course work at Carl Sandburg College will be offered to the student with a full tuition and fee waiver. (Policy No. 3.21)

## Grading

### Grades

Grades are issued at the close of each academic term on a letter basis indicating quality of academic work. Grades issued by Carl Sandburg College are:

Code	Description
A	Superior work
B	Good work
C	Average work
D	Poor work
F	Failing work
I	Incomplete. Incomplete indicates that the student has, for acceptable reasons, been unable to complete the required work by the close of the semester. "I" is permissible only when the student has maintained a passing grade as revealed by the class record. An "I" must be changed by the instructor to an appropriate letter grade by mid-term of the following academic term or it will default to a grade of "F."
P	Satisfactory work. Credit granted. Not calculated in grade point average.
U	Unsatisfactory work. No credit granted. Not calculated in grade point average.
T	Audit. Course which was taken without credit.
W	Withdrawal. No credit. Not calculated in grade point average.

## Grade Point Average

Grade point averages are calculated by dividing the number of grade points earned by the number of semester hours attempted.

The number of grade points for a given course is found by multiplying the grade point value (A = 4; B = 3; C = 2; D = 1; F = 0) by the number of semester hours which may be earned in the course.

Example:

Class	Grade	Points	x	Credit Hours	=	Total Grade Points
Biology	B	3	x	4	=	12
Speech	C	2	x	3	=	6
History	A	4	x	4	=	16
Total				11		34

(34 divided by 11 equals 3.09)

Grade Point Average (GPA) is 3.09

## Transcripts

The Admissions and Records Office will make a copy of a student's transcript (official academic or permanent record) when requested to do so. All requests for transcripts must be made in writing by the student. "Transcript Request" forms are available in the Admissions and Records Office and at <http://www.sandburg.edu/admissions/request-transcripts>.

No transcripts will be released without the written permission of the student. The College reserves the right to withhold transcripts of persons who have financial obligations with the College.

## Transcript Evaluations

Official transcripts sent to Carl Sandburg College to be evaluated for transfer credit will be evaluated by program of choosing on admissions application. Results of transcript evaluation will be sent to current students MySandburg email only. For non current students transcript evaluation results will be sent via US mail. If your academic program changes after your initial choosing on application, please contact Angela Snow for a new evaluation for transfer credits. If you have further questions, please call Angela Snow at 309-341-5233 or [asnow@sandburg.edu](mailto:asnow@sandburg.edu).

## Academic Load

For purposes of certifying that a student is full-time academically, such student must be enrolled for at least 12 semester hours each semester and for at least six semester hours during a summer term. The normal academic load for students expecting to complete their degrees within a two-year period is 12-15 semester hours per term.

## Classification of Students

Students are classified as follows:

Class	Hours
Freshman	0-29 semester hours
Sophomore	30 or more semester hours
Unclassified	Not pursuing a specific educational program

## Repeating Courses

A student who receives a "D" or "F" in a course may repeat the course once. Only the higher grade will be computed in the grade point average.



Please be aware that financial aid may not pay for repeated courses. NOTE: Students planning to transfer to another college or university are cautioned that the receiving institution may use all grades earned in computing a grade point average for admission purposes.

## Auditing Courses

Students may audit courses. In such cases, grades of "T" will be assigned. This grade does not grant credit nor is it calculated in the grade point average. Students wishing to audit a class will be required to pay full tuition and fees for the class.

Students will be admitted to classes on an audit basis on a space-available status only. Students enrolling for credit will be given registration priority over students desiring to audit a course. Students may register to audit a course only during Late Registration (after the class has begun).

Students may change from "credit" to "audit" in a course from the first day of the class through the midterm date for that class. Students may, with permission from the instructor, change from "audit" to "credit" at any time prior to the midterm date for the class.

Auditing students are expected to attend class but are not required to submit assignments or take examinations.

## Class Attendance

Students are expected to attend all regularly scheduled classes and are responsible for fulfilling the requirements of each semester. Individual instructors may set class attendance requirements that they consider to be reasonable and that are consistent with the objectives of the course. Instructors may assign final grades based, in part, upon class attendance.

## Attendance/No-Show Policy

Effective Spring 2011: Students who do not attend class during the first four days of the semester will be dropped from the class.

Carl Sandburg College has a mandatory attendance policy for all classes. Non-attendance during the first four days of the semester/class will result in the class being dropped from your schedule. For online and self-paced courses, this means participating in the week one discussion and/or e-mailing your instructor. If you are unable to attend due to an emergency or conflict of a serious nature, you must contact your instructor. If an instructor is not designated, you should contact the Retention Specialist at 309.341.5338. If you are dropped from a course and wish to re-enroll, you will need instructor permission. Instructors have the right to deny you re-enrollment if the course is full or if it would be too late to make up missed work. If you decide to drop the class, it is your responsibility to verify that the course has been officially dropped from your class schedule and fees adjusted prior to the end of the 100% refund period.

## Withdrawal from Courses

1. Students may officially withdraw from classes until the Tuesday of the 14th week of a 16-week calendar. See the Academic Calendar (p. 4) for withdrawal dates for terms less than 16 weeks.

Students who withdraw from classes prior to the first day or during the refund period may do so without notation on their permanent records (transcripts). After the refund period, students who withdraw from classes will receive a grade of "W" for those classes. This grade will not

affect the grade point average. Refund dates are noted under the Tuition section of the catalog and are listed in the term's Class Schedule.

To withdraw from a class, students must notify their Academic Advisor either in person, over the phone, through email or by completing a *Class Schedule Change* form of their intentions of withdrawing from any or all courses. The official date of withdrawal will be the date on which the form or letter is received by the Academic Advisor. Students who do not officially withdraw from a course will receive a grade of "F" for that course.

2. Instructor-Initiated Withdrawal: Instructors may withdraw students from classes at mid-term for non-attendance. Instructors may also drop students at mid-terms if the student's progress is extremely poor preventing the student from passing the course. Instructor-initiated withdrawals will result in grades of "W".

3. Administrative-Initiated Withdrawal: The administration may withdraw students from classes for emergency or disciplinary reasons after due process. These withdrawals will result in grades of "W".

\* Date is pro-rated based upon length of the term.

## Important Note for Financial Aid Recipients

Students who withdraw or who receive instructor-initiated withdrawals from all of their courses prior to the 11th week of the semester and who received Federal Financial Aid (Pell Grant, SEOG, Direct Loans) to pay tuition, fees, books, or other institutional cost, will be responsible to repay part of the monies received. The College follows the federal requirements for Repayment of Title IV funds. A copy of this policy is available in the Financial Aid Office or the Business Office.

## Records Policy

The College's policy regarding student records is intended to comply fully with the Family Educational Rights and Privacy Act of 1974. This Act was designed to protect the privacy of educational records, to establish the right of students to inspect and review their educational records, and to provide guidelines for correction of inaccurate or misleading data through formal and informal hearings. Students also have the right to file complaints with the Family Educational Rights and Privacy Act Office, Department of Education, Washington, DC 20202, concerning the alleged failures of Carl Sandburg College to comply with the Act. Copies of the College policy are available in the Admissions and Records Office.

Carl Sandburg College designates the following categories of student information as public or "directory information": student's name, hometown, high school attended, full time, part time enrollment, approval candidacy for graduation, major field of study, enrollment status, dates of attendance, most recent education agency or institution attended degrees, honors, and awards received, height and weight of student athletes, participation in officially recognized activities and sports.

The above information may be disclosed by the institution for any purpose at its discretion. However, currently enrolled students may withhold disclosure of these items by notifying the Admissions and Records Office in writing within the first fourteen days of classes each semester. Request for non-disclosure must be made each semester.

Questions concerning the Family Education Rights and Privacy Act may be referred to the Admissions and Records Office.

## Academic Notice & Separation Policy

### Standards of Academic Progress:

Students must maintain at minimum a 2.0 cumulative grade point average (GPA) and complete at least 67% of the courses in which they enroll to demonstrate academic progress. Students are strongly encouraged to select classes carefully so that they may complete their academic program requirements within the recommended guideline of 150% of their program's length.

### **Academic Warning: (Financial Aid Warning)**

Students will be placed on *Academic Warning* if their cumulative GPA falls below a 2.0 or if their cumulative completion rate of courses attempted drops below 67%. Students who are placed on *Academic Warning* must demonstrate progress towards degree completion during their next semester of enrollment by earning a semester GPA of 2.0 and a semester completion rate of 67%. Students who are placed on *Academic Warning* may continue to enroll in classes and receive financial aid.

### **Academic Notice: (Financial Aid Dismissal)**

Students previously placed on *Academic Warning* who fail to meet the *Standards of Academic Progress* will be placed on *Academic Notice*. Any student placed on *Academic Notice* must complete the next semester of enrollment with a 2.2 GPA and achieve a 75% semester completion rate to remain on *Academic Notice*. Students on *Academic Notice* and who meet the minimum GPA and completion requirements will be permitted to enroll in the upcoming semester even if the student's *cumulative* GPA and *cumulative* completion rates remain below the required levels.

Students placed on *Academic Notice* are **strongly** encouraged to schedule a meeting with their academic advisor to develop an academic plan that will allow the student to complete his/her program in a timely manner.

Students placed on *Academic Notice* may be eligible to receive financial aid if they are approved to participate in the *Academic Improvement Plan (AIP)* through the Office of Financial Aid. Students interested in learning more about the *AIP* are advised to contact the Office of Financial Aid for specific program details.

Students who have been placed on *Academic Notice* and who earn a semester GPA **below** a 2.2 and/or whose completion rate is below 75%, will be placed on *Academic Notice II*.

### **Academic Notice II: (AIP Dismissal)**

Students placed on *Academic Notice II* are allowed one additional semester to improve their academic standing. Students who fail to make significant improvements may be suspended from the college for the following semester and must appeal to be permitted to enroll for future classes.

Students placed on *Academic Notice II* are required to schedule a meeting with their academic advisor to re-evaluate and to revise the student's existing academic plan. Students placed on *Academic Notice II* will be restricted from enrolling in no more than 12 credit hours per semester. A registration restriction will be placed on the student's account so that additional courses may not be added. Students on *Academic Notice II* must complete the semester with a 2.2 GPA and achieve a 75% semester completion rate to remain on *Academic Notice II*. Students on *Academic Notice II* and who meet the minimum GPA and completion requirements will be permitted to enroll in the upcoming semester even if the student's *cumulative* GPA and *cumulative* completion rates remain below the required levels.

Students whose performance failed to improve will be placed on *Academic Separation*.

### **Academic Separation:**

Students placed on *Academic Separation* will be suspended from the college for one semester. A registration restriction will be placed on the student's account to prevent any attempt to enroll while on *Academic Separation* which includes auditing of courses. Students who are placed on *Academic Separation* at the end of the spring semester, will be suspended for both the upcoming summer and fall semesters.

If there are extenuating circumstances, a student may appeal the *Academic Separation* decision. The student may complete the *Academic Separation Appeal Form* to be considered for re-instatement by the committee. The student is **strongly encouraged** to schedule a meeting with their academic advisor to develop an academic improvement plan to accompany the appeal form.

At the conclusion of the separation period, students may complete an appeal for re-enrollment privileges. Students who choose to appeal must meet with their academic advisor in order to review and revise his/her academic plan and to complete the *Academic Separation Appeal Form (ASAF)*. The student's completed *ASAF* must include a detailed explanation of the changes that the student plans to make in order to satisfy the *Standards of Academic Progress*. This appeal will be submitted to the Student Services faculty committee for consideration.

If the *ASAF* appeal is granted, the student will be placed on *Academic Notice II* and must satisfy the requirements of that policy for the privilege of continued enrollment. The committee reserves the right to impose additional restrictions or conditions of reinstatement based on what they feel best supports the student's academic success.

However, if the student's appeal is denied, he/she may re-appeal if additional supporting documentation is available, if extenuating circumstances were a factor or after an appropriate time frame has passed as determined by the Student Services faculty committee.

Students who have been placed on *Academic Separation* for a second or subsequent semester or their appeal was denied by the Student Services faculty committee, may appeal to the Vice President of Academic Services or the Vice President of Student Services. Students who wish to pursue this option must notify the Dean of Student Success in writing of their intent to appeal. The student has the right to submit any additional supporting documentation if available to add to their previous appeal documentation.

## Academic Honors

A Dean's List and Honors List are published after each semester to recognize the academic achievements of our full and part-time students. To qualify for these honors, all students must complete a minimum of 12 semester hours of college credit courses (developmental courses do not qualify). Full-time students have earned 12 or more college-level credit courses in a term. Part-time students have earned 6-11 college-level credit courses in a term.

### **Dean's List**

Full-time students who have earned a semester grade point average of 3.5 or better.

### **Part-time Dean's List**

Part-time students who have earned a semester grade point average of 3.5.



**Honors List**

Full-time students who have earned a semester grade point average of 3.0 - 3.49.

**Part-time Honors List**

Part-time students who have earned a semester grade point average of 3.0 - 3.49.

**Graduation Policies and Procedures**

It is the responsibility of the student to know and to observe the requirements of his/her curriculum and the rules governing academic work. Although the advisor will attempt to help the student make wise decisions, the final responsibility for meeting the requirements for graduation rests with the student. If the student is currently enrolled at Carl Sandburg College, they can apply online to graduate under WebAdvisor.

Degree and certificate requirements stated in the Carl Sandburg College catalog will remain in effect for five academic years beginning with the student's initial enrollment in a given academic program. If changes occur in graduation requirements subsequent to initial enrollment, the student may elect to graduate under the most recent degree or certificate requirements. If more than five years have passed since the student's initial enrollment and the courses are still available, the student may continue their program requirements based on their entry year. If the courses in the student's original program have been discontinued, the student must choose a more recent degree plan (within five years). Students who are pursuing a program with selective admission must be readmitted to the program and meet the requirements as determined by the certification of their field of study.

In addition to fulfilling the course requirements for individual academic programs as stated by the College, students who intend to graduate from Carl Sandburg College must meet these requirements:

1. File a petition for graduation in the Admissions and Records Office prior to the beginning of registration for their last semester of classes. Petition forms are available in the Admissions and Records Office.
2. Satisfy the minimum credit hour residence requirement.
3. Fulfill all financial obligations to the College.
4. Earn a cumulative grade point average of 2.0 or better for all courses which are applicable toward the degree or certificate.
5. There may be occasions when a student meets the criteria to graduate but has not completed a petition to graduate. Carl Sandburg College reserves the right to grant certificates or degrees to these students as qualifications are verified.
6. Results of the petition to graduate will be sent to current students MySandburg email only. If you are not a current student, and have submitted an application, results will be mailed to address on graduation application. If you have questions, please contact Angela Snow at 309-341-5233 or [asn@sandbug.edu](mailto:asn@sandbug.edu)

**Residency Requirement for Graduation**

Associate Degree candidates must earn fifteen (15) of the required semester hours in residence at the College. Certificate candidates must earn one-third (1/3) of the required semester hours in residence at the College. Residency is defined as enrollment and completion of courses taught by Carl Sandburg College. Credit earned by other than coursework

(i.e., examination, advanced placement, etc.) may not be counted as part of the residency requirement for either degrees or certificates.

**Graduation Honors****Honors**

Designation for graduates whose cumulative grade point average is within the 3.50-3.69 range.

**High Honors**

Designation for graduates whose cumulative grade point average is within the 3.70-3.89 range.

**Highest Honors**

Designation for graduates whose cumulative grade point average is within the 3.90-4.00 range.

**Certification**

Candidates for certification in specific fields (i.e., nursing, cosmetology, dental hygiene, etc.) are responsible for fulfilling any special accreditation or certification requirements of the State of Illinois.

**Carl Sandburg College Honors Program**

The Carl Sandburg College Honors Program is for exceptional students who want to excel in college. Honors courses are intellectually challenging and involve considerable interaction among students and instructors. The Honors Program requires that students participate in an Honors Learning Community and complete an Honors Option.

Opportunities through Honors: friendly learning environment, challenging courses, independent study, honors scholarships, awards, and recognition on college transcripts.

There are many ways to be eligible to apply for the Honors Program. You can apply if you have one of the following: a cumulative high school GPA of 3.5 or higher; graduated in the top 10% of your high school class; had a composite score of 25 or above on the ACT; received a combined score of 1000 on the SAT; completed 12 college transfer credits with a minimum 3.25 GPA; completed 12 Carl Sandburg College transfer credits with a minimum 3.25 GPA; or are recommended by an instructor or counselor.

If you meet one or more of these requirements, you should contact the Honors Program Coordinator and pick up an application. The application process is simple and you will be notified within two weeks if you are accepted into the Honors Program.

What is an Honors Learning Community? An Honors Learning Community combines two different courses in two different disciplines. The courses are team taught by two instructors. The faculty cooperate together to integrate content and coordinate syllabi, strategies, and assignments. Outstanding faculty teach the classes. Honors courses are designed to help students learn and apply diverse concepts while stressing collaborative activity and creative and critical thinking.

What is an Honors Option? An Honors Option is taken after completing the Learning Community Linked Classes with a minimum 3.0 GPA. For instance, you may give a presentation, do research on a specific topic, or volunteer your time. The experience will generate a paper or a portfolio. Early in the semester, you should work with your instructor to develop an Honors Option. Your instructor and the Honors Program Director will agree on what is to be completed for Honors Credit.

Upon successful completion, the Honors Program offers an Honors Certification. The award will be noted on your transcript, and you will be recognized at Spring Commencement.

The requirements for the Honors Certificate are as follows: you must complete a minimum of 6 Honors Credits from Honors Learning Community Linked Classes and complete a non-credit Honors project; and you must maintain a GPA of 3.0 in your Honors classes.

For more information, comments or questions about the Carl Sandburg College Honors Program, please contact the Honors Program Coordinator at Carl Sandburg College, 309.341.5317.

# STUDENT SERVICES

## General Services

### Academic Advising

Academic advising is an interactive process involving the student and his/her academic advisor. During the first term, each student is assigned to an academic advisor that specializes in the program the student is pursuing. The academic advisor serves as a valuable resource to the student in the areas of program requirements, graduation requirements and transfer coursework as well as giving guidance when a student may be experiencing difficulty in a course. It is **required** that the student meets with their advisor prior to registration beginning to review their degree plan and make sure the student is on track with their academic goals. In person, phone or Skype appointments are available.

### Veterans' Advising

The Veterans' advisor works with veterans and members of the Reserve receiving educational benefits. This counselor provides academic and personal counseling to student veterans, regardless of expected benefits.

### Personal Counseling

Short-term counseling services are provided for students facing personal or family problems. Counselors serve as a resource for all students by providing a caring, supportive environment in which students can examine, explore and make decisions about career, personal and academic matters. Students also are assisted in goal clarification, achieving academic success and resolving personal dilemmas.

### Career Counseling

Student Services counselors offer an assortment of individual or group services to assist with the process of making a career decision that is insightful and well informed. A variety of personal inventory and occupational assessments are available through the Student Services Office to assist students in making career decisions. Students can make an appointment with a counselor to take the assessments and then for the follow-up and interpretation of the results. Career Counseling services are available to all residents of the Carl Sandburg College district at no charge and fall into the categories of self-awareness resources and occupational resources.

### Career Development

The Career Development Office assists students and alumni on all Sandburg campuses with career preparation needs. The following resources are available free of charge:

- **Employability Skills Academy:** Provides learning experiences that may effectively improve the success rate in gaining and retaining employment; provides training and assessments to establish and promote an individual's impact in the workplace; and build employable resumes and cover letters.
- **Career Expo:** This annual, free event is held at the Main Campus in Galesburg each spring. This is an excellent way to meet potential employers, learn about their organizational needs, see who is hiring and explore a new career path.

Campus Connection Program:

Your Campus Connection Team can help you...

- Connect with new people
- Network with campus staff

- Guide you through your college experience
- Locate opportunities on campus

If you are in need of a friendly and reliable person on campus, sign up to be part of the Campus Connection Program and be matched with a mentor from the Sandburg team.

**Career Opportunities:** Full-time, part-time, summer and temporary vacancies are posted on the Career Development bulletin boards in the B Building hallway and upper C hallway, the Carl Sandburg College website at <http://sandburg.edu/Services/Career-Development%20/Career%20Opportunities/index.html>, and the Career Development Facebook page at <http://www.facebook.com/sandburgcareerdevelopment>.

General Career Assistance:

- **Resume Writing** - Learn how to make a lasting and positive impression on a prospective employer in a short amount of time by receiving assistance from a certified resume writer. Whether you are in the beginning stages or in need of a final proof, visit the office of career development for a consultation.
- **Mock Interviews** - Receive help in learning how to answer difficult questions, develop interview strategies, improve your communication skills and reduce your stress before an actual job interview.

The Career Development Office is located in Room D207 on the Main Campus in Galesburg. For more information, contact the coordinator of career development at 309.341.5246.

### Career Cruising

Career Cruising is an interactive career resource designed for students of all ages. Career Cruising was designed with one goal in mind: to help students plan their futures. With Career Cruising's exceptional assessment tools, detailed occupational profiles, and comprehensive post-secondary education information, students can move seamlessly through the career exploration and planning process.

The program features:

- Interest Assessment
- Skills Match
- Ability Profile
- Learning Styles Inventory
- Occupational Profiles
- College, University, and
- Financial Aid Information
- Career Portfolio Tool
- Career Advisor Management System
- Printable Lesson Plans, Assignments, and Worksheets

Carl Sandburg College students can link to Career Cruising from their "mySANDBURG" portal. Under the "My Bookmarks" tab, click on "Career Cruising". Students can also access the program by going directly to [www.careercruising.com](http://www.careercruising.com) (<http://www.careercruising.com>) (user name: CSC/password:careers). If you have any questions about the program, please see your counselor or advisor.

### Library

The Library supplies a wide variety of traditional and innovative materials and services necessary to support our patrons' educational and recreational needs. The Library subscribes to research databases accessible through the Internet at all three campuses. The collection of

books, DVDs, CDs, and print periodicals totals over 39,500 volumes. In addition, the Library has an extensive Inter-library Loan program through which materials may be borrowed from other libraries. Members of the community-at-large may check materials out of the Library after presenting appropriate identification.

The Library staff offers orientation and information literacy sessions to teach students about library resources. The Main Campus Library is open from 7:45 a.m. to 8:00 p.m. Monday through Thursday and from 7:45 a.m. to 4:00 p.m. Friday. The Carthage Campus Library is open from 7:30 a.m. to 9:00 p.m. Monday through Thursday and from 7:30 a.m. to 4:30 p.m. on Friday. Holiday and summer hours are posted.

## Welcome Center

The Welcome Center is the first stop for new students at the Main Campus in Galesburg. Learn more about what Sandburg has to offer and how to get started as a student. Take a tour of campus and explore the various educational programs. For more information, contact the Welcome Center at [welcomecenter@sandburg.edu](mailto:welcomecenter@sandburg.edu) or 309.345.3500.

## Technology Resources

Computer labs and classrooms are located throughout all campuses to help students do research and complete their assignments. The Tech Help Desk, located in the Galesburg library, provides technical assistance and support to students. The Tech Help Desk is open 8 a.m. to 8 p.m., Monday through Thursday, and 8 a.m. to 4 p.m. on Friday, and can be reached at 309.341.5446 or [support@sandburg.edu](mailto:support@sandburg.edu).

For answers to frequently asked questions and a searchable Knowledgebase, students may visit <http://support.sandburg.edu/>

## Testing Center

The Carl Sandburg College Testing Center administers the following tests: COMPASS (placement testing for incoming students); TEAS (pre-admissions tests for Nursing); extension and correspondence tests; online Internet tests; telecourse tests, and make-up tests for Sandburg faculty. The College is also a testing site for the ACT (American College Test), CLEP (College Level Examination Program), and GED (General Education Development) tests. Registration information and test schedules are available from the Office of Student Services or the Testing Center Coordinator. Special testing procedures to accommodate persons with documented disabilities are provided in compliance with Section 504 and ADA. Contact the Testing Center Coordinator, Room B07, or call 309.341.5323 for further information.

## TRIO Student Support Services

The TRIO SSS program offers support services to students who are planning to transfer to a four-year university and who are either first-generation college students or who are eligible according to the federal income guidelines. The goal of the program is to help participants to stay in school, graduate from Sandburg, and transfer to a four-year college or university. Services include: academic advising, transfer advising, orientation to college, intensive mentoring and support during the first year of college, financial aid and scholarship advising, planning for four-year college expenses, assistance with study skills, career research and planning, and support with other college-related or personal issues.

To apply for this program, stop by the office in the Student Success Center in E136 or call 309.341.5362 for more information. This program is available on the Galesburg campus only. The TRIO SSS program is

funded 100% by the U.S. Department of Education. In 2016-2017, the funded amount was \$226,600.

## TRIO Upward Bound

TRIO Upward Bound is a federal program designed to help low-income, first-generation high school students excel in secondary and post-secondary education. Carl Sandburg College was awarded the TRIO Upward Bound grant in the Fall of 1999. Upward Bound serves students who attend Abingdon-Avon, Galesburg, Knoxville, and ROWVA high schools. The grant is 100% funded in the amount of \$270,375 annually through the U.S. Department of Education.

Upward Bound provides educational, cultural, and social services to program participants throughout the year. Students are provided information and advising in various academic skills, as well as in the areas of postsecondary education and career exploration. During the summer, students are provided instruction in math, lab science, foreign language, and composition and literature. Students have available resources such as laptops, calculators, and stipends, and have the opportunity to participate in various program trips and activities. For more information on the program, application, and/or selection process call 309.341.5268.

## Academic Support Services

Located in the Crist Center, B68, on the Galesburg campus, Academic Support Services offers tutoring services for all students and support services for students with disabilities.

## Disability Support Services

Carl Sandburg College makes it a priority to be an environment in which students of all backgrounds can come to pursue their academic and professional goals. As such, we strive to be a campus that is disability-friendly, both in terms of physical accessibility of our facilities and equal opportunity of access to learning materials and classroom experience. We seek to enable students with any history of disability, from physical disabilities to intellectual disabilities, anxiety, and attention deficits.

In compliance with the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990, Disability Support at Carl Sandburg College seeks to make the classroom equally accessible to students with disabilities by providing students with tools and accommodations intended to remove barriers imposed by their unique disabilities.

Current or prospective students or visitors to campus who have questions about disability access to campus resources or who would like to request accommodations for a disability while on campus should contact the Coordinator of Academic Support Services at 309-341-5262, or [jrunge@sandburg.edu](mailto:jrunge@sandburg.edu).

Carl Sandburg College does not discriminate on the basis of the student's sex, color, race, religion, creed, ancestry, national origin, physical or mental disability, sexual orientation, sexual identity or other protected group status.

## Tutoring Services

The Carl Sandburg College Tutoring Program is a fantastic, free resource for all Carl Sandburg College students. Through tutoring, our goal is to provide friendly, accessible academic assistance in all subject areas. Students on the Galesburg campus interested in any of the resources listed below should visit the Tutoring Center in room B72 for more information.

## Face-to-Face Tutoring

The Tutoring Center, located in B72, is the place to go for help with all of your core classes, from math and science to writing, Spanish, and general study skills. Tutoring is available primarily on a walk-in basis, though students can call ahead to schedule an appointment. Additionally, students may attend study sessions for CTE (Career and Technical Education) courses, arranged on an as-needed basis, by asking their instructor or contacting the Coordinator of Academic Support Services. Students in Carthage should contact the Student Services specialist on their campus for information about tutoring availability. Online students or those who attend the Carthage campus can schedule tutoring sessions via Skype by calling 309-341-5262.

Tutoring sessions are casual interactions that are student-initiated, student-centered, and student-driven. Students get the most out of tutoring services when they come well before an assignment is due and prepared to work. Students often come for clarification, extra practice, brainstorming and planning, or guidance on their homework. Tutoring is not a homework correction service; rather it should be seen as an educational opportunity, additional instructions that enables students to work on their own with more confidence.

## Online Tutoring

Students have access to tutoring any day, any time with Brainfuse. If you have internet access and a Carl Sandburg College student email account, you can take advantage of this resource.

Online tutoring is free, one-on-one, real-time tutoring via your computer, tablet, or smart phone. Brainfuse records your documents and tutoring sessions, so they are easily accessible as study notes later, or sent to your instructor. Best of all, it's a tutoring service that conforms to your schedule—even if that means you're getting tutored at 3AM! Brainfuse also offers skillbuilding exercises, video tutorials, practice tests, and much more.

Head over to your mySandburg page to get started. Click on the Brainfuse link to be automatically logged in from your mySandburg page or if your instructor has enabled it, your Moodle course page.

## Student Life

Student learning expands well past the walls of the classroom! The Offices of Student Life offers meaningful co-curricular experiences that complement the academic curriculum and in turn, provide an active and engaging campus environment. Take advantage of all the opportunities at Sandburg to enjoy college and make your experience great! Visit our website to learn more about Student Life at Carl Sandburg College <http://sandburg.edu/Campus-Life/index.html>.

## Athletics

Carl Sandburg College is a member of the National Junior College Athletic Association (NJCAA) and the Arrowhead Athletic Conference. Student athletes compete in the sports of men's baseball, basketball, cross country, golf, and soccer; and women's basketball, cross country, golf, softball, and volleyball.

Each home game is a chance to come out and cheer on your Sandburg Chargers. All students receive free admission to home sporting events. There is a student section to cheer on the Chargers to victory, along with frequent interactive activities. Check out your Chargers' schedules and meet the athletes at <http://sandburg.edu/Athletics/index.html>

or [facebook.com/sandburgathletics](http://facebook.com/sandburgathletics). (<http://www.facebook.com/sandburgathletics>)

## Phi Theta Kappa

The Chi Kappa chapter of Phi Theta Kappa, the international honor society for two-year colleges, is committed to recognizing outstanding scholarship and to assisting its members in obtaining academic scholarships and job opportunities, while fostering leadership and personal achievement. The organization offers several national scholarships, as well as opportunities to be nominated for additional honors, such as membership on the society's Academic All-American Team. To become a member, students must be currently enrolled and must have a grade point average of at least 3.5 after a minimum of 12 hours of course work leading to an associate's degree. Contact 309.341.5219.

## Student Government Association

The Student Government Association (SGA) is the officially recognized student governance body for Carl Sandburg College. SGA is composed of five executive officers and up to 15 student representatives who serve as the liaison between the student body and the College, govern student organizations, and assist with campus events. Elections are held in the fall semester. To learn how you can get involved, contact the SGA Advisor at 309.341.5332 or [sga@sandburg.edu](mailto:sga@sandburg.edu).

### Benefits of Becoming a Student Leader:

- Gain professional and personal skills (social, organizational, leadership, etc.)
- Build your resume with experience
- Leave your mark on Sandburg
- Network with professionals and peers
- Attend conferences and workshops
- Enrich your college experience!

## Student Life

The Office of Student Life provides out-of-classroom experiences that compliment your academic program. Student Life oversees student events, organizations, and the Student Government Association. Don't see what you're looking for? Contact the Student Life Coordinator today to see about starting your own movement. Call 309.341.5332 or visit our website at <http://sandburg.edu/Campus-Life/index.html>. (<http://sandburg.edu/life/student-life>)

## Student Organizations

Student organizations are a great way to get involved on campus, meet new people, give back to our community, and enhance your college experience! Student organizations may focus on academics, community services, entertainment, and campus improvement. For a complete listing of student organizations please visit our website at <http://sandburg.edu/Campus-Life/index.html>.

## Student Publications

The College provides students with opportunities for writing, editing, and print production through the literary magazine, *Phizzogs*. Interested students may contact the Humanities & Fine Arts Department for more information about joining or contributing towards the publication.

## Theater, Music, and Art

Carl Sandburg College's fine arts facility consists of well-equipped studios, rehearsal and recital rooms, and an intimate 180-seat theater.



Sandburg Theatre produces main stage productions, student-led productions and ancillary performance activities like Talent Shows, Improv Theatre and student acted and directed scenes. Drama Club provides leadership opportunities, social and educational experiences such as viewing area college and professional productions, service learning, and performing for area schools. Participation in all theatre activities is open to all Sandburg students. Actors are chosen through auditions and Drama Club officers are elected by its student members. Classes like Acting and Theatre History provide students opportunities to showcase their skills in public performance or presentation. Whether you have an interest in working on or off stage, there is a place for you at Sandburg Theatre.

The music department offers many opportunities for students from all majors. Large and small choirs present multiple concerts each semester for both campus and community, and the Sandburg Jazz Combo performs regularly each semester. Music groups regularly attend area concerts, shows, and often take longer performance and cultural trips. Participation in music ensembles is open to all students, staff, faculty, and community members.

The fine arts department at Carl Sandburg College offers classes that are accessible for all levels of experience. Events like the Art Institute of Chicago field trip and the student art show are open to any interested student. Art majors are encouraged to become involved in gallery or collection conservation work through the department. Every art student is given opportunities to exhibit work in a variety of venues, on- and off-campus, including our new Lonnie Eugene Stewart Art Gallery. Sales of student art work are always encouraged. Additionally, the department sponsors exhibits of the work of professional artists from across the region; often these artists will give gallery talks or studio demonstrations, providing additional resources for students.

## Bookstore

The Carl Sandburg College Bookstore is located in the Crist Center in building B. The Sandburg Bookstore is a friendly place where the student may purchase textbooks for classes. Textbooks may also be purchased online or reserved at [www.bkstr.com/carlsandburgcollegestore/home](http://www.bkstr.com/carlsandburgcollegestore/home) (<http://www.bkstr.com/carlsandburgcollegestore/home>). Textbooks are available for sale online and in the store three weeks prior to the start of classes. The bookstore offers a textbook rental program in which selected titles are rented for the semester. The bookstore also sells e-books as selected by the instructors. The bookstore's normal hours of operation are Monday through Thursday, 8:30 a.m. to 4:30 p.m., and Friday, 8:30 a.m. to 3:30 p.m. The bookstore offers extended hours during each semester rush and buyback; these hours will be posted throughout the campus and on our Web site. The bookstore will be closed as the College dictates due to severe weather conditions, etc., and any College-observed holidays.

In addition to standard school supplies, the bookstore also carries required supplies for art and photography courses. For the student in the medical field, the bookstore offers a selection of quality clothing, accessories, and supplies at an affordable student price. The bookstore also stocks a variety of non-textbook merchandise for other classes, such as jump drives, headphones and goggles, and a variety of imprinted Sandburg clothing and gifts.

Students who have applied for and have been awarded financial aid and who have Pell, SEOG, IIA, and some scholarships may be able to charge their purchases in the bookstore, using the balance of these funds after

all tuition and fees are charged off the account. Book charge dates are posted at the bookstore and on our Web site.

## Full Refund Policy

Textbook returns will follow in accordance with Carl Sandburg College refund policies for tuition refunds. The textbook must be returned with a receipt in the same condition as purchased for a full refund. Textbooks that are shrink-wrapped must be returned with the shrink-wrap intact for a full refund. Textbooks that have been unwrapped will be refunded at a used textbook price. If the textbook is defective, it is the student's responsibility to return it immediately to the bookstore for an exchange.

Computer software and electronics may NOT be returned or exchanged if the package is opened.

Please note: It is the student's responsibility to provide a receipt. All returns and exchanges must be accompanied by a receipt regardless of the form of payment (cash, check, credit card, or financial aid).

## Buyback Policy

At the end of each semester, during Finals Week, the bookstore will hold a buyback session in which textbooks in good saleable condition, i.e., no water-damaged books, books must have covers and pages intact, and any CDs or diskettes must accompany the textbook if they were purchased with it. The exact dates and times of the buyback will be posted a week prior to finals.

## Special Orders

The bookstore offers special ordering for any textbooks, trade books, and other items that may not be in stock. Please ask the staff about special ordering an item that is not on the shelf.

## Academic Dishonesty

Students enrolling at Carl Sandburg College are responsible for learning what constitutes academic dishonesty. Carl Sandburg College defines the first three acts of academic dishonesty as proposed by Gary Pavela\* (Kibler, et al, 1988, p. 1), the fourth is from Stony Brook University Library Research Guide\*\* (SBU Library Research Guide, 2004).

*Cheating* – Intentionally using or attempting to use work that is not your own, unauthorized materials, information or study aids in any academic exercise. The term academic exercise includes all forms of work submitted for credit or hours.

*Fabrication* – The intentional and unauthorized falsification or invention of any information for citation in an academic exercise.

*Facilitating academic dishonesty* – Intentionally or knowingly helping or attempting to help another violate a provision of the institutional code of academic integrity.

*Plagiarism* – Presenting the words or ideas of someone else as your own without proper acknowledgement of the source.

The penalties for academic dishonesty may be severe. Students are advised to contact their instructors for policy clarification for a specific class.

\* Kibler, et al, (1988) *Academic Integrity and Student Development: Legal Issues and Policy Perspectives*. North Carolina: College Administrative Publications, Inc.

\*\* *SBU Library Research Guide*, (2004). Stony Brook University Libraries, 11 February 2008.

## Procedure for Addressing Student Concerns

Should the student have a concern or a complaint — an issue believed to have an adverse effect upon the student, someone else, or a group of students — the student may work to address that problem by first bringing the issue to the attention of the person(s) against whom the complaint is directed. Should resolution not be reached at that level, the issue must be presented, within ten school days of the issue in question, to the immediate supervisor of the person against whom the complaint is directed or to a Student Services Counselor who will, in a timely fashion, direct the student to the appropriate supervisor and then to the appropriate dean. If no resolution is reached at the dean's level, the student may appeal to the proper vice president. All decisions, notification of decisions and reasons for decisions shall be in writing. This procedure shall not apply to complaints filed on the basis of discrimination and/or sexual harassment.

### Policy on Anti-Discrimination/EEO

Carl Sandburg College, an equal opportunity/affirmative action employer and educator, complies with all applicable federal, state and/or local laws prohibiting discrimination. It is the policy of the College that no person shall be discriminated against in employment, educational programs and activities, or in admissions on the basis of race, color, religious affiliation, gender (sex), sexual orientation, gender identity or expression, national orientation, ancestry, genetic information, disability, age, arrest record status, marital or family status, citizenship status (*with regard to employment*), military status, unfavorable military discharge, sexual harassment, order of protection status and status in any group protected by applicable federal, state and/or local laws.

### Student Code of Conduct

Please view the Student Code of Conduct (Procedure on Disciplinary Due Process 3.16.1.1) by following the link: Student Code of Conduct. (<http://sandburg.edu/Services/Public-Safety>)

### Student Rights and Responsibilities

Carl Sandburg College recognizes that students are citizens as well as members of an academic community. As a citizen, each student has the freedom of speech, assembly, association, the press, and the rights of petition and due process which are guaranteed by the state and federal constitutions. As a member of an academic community, students have the right and responsibility for participating in the formulation and review of all-college regulations and policies directly affecting them. Upon enrolling in the College, each student assumes an obligation to conduct himself/herself in a manner that is compatible with the College's function as an educational institution. If this obligation is neglected or ignored by the student, the College must, in the interest of fulfilling its function and meeting its total obligations, institute appropriate disciplinary action as outlined in the Carl Sandburg College Policy, Regulation and Procedure Manual.

### Student Harassment and Sexual Harassment

It is the policy of the College to maintain a learning environment that is free from harassment based on a student's sex, color, race, religion, creed, ancestry, national origin, physical or mental disability, sexual

orientation, or other protected group status. The College prohibits any and all forms of the above-mentioned harassment.

It shall be a violation of the College's policy for any "College Representative," "College Personnel," or "Third Parties" as defined by this policy to harass a student as defined herein or to tolerate harassment or sexual harassment because of a student's sex, color, race, religion, creed, ancestry, national origin, physical or mental disability, sexual orientation, or other protected group status.

## Health Services

Students who become ill or need emergency medical treatment may seek help at St. Mary Medical Center and Cottage Hospital, both in Galesburg. The College assumes no responsibility for medical treatment of students and has no facilities or professional staff for emergency treatment of ill students.

## Policy on Tobacco-Free Campus

As of July 1, 2015, smoking is prohibited on all campus property at Carl Sandburg College, both indoors and outdoors, in College-owned vehicles and in privately-owned vehicles parked on campus property. The advertising, sale or free sampling of tobacco products is also prohibited on campus property. Littering the remains of tobacco products or any other related waste product on campus property is further prohibited. (Public Act No. 098-0985)

## Crime Awareness and Public Safety

### Preface

In response to the Crime Awareness and Campus Security Act of 1990 requiring all post-secondary institutions to prepare an annual report detailing crime prevention on policy and campus crime statistics, Carl Sandburg College has issued its Crime Awareness and Campus Security Report showing data for calendar years 2013, 2014, and 2015.

This annual report features Carl Sandburg College policies regarding crime prevention issues, services performed by the college, anti-crime information available through the college, crime statistics and prescribed standards of conduct as set forth by the policies of the Board of Trustees.

### Public Safety

Carl Sandburg College provides for safety and security needs of staff, students and visitors through the public safety officers, who are on site 24 hours per day, 365 days per year.

Any person who witnesses a crime or becomes a victim of a crime should report it as soon as possible to Public Safety. For emergencies, Public Safety can be reached from any on-campus/college phone simply by calling the campus dispatch (Dial - 5499). For non-emergencies, Public Safety may be reached 24 hours a day by dialing 0 from any campus phone or 309.341.5304. Questions about safety, security or law enforcement issues should be referred to the director of public safety, located in the D-201A, or call 309.341.5325.

The director of public safety receives all incident/accident reports filed by any individual of the college community. When multiple incidents occur during the same time frame, reports and subsequent action by public safety officers are handled in order of priority: 1) personal safety; 2) property crime; 3) services.



## Clery Crime Report

Carl Sandburg College provides crime statistics involving murder, rape, robbery, aggravated assault, burglary, motor vehicle theft, arrests for liquor, stalking, domestic violence, dating violence, and drug and weapons violations in accordance with the Crime Awareness and Campus Security of 1990. All incidents of a criminal nature occurring at off-campus facilities are reported to that facility's local law enforcement agency.

Written literature on all aspects of the Crime Awareness and Campus Security Act of 1990 is available in the Office of the Director of Public Safety or online at Clery Crime Report (<http://sandburg.edu/Services/Public-Safety>). (<http://sandburg.edu/sites/default/files/files/2013%20Sandburg%20Campus%20Security%20and%20Fire%20Safety%20Report.pdf>)

NOTE: No Residence Halls on or off campus.

Any questions about the Crime Statistics or safety issues on Carl Sandburg College can be directed to the director of public safety at 309.341.5325.

## Emergency Phone System

Carl Sandburg College's Emergency Telephone System consists of twelve (12) outside emergency telephones located in parking lots across campus and fifteen (15) inside emergency telephones located in the College buildings across campus.

All emergency telephones on campus are connected to the College dispatch center. The dispatch center is staffed 24 hours a day, Monday through Sunday.

If the caller is unable to respond verbally, the boxes are a one-button system enhanced by location ID. All emergency telephones will ring directly to the Campus Dispatch Center.

This system is for emergencies only or when you need Public Safety assistance. This would include medical emergencies, accidents, reporting a fire, or request for escorting of students. This system is not for general information on campus activities or directions. Every classroom has an in-house telephone that can be used to reach the Galesburg Police Department by dialing 911; any situation that requires a call to the Galesburg Police Department should be reported to Carl Sandburg College's Public Safety at 5499.

Any abuse or violation of the Emergency Telephone System will lead to disciplinary action, arrest, or prosecution.

## Facility Access

The facilities of this college are provided by the State of Illinois and the Carl Sandburg College District to provide a service to this college community. The service includes not only the instructional program, but a public service beyond that normally called instruction. The facilities of the college may be used by other groups and organizations for such purposes that will extend and enhance the general welfare of the total community.

Carl Sandburg College's Galesburg campus is open from 8:00 a.m. to 9:00 p.m. Monday through Thursday and 8:00 a.m. to 6:00 p.m. Friday, excluding declared holidays. During closed periods, all exterior doors are locked to prohibit unauthorized entry. Faculty and staff may enter after hours by making prior arrangements with their supervisor and/or Public Safety. Student access to facilities after hours is prohibited unless they

have the expressed permission of a college employee and Public Safety has been notified.

Public Safety utilizes motor and foot patrol as well as two-way radio/telephone communications to monitor the premises both inside and out. Public Safety also utilizes CCTV across campus, and they are monitored 24/7, 365 days a year.

## Parking Regulations

The College has free large parking lots. No parking is allowed on the sides of the entry roads, in fire lanes, or on lawn areas. Tickets will also be issued for taking up two parking spaces and for parking over the lines taking up two parking spaces. Tickets will be issued for violation of these parking rules. In addition, each parking lot has parking spaces designated for handicapped parking. Unauthorized use of these parking places will result in a \$250 fine in accordance with paragraph 11-1301.3 of the Illinois Vehicle Code.

The Risk Management Committee of the College has been charged with the responsibility of serving as the Appeals Board for persons issued a parking violation. This committee meets each month and its membership is comprised of students, faculty and staff. Parking violation fines must be paid within ten (10) days. Appeals may be made only AFTER the fine has been paid. Appeal forms may be picked up in the Public Safety Office (D201).

## Enforcement Policies

The Board of Trustees of Community College District #518 has employed Public Safety personnel which report to the Director of Public Safety. Their primary purpose is to monitor and maintain the security of college assets and personnel by observing, reporting and then acting within the framework of established procedures.

In this capacity, public safety officers facilitate conservation of the peace by working harmoniously with all local law enforcement agencies. In the event of classroom/student and/or other college-business related emergency, college personnel are instructed to remove themselves from dangerous situations. If the immediacy of the situation requires, college employees will call the proper emergency facility by dialing 911 from the nearest public phone or 911 from the nearest college phone.

Public safety officers do not possess any of the powers of sheriffs in counties or policemen in cities except the Director of Public Safety and the Coordinator of Public Safety. Carl Sandburg College resides within the city limits of the City of Galesburg and, therefore, refers all matters appropriate to their jurisdiction/authority to the Galesburg Police Department. Public safety officers are not authorized to carry or use weapons in the performance of their duties except the Director of Public Safety and the Coordinator of Public Safety.

## Information Programs

Carl Sandburg College endeavors to reduce the likelihood and opportunity for unsafe activity on campus through a proactive risk management program involving all campus constituencies.

The College maintains a substance abuse awareness program to inform students and employees about the dangers of substance/alcohol abuse, college policy of maintaining a substance/alcohol-free environment, available abuse counseling and rehabilitation assistance programs, and the penalties that may be imposed upon students and employees for violations occurring in the college. The College also maintains a sexual assault prevention and awareness program to inform students and employees on resources available to victims, bystander awareness

and reporting, and how a victim can file a report to our Public Safety department and/or local law enforcement.

Students and employees are encouraged to be responsible for their own security.

# CORPORATE AND LEISURE COLLEGE

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## Corporate and Leisure College

The Corporate and Leisure College of Carl Sandburg College provides workshops, classes, educational day trips, and events to inspire learning that enriches lives both professionally and personally. Programs are designed to attract everyone with a desire to learn, regardless of previous academic experience or career path. The following services promote life-long learning from children to adults. Current course schedules can be viewed online at [www.sandburg.edu/corp-leisure-college](http://www.sandburg.edu/corp-leisure-college).

### Corporate College

- Professional Development
- Customized Training

## Corporate College

The Carl Sandburg College Corporate College serves as the primary contact for all inquiries from the business and industrial community. The Corporate College staff will assist businesses of any size, analyze their needs, and will arrange appropriate college services, i.e., credit classes, non-credit classes, seminars, workshops, on-site training programs or customized training.

The Corporate College is located at the Center for Manufacturing Excellence (CME) on the main campus. Professional development workshops may be held at the college or at the company's location depending on their needs. Corporate College business classes are also available through the Carthage campus, respectively.

### Leisure College

- Personal Enrichment
- Kids on Campus

## Leisure College

The Leisure College classes are developed based on input from community members regarding their interest and needs. Classes are held at various locations throughout the district and include non-credit general interest classes for personal growth and enjoyment. Classes in the following areas may be offered: history, art, computers, gardening, crafts, cooking, fitness and more. Educational day trips are also offered throughout the year.

Program offerings are developed and advertised through the Corporate and Leisure schedule. Detailed class information is available online at [www.sandburg.edu/corp-leisure-college](http://www.sandburg.edu/corp-leisure-college). Classes are designed for various age and interest groups. Suggestions and ideas are always encouraged and should be given to the Leisure College staff.

## Kids on Campus

A summer program for area youth is offered through the Carthage campus. Topics are designed to be interesting, challenging, and age-appropriate for elementary and middle school youth. Summer program flyers are distributed to area schools in April or May each year. Additional information for youth programs is listed online at [www.sandburg.edu/corp-leisure-college](http://www.sandburg.edu/corp-leisure-college).

### For More Information, Contact

Director of Corporate and Leisure College  
Galesburg Main Campus  
Center for Manufacturing Excellence  
2051 Tom L. Wilson Blvd.  
Galesburg, IL 61401  
309.341.5330

# THE BRANCH CAMPUS - CARTHAGE, ILLINOIS

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The Branch Campus is located on the north edge of Carthage just off Highway 94. This satellite location serves the communities, businesses, organizations and school districts in Hancock County and portions of McDonough and Henderson Counties. The full-service campus provides baccalaureate, career and community education programs. Some popular career and technical programs offered at the Branch Campus include nursing assistant, criminal justice, accounting, business administration, and office occupations programs. High school students take advantage of dual credit coursework offered at the Branch Campus and/or at their high schools.

Students receive individualized attention for academic advising, career counseling, and financial aid planning as well as tutoring and instructional support in a relaxed and friendly educational atmosphere. Students also have access to the resources in the library, computer labs, a wellness room for exercise, and lounges for study and relaxation between classes.

## **For More Information Contact**

Branch Campus  
305 Sandburg Dr.  
Carthage, IL 62321  
217.357.3129

## **Corporate and Leisure College**

Corporate and Leisure College opportunities are also available at the Branch Campus in Carthage. Offerings include customized classes for business and industry, courses for personal growth and interests, and our popular Kids on Campus program each summer. Suggestions for programming are always welcome from the community.

## **For More Information Contact**

Coordinator of Branch Campus Support Services  
305 Sandburg Dr.  
Carthage, IL 62321  
217.357.3129, ext. 7243

# DEGREES, PROGRAMS, AND CERTIFICATES

## University Studies

A wide variety of programs leading to degrees and certificates is offered by the College to serve a variety of student needs. Students needing assistance in selecting an appropriate program for their career goals are advised to meet with a counselor.

### Associate in Arts, Associate in Science, Associate in Science (Agriculture), Associate in Fine Arts (Emphasis in Art) (Transfer Degrees)

The Associate in Arts (AA), Associate in Science (AS), Associate in Science (Agriculture), or Associate in Fine Arts (AFA) degree is for those students planning to transfer to a senior college or university to earn a Baccalaureate degree.

#### Transfer Information

Associate and baccalaureate degree-granting institutions are equal partners in providing the first two years of baccalaureate degree programs in Illinois. While each institution is ultimately responsible for the quality of the programs it provides, both associate and baccalaureate degree-granting institutions are expected to work together to assure that their lower-division baccalaureate programs are comparable in scope, quality, and intellectual rigor.

Any student admitted in transfer to an Illinois baccalaureate degree-granting institution should be granted standing comparable to current students who have completed the same number of baccalaureate-level credit hours and should be able to progress toward baccalaureate degree completion at a rate comparable to that of students who entered the baccalaureate institution as first-time freshmen. To assure students of comparable treatment, it is expected that:

1. Students admitted in transfer who have earned an Associate in Arts or an Associate in Science degree from a regionally accredited Illinois community or junior college whose general education requirement for the degree incorporates the Illinois General Education Core Curriculum will have met the receiving institution's all-campus, lower-division general education requirement for the baccalaureate degree (or or a second associate degree). A receiving institution may, however, require admitted transfer students to complete an institution-wide and/or mission-related graduation requirement that is beyond the scope of the Illinois General Education Core Curriculum.
2. Students admitted in transfer who have satisfactorily completed the Illinois General Education Core Curriculum at any regionally accredited Illinois college or university prior to transfer should be granted credit in lieu of the receiving institution's all-campus, lower-division general education requirement for an associate or baccalaureate degree. A receiving institution may, however, require admitted transfer students to complete an institution-wide and/or mission-related graduation requirement that is beyond the scope of the Illinois General Education Core Curriculum.
3. Students admitted in transfer who have satisfactorily completed courses within the Illinois General Education Core Curriculum at a regionally accredited Illinois college or university should be granted credit towards fulfilling the receiving institution's comparable all-campus, lower-division general education requirement.
4. Students admitted in transfer who have met program entry requirements and have satisfactorily completed courses described in an Illinois Articulation Initiative Baccalaureate Major Curriculum Recommendation at a regionally accredited Illinois college or university should be granted credit towards fulfilling the receiving institution's comparable lower-division requirements for that specific major. Where admission is competitive, completion of a Baccalaureate Major Recommendation does not guarantee admission.

## AAS and Certificate Programs

Career, Technical, & Health Education (CTHE) programs are available as a Certificate, which may be completed in as little as nine months, or as an Associate in Applied Science degree, which may be completed in as little as two years. This specialized approach to education results in graduates who enter the job market with highly marketable skills and backgrounds. The courses that you take in our CTHE programs were selected based upon recommendations from professionals working in specific CTHE fields.

## Statement on General Education

The Higher Learning Commission believes that quality undergraduate higher education involves breadth as well as depth of study. According to the HLC commission statement, "General education is intended to impart common knowledge and intellectual concepts to students and to develop in them the skills and attitudes that an organization's faculty believe every educated person should possess." A general education curriculum provides an opportunity for students to acquire some breadth of knowledge, proficiency in skills that are deemed to be commonly shared by those receiving a college education, and allow students to gain exposure to and competence in pursuit of intellectual inquiry and the examination of personal, social, and civic values.

At Carl Sandburg College we are committed to the centrality of general education by including an appropriate component of general education coursework in all of the Associate in Applied Science degrees as well as many of the certificates. These courses are identified in the catalog description as a general education core or an elective.

#### NOTE:

Though some CTHE programs will transfer to specific four-year institutions, most will not.

To find out the transferability of a specific CTHE program, talk with your advisor.

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# AA Degree Requirements

## Associate in Arts Degree

<b>I. General Education Requirements</b>	<b>37</b>
<b>A. Communications</b>	<b>9</b>
ENG.101	Freshman Composition 1 *
ENG.102	Freshman Composition 2 **
SPE.120	Introduction to Public Speaking
<b>B. Humanities/Fine Arts</b>	<b>9</b>
Select one course from Fine Arts:	
ART.111	Art Appreciation
ART.112	Art: Prehistoric to 1400
ART.113	Art: 1400 to Present Day
MUS.100	Music in the Western World
MUS.101	Introduction to American Music
MUS.105	Non-Western Music
THE.110	Theatre Arts Appreciation
THE.111	Theatre History
Select one course from Humanities:	
ENG.160	Introduction to Fiction
ENG.170	Introduction to Drama
ENG.180	Introduction to Poetry
ENG.221	American Literature 1
ENG.222	American Literature 2
ENG.231	British Literature 1
ENG.232	British Literature 2
ENG.240	Women and Literature
MUS.205	Music and Society
PHL.100	Logic
PHL.101	Introduction to Philosophy
PHL.102	Ethics
Select three additional hours from either Humanities or Fine Arts	
<b>C. Social Sciences</b>	<b>9</b>
Select three courses from the following:	
(Must select one or more courses from 3 subject areas)	
ECO.101	Introduction to Economics
ECO.201	Principles of Macro Economics
ECO.202	Principles of Micro Economics
GEO.100	Human Geography
GEO.110	World Regional Geography
HIS.105	American History to 1877
HIS.106	American Hist From 1877
HIS.125	Western Civilization 1
HIS.126	Western Civilization 2
HIS.285	History of Africa: 1500 to Present
POS.122	American Government & Politics
POS.223	State & Local Government
POS.228	International Relations
POS.267	Comparative Government
PSY.101	Introduction to Psychology
PSY.204	Social Psychology
PSY.206	The Social Psychology of Aging

PSY.221	Child Psychology	
PSY.265	Developmental Psychology	
SOC.101	Introduction to Sociology	
SOC.102	Contemporary Social Problems	
SOC.103	Marriage and the Family	
SOC.105	Intro to Cultural Anthropology	
SOC.201	Introduction to Anthropology	
SOC.203	Introduction to Diversity	
SOC.260	Gender & Society	
SSC.110	Global Issues	
<b>D. Science/Mathematics</b>		<b>10</b>
<b>Science ***</b>		<b>7</b>
Select one course from Life Sciences:		
BIO.101	General Biology	
BIO.102	General Zoology	
BIO.103	General Botany	
BIO.120	Environmental Science	
BIO.205	Human Biology	
Select one course from Physical Sciences:		
CHM.100	Concepts of Chemistry	
CHM.110	General Chemistry 1	
ESC.100	Introduction to Earth Science	
PHY.130	The Physical Universe	
PHY.151	General Physics 1	
<b>Math</b>		<b>3</b>
Select one course from the following:		
MAT.109	Concepts of Mathematics	
MAT.112	Math for Elementary Teaching 2	
MAT.131	Finite Mathematics	
MAT.132	Calculus for Business Or Social Science	
MAT.210	Statistics	
MAT.240	Calculus With Analytic Geometry 1	
MAT.241	Calculus With Analytic Geometry 2	
MAT.242	Calculus With Analytic Geometry 3	
SSC.120	Statistics for Social Science (One or the other, but not both.)	
	or MAT.110 General Education Statistics	
<b>II. Electives</b>		<b>21</b>
<b>III. Other Requirements</b>		<b>3</b>
Human Relations Course – Select one course from the following:		
ART.111	Art Appreciation	
ART.113	Art: 1400 to Present Day	
ENG.160	Introduction to Fiction	
ENG.170	Introduction to Drama	
ENG.180	Introduction to Poetry	
ENG.221	American Literature 1	
ENG.222	American Literature 2	
ENG.250	African American Literature	
GEO.100	Human Geography	
GEO.110	World Regional Geography	
HIS.125	Western Civilization 1	
HIS.126	Western Civilization 2	

HIS.285	History of Africa: 1500 to Present	
MUS.100	Music in the Western World	
MUS.101	Introduction to American Music	
MUS.105	Non-Western Music	
MUS.205	Music and Society	
PHL.102	Ethics	
PHL.103	Biomedical Ethics	
PSY.204	Social Psychology	
SOC.101	Introduction to Sociology	
SOC.102	Contemporary Social Problems	
SOC.105	Intro to Cultural Anthropology	
SOC.201	Introduction to Anthropology	
SOC.203	Introduction to Diversity	
SOC.260	Gender & Society	
SPE.110	Interpersonal Communication	
SSC.110	Global Issues	
THE.110	Theatre Arts Appreciation	

Residency Requirement – (Complete 15 semester hours at Sandburg)

GPA Required for Graduation – 2.0 on 4.0 scale

**Total Hours Required For Degree** 61

\* Students must pass with a grade of "C" or better and pass the exit examination.

\*\* Students must pass with a grade of "C" or better.

\*\*\* at least one course must be a lab course

## AS Degree Requirements

### Associate in Science Degree

**I. General Education Requirements** 39

**A. Communications** 9

ENG.101	Freshman Composition 1 *	
ENG.102	Freshman Composition 2 **	
SPE.120	Introduction to Public Speaking	

**B. Humanities** 6

Select one course from Fine Arts:

ART.111	Art Appreciation	
ART.112	Art: Prehistoric to 1400	
ART.113	Art: 1400 to Present Day	
MUS.100	Music in the Western World	
MUS.101	Introduction to American Music	
MUS.105	Non-Western Music	
THE.110	Theatre Arts Appreciation	
THE.111	Theatre History	

Select one course from Humanities:

ENG.160	Introduction to Fiction	
ENG.170	Introduction to Drama	
ENG.180	Introduction to Poetry	
ENG.221	American Literature 1	
ENG.222	American Literature 2	
ENG.231	British Literature 1	
ENG.232	British Literature 2	

ENG.240	Women and Literature	
MUS.205	Music and Society	
PHL.100	Logic	
PHL.101	Introduction to Philosophy	
PHL.102	Ethics	
C. Social Sciences		6
Select two courses from the following:		
(Must select one or more courses from 2 subject areas)		
ECO.101	Introduction to Economics	
ECO.201	Principles of Macro Economics	
ECO.202	Principles of Micro Economics	
GEO.100	Human Geography	
GEO.110	World Regional Geography	
HIS.105	American History to 1877	
HIS.106	American Hist From 1877	
HIS.125	Western Civilization 1	
HIS.126	Western Civilization 2	
HIS.285	History of Africa: 1500 to Present	
POS.122	American Government & Politics	
POS.223	State & Local Government	
POS.228	International Relations	
POS.267	Comparative Government	
PSY.101	Introduction to Psychology	
PSY.204	Social Psychology	
PSY.206	The Social Psychology of Aging	
PSY.221	Child Psychology	
PSY.265	Developmental Psychology	
SOC.101	Introduction to Sociology	
SOC.102	Contemporary Social Problems	
SOC.103	Marriage and the Family	
SOC.105	Intro to Cultural Anthropology	
SOC.201	Introduction to Anthropology	
SOC.203	Introduction to Diversity	
SOC.260	Gender & Society	
SSC.110	Global Issues	
D. Science/Mathematics		18
Science ***		9
Select one course from Life Sciences:		
BIO.101	General Biology	
BIO.102	General Zoology	
BIO.103	General Botany	
BIO.120	Environmental Science	
BIO.205	Human Biology	
Select one course from Physical Sciences:		
CHM.100	Concepts of Chemistry	
CHM.110	General Chemistry 1	
ESC.100	Introduction to Earth Science	
PHY.130	The Physical Universe	
PHY.151	General Physics 1	
Math		9
Select three courses from the following:		
MAT.109	Concepts of Mathematics	
MAT.112	Math for Elementary Teaching 2	
MAT.131	Finite Mathematics	
MAT.132	Calculus for Business Or Social Science	
MAT.210	Statistics	
MAT.240	Calculus With Analytic Geometry 1	
MAT.241	Calculus With Analytic Geometry 2	
MAT.242	Calculus With Analytic Geometry 3	
SSC.120	Statistics for Social Science (One or the other, but not both.)	
or MAT.110 General Education Statistics		
<b>II. Electives</b>		<b>19</b>
<b>III. Other Requirements</b>		<b>3</b>
Human Relations Course – Select one course from the following:		
ART.111	Art Appreciation	
ART.113	Art: 1400 to Present Day	
ENG.160	Introduction to Fiction	
ENG.170	Introduction to Drama	
ENG.180	Introduction to Poetry	
ENG.221	American Literature 1	
ENG.222	American Literature 2	
ENG.250	African American Literature	
GEO.100	Human Geography	
GEO.110	World Regional Geography	
HIS.125	Western Civilization 1	
HIS.126	Western Civilization 2	
HIS.285	History of Africa: 1500 to Present	
MUS.100	Music in the Western World	
MUS.101	Introduction to American Music	
MUS.105	Non-Western Music	
MUS.205	Music and Society	
PHL.102	Ethics	
PHL.103	Biomedical Ethics	
PSY.204	Social Psychology	
SOC.101	Introduction to Sociology	
SOC.102	Contemporary Social Problems	
SOC.105	Intro to Cultural Anthropology	
SOC.201	Introduction to Anthropology	
SOC.203	Introduction to Diversity	
SOC.260	Gender & Society	
SPE.110	Interpersonal Communication	
SSC.110	Global Issues	
THE.110	Theatre Arts Appreciation	
Residency Requirement – (Complete 15 semester hours at Sandburg)		
GPA Required for Graduation – 2.0 on 4.0 scale		
<b>Total Hours Required For Degree</b>		<b>61</b>
* Students must pass with a grade of "C" or better and pass the exit examination.		
** Students must pass with a grade of "C" or better.		
*** at least one course must be a lab course		

# ASA Degree Requirements

## Associate in Science Degree (Emphasis in Agriculture)

The following curriculum is designed to satisfy the basic lower division requirements for agriculture majors at most senior institutions. The agriculture classes listed below are offered in partnership with the University of Illinois-Urbana/Champaign, through a blend of Internet-based instruction and specially scheduled lab days to complete the agriculture transfer course requirements. Students enrolling in this curriculum are urged to meet with an advisor at the senior institution to review course selections and transfer plans.

Transfer Program between Carl Sandburg College and the College of Agricultural, Consumer and Environmental Sciences (ACES) University of Illinois at Urbana-Champaign.

**General Information** This Curriculum Guide outlines a set of required and recommended courses that may guide students at Carl Sandburg College interested in completing a Bachelor's Degree at the College of Agricultural, Consumer and Environmental Sciences (ACES) at the University of Illinois at Urbana-Champaign.

The majors offered in the College of ACES include: Agricultural and Consumer Economics, Agricultural Leadership and Science Education, Animal Sciences, Crop Sciences, Food Sciences and Human Nutrition, Horticulture, Human Development and Family Studies, Natural Resources and Environmental Sciences, Technical Systems Management.

Descriptions of each of these majors and their concentrations may be found at [www.aces.illinois.edu](http://www.aces.illinois.edu) (<http://www.aces.illinois.edu>). Specific recommendations for Carl Sandburg College courses that will meet the requirements for each of the majors are listed below.

To learn more about the transferability of courses not on this list, please use the U Select Website [www.transfer.org](http://www.transfer.org) (<http://www.transfer.org>) in conjunction with the University of Illinois General Education course listing (<https://courses.illinois.edu/gened/DEFAULT/DEFAULT>) <https://courses.illinois.edu/gened/> or contact the ACES Academic Programs Office (contact info below).

Students completing the prescribed course sequences at Carl Sandburg College, meeting the stated GPA requirement, and submission of a full application with supporting documentation, will be admitted to the College of Agricultural, Consumer and Environmental Sciences (ACES) at the University of Illinois. Acceptance into a specific major and concentration will be based on the individual student's meeting of the requirements, conditions and considerations listed for that program, including space in that major or concentration.

### I. Agriculture Requirements 12

Select three courses from the following:

AGR.121	Introduction to Animal Science
AGR.131	Introduction to Crop Science
AGR.151	Introductory Soil Science
AGR.181	Introduction to Horticultural Science

### II. General Education Requirements 41

#### A. Communications 9

ENG.101	Freshman Composition 1 *
ENG.102	Freshman Composition 2 **

SPE.120	Introduction to Public Speaking	
<b>B. Humanities</b>		<b>9</b>
Select one course from Fine Arts:		
ART.111	Art Appreciation	
ART.112	Art: Prehistoric to 1400	
ART.113	Art: 1400 to Present Day	
MUS.100	Music in the Western World	
MUS.101	Introduction to American Music	
MUS.105	Non-Western Music	
THE.110	Theatre Arts Appreciation	
THE.111	Theatre History	
Select one course from Humanities:		
ENG.160	Introduction to Fiction	
ENG.170	Introduction to Drama	
ENG.180	Introduction to Poetry	
ENG.221	American Literature 1	
ENG.222	American Literature 2	
ENG.231	British Literature 1	
ENG.232	British Literature 2	
ENG.240	Women and Literature	
MUS.205	Music and Society	
PHL.100	Logic	
PHL.101	Introduction to Philosophy	
PHL.102	Ethics	
Select three additional hours from either Humanities or Fine Arts		
<b>C. Social Sciences</b>		<b>9</b>
Select three courses from the following:		
(Must select one or more courses from 3 subject areas)		
ECO.101	Introduction to Economics	
ECO.201	Principles of Macro Economics	
ECO.202	Principles of Micro Economics	
GEO.100	Human Geography	
GEO.110	World Regional Geography	
HIS.105	American History to 1877	
HIS.106	American Hist From 1877	
HIS.125	Western Civilization 1	
HIS.126	Western Civilization 2	
HIS.285	History of Africa: 1500 to Present	
POS.122	American Government & Politics	
POS.223	State & Local Government	
POS.228	International Relations	
POS.267	Comparative Government	
PSY.101	Introduction to Psychology	
PSY.204	Social Psychology	
PSY.206	The Social Psychology of Aging	
PSY.221	Child Psychology	
PSY.265	Developmental Psychology	
SOC.101	Introduction to Sociology	
SOC.102	Contemporary Social Problems	
SOC.103	Marriage and the Family	
SOC.105	Intro to Cultural Anthropology	
SOC.201	Introduction to Anthropology	

SOC.203	Introduction to Diversity	
SOC.260	Gender & Society	
D. Science/Mathematics		14
Science ***		8
Select one course from Life Sciences:		
BIO.101	General Biology	
BIO.102	General Zoology	
BIO.103	General Botany	
BIO.120	Environmental Science	
BIO.205	Human Biology	
Select one course from Physical Sciences:		
CHM.100	Concepts of Chemistry	
CHM.110	General Chemistry 1	
PHY.130	The Physical Universe	
PHY.151	General Physics 1 (MATH)	
Math		6
Select two courses from the following:		
MAT.109	Concepts of Mathematics (MATH)	
MAT.112	Math for Elementary Teaching 2	
MAT.131	Finite Mathematics	
MAT.132	Calculus for Business Or Social Science	
MAT.210	Statistics	
MAT.240	Calculus With Analytic Geometry 1	
MAT.241	Calculus With Analytic Geometry 2	
MAT.242	Calculus With Analytic Geometry 3	
SSC.120	Statistics for Social Science (One or the other, but not both)	
	or MAT.110 General Education Statistics	
<b>III. Electives</b>		<b>8</b>
Choose 8 credit hours from any elective area. ****		
Credit hours may come from additional agriculture major courses.		
<b>IV. Other Requirements</b>		<b>3</b>
Human Relations Course – Select one course from the following:		
ART.111	Art Appreciation	
ART.113	Art: 1400 to Present Day	
ENG.160	Introduction to Fiction	
ENG.170	Introduction to Drama	
ENG.180	Introduction to Poetry	
ENG.221	American Literature 1	
ENG.222	American Literature 2	
ENG.250	African American Literature	
GEO.100	Human Geography	
GEO.110	World Regional Geography	
HIS.125	Western Civilization 1	
HIS.126	Western Civilization 2	
HIS.285	History of Africa: 1500 to Present	
MUS.100	Music in the Western World	
MUS.101	Introduction to American Music	
MUS.105	Non-Western Music	
MUS.205	Music and Society	
PHL.102	Ethics	
PHL.103	Biomedical Ethics	

PSY.204	Social Psychology	
SOC.101	Introduction to Sociology	
SOC.102	Contemporary Social Problems	
SOC.105	Intro to Cultural Anthropology	
SOC.201	Introduction to Anthropology	
SOC.203	Introduction to Diversity	
SOC.260	Gender & Society	
SPE.110	Interpersonal Communication	
THE.110	Theatre Arts Appreciation	
Residency Requirement – (Complete 15 semester hours at Sandburg)		
GPA Required for Graduation – 2.0 on 4.0 scale		
<b>Minimum Credit Hours For Completion</b>		<b>64</b>

\* Student must pass with a grade of "C" or better and pass the exit examination.

\*\* Students must pass with a grade of "C" or better.

\*\*\* At least one course must be a lab course.

\*\*\*\* ICT.110 Computer Software Applications is recommended.

Additional UIUC Requirements:

- All transfer applicants must have completed either three years of one language other than English in high school or through the second level (2 semesters) of one language other than English in college prior to the desired term of entry.
- The college's graduation requirement is satisfied by completion through the third year of one language other than English in high school or through the third level (3 semesters) of one language other than English in college.
- If General Chemistry II is required for degree completion, it is strongly recommended that CHM.120 General Chemistry 2 be completed prior to transfer.

## AFA Degree Requirements

### Associate in Fine Arts Degree (Emphasis in Art)

<b>I. General Education Requirements</b>		<b>31</b>
A. Communications		9
ENG.101	Freshman Composition 1 *	
ENG.102	Freshman Composition 2 **	
SPE.120	Introduction to Public Speaking	
B. Humanities		6
Select one or more courses from two subject areas – no fine arts courses applicable:		
ENG.160	Introduction to Fiction	
ENG.170	Introduction to Drama	
ENG.180	Introduction to Poetry	
ENG.221	American Literature 1	
ENG.222	American Literature 2	
ENG.231	British Literature 1	
ENG.232	British Literature 2	
ENG.240	Women and Literature	
PHL.100	Logic	



PHL.101	Introduction to Philosophy	
PHL.102	Ethics	
<b>C. Social Sciences</b>		<b>6</b>
Select one or more courses from at least two different disciplines:		
ECO.101	Introduction to Economics	
ECO.201	Principles of Macro Economics	
ECO.202	Principles of Micro Economics	
GEO.100	Human Geography	
GEO.110	World Regional Geography	
HIS.105	American History to 1877	
HIS.106	American Hist From 1877	
HIS.125	Western Civilization 1	
HIS.126	Western Civilization 2	
HIS.285	History of Africa: 1500 to Present	
POS.122	American Government & Politics	
POS.223	State & Local Government	
POS.228	International Relations	
POS.267	Comparative Government	
PSY.101	Introduction to Psychology	
PSY.204	Social Psychology	
PSY.206	The Social Psychology of Aging	
PSY.265	Developmental Psychology	
SOC.101	Introduction to Sociology	
SOC.102	Contemporary Social Problems	
SOC.103	Marriage and the Family	
SOC.105	Intro to Cultural Anthropology	
SOC.201	Introduction to Anthropology	
SOC.203	Introduction to Diversity	
SOC.260	Gender & Society	
SSC.110	Global Issues	
<b>D. Science/Mathematics</b>		<b>10</b>
<b>Science ***</b>		<b>7</b>
Select one course from Life Sciences, one course from Physical Sciences, and at least one laboratory course:		
BIO.101	General Biology	
BIO.102	General Zoology	
CHM.100	Concepts of Chemistry	
CHM.110	General Chemistry 1	
PHY.130	The Physical Universe	
PHY.151	General Physics 1	
<b>Mathematics</b>		<b>3</b>
MAT.109	Concepts of Mathematics	
MAT.112	Math for Elementary Teaching 2	
MAT.131	Finite Mathematics	
MAT.132	Calculus for Business Or Social Science	
MAT.210	Statistics	
MAT.240	Calculus With Analytic Geometry 1	
MAT.241	Calculus With Analytic Geometry 2	
MAT.242	Calculus With Analytic Geometry 3	
SSC.120	Statistics for Social Science (One or the other, but not both)	
	or MAT.110 General Education Statistics	

<b>II. Art</b>		<b>33</b>
<b>Core Art Courses</b>		<b>21</b>
ART.112	Art: Prehistoric to 1400	
ART.113	Art: 1400 to Present Day	
ART.121	Two Dimensional Design	
ART.122	Three Dimensional Design	
ART.131	Drawing 1	
ART.132	Drawing 2	
ART.133	Life Drawing	
<b>Elective Art Courses</b>		<b>12</b>
ART.141	Painting	
ART.142	Advanced Painting	
ART.151	Printmaking	
ART.162	Digital Photography	
ART.163	Digital Photography II	
ART.171	Ceramics 1	
ART.172	Ceramics 2	
ART.193	Computer Art	
<b>III. Other Requirements</b>		
GPA Required for Graduation – 2.0 on 4.0 scale		
Residency Requirement – (Complete 15 semester hours at Sandburg)		
<b>Total Hours Required For Degree</b>		<b>64</b>

\* Students must pass with a grade of "C" or better and pass the proficiency examination.

\*\* Students must pass with a grade of "C" or better.

\*\*\* One course must be a lab course.

## Associate in General Studies (Individually-Designed Degrees)

This curriculum is designed for students who desire to pursue a two-year program. It is not designed to serve as a degree for transfer.

Both baccalaureate and career, technical and health education courses may be taken as a part of this program.

Graduation requirements for the Associate in General Studies degree are listed below. Review the course descriptions to determine which courses count toward the various requirements.

## Associate in General Studies Degree

<b>I. General Studies Requirements</b>		<b>33</b>
<b>A. Communications</b>		<b>6</b>
ENG.101	Freshman Composition 1 *	
SPE.120	Introduction to Public Speaking	
<b>B. Humanities</b>		<b>9</b>
Art, Music, Philosophy, Literature, Foreign Language, Creative Writing, Theatre		
<b>C. Social Sciences</b>		<b>9</b>
History, Political Science, Geography, Sociology, Psychology, Economics, Education		
<b>D. Science/Mathematics</b>		<b>9</b>

(Must complete courses in both science and mathematics for a total of 9 hours.)

Science

Math

**II. Electives** 28

(May include both baccalaureate & career, technical and health education credits)

**III. Other**

GPA Required for Graduation — 2.0 on 4.0 scale

Residency Requirement — (Complete 15 semester credit hours at Sandburg)

**Total Hours Required For Graduation** 61

\* Students must pass with a grade of "C" or better and pass the exit examination.

## Accounting

<http://www.sandburg.edu/Academics/Degree-Certificates/Accounting/index.html>

## Certificate

This program is designed for the student who desires to work as an assistant to an accountant or accounting professional. Persons who take positions as accounting assistants need competence in the theory and practice of areas such as accounts receivable, accounts payable, payroll, merchandise accounting and fixed asset accounting. Standard record-keeping practices are also required. Satisfactory completion of this certificate program will provide an appropriate background for a job-entry level position as a bookkeeper or an assistant in an accounting department.

## Associate in Applied Science

This program is designed for the student who desires to prepare for employment in the accounting function of many different types of organizations. Manufacturing, distribution, marketing and sales, governmental, and non-profit organizations all require competent accounting personnel to keep accurate records and provide analysis of the effect of management decisions on day-to-day business activities. Satisfactory completion of this curriculum will provide competence for positions in accounting.

### Admission to the Program: Open First-Time Enrollees

1. Complete an application for admission and, if desired, apply for financial aid.
2. Send an official high school transcript or GED score report to the Admissions and Records Office.
3. Complete the placement exam.
4. Meet with an advisor/counselor to select classes and complete the registration process

### Department of Social & Business Sciences

2400 Tom L. Wilson Blvd.  
Galesburg, IL 61401  
Phone: 309.341.5299

### For Additional Information Contact:

The Welcome Center  
Phone: 309.345.3500

welcomecenter@sandburg.edu

### For Graduation Requirements:

See the graduation policies and procedures ([http://catalog.sandburg.edu/academicinformation/#graduation\\_policies\\_and\\_procedures](http://catalog.sandburg.edu/academicinformation/#graduation_policies_and_procedures)) page for details.

## Certificate

Course	Title	Semester Hours
<b>First Year</b>		
<b>Summer Session</b>		
AOP.101	Keyboarding Formatting 1	3
or BOC.107	or Tech Skills for Business Environment	
<b>Fall Semester</b>		
ACC.101	Principles of Financial Accounting	3
BUS.100	Introduction to Business	3
BOC.100	Business Mathematics	3
or	or Finite Mathematics	
MAT.131		
ENG.101	Freshman Composition 1	3
ICT.110	Computer Software Applications	3
<b>Spring Semester</b>		
ACC.102	Principles of Managerial Accounting	3
BOC.101	Business Records Management	2
ACC.203	Accounting Software	3
or ACC.208	or Spreadsheet Applications for Business	
Directed Elective		6
Total Semester Hours		32

### Directed Electives

Select two of the following:

ACC.205	Cost Accounting	3
ACC.206	Federal Income Tax	3
ACC.207	Payroll Accounting	3

## Associate in Applied Science

Course	Title	Semester Hours
<b>First Year</b>		
<b>Fall Semester</b>		
ACC.101	Principles of Financial Accounting	3
AOP.101	Keyboarding Formatting 1	3
or BOC.107	or Tech Skills for Business Environment	
BOC.100	Business Mathematics	3
or	or Finite Mathematics	
MAT.131		
BUS.100	Introduction to Business	3
ENG.101	Freshman Composition 1	3
<b>Spring Semester</b>		
ACC.102	Principles of Managerial Accounting	3
ACC.203	Accounting Software	3
SPE.120	Introduction to Public Speaking	3
ICT.110	Computer Software Applications	3

BOC.104	Mathematics of Finance	3
or	or Calculus for Business Or Social Science	
MAT.132		

**Second Year****Fall Semester**

ACC.201	Intermediate Accounting 1	4
ACC.208	Spreadsheet Applications for Business	3
BLA.201	Legal Environment of Business	3
or BLA.202	or Business Law	
PSY.204	Social Psychology	3
BOC.102	Business Communications	3

**Spring Semester**

ACC.202	Intermediate Accounting 2	4
ACC.205	Cost Accounting	3
ACC.206	Federal Income Tax	3
ACC.207	Payroll Accounting	3
ECO.101	Introduction to Economics	3
or ECO.201	or Principles of Macro Economics	
or ECO.202	or Principles of Micro Economics	

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Total Semester Hours		62
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**Johnson, Jill L**

assistant professor psychology  
associate dean of social & business sciences

**Williams, Keith E**

instructor, economics/business administration  
coordinator, business programs

**Fox, Amber**

instructor, accounting

## Administrative Office Professions

### Administrative Office Assistant Certificate

<http://www.sandburg.edu/Academics/Degree-Certificates/Administrative-Office-Professions/index.html>

This curriculum prepares students with the skills needed for office work, including keyboarding, records management, communications, computers and other office technology. Graduates are qualified for entry-level positions in a business where a wide variety of office skills are required.

**Admission to the Program: Open**

### Administrative Office Professional AAS

<http://www.sandburg.edu/Academics/Degree-Certificates/Administrative-Office-Professions/index.html>

This curriculum prepares students with the efficient skill level needed for administrative/executive work, including keyboarding, speedwriting, office management, communications, computers and other office technology. Graduates are qualified for positions as administrative/executive assistants and office managers.

**Admission to the Program: Open First-Time Enrollees**

1. Complete an application for admission to the College and, if desired, apply for financial aid.

2. Send an official high school transcript or GED score report to the Admissions and Records Office.
3. Complete the placement exam.
4. Meet with an advisor/counselor to select classes and complete the registration process

**Department of Career, Technical & Health Education**

2400 Tom L. Wilson Blvd.  
Galesburg, IL 61401  
309.341.5363

**For Additional Information Contact:**

The Welcome Center  
Phone: 309.345.3500  
welcomecenter@sandburg.edu

**For Graduation Requirements:**

See the graduation policies and procedures (p. 22) page for details.

## Certificate

Course	Title	Semester Hours
<b>First Year</b>		
<b>Fall Semester</b>		
AOP.100	Careers for Office Professional	1
AOP.101	Keyboarding & Formatting 1	3
BOC.120	Customer Service	2
BOC.100	Business Mathematics	3
BOC.101	Business Records Management	2
PSY.101	Introduction to Psychology	3
or PSY.107	or Positive Psychology	
or SOC.101	or Introduction to Sociology	
<b>Spring Semester</b>		
AOP.102	Keyboarding & Formatting 2	3
AOP.116	Introduction to Word Processing	3
AOP.201	Business English	2
BOC.103	Office Technology	3
ICT.110	Computer Software Applications	3
ICT.115	Website Support	2
Total Semester Hours		30

(Students who do not expect to complete their degree within five years should refer to the Graduation Requirements section in this catalog.)

## Associate in Applied Science

Course	Title	Semester Hours
<b>First Year</b>		
<b>Fall Semester</b>		
AOP.100	Careers for Office Professional	1
AOP.101	Keyboarding & Formatting 1	3
BOC.100	Business Mathematics	3
BOC.101	Business Records Management	2
BOC.120	Customer Service	2
PSY.101	Introduction to Psychology	3
or PSY.107	or Positive Psychology	
or SOC.101	or Introduction to Sociology	

**Spring Semester**

AOP.102	Keyboarding & Formatting 2	3
AOP.116	Introduction to Word Processing	3
AOP.201	Business English	2
BOC.103	Office Technology	3
ICT.110	Computer Software Applications	3
ICT.115	Website Support	2

**Second Year****Fall Semester**

ACC.101	Principles of Financial Accounting	3
AOP.203	Office Procedures	3
BOC.102	Business Communications	3
BUS.100	Introduction to Business	3
SPE.110	Interpersonal Communication	3
or SPE.120	or Introduction to Public Speaking	

**Spring Semester**

AOP.216	Advanced Word Processing	3
BUS.201	Management Fundamentals	3
ENG.120	Report Writing	3
ICT.210	Advanced Microcomputer Software Applicat	3
AOP.291	Professional Internship 1	3
or AOP.292	or Professional Internship 2	

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Total Semester Hours 60

(Students who do not expect to complete their degree within five years should refer to the Graduation Requirements section in this catalog.)

**Hawkinson, Carrie A**

associate professor, administrative office professional/business occupations

**Higgins, Diana D**

assistant professor, administrative office professional/business occupations/graphic design  
associate dean of career technical health education

## Advanced Electrical Automotive Certificate

<http://www.sandburg.edu/Academics/Degree-Certificates/Advanced-Electrical-Automotive/index.html>

Carl Sandburg College offers a one-semester certificate program in Advanced Electrical Automotive to provide further training to support students in advancing their opportunities in the auto-tech industry. Graduates will learn about more complex systems such as anti-lock brakes, traction, electrical systems, switches and sensors, powertrain and emissions control systems and high voltage electrical systems.

**Nature of the Work**

The work of automotive service technicians and mechanics has evolved from simply mechanical to high technology. Technicians must have an increasingly broad base of knowledge about how vehicles' complex electronic components work and interact, as well as the ability to work with electronic diagnostic equipment and computer-based technical reference materials. Automotive service technicians and mechanics use these high tech skills to inspect, maintain, and repair vehicles. The ability to diagnose the source of a problem quickly and accurately requires

good reasoning ability and a thorough knowledge of automobiles. Many technicians consider diagnosing hard-to-find troubles one of their most challenging and satisfying duties.

**Employment**

Job opportunities for those individuals who complete automotive training programs are expected to be very good. Persons with good diagnostic and problem-solving skills should have the best opportunity. For well-prepared people with a technical background, automotive service technicians careers offer an excellent opportunity for good pay and secure employment. To learn more about the admission requirements and the application process for this program, call 309.345.3500.

**Admission to the Program: Open****First-Time Enrollees:**

1. Complete an application for admission and, if desired, apply for financial aid
2. Must have an Automotive Technology certificate or degree and two years of work experience; or three years of work experience.
3. Meet with an advisor/counselor to select classes and complete the registration process.

**Department of Career Technical & Health Education**

2400 Tom L. Wilson Blvd.  
Galesburg, IL 61401  
Phone: 309.341.5363

**For Additional Information Contact:**

The Welcome Center  
Phone: 309.345.3500  
[welcomecenter@sandburg.edu](mailto:welcomecenter@sandburg.edu)

**For Graduation Requirements:**

See the graduation policies and procedures (p. 22) page for details.

Course	Title	Semester Hours
<b>First Year</b>		
<b>Fall Semester</b>		
AUT.215	Advanced Braking & Chassis Control	3
AUT.220	Advanced Electrical Systems	3
AUT.225	Adv Emissions & Powertrain Control	4
AUT.230	Automotive High Voltage Safety & System	3
Total Semester Hours		13

**Wright, Larry E**

associate professor, automotive technology

**Higgins, Diana D**

associate dean of career technical health education

The Advanced Electrical Automotive program is located in Building B. Its facilities include classroom space, faculty offices, and an automotive bay that functions as a full-service automotive shop.

## Automotive Technology Certificate

Carl Sandburg College offers a two-semester certificate program in Automotive Technology providing students with the basic skills to gain

employment in automotive dealerships, automotive technology centers, and independent service centers.

### Nature of the Work

The work of automotive service technicians and mechanics has evolved from simply mechanical to high technology. Technicians must have an increasingly broad base of knowledge about how vehicles' complex electronic components work and interact, as well as the ability to work with electronic diagnostic equipment and computer-based technical reference materials. Automotive service technicians and mechanics use these high tech skills to inspect, maintain, and repair vehicles. The ability to diagnose the source of a problem quickly and accurately requires good reasoning ability and a thorough knowledge of automobiles. Many technicians consider diagnosing hard-to-find troubles one of their most challenging and satisfying duties.

### Working Conditions

Almost half of automotive service technicians work a standard 40-hour week, but about one third work over 40 hours per week. Many of those working over 40-hour weeks are self-employed technicians. Some shops offer evening and weekend service to meet the needs of their customers. Generally, service technicians work indoors in well ventilated and lighted repair shops.

### Employment

Job opportunities for those individuals who complete automotive training programs are expected to be very good. Persons with good diagnostic and problem-solving skills should have the best opportunity. For well-prepared people with a technical background, automotive service technicians careers offer an excellent opportunity for good pay and secure employment. To learn more about the admission requirements and the application process for this program, call 309.345.3500.

### Admission to the Program: Open First-Time Enrollees

1. Complete an application for admission and, if desired, apply for financial aid.
2. Send an official high school transcript or GED score report to the Admissions and Records Office.
3. Complete the placement exam.
4. Meet with an advisor/counselor to select classes and complete the registration process.

### Department of Career, Technical, & Health Education

2400 Tom L. Wilson Blvd.  
Galesburg, IL 61401  
Phone: 309.341.5363

### For Additional Information Contact:

The Welcome Center  
Phone: 309.345.3500  
welcomecenter@sandburg.edu

### For Graduation Requirements:

See the graduation policies and procedures (p. 22) page for details.

## Certificate

Course	Title	Semester Hours
<b>First Year</b>		
<b>Fall Semester</b>		
AUT.101	Spark Ignition Engines 1	3

AUT.105	Electrical Systems	3
AUT.201	Ignition Systems	3
AUT.107	Shop Practices 1	4
AUT.110	Auto Math	2
<b>Spring Semester</b>		
AUT.103	Braking Systems	2
AUT.202	Steering Suspension & Front Wheel Dr	3
AUT.203	Manual Transmission & Dr Trains	2
AUT.204	Automatic Transmissions	3
AUT.206	Heating and Air Conditioning	2
AUT.209	Shop Practices 2	2
Total Semester Hours		29

### Wright, Larry E

associate professor, automotive technology

### Higgins, Diana D

associate dean of career technical health education

The Automotive Technology program is located in Building B. It's facilities include classroom space, faculty offices, and an automotive bay as a full-service automotive shop.

## Bioprocess Professions

### Bioprocess Technology Certificate

<http://www.sandburg.edu/Academics/Degree-Certificates/Bioprocess%20Technology/index.html>

This certificate is designed to refresh skills for individuals who have great technical skills in the manufacturing area and are looking to explore the bioprocess areas.

### Bioprocess Fermentation Technician Certificate

<http://www.sandburg.edu/Academics/Degree-Certificates/Bioprocess%20Fermentation%20Technician%20Certificate/index.html>

This certificate is designed to prepare individuals to be entry level technicians in the renewable energy and/or waste water control and treatment sectors.

### Bioprocess Operations Technician AAS

<http://www.sandburg.edu/Academics/Degree-Certificates/Bioprocess%20Operations%20AAS/index.html>

This degree program is designed to prepare individuals to become professional technicians in the renewable energy, waste water control and treatment and/or chemical processing sectors.

### Industry Growth

According to Illinois Renewable Fuels Association, there are 12 plants producing approximately 1 billion gallons of ethanol annually. Further, the Bureau of Labor Statistics, reports the Bioprocess industry employs over 11,000 workers with an additional 3,700 workers needed over the next 8 years.



**Admission to the Program: Open First-Time Enrollees**

1. Complete an application for admission to the College and, if desired, apply for financial aid.
2. Send an official high school transcript or GED score report to the Admissions and Records Office.
3. Complete the placement exam.
4. Meet with an advisor/counselor to select classes and complete the registration process

**Department of Career and Corporate Development**

2400 Tom L. Wilson Blvd.  
Galesburg, IL 61401  
Phone: 309.341.5313

**For Additional Information Contact:**

The Welcome Center  
Phone: 309.345.3500  
welcomecenter@sandburg.edu

**For Graduation Requirements:**

See the graduation policies and procedures (p. 22) page for details.

**Bioprocess Technology - Certificate**

Course	Title	Semester Hours
<b>First Year</b>		
<b>Fall Semester</b>		
ELT.100	Electrical Fundamentals	3
BFM.101	Biofuels Fundamentals	2
MFG.130	Industrial Safety	2
CHM.100	Concepts of Chemistry	3
WEL.101	Fundamentals of Welding Theory	2
WEL.103	Welding Survey	1
MAT.101	Technical Mathematics 1	3
Total Semester Hours		16

\* (Students who do not expect to complete their degree within five years should refer to the Graduation Requirements section in this catalog.)

**Bioprocess Fermentation Technician - Certificate**

Course	Title	Semester Hours
<b>First Year</b>		
<b>Fall Semester</b>		
ELT.100	Electrical Fundamentals	3
BFM.101	Biofuels Fundamentals	2
MFG.130	Industrial Safety	2
CHM.100	Concepts of Chemistry	3
WEL.101	Fundamentals of Welding Theory	2
WEL.103	Welding Survey	1
MAT.101	Technical Mathematics 1	3
<b>Spring Semester</b>		
ELT.104	Industrial Electrical Control	3

MAT.102	Technical Mathematics 2	3
MFG.125	Industrial Blueprints	3
BFM.201	Ethanol Production	4
BFM.203	Water Treatment & Control	3
Total Semester Hours		32

**Bioprocess Operations Technology AAS**

Course	Title	Semester Hours
<b>First Year</b>		
<b>Fall Semester</b>		
BFM.101	Biofuels Fundamentals	2
CHM.100	Concepts of Chemistry	3
ELT.100	Electrical Fundamentals	3
MAT.101	Technical Mathematics 1	3
MFG.130	Industrial Safety	2
WEL.101	Fundamentals of Welding Theory	2
WEL.103	Welding Survey	1
<b>Spring Semester</b>		
BFM.201	Ethanol Production	4
BFM.203	Water Treatment & Control	3
ELT.104	Industrial Electrical Control	3
MAT.102	Technical Mathematics 2	3
MFG.125	Industrial Blueprints	3
<b>Summer Session</b>		
BIO.101	General Biology	4
<b>Second Year</b>		
<b>Fall Semester</b>		
BFM.202	Biodiesel Production	4
ELT.119	Industrial Electronic Control	3
ELT.120	Electrical/Electronics Troubleshooting	3
ENG.101	Freshman Composition 1	3
HYD.101	Hydraulics and Pneumatics	3
<b>Spring Semester</b>		
BFM.291	Professional Internship 1 or Professional Internship 2	3
BFM.292		
BIO.200	General Microbiology	4
BOC.107	Tech Skills for Business Environment	3
BUS.100	Introduction to Business	3
ELT.213	Process Control & Instrumentation	3
Total Semester Hours		68

**Kellogg, David M.**

associate dean of career and corporate development

The Center for Manufacturing Excellence (CME) offers classroom space, a computer lab, and houses Carl Sandburg College's industrial programs. Students may take courses in the following subject areas: welding, biofuels, rail, machine tooling, manufacturing or electrical. The electrical lab features a host of components to aid in student learning including AC/DC trainers. In 2014, Sandburg became a designated National Academy of Railroad Sciences (NARS) training site offering courses in locomotive electrical and locomotive mechanical. Instruction is delivered by individuals with industry-specific expertise and includes specialized

coursework using technical equipment. Two diesel engines inside the CME are available for training opportunities. The College's welding lab offers 16 bay stations and soon will have an additional ten working spaces. The welding area offers a welding simulator, as well as state of the art multi process welding machines.

## Business Administration Associate in Applied Science

This program is designed for students who want to develop administrative management skills for a career in business. In addition to building general business proficiency, students are prepared for occupations in management, supervision, or marketing. Satisfactory completion of this program will provide an adequate level of competency for entry-level positions in various organizational structures, including for-profit and not-for-profit organizations.

### Admission to the Program: Open First-Time Enrollees

1. Complete an application for admission and, if desired, apply for financial aid.
2. Send an official high school transcript or GED score report to the Admissions and Records Office.
3. Complete the placement exam.
4. Meet with an advisor/counselor to select classes and complete the registration process.

### Department of Social & Business Sciences

2400 Tom L. Wilson Blvd.  
Galesburg, IL 61401  
Phone: 309.341.5299

### For Additional Information Contact:

The Welcome Center  
Phone: 309.345.3500  
welcomecenter@sandburg.edu (admissions@sandburg.edu)

### For Graduation Requirements:

See the graduation policies and procedures (p. 22) page for details.

## Associate in Applied Science

Course	Title	Semester Hours
<b>First Year</b>		
<b>Fall Semester</b>		
ACC.101	Principles of Financial Accounting	3
BUS.100	Introduction to Business	3
BOC.107 or ICT.110	Tech Skills for Business Environment or Computer Software Applications	3
ENG.101	Freshman Composition 1	3
MAT.099 or MAT.130 or MAT.131	Intermediate Algebra or College Algebra or Finite Mathematics	4
<b>Spring Semester</b>		
ACC.102	Principles of Managerial Accounting	3
BUS.201	Management Fundamentals	3

ENG.102	Freshman Composition 2	3
BUS.101	Marketing Fundamentals	3
BOC.120	Customer Service	2
BUS.114	Skills for Business Careers	1

### Second Year

#### Fall Semester

BOC.102	Business Communications	3
ECO.201 or ECO.101	Principles of Macro Economics or Introduction to Economics	3
PSY.204	Social Psychology	3
SPE.110 or SPE.120	Interpersonal Communication or Introduction to Public Speaking	3
BUS.212	Human Resources Management	3

#### Spring Semester

BLA.202	Business Law	3
BUS.206	Principles of Finance	3
BUS.112	Supervision Fundamentals	3
BUS.208	Marketing Promotion	3
ECO.202 or BUS.291 or BUS.292	Principles of Micro Economics or Professional Internship 1 or Professional Internship 2	3

Total Semester Hours 61

Other courses could be used upon the approval of the program coordinator or the supervising Dean/Associate Dean.

### Johnson, Jill L

assistant professor, psychology  
associate dean of social & business sciences

### Williams, Keith W

instructor, economics/business administration  
coordinator, business programs

## Cisco Network Associate Certificate

<http://www.sandburg.edu/Academics/Degree-Certificates/CISCO-Network-Associate/index.html>

The Cisco Network Associate certificate is designed to provide students with technical skills needed to become a network support specialist. This course of study also provides the student with the practical knowledge to successfully take the CCNA certification test.

### Admission to the Program: Open First-Time Enrollees

1. Complete an application for admission and, if desired, apply for financial aid.
2. Send an official high school transcript or GED score report to the Admissions and Records Office.
3. Complete the placement exam.
4. Meet with an advisor/counselor to select classes and complete the registration process.

### Department of Career, Technical & Health Education

2400 Tom L. Wilson Blvd.  
Galesburg, IL 61401

Phone: 309.341.5363

### For Additional Information Contact:

The Welcome center  
Phone: 309.345.3500  
welcomecenter@sandburg.edu

### For Graduation Requirements:

See the graduation policies and procedures (p. 22) page for details.

## Certificate

Course	Title	Semester Hours
<b>First Year</b>		
<b>Spring Semester</b>		
ICT.160	Introduction to Internetworking	3
<b>Second Year</b>		
<b>Fall Semester</b>		
ICT.260	Introduction to Internetwork Operating S	3
<b>Spring Semester</b>		
ICT.261	Introduction to Local Area Networks	3
ICT.262	Introduction to Wide Area Networks	3
Total Semester Hours		12

Total Program  
Hours  
12.0

### Higgins, Diana D

associate dean of career technical health education

### Herath, Suvineetha

instructor, information and communication technology

## Computed Tomography (CT)

### Advanced Certificate

<http://www.sandburg.edu/Academics/Degree-Certificates/Computed-Tomography/index.html>

Computed Tomography (CT) Advanced Certificate is a one-semester program that prepares radiographers to perform CT procedures in hospitals and imaging centers.

CT is an imaging modality that combines the use of x-rays and computer technology. Cross-sectional images of the body are produced by an x-ray beam and array of detectors that encircle the patient. These images can be reconstructed in multiple planes to display anatomical structures not otherwise visible on conventional radio-graphs. The curriculum covers all subjects identified in the American Registry of Radiologic Technologists (ARRT) content specifications for examination in Computed Tomography (CT).

### Working Conditions

Computed Tomography Technologists may work in a variety of health care facilities, although most are employed in hospitals or imaging centers. Technologists typically work 40-hour weeks that may include evening, weekend or "on-call" hours dependent upon their employment setting. Please refer to the Essential Skills & Abilities of MRI technologist

to determine if you are able to meet these functions with or without reasonable accommodations.

### Employment

As the cost of equipment declines and smaller units become available, CT and other radiologic procedures are increasingly being used in physicians' offices and walk-in clinics, which increases the demand for technologists to operate the machinery. With life expectancy increasing, the demands of an aging population increases the need for health care providers. It is projected that employment of Radiologic and CT technologists will increase by about 28% from 2010-2020, faster than average for all occupations. U.S. Department of Labor, Bureau of Labor Statistics.

### Accreditation/Approval

Carl Sandburg College is accredited through the North Central Association of Colleges and Schools – The Higher Learning Commission, 30 LaSalle Street, Suite 2400, Chicago, IL. 60602-2504.

### Licensure

Graduates are eligible to apply to take the American Registry of Radiologic Technologists A.R.R.T Post Primary Examination for Computed Tomography. This certification is nationally recognized and enables the student to pursue employment throughout the United States.

### Admission Requirements: Selective

The Computed Tomography (CT) Program has limited enrollment and a selection process for admission into the program. Students must apply and be formally accepted into the program prior to enrolling in any Computed Tomography courses. Students can apply online to the Computed Tomography (CT) Program February 15 - June 15. Application deadline date is June 15 for Fall enrollment. We notify applicants approximately two weeks after application deadline date whether or not they have been accepted into the program.

1. If you have never attended Carl Sandburg College, complete a general application for admission to the College - <http://sandburg.edu/admissions/steps-enroll>
2. Submit official transcripts from high school and all post-secondary educational institutions.
3. Graduate from an A. R. R. T approved radiography program with a 2.5 or higher cumulative G.P.A. on a 4.0 scale.
4. Provide evidence of active registration with the A.R.R.T or registry eligible status.
5. Complete the online application for the Computed Tomography program.
6. Students admitted must attend the program orientation session.

Program admission is competitive and fulfillment of the basic requirements does not guarantee admission. Class size is limited and is determined by the number of available clinical sites within each community-college district. Participating community college districts (in addition to Carl Sandburg College) include: Black Hawk, Heartland, Illinois Central, Illinois Valley, John Wood, Lincoln Land, Parkland, Richland, Sauk Valley, Scott (IA), Southeastern (IA), and Spoon River.

RDT 255 practicum requires immunizations with titers, TB skin test, current Healthcare Provider CPR certification, drug screen, background check and physical. Students are responsible for all fees incurred. Please refer to the Computed Tomography Program Cost Sheet. Please note that findings on the criminal background check and drug screen may void the conditional admission and prevent entrance to the program. Findings on the physical examination and drug screen may prevent placement at the

clinical sites. Technologists employed in CT may seek enrollment in the online classroom-only portions of the program, if desired.

### College of Nursing & Health Professions

2400 Tom L. Wilson Blvd.  
Galesburg, IL 61401  
Phone: 309.341.5229

#### For Additional Information Contact:

The Welcome Center  
Phone: 309.345.3500  
welcomecenter@sandburg.edu

#### For Graduation Requirements:

See the graduation policies and procedures (p. 22) page for details.

## Advanced Certificate

### Program Curriculum

RDT.262	Sectional Anatomy for Diagnostic Imaging	3
RDT.250	CT Principles & Instrumentation	3
RDT.252	Computed Tomography Procedures	4
RDT.255	CT Practicum	6
<b>Total Program Requirement</b>		<b>16</b>

NOTE: In order to graduate, each student must complete all required courses with a grade of "C" or better. RDT 262, RDT 250 and RDT 252 are online courses.

#### Whipple, Jackie D

Assistant Professor, Radiologic Technology

## Computer Numeric Control Certificates

<http://www.sandburg.edu/Academics/Degree-Certificates/CNC%20Operator%20Certificate/index.html>

### CNC Operator Certificate

The program will train graduates for entry level positions in the machine tool area as represented in the Manufacturing career cluster, Production pathway. Positions could include: Grinding, Lapping and Buffing Machine Operator, Milling Machine setter, Set-Up Operator and Machine Operator. The program is being proposed to address the anticipated immediate need for trained workers for the Galesburg and area manufacturing industries in computer numerical control operations with skills in machine tooling and blueprint reading. The current employment projections from the Bureau of Labor Statistics indicate positive growth for the various machine tool operator's positions in the state and our college district. Computer-Controlled Machine Tool Operator (51-4011) shows an annual growth of 1.87% for the state and 1.93% for the college district. These numbers are reflective through 2022 for the district and state.

#### Admission to the Program: Open

### CNC Programmer Advanced Certificate

The CNC Programmer certificate program gives an overview of essential machine shop practices including machine safety, blueprint reading and part inspection methods. CNC machine programming, set-up and operation will also be covered in-depth. Graduates of this program will

have the skills necessary for entry-level employment in a machine shop setting. Special emphasis will be placed on learning the skills necessary to transform raw material into a finished part. Students will be able to apply the techniques learned in lectures within a machine shop setting. Overall, this program is intended to introduce students to many different aspects within a machine shop setting.

#### Admission to the Program: Open First-Time Enrollees

1. Complete an application for admission to the College and, if desired, apply for financial aid.
2. Send an official high school transcript or GED score report to the Admissions and Records Office.
3. Complete the placement exam.
4. Meet with an advisor/counselor to select classes and complete the registration process

### Department of Career & Corporate Development

2400 Tom L. Wilson Blvd.  
Galesburg, IL 61401  
Phone: 309.341.5313

#### For Additional Information Contact:

The Welcome Center  
Phone: 309.345.3500  
welcomecenter@sandburg.edu

#### For Graduation Requirements:

See the graduation policies and procedures (p. 22) page for details.

Course	Title	Semester Hours
<b>First Year</b>		
<b>Spring Semester</b>		
MFG.125	Industrial Blueprints	3
MFG.130	Industrial Safety	2
MTL.103	Manufacturing Processes	2
MTL.130	CNC Machining Technology	4
MTL.135	Fund. of CNC Machine Applications	4
<b>Summer Session</b>		
MTL.295 or MTL.296	Operator Internship I or Operator Internship II	2
Total Semester Hours		17
Course	Title	Semester Hours
<b>Second Year</b>		
<b>Fall Semester</b>		
MAT.101	Technical Mathematics 1	3
MTL.150	Fund. of CNC Turning Applications	3
MTL.155	Fund. of CNC Milling Applications	3
MTL.160	CNC Lathe Set-up	3
MTL.165	CNC Mill Set-up	3
<b>Spring Semester</b>		
MAT.102	Technical Mathematics 2	3
MTL.200	Fundamentals of Live Tooling	3
MTL.205	Live Tooling & Set-Up & Orientation	3
MTL.210	CNC Lathe Process	3

MTL.215	CNC Mill Process	3
<b>Summer Session</b>		
MTL.297	Programmer Internship I	2
or MTL.298	or Programmer Internship II	
Total Semester Hours		32

**Kellogg, David M**

associate dean, career and corporate development

The Center for Manufacturing Excellence (CME) offers classroom space, a computer lab, and houses Carl Sandburg College's industrial programs. Students may take courses in the following subject areas: welding, biofuels, rail, machine tooling, manufacturing or electrical. The electrical lab features a host of components to aid in student learning including AC/DC trainers. In 2014, Sandburg became a designated National Academy of Railroad Sciences (NARS) training site offering courses in locomotive electrical and locomotive mechanical. Instruction is delivered by individuals with industry-specific expertise and includes specialized coursework using technical equipment. Two diesel engines inside the CME are available for training opportunities. The College's welding lab offers 16 bay stations and soon will have an additional ten working spaces. The welding area offers a welding simulator, as well as state of the art multi process welding machines.

## Computer Support Associate

<http://www.sandburg.edu/Academics/Degree-Certificates/Computer%20Support%20Associate/index.html>

This program prepares students to work in career fields of computer support, maintenance and repair. Students will receive training in computer hardware, software, and support. Student will learn about computer hardware components, system operating systems, and application software. Jobs in computer maintenance can be found in such career fields as PC Support Technician, Computer Help Desk, and Computer Configuration Specialist. This certificate prepares students for the CompTia A+ and MCTS certification exams.

### Admission to the Program: Open First-Time Enrollees

1. Complete an application for admission and, if desired, apply for financial aid.
2. Send an official high school transcript or GED score report to the Admissions and Records Office.
3. Complete the placement exam.
4. Meet with an advisor/counselor to select classes and complete the registration process.

### Computer Information Systems Course Completion Requirement

For credit toward degree requirements, all ICT courses must have been completed during the five school years preceding conference of the degree or must have the approval of the Dean of Career, Technical, and Health Education Programs or Program Coordinator.

\*NOTE: Computer Technician Certificate conferred upon successful completion of the required 30 hours contained in the first and second semesters plus summer session of this program. A.A.S. Degree conferred upon successful completion of all 62 required hours.

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welcomecenter@sandburg.edu

### For Graduation Requirements:

See the graduation policies and procedures (p. 22) page for details.

Course	Title	Semester Hours
<b>First Year</b>		
<b>Fall Semester</b>		
BOC.107	Tech Skills for Business Environment	3
ICT.110	Computer Software Applications	3
ICT.125	Foundations of Information Technology	3
ICT.170	Hardware Installation & Maintenance	3
ICT.180	Windows Networking & Operating System	3
Total Semester Hours		15

\*Completion of this certificate also fulfills the first semester requirements of the Computer Technician Certificate.

**Higgins, Diana D**

associate dean of career technical health education

**Herath, Suvineetha**

instructor, information and communication technology

## Computer Technician Certificate

<http://www.sandburg.edu/Academics/Degree-Certificates/Computer%20Technician/index.html>

This program prepares students for entry-level positions in PC installation, maintenance and repair professions. Common career titles include PC support technician, hardware specialist, help desk support specialist, hardware configuration technician, and many others.

Student will examine PC software, including operating systems, office applications, network management, and desktop utilities. Courses also introduce a variety of current hardware technology, including CPU features and functions, system architecture, storage technology, backup devices, multimedia devices, and data communication equipment. This program prepares students for the CompTIA A+ and Network+ and MCTS certification exams.

### Admission to the Program: Open First-Time Enrollees

1. Complete an application for admission and, if desired, apply for financial aid.
2. Send an official high school transcript or GED score report to the Admissions and Records Office.
3. Complete the placement exam.
4. Meet with an advisor/counselor to select classes and complete the registration process.

### Computer Information Systems Course Completion Requirement

For credit toward degree requirements, all ICT courses must have been completed during the five school years preceding conference of the



degree or must have the approval of the Dean of Career, Technical, and Health Education Programs or Program Coordinator.

\*NOTE: Computer Technician Certificate conferred upon successful completion of the required 26 hours contained in the first and second semesters of this program. A.A.S. Degree conferred upon successful completion of all 70 required hours.

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welcomecenter@sandburg.edu

**For Graduation Requirements:**

See the graduation policies and procedures (p. 22) page for details.

**Certificate**

Course	Title	Semester Hours
<b>First Year</b>		
<b>Fall Semester</b>		
BOC.107	Tech Skills for Business Environment	3
ICT.110	Computer Software Applications	3
ICT.125	Foundations of Information Technology	3
ICT.170	Hardware Installation & Maintenance	3
ICT.180	Windows Networking & Operating System	3
<b>Spring Semester</b>		
BOC.120	Customer Service	2
ICT.135	Mobile Technologies	3
ICT.160	Introduction to Internetworking	3
ICT.182	Implementing Ms Network Infrastructure	3
Total Semester Hours		26

- Note:
  - Successful completion of this Certificate also completes the first year of the IT LAN & Security Specialist AAS degree (p. 59)

**Higgins, Diana D**

associate dean of career technical health education

**Herath, Suvineetha**

instructor, information and communication technology

**Criminal Justice Associate in Applied Science and Certificate**

<http://www.sandburg.edu/Academics/Degree-Certificates/Criminal%20Justice/index.html>

**Criminal Justice Associate in Applied Science**

A student completing this curriculum will be eligible for employment with various law enforcement, judiciary, and correctional agencies. Various

positions in business and industrial security may also be available. A student with a criminal conviction will be admitted to the program, but may experience difficulty in securing employment in some criminal justice areas. Students transferring to a four-year criminal justice program with this degree should consult with a counselor or the Criminal Justice Coordinator for advisement on pre-enrollment requirements.

**Criminal Justice Certificate**

A student completing this curriculum will be eligible for employment with various criminal justice agencies. Certain private positions, such as business, industrial, and institutional security guards, may also be available. A student with a felony conviction will be admitted to the program, but may experience difficulty in securing employment in some criminal justice agencies.

**Law, Public Safety, Corrections & Security**

Carl Sandburg College offers students the opportunity to prepare for a wide array of careers in public service including law enforcement officers, correctional staff and private security positions. Both the public and private sector careers are readily available in many locations and include high incomes.

**Program Features**

Students have an opportunity to make the criminal justice program work with their schedule. The courses are offered in the day and evening on a scheduled semester outline. Students are exposed to a rich curriculum that allows for a solid foundation in all aspects of the criminal justice system.

**Short-Term Benefits**

- Day and evening classes; online offerings
- Small class sizes allowing for individual attention
- Quality education at an affordable price
- Range of programs to meet the students needs

**Long-Term Benefits**

- Graduates are prepared for the workforce and can make their degrees and certificates work for them
- Continuing education available to those in the field

**The Future of Public Safety, Corrections and Security**

Employers are seeking entry level applicants with an education associated with an Associate degree or higher. Agencies are seeking applicants with strong communication, writing, and leadership qualities. Applicants will need to pass several pre-hiring testing requirements which vary from agency to agency. Applicants need to be in good health, pass fitness standards and have a clear criminal background for consideration.

**Admission to the Program: Open First-Time Enrollees**

1. Complete an application for admission and, if desired, apply for financial aid.
2. Send an official high school transcript or GED score report to the Admissions and Records Office.
3. Complete the placement exam.
4. Meet with an advisor/counselor to select classes and complete the registration process.

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**For Graduation Requirements:**

See the graduation policies and procedures (p. 22) page for details.

## Associate in Applied Science

Course	Title	Semester Hours
<b>First Year</b>		
<b>Fall Semester</b>		
CRM.101	Introduction to Criminal Justice	3
CRM.102	Police Administration & Management	3
CRM.231	Procedural Law for Police	3
ENG.101	Freshman Composition 1	3
SOC.205	Social Problems-Professional Ethics	3
<b>Spring Semester</b>		
CRM.121	Juvenile Justice	3
CRM.261	Criminal Law	3
CRM.103	Intro to Crime Scene Technology or SOC.101 or Introduction to Sociology	3
BOC.107	Tech Skills for Business Environment	3
CRM.141	Introduction to Corrections	3
KIN.140	Physical Fitness 1	1
<b>Second Year</b>		
<b>Fall Semester</b>		
PSY.107	Positive Psychology or PSY.204 or Social Psychology	3
CRM.222	Communication in Criminal Justice	3
ICT.110	Computer Software Applications	3
SPE.110	Interpersonal Communication or SPE.120 or Introduction to Public Speaking	3
CRM.271	Criminal Investigation	3
<b>Spring Semester</b>		
POS.122	American Government Politics or POS.223 or State Local Government	3
CRM.151	Criminal Justice & Community Relations	3
CRM.172	Introduction to Security	3
CRM.262	Criminal Justice Internship	3
HTH.140	Wellness	2
Total Semester Hours		60

\* KIN.141 Physical Fitness 2, KIN.142 Physical Fitness 3 & KIN.143 Physical Fitness 4 also accepted.

## Certificate

Course	Title	Semester Hours
<b>First Year</b>		
<b>Fall Semester</b>		
CRM.101	Introduction to Criminal Justice	3
CRM.102	Police Administration & Management	3
CRM.231	Procedural Law for Police	3
ENG.101	Freshman Composition 1	3
SOC.205	Social Problems-Professional Ethics	3
<b>Spring Semester</b>		
CRM.121	Juvenile Justice	3
CRM.261	Criminal Law	3
CRM.103	Intro to Crime Scene Technology or SOC.101 or Introduction to Sociology	3
BOC.107	Tech Skills for Business Environment	3
CRM.141	Introduction to Corrections or Introduction to Security CRM.172	3
Total Semester Hours		30

**Kellogg, David M**

assistant professor, criminal justice

associate dean of career &amp; corporate development

The Criminal Justice Program is establishing a Crime Lab for the development of new curriculum and supplemental instruction. The lab will be a multifunction room that will consist of both lecture and lab stations for computer and practical use. The area will allow for students to participate in active interview and interrogation simulations, mock processing and booking, crime scene software as well as mock crime scenes. Students will be introduced to five key areas of crime scene technology; latent print evidence, blood spatter and trace evidence, impression evidence, ballistics, and crime scene photography.

This space will employ practical applications to many core courses within the criminal justice program. It will also allow for program growth in the area of crime scene technologies and practical presentations of contemporary investigative methods.

## Database Associate

### Certificate

<http://www.sandburg.edu/Academics/Degree-Certificates/Database-Associate/index.html>

The Database Specialist is designed to provide students with technical skills needed to become a database specialist. The core curriculum centers on creating and managing databases in popular applications such as: Microsoft Access and SQL; as well as learn the basic fundamentals of programming and managing database servers.

**Admission to the Program: Open First-Time Enrollees**

1. Complete an application for admission and, if desired, apply for financial aid.
2. Send an official high school transcript or GED score report to the Admissions and Records Office.

- Complete the placement exam.
- Meet with an advisor/counselor to select classes and complete the registration process.

### Computer Information Systems Course Completion Requirement

For credit toward degree requirements, all ICT courses must have been completed during the five school years preceding conference of the degree or must have the approval of the Associate Dean of Career, Technical, and Health Education Programs or Program Coordinator.

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### For Graduation Requirements:

See the graduation policies and procedures (p. 22) page for details.

Course	Title	Semester Hours
<b>First Year</b>		
<b>Spring Semester</b>		
ICT.114	Microcomputer Database Applications 1	2
ICT.130	Fundamentals of Programming	3
ICT.205	Visual Basic Programming	3
ICT.214	Microcomputer Database Applications 2	3
ICT.225	Sql/Database Application	3
Total Semester Hours		14

### Higgins, Diana D

associate dean of career technical health education

### Herath, Suvineetha

instructor, information and communication technology

## Dental Hygiene

### Associate in Applied Science

<http://www.sandburg.edu/Academics/Degree-Certificates/Dental%20Hygiene/index.html>

The Dental Hygiene program prepares the student to work as a dental hygienist under the supervision of a licensed dentist in dental offices and other health agencies. Dental hygienists remove soft and hard deposits from teeth, teach patients how to practice good oral hygiene, and provide other preventative dental care, such as cleaning and polishing teeth, taking radiographs and applying fluoride treatment. The dental hygienist also serves as an oral health educator in the clinical and community setting. Dental hygienists should work well with others and must have good manual dexterity to use dental instruments within a patient's mouth, with little room for error.

### Working Conditions

Flexible scheduling is a distinctive feature of this job. Full-time, part-time, evening, and weekend schedules are widely available. Hygienists are frequently hired to work only two or three days a week, so hygienists may hold jobs in more than one dental office. Dental hygienists work

in offices that are clean and well lit, and they must follow important health safeguards including wearing safety glasses, masks and gloves to protect themselves from blood-borne pathogens and infectious diseases.

### Employment

Employment of dental hygienists is expected to grow much faster than the average for all occupations through 2020. According to the U.S. Bureau of Labor Statistics, median hourly salary of dental hygienists was \$33.31 in May 2010. Earnings vary by geographic location, employment setting, and years of experience. Source: [www.bls.gov/ooh/healthcare/dental-hygienists.htm](http://www.bls.gov/ooh/healthcare/dental-hygienists.htm) (<http://www.bls.gov/ooh/healthcare/dental-hygienists.htm>)

### Accreditation/Licensure

The Dental Hygiene program has been approved by the Illinois Community College Board and the Illinois Board of Higher Education. The program in dental hygiene is accredited by the American Dental Association Commission on Dental Accreditation and has been granted the accreditation status of "approval without reporting requirements". The Commission is a specialized accrediting body recognized by the United States Department of Education. The Commission on Dental Accreditation can be contacted at 312-440-4653, or at 211 E. Chicago Avenue, Chicago, IL 60611. Graduates from the Dental Hygiene program will be eligible to take the National Dental Hygiene Board Examination, the respective clinical dental hygiene board examination, and the examination for registration as a dental hygienist in the respective state.

### Admission to the Program: Limited

Admission to limited enrollment programs is competitive and selection is based on candidates' overall academic performance. All prospective students for the Dental Hygiene program must submit all admission materials and meet admission requirements before their applications will be considered for review. Applicants who are denied admission to a program and wish to apply for a subsequent academic year must repeat the application process in its entirety. As a result, no application files are carried over from prior years which allows the evaluation process to begin anew October 1 of each year. The most qualified applicants who are residents of the Carl Sandburg College district or who are residents of a community college district participating in a cooperative agreement with Carl Sandburg College will be given preference for admission to the program.

### Department of Career, Technical & Health Education

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### For Additional Information Contact:

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welcomecenter@sandburg.edu

### For Graduation Requirements:

See the graduation policies and procedures (p. 22) page for details.

## Associate in Applied Science

Course	Title	Semester Hours
<b>First Year</b>		
<b>Fall Semester</b>		
DHG.109	Preclinic Laboratory	1.5

DHG.110	Fundamentals of Dental Hygiene	2
DHG.112	Dental Radiology	3
DHG.113	Preventive Dentistry	2
DHG.114	Head/Neck & Oral Anatomy	3
DHG.115	Dental Hygiene Practice 1	2
BIO.211	Anatomy & Physiology 1	4
<b>Spring Semester</b>		
DHG.118	Oral Histology & Embryology	1
DHG.119	Periodontology 1	2
DHG.120	Dental Hygiene 2	2
DHG.125	Dental Hygiene Practice 2	4
BIO.212	Anatomy & Physiology 2	4
SOC.101	Introduction to Sociology	3
ENG.101	Freshman Composition 1	3
<b>Summer Session</b>		
DHG.205	Dental Hygiene Practice 3	3
BIO.200	General Microbiology	4
<b>Pre-Summer Session</b>		
DHG.200	Dental Hygiene 3	2
<b>Second Year</b>		
<b>Fall Semester</b>		
DHG.210	Dental Hygiene 4	2
DHG.211	Community Dental Health	2
DHG.212	Pathology	2
DHG.213	Pharmacology	2
DHG.215	Dental Hygiene Practice 4	5
NUT.100	Introduction to Nutrition	2
<b>Spring Semester</b>		
DHG.217	Clinical Applications Pain/Anxiety Ctrl	1
DHG.218	Dental Office Management & Jurisprudence	2
DHG.219	Periodontology 2	2
DHG.220	Dental Hygiene 5	2
DHG.225	Dental Hygiene Practice 5	5
SPE.120	Introduction to Public Speaking	3
PSY.101	Introduction to Psychology	3
Total Semester Hours		78.5

Courses must be completed with a grade of "C" or better by the end of the scheduled semester. In order to graduate, each student must complete all required courses with a grade of "C" or better.

#### **Eagen, Carla J**

instructor, dental hygiene

#### **Kosier, Stacy J**

assistant professor, dental hygiene  
coordinator, dental hygiene

#### **Higgins, Diana D**

associate dean of career technical health education

The Dental Hygiene program is located in The Annex in downtown Galesburg. This facility contains the faculty offices, general classroom space, a simulation lab, and the dental hygiene clinic. The dental hygiene clinic contains fifteen patient operatories and six radiology suites that

contain analog radiography, digital radiography, and/or panoramic technology.

## Emergency Medical Services-Paramedic

<http://www.sandburg.edu/Academics/Degree-Certificates/EMS-Paramedic/index.html>

The Emergency Medical Services (EMS) – Paramedic program offers two paramedic training options, resulting in a one-year certificate or a two-year Associate in Applied Science degree, both designed to prepare individuals to become an entry-level paramedic in the State of Illinois. The EMS – Paramedic program at Carl Sandburg College is designed to prepare the graduate to administer emergency care to the critically ill or injured in pre-hospital settings, as well as inside emergency departments.

### Working Conditions

Paramedics work all shifts ranging 12-24 hours per shift, weekends, and holidays. Their work is physically strenuous and can be stressful, sometimes involving life-or-death situations. The Paramedic provides direct patient care and must be able to obtain the knowledge (cognitive function), skills (psychomotor function), and demonstrate professionalism (affective function). Please refer to the Essential Skills & Abilities of a Paramedic to determine if you are able to meet these functions with or without reasonable accommodations.

### Employment

Graduates gain employment primarily with ambulance services, fire departments, helicopter flight crews and hospitals. It is projected employment of emergency medical technicians (EMTs) and paramedics will grow 24 percent from 2014 to 2024, much faster than the average for all occupations. Emergencies, such as car crashes, natural disasters, and acts of violence, will continue to create demand for EMTs and paramedics. U.S. Department of Labor, Bureau of Labor Statistics.

### Accreditation/Approval

Carl Sandburg College Paramedic program has been issued a Letter of Review by the Committee on Accreditation of Educational Programs for the Emergency Medical Services Professions (CoAEMSP). This letter is NOT a CAAHEP accreditation status. It is a status signifying that a program seeking initial accreditation has demonstrated sufficient compliance with the accreditation Standards through the Letter of Review Self Study Report (LSSR) and other documentation. The Letter of Review is recognized by the National Registry of Emergency Medical Technicians (NREMT) for eligibility to take the NREMT's Paramedic credentialing examination(s). However, it is NOT a guarantee of eventual accreditation.

To contact CoAEMSP:

8301 Lakeview Parkway Suite 111-312

Rowlett, TX 75088

214-703-8445

FAX: 214-703-8992

<http://www.coaemsp.org/>

### Licensure

Graduates will be eligible to take the Illinois Department of Public Health (IDPH) Paramedic licensure exam or the National Registry of Emergency Medical Technicians (NREMT) Paramedic Exam.

### Admission to the Program: Selective

The Paramedic Program has limited enrollment and a selection process for admission into the program. Applicants need to refer to the Eligibility & Admission Requirements for this program to determine eligibility criteria and selection process. Students interested in this program must attend a Health Professions Informational Session prior to applying to the program. The online application deadline date for the Paramedic Program is June 1 for Fall enrollment and November 1 for Spring enrollment.

Please note applicants who do not hold a current EMT license need to apply by November 1 for Spring enrollment into EMS 101- EMT course. Upon successful completion of the EMS 101 course and EMT state examination the student will progress into paramedic courses in the Fall. Applicants who have a current EMT license need to apply by June 1 for Fall enrollment. We notify applicants approximately two weeks after the application deadline date whether or not they have been accepted into the program. Applicants accepted into the Paramedic program must attend the required program orientation session.

Students accepted will be required to possess Healthcare Provider CPR certification throughout the program, show proof of immunizations and required titers, TB test, physical examination, criminal background check, and drug screen. Students are responsible for all fees incurred, in addition to tuition. Please refer to the EMS-Paramedic Program Cost Sheet. Please note findings on the criminal background check and drug screen may void conditional admission and prevent entrance to the program. Findings on the physical examination and drug screen may prevent placement at the clinical sites.

### College of Nursing & Health Professions

2400 Tom L. Wilson Blvd.  
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### For Additional Information Contact:

The Welcome Center  
Phone: 309.345.3500  
welcomecenter@sandburg.edu

### For Graduation Requirements:

See the graduation policies and procedures (p. 22) page for details.

Course	Title	Semester Hours
<b>First Year</b>		
<b>Spring Semester</b>		
EMS.101	Emergency Medical Technician	8
ENG.101	Freshman Composition 1	3
PSY.101	Introduction to Psychology	3
SOC.101	Introduction to Sociology	3
<b>Summer Session</b>		
PHL.103	Biomedical Ethics	3
<b>Fall Semester</b>		
BIO.211	Anatomy & Physiology 1	4
EMS.112	Paramedic Pharmacology	2.5
EMS.120	Paramedic I	7
EMS.125	Paramedic Practice 1	2.5
<b>Second Year</b>		
<b>Spring Semester</b>		
BIO.212	Anatomy & Physiology 2	4

EMS.130	Paramedic II	8
EMS.135	Paramedic Practice II	4
<b>Summer Session</b>		
EMS.210	Paramedic III	3
EMS.215	Paramedic Field Internship	5
Total Semester Hours		60

Note: Students enrolled in the Emergency Medical Services-Paramedic program must complete all EMS courses with a grade of C or better in order to register for subsequent courses and continue in the program. In order to graduate students must complete all EMS courses with a grade of C or better.

(Students who do not expect to complete their degree within five years should refer to the Graduation Requirements section in this catalog.)

## Certificate

Course	Title	Semester Hours
<b>First Year</b>		
<b>Spring Semester</b>		
EMS.101	Emergency Medical Technician	8
<b>Fall Semester</b>		
EMS.112	Paramedic Pharmacology	2.5
EMS.120	Paramedic I	7
EMS.125	Paramedic Practice 1	2.5
<b>Second Year</b>		
<b>Spring Semester</b>		
EMS.130	Paramedic II	8
EMS.135	Paramedic Practice II	4
<b>Summer Session</b>		
EMS.210	Paramedic III	3
EMS.215	Paramedic Field Internship	5
Total Semester Hours		40

Note: Students enrolled in the Emergency Medical Services-Paramedic program must complete all EMS courses with a grade of C or better in order to register for subsequent courses and continue in the program. In order to graduate students must complete all EMS courses with a grade of C or better.

(Students who do not expect to complete their degree within five years should refer to the Graduation Requirements section in this catalog.)

**Raymond Darsidan, EMT-P, CCEMT-P, TEMS, OSHA HSM**  
Adjunct Faculty, Paramedic Program Lead Instructor

**Richard Springer, EMT-P**  
Adjunct Faculty, Paramedic Program Instructor

**Christopher Herman, M.D.**  
Medical Director, Paramedic Program

**Mischelle Monagle, RN, MSN, MBA**  
Program Director, Paramedic Program  
Dean, College of Nursing & Health Professions

The paramedic practice courses are designed for hands-on training in the Paramedic classroom, lab and practicum settings. The paramedic



courses are held in the evenings at Carl Sandburg College's Galesburg campus Building H, H102 is the Paramedic State-of-the-art Skills Lab where essential skills such as IV insertion, airway management, EKGs, administering medications and performing advanced life support measures will be practiced on up-to-date equipment and simulated training manikins. Practicum experiences for the EMS-Paramedic program will be gained with community agencies and ambulance services in the Galesburg area such as: Galesburg Hospitals' Ambulance Service, Galesburg Cottage Hospital, OSF St. Mary's Medical Center, Kewanee Fire & Rescue, and other surrounding community's fire & rescue agencies as needed.

## Gas Shielded Arc Welding Specialist Certificate

[www.sandburg.edu/academics/welding](http://www.sandburg.edu/academics/welding)

This two-semester certificate is designed to provide the graduate with skills needed to enter employment in local industry with skills and knowledge that emphasizes training and the entry-level competence for MIG, TIG, or ARC welding. The welding program emphasizes welding skill proficiency through lab activities and projects as learning activities.

All the courses contain essential components required for success in industry today such as mathematics, communication, attendance, and productivity.

### Long-term Benefits:

- Increased labor pool to replace retiring workers
- Increased selection for new hires
- Overall increased quality of work force
- Overall increased quality of manufacturing in western Illinois
- Increased technical expertise of existing work force

### Admission to the Program: Open First-Time Enrollees

1. Complete an application for admission and, if desired, apply for financial aid.
2. Send an official high school transcript or GED score report to the Admissions and Records Office.
3. Complete the placement exam.
4. Meet with an advisor/counselor to select classes and complete the registration process.

### Department of Career & Corporate Development

2400 Tom L. Wilson Blvd.

Galesburg, IL 61401

Phone:

### For Additional Information Contact:

The Welcome Center

Phone: 309.345.3500

[welcomecenter@sandburg.edu](mailto:welcomecenter@sandburg.edu)

### For Graduation Requirements:

See the graduation policies and procedures (p. 22) page for details.

## Fall Start

Course	Title	Semester Hours
<b>First Year</b>		
<b>Fall Semester</b>		
WEL.100	Welding Theory OFC & OAW	1
WEL.102	Metal Preparation	1
WEL.109	Oxyacetylene Welding	1
WEL.104	Welding Theory Basic SMAW	1
WEL.111	Arc Welding Basic 1	1
WEL.112	Arc Welding Basic 2	1
WEL.105	Welding Theory Advanced SMAW	1
WEL.114	Arc Welding Advanced 1	1
WEL.115	Arc Welding Advanced 2	1
WEL.106	Welding Theory GTAW	1
WEL.116	Gas Shielded Arc-TIG 1	1
WEL.117	Gas Shielded Arc-TIG 2	1
MAT.101	Technical Mathematics 1	3
<b>Spring Semester</b>		
WEL.107	Welding Theory Basic GMAW	1
WEL.118	Gas Shielded Arc-MIG 1	1
WEL.119	Gas Shielded Arc-MIG 2	1
WEL.108	Welding Theory GMAW & FCAW	1
WEL.120	Gas Shielded Applications	1
WEL.129	Flux Cored Arc Welding	1
WEL.125	Welding Blueprints	2
WEL.130	Industrial Safety	2
MTL.103	Manufacturing Processes	2
ENG.101 or RDG.120	Freshman Composition 1 or Strategies for Success in College	3
Total Semester Hours		30

## Spring Start

Course	Title	Semester Hours
<b>First Year</b>		
<b>Spring Semester</b>		
WEL.100	Welding Theory OFC & OAW	1
WEL.102	Metal Preparation	1
WEL.109	Oxyacetylene Welding	1
WEL.104	Welding Theory Basic SMAW	1
WEL.111	Arc Welding Basic 1	1
WEL.112	Arc Welding Basic 2	1
WEL.105	Welding Theory Advanced SMAW	1
WEL.114	Arc Welding Advanced 1	1
WEL.115	Arc Welding Advanced 2	1
WEL.106	Welding Theory GTAW	1
WEL.116	Gas Shielded Arc-TIG 1	1
WEL.117	Gas Shielded Arc-TIG 2	1
ENG.101 or RDG.120	Freshman Composition 1 or Strategies for Success in College	3

**Fall Semester**

WEL.107	Welding Theory Basic GMAW	1
WEL.118	Gas Shielded Arc-MIG 1	1
WEL.119	Gas Shielded Arc-MIG 2	1
WEL.108	Welding Theory GMAW & FCAW	1
WEL.120	Gas Shielded Applications	1
WEL.129	Flux Cored Arc Welding	1
WEL.130	Industrial Safety	2
WEL.125	Welding Blueprints	2
MTL.103	Manufacturing Processes	2
MAT.101	Technical Mathematics 1	3
Total Semester Hours		30

**Schave, Jamie**

instructor, welding

**LaLonde, Matthew J**

instructor, welding

**Kellogg, David M.**

associate dean, career and corporate development

The Center for Manufacturing Excellence (CME) offers classroom space, a computer lab, and houses Carl Sandburg College's industrial programs. Students may take courses in the following subject areas: welding, biofuels, rail, machine tooling, manufacturing or electrical. The electrical lab features a host of components to aid in student learning including AC/DC trainers. In 2014, Sandburg became a designated National Academy of Railroad Sciences (NARS) training site offering courses in locomotive electrical and locomotive mechanical. Instruction is delivered by individuals with industry-specific expertise and includes specialized coursework using technical equipment. Two diesel engines inside the CME are available for training opportunities. The College's welding lab offers 16 bay stations and soon will have an additional ten working spaces. The welding area offers a welding simulator, as well as state of the art multi process welding machines.

## Industrial Process Professions

### Basic Industrial & Manufacturing Maintenance Certificate

<http://www.sandburg.edu/Academics/Degree-Certificates/Basic-Industrial-Manufacturing/index.html>

The certificate program provides generalized knowledge of electrical, welding, and manufacturing and industrial processes giving the program graduates knowledge and skill to be general maintenance workers in a variety of industrial, manufacturing, utilities, telecommunications and transportation settings.

The certificate is the first semester for the following A.A.S. degrees:

- Locomotive Electrical (p. 61)
- Locomotive Mechanical (p. 62)
- Rail/Off Highway Motive Power Electrical Technician (p. 73)
- Process Maintenance Technology (p. 56)

### Admission to the Program: Open Industrial Mechanical Maintenance Certificate

This certificate is designed for persons who want to prepare for initial or improved employment in the industry mechanical area. The curriculum provides for a student to learn the basic principles and skills which are necessary to industrial maintenance, such as drafting/blueprint reading, electricity, hydraulics and pneumatics, machine tool, mathematics and fundamentals of welding.

### Admission to the Program: Open Process Maintenance Technology A.A.S.

This degree program is designed for persons who want to prepare for employment as industry machinery mechanic, maintenance worker or stationary engineer and boiler operator. The curriculum provides for a student to learn the skills which are necessary to industrial maintenance and gives the student to choose the track where their aptitude lies – electricity or welding.

### Admission to the Program: Open First-Time Enrollees

1. Complete an application for admission and, if desired, apply for financial aid.
2. Send an official high school transcript or GED score report to the Admissions and Records Office.
3. Complete the placement exam.
4. Meet with an advisor/counselor to select classes and complete the registration process.

### Department of Career & Corporate Development

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[welcomecenter@sandburg.edu](mailto:welcomecenter@sandburg.edu)

### For Graduation Requirements:

See the graduation policies and procedures (p. 22) page for details.

## Basic Industrial & Manufacturing Maintenance - Certificate

Course	Title	Semester Hours
<b>First Year</b>		
<b>Fall Semester</b>		
ELT.100	Electrical Fundamentals	3
MAT.101	Technical Mathematics 1	3
MTL.101	Machine Tool Fundamentals 1	3
MTL.103	Manufacturing Processes	2
WEL.101	Fundamentals of Welding Theory	2
WEL.103	Welding Survey	1
MFG.130	Industrial Safety	2
Total Semester Hours		16

Note: Students enrolled in the Basic Industrial Manufacturing Maintenance Certificate must complete ELT, MTL, and WEL courses with a grade of C or better. In order to graduate, students must complete all ELT, MTL and WEL courses with a grade of C or better.

## Industrial Mechanical Maintenance - Certificate

Course	Title	Semester Hours
<b>First Year</b>		
<b>Fall Semester</b>		
ELT.100	Electrical Fundamentals	3
MAT.101	Technical Mathematics 1	3
MFG.130	Industrial Safety	2
MTL.101	Machine Tool Fundamentals 1	3
MTL.103	Manufacturing Processes	2
WEL.101	Fundamentals of Welding Theory	2
WEL.103	Welding Survey	1
<b>Spring Semester</b>		
BOC.107	Tech Skills for Business Environment	3
DRF.100	Basic Drafting	2
MFG.125	Industrial Blueprints	3
HYD.101	Hydraulics and Pneumatics	3
MAT.102	Technical Mathematics 2	3
Total Semester Hours		30

Note: Students enrolled in the Industrial Mechanical Maintenance Certificate must complete ELT, MTL, and WEL courses with a grade of C or better. In order to graduate, students must complete all ELT, MTL and WEL courses with a grade of C or better.

(Students who do not expect to complete their degree within five years should refer to the Graduation Requirements section in this catalog.)

## Process Maintenance Technology - Associate in Applied Science

Course	Title	Semester Hours
<b>First Year</b>		
<b>Fall Semester</b>		
ELT.100	Electrical Fundamentals	3
MAT.101	Technical Mathematics 1	3
MFG.100	Introduction to Welding	3
MFG.130	Industrial Safety	2
MTL.101	Machine Tool Fundamentals 1	3
MTL.103	Manufacturing Processes	2
<b>Spring Semester</b>		
BOC.107	Tech Skills for Business Environment	3
DRF.100	Basic Drafting	2
MFG.125	Industrial Blueprints	3
HYD.101	Hydraulics and Pneumatics	3
MAT.102	Technical Mathematics 2	3

### Second Year

#### Fall Semester

ELT.107	Digital Logic & Circuits	3
ELT.119	Industrial Electronic Control	3
SPE.110 or SPE.120	Interpersonal Communication or Introduction to Public Speaking	3
PSY.101 or PSY.107 or SOC.101	Introduction to Psychology or Positive Psychology or Introduction to Sociology	3
ICT.110	Computer Software Applications	3

#### Spring Semester

PHY.110	Applied Physics	3
BUS.100	Introduction to Business	3
ELT.212	Industrial Electricity	3
Total Semester Hours		54

Select One Track to Complete:

<b>Welding Track</b>		
WEL.160	Oxyacetylene Welding & Metal Preparation	3
WEL.162	Arc Welding Basics	3
<b>Electrical Track</b>		
ELT.209	AC/DC Drives and Servos	3
ELT.213	Process Control & Instrumentation	3
Total Degree Hours		60

#### Schave, Jamie

Instructor, welding

#### La Londe, Matthew J

Instructor, welding

#### Kellogg, David M

associate dean, career and corporate development

The Center for Manufacturing Excellence (CME) offers classroom space, a computer lab, and houses Carl Sandburg College's industrial programs. Students may take courses in the following subject areas: welding, biofuels, rail, machine tooling, manufacturing or electrical. The electrical lab features a host of components to aid in student learning including AC/DC trainers. In 2014, Sandburg became a designated National Academy of Railroad Sciences (NARS) training site offering courses in locomotive electrical and locomotive mechanical. Instruction is delivered by individuals with industry-specific expertise and includes specialized coursework using technical equipment. Two diesel engines inside the CME are available for training opportunities. The College's welding lab offers 16 bay stations and soon will have an additional ten working spaces. The welding area offers a welding simulator, as well as state of the art multi process welding machines.

## Industrial Welding Technology Associate in Applied Science

<http://www.sandburg.edu/Academics/Degree-Certificates/Welding/index.html>

The Welding program is designed to provide the graduate with skills needed to enter employment in local industry as an entry-level welding supervisor for construction firms, agricultural enterprises, and heavy machine fabrication. This certificate program is designed to provide

students a hands-on welding certificate that emphasizes training and the mastery of welding techniques. The welding program emphasizes welding skill proficiency through lab activities and projects as learning activities. All the courses contain essential components required for success in the industry today such as mathematics, communication, attendance, and productivity.

#### Long-term Benefits:

- Increased labor pool to replace retiring workers
- Increased selection for new hires
- Overall increased quality of work force
- Overall increased quality of manufacturing in western Illinois
- Increased technical expertise of existing work force

#### Admission to the Program: Open First-Time Enrollees

1. Complete an application for admission and, if desired, apply for financial aid.
2. Send an official high school transcript or GED score report to the Admissions and Records Office.
3. Complete the placement exam.
4. Meet with an advisor/counselor to select classes and complete the registration process.

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#### For Graduation Requirements:

See the graduation policies and procedures (p. 22) page for details.

## Associate in Applied Science

Course	Title	Semester Hours
<b>First Year</b>		
<b>Fall Semester</b>		
MAT.101	Technical Mathematics 1	3
MET.100	Metallurgy Fundamentals	2
MFG.100	Introduction to Welding	3
WEL.125	Welding Blueprints	2
WEL.160	Oxyacetylene Welding & Metal Preparation	3
WEL.162	Arc Welding Basics	3
<b>Spring Semester</b>		
MAT.102	Technical Mathematics 2	3
MFG.125	Industrial Blueprints	3
MFG.130	Industrial Safety	2
WEL.164	Arc Welding Advanced	3
WEL.166	Gas Shielded Arc Tig	3
<b>Second Year</b>		
<b>Fall Semester</b>		
ELT.100	Electrical Fundamentals	3
MTL.103	Manufacturing Processes	2

TQM.101	Total Quality Management	2
WEL.168	Gas Shielded Arc Mig	3
WEL.170	Applications of GMAW & FCAW	3
SPE.110	Interpersonal Communication	3
or SPE.120	or Introduction to Public Speaking	
<b>Spring Semester</b>		
PHY.110	Applied Physics	3
WEL.126	Weld Test Evaluation	1
WEL.149	Automated Welding Applications	2
WEL.172	Welding Applications	3
PSY.101	Introduction to Psychology	3
or PSY.107	or Positive Psychology	
or SOC.101	or Introduction to Sociology	
Total Semester Hours		58

#### Schave, Jamie

instructor, welding

#### La Londe, Matthew J

instructor, welding

#### Kellogg, David M

associate dean, career and corporate development

The Center for Manufacturing Excellence (CME) offers classroom space, a computer lab, and houses Carl Sandburg College's industrial programs. Students may take courses in the following subject areas: welding, biofuels, rail, machine tooling, manufacturing or electrical. The electrical lab features a host of components to aid in student learning including AC/DC trainers. In 2014, Sandburg became a designated National Academy of Railroad Sciences (NARS) training site offering courses in locomotive electrical and locomotive mechanical. Instruction is delivered by individuals with industry-specific expertise and includes specialized coursework using technical equipment. Two diesel engines inside the CME are available for training opportunities. The College's welding lab offers 16 bay stations and soon will have an additional ten working spaces. The welding area offers a welding simulator, as well as state of the art multi process welding machines.

## Industrial Welding Technology-Mig Option/Gas Metal Arc Cert Certificate

<http://www.sandburg.edu/Academics/Degree-Certificates/Welding-MIG-Option-Gas-Metal-Arc/index.html>

This two-semester certificate is designed to provide the graduate with skills needed to enter employment in local industry with skills and knowledge that emphasizes training and the entry-level competence for MIG welding. The welding program emphasizes welding skill proficiency through lab activities and projects as learning activities. All of the courses contain essential components required for success in the industry today such as mathematics, communication, attendance, and productivity.

#### Long-term Benefits:

1. Increased labor pool to replace retiring workers
2. Increased selection for new hires
3. Overall increased quality of work force

- Overall increased quality of manufacturing in western Illinois
- Increased technical expertise of existing work force

### Admission to the Program: Open First-Time Enrollees

- Complete an application for admission and, if desired, apply for financial aid.
- Send an official high school transcript or GED score report to the Admissions and Records Office.
- Complete the placement exam.
- Meet with an advisor/counselor to select classes and complete the registration process.

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### For Graduation Requirements:

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Course	Title	Semester	Hours
<b>First Year</b>			
<b>Fall Semester</b>			
MAT.101	Technical Mathematics 1		3
MET.100	Metallurgy Fundamentals		2
MFG.100	Introduction to Welding		3
WEL.125	Welding Blueprints		2
WEL.160	Oxyacetylene Welding & Metal Preparation		3
WEL.162	Arc Welding Basics		3
<b>Spring Semester</b>			
MAT.102	Technical Mathematics 2		3
MFG.125	Industrial Blueprints		3
MFG.130	Industrial Safety		2
WEL.164	Arc Welding Advanced		3
WEL.166	Gas Shielded Arc Tig		3
<b>Second Year</b>			
<b>Fall Semester</b>			
ELT.100	Electrical Fundamentals		3
MTL.103	Manufacturing Processes		2
TQM.101	Total Quality Management		2
WEL.168	Gas Shielded Arc Mig		3
WEL.170	Applications of GMAW & FCAW		3
SPE.110	Interpersonal Communication		3
or SPE.120	or Introduction to Public Speaking		
Total Semester Hours			46

**Schave, Jamie**  
instructor, welding

**La Londe, Matthew J**

instructor, welding

### Kellogg, David M

associate dean, career and corporate development

The Center for Manufacturing Excellence (CME) offers classroom space, a computer lab, and houses Carl Sandburg College's industrial programs. Students may take courses in the following subject areas: welding, biofuels, rail, machine tooling, manufacturing or electrical. The electrical lab features a host of components to aid in student learning including AC/DC trainers. In 2014, Sandburg became a designated National Academy of Railroad Sciences (NARS) training site offering courses in locomotive electrical and locomotive mechanical. Instruction is delivered by individuals with industry-specific expertise and includes specialized coursework using technical equipment. Two diesel engines inside the CME are available for training opportunities. The College's welding lab offers 16 bay stations and soon will have an additional ten working spaces. The welding area offers a welding simulator, as well as state of the art multi process welding machines.

## Industrial Welding Technology-Tig Option/Gas Metal Arc Cert. Certificate

<http://www.sandburg.edu/Academics/Degree-Certificates/Welding-TIG-Option-Gas-Metal-Arc/index.html>

This two-semester program is designed to provide the graduate with skills needed to enter employment in local industry as an entry-level welding supervisor for construction firms, agricultural enterprises, and heavy machine fabrication. This certificate program is designed to provide students a hands-on welding certificate that emphasizes training and the mastery of welding techniques specializing in TIG-Gas Metal Arc welding. The welding program emphasizes welding skill proficiency through lab activities and projects as learning activities. All the courses contain essential components required for success in industry today such as mathematics, communication, attendance, and productivity.

### Long-term Benefits:

- Increased labor pool to replace retiring workers
- Increased selection for new hires
- Overall increased quality of work force
- Overall increased quality of manufacturing in western Illinois
- Increased technical expertise of existing work force

### Admission to the Program: Open First-Time Enrollees

- Complete an application for admission and, if desired, apply for financial aid.
- Send an official high school transcript or GED score report to the Admissions and Records Office.
- Complete the placement exam.
- Meet with an advisor/counselor to select classes and complete the registration process.

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**For Graduation Requirements:**

See the graduation policies and procedures (p. 22) page for details.

Course	Title	Semester Hours
<b>First Year</b>		
<b>Fall Semester</b>		
MAT.101	Technical Mathematics 1	3
MET.100	Metallurgy Fundamentals	2
MFG.100	Introduction to Welding	3
WEL.125	Welding Blueprints	2
WEL.160	Oxyacetylene Welding & Metal Preparation	3
WEL.162	Arc Welding Basics	3
<b>Spring Semester</b>		
MAT.102	Technical Mathematics 2	3
MFG.125	Industrial Blueprints	3
MFG.130	Industrial Safety	2
WEL.164	Arc Welding Advanced	3
WEL.166	Gas Shielded Arc Tig	3
Total Semester Hours		30

**Schave, Jamie**  
instructor, welding

**La Londe, Matthew J**  
instructor, welding

**Kellogg, David M**  
associate dean, career and corporate development

The Center for Manufacturing Excellence (CME) offers classroom space, a computer lab, and houses Carl Sandburg College's industrial programs. Students may take courses in the following subject areas: welding, biofuels, rail, machine tooling, manufacturing or electrical. The electrical lab features a host of components to aid in student learning including AC/DC trainers. In 2014, Sandburg became a designated National Academy of Railroad Sciences (NARS) training site offering courses in locomotive electrical and locomotive mechanical. Instruction is delivered by individuals with industry-specific expertise and includes specialized coursework using technical equipment. Two diesel engines inside the CME are available for training opportunities. The College's welding lab offers 16 bay stations and soon will have an additional ten working spaces. The welding area offers a welding simulator, as well as state of the art multi process welding machines.

## IT LAN & Security Specialist Associate in Applied Science

<http://www.sandburg.edu/Academics/Degree-Certificates/IT%20LAN%20Security%20Specialist/index.html>

The degree program is designed to provide a comprehensive program to develop a skilled workforce in the emerging field of information technology security. Managing information security programs consists of preserving information, confidentiality and protection,

risk management, data and system integrity, availability, authenticity, and utility. The program is based on information security concepts, principles, methods, techniques, practices, and procedures that guide today's IT security professionals. This program prepares graduates to become employed as IT security specialists, firewall and VPN specialists, and data assurance specialists. The degree program is designed with an IT Security core curriculum combined with a set of fundamental IT courses. In addition, the program requires the completion of a traditional group of general education courses.

**Admission to the Program: Open First-Time Enrollees**

1. Complete an application for admission and, if desired, apply for financial aid.
2. Send an official high school transcript or GED score report to the Admissions and Records Office.
3. Complete the placement exam.
4. Meet with an advisor/counselor to select classes and complete the registration process.

**Computer Information Systems Course Completion Requirement**

For credit toward degree requirements, all ICT courses must have been completed during the five school years preceding conference of the degree or must have the approval of the Dean of Career, Technical, and Health Education Programs or Program Coordinator.

\*NOTE: This program consists of one degree and four certificates.

**Department of Career, Technical & Health Education**

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**For Graduation Requirements:**

See the graduation policies and procedures (p. 22) page for details.

Course	Title	Semester Hours
<b>First Year</b>		
<b>Fall Semester</b>		
BOC.107	Tech Skills for Business Environment	3
ICT.110	Computer Software Applications	3
ICT.125	Foundations of Information Technology	3
ICT.170	Hardware Installation & Maintenance	3
ICT.180	Windows Networking & Operating System	3
<b>Spring Semester</b>		
BOC.120	Customer Service	2
ICT.135	Mobile Technologies	3
ICT.160	Introduction to Internetworking	3
ICT.182	Implementing Ms Network Infrastructure	3
MAT.109	Concepts of Mathematics	3
or	or General Education Statistics	
MAT.110	or Statistics for Social Science	
or SSC.120		

SPE.110	Interpersonal Communication	3
or SPE.120	or Introduction to Public Speaking	

**Summer Session**

Choose 6 Credits from the Following General Education Courses:

PSY.101	Introduction to Psychology	6
or PSY.107	or Positive Psychology	
or SOC.101	or Introduction to Sociology	
or GEO.100	or Human Geography	
or HIS.105	or American History to 1877	

**Second Year****Fall Semester**

ICT.165	LINUX 1	3
ICT.184	Managing Ms Windows Network Servers	3
ICT.255	Security + Fundamentals	3
ICT.260	Introduction to Internetwork Operating S	3
CRM.172	Introduction to Security	3

**Spring Semester**

ICT.225	Sql/Database Application	3
ICT.261	Introduction to Local Area Networks	3
ICT.262	Introduction to Wide Area Networks	3
ICT.270	Cisco Security	3
ICT.275	Virtualization	3
ICT.295	Internship	2

Total Semester Hours	70
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**Higgins, Diana D**

associate dean of career technical health education

**Herath, Suvineetha**

Instructor, ICT

## Legal Office Professions Certificate

<http://www.sandburg.edu/Academics/Degree-Certificates/Legal%20Office%20Professions/index.html>

This curriculum prepares students with the skills needed for legal office work, including keyboarding, word processing, machine transcription, communications, and specialized legal courses. Graduates are qualified for positions as an assistant in a legal or governmental office.

## Associate in Applied Science

This degree is designed to prepare the graduate for a legal assistant position within a legal or government office. In addition to general office skills, a graduate will acquire expertise in specialized legal software, research, litigation support, electronic discovery, time and billing, and docket management. Also, current legal cases and ethical dilemmas are used to illustrate and reinforce legal regulations.

### Admission to the Program: Open First-Time Enrollees

1. Complete an application for admission and, if desired, apply for financial aid.
2. Send an official high school transcript or GED score report to the Admissions and Records Office.
3. Complete the placement exam.

4. Meet with an advisor/counselor to select classes and complete the registration process.

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welcomecenter@sandburg.edu

**For Graduation Requirements:**

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## Certificate

Course	Title	Semester Hours
<b>First Year</b>		
<b>Fall Semester</b>		
AOP.100	Careers for Office Professional	1
AOP.101	Keyboarding & Formatting 1	3
AOP.120	Legal Terminology & Concepts	2
BOC.120	Customer Service	2
PSY.101	Introduction to Psychology	3
or PSY.107	or Positive Psychology	
or SOC.101	or Introduction to Sociology	
SPE.110	Interpersonal Communication	3
<b>Spring Semester</b>		
AOP.102	Keyboarding & Formatting 2	3
AOP.201	Business English	2
AOP.220	Legal Document Processing	3
BOC.101	Business Records Management	2
BOC.103	Office Technology	3
ICT.110	Computer Software Applications	3
Total Semester Hours		30

## Legal Office Professional - AAS.

Course	Title	Semester Hours
<b>First Year</b>		
<b>Fall Semester</b>		
AOP.100	Careers for Office Professional	1
AOP.101	Keyboarding & Formatting 1	3
AOP.120	Legal Terminology & Concepts	2
BOC.120	Customer Service	2
PSY.101	Introduction to Psychology	3
or PSY.107	or Positive Psychology	
or SOC.101	or Introduction to Sociology	
SPE.110	Interpersonal Communication	3
<b>Spring Semester</b>		
AOP.102	Keyboarding & Formatting 2	3
AOP.201	Business English	2
AOP.220	Legal Document Processing	3
BOC.101	Business Records Management	2

BOC.103	Office Technology	3
ICT.110	Computer Software Applications	3
<b>Second Year</b>		
<b>Fall Semester</b>		
ACC.100	Procedural Accounting	3
AOP.203	Office Procedures	3
BLA.201	Legal Environment of Business	3
BOC.100	Business Mathematics	3
BOC.102	Business Communications	3
<b>Spring Semester</b>		
AOP.205	Specialized Software Apps-Legal Office	4
AOP.216	Advanced Word Processing	3
BLA.202	Business Law	3
ICT.112	Microcomputer Spreadsheet Applications 1	2
AOP.291	Professional Internship 1	3
or AOP.292	or Professional Internship 2	
Total Semester Hours		60

**Hawkinson, Carrie**

associate professor, administrative office professional/business occupations

**Higgins, Diana D**

assistant professor, administrative office professional/business occupations/graphic communications  
associate dean of career technical health education

## Locomotive Electrical Associate in Applied Science

<http://www.sandburg.edu/Academics/Degree-Certificates/Locomotive%20Electrical/index.html>

The program is designated to introduce the student to the basic electrical theory and concepts related to locomotive electrical systems, including the operations, maintenance, and troubleshooting of EMD Low Horsepower locomotive electrical systems. Also, it includes the basic operation, maintenance, repair requirements and trouble shooting of EMD diesel engines and support systems, and the GE Dash 8/9 locomotive systems.

### Admission to the Program: Open First-Time Enrollees

1. Complete an application for admission and, if desired, apply for financial aid.
2. Send an official high school transcript or GED score report to the Admissions and Records Office.
3. Complete the placement exam.
4. Meet with an advisor/counselor to select classes and complete the registration process.

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welcomecenter@sandburg.edu

### For Graduation Requirements:

See the graduation policies and procedures (p. 22) page for details.

Course	Title	Semester Hours
<b>First Year</b>		
<b>Fall Semester</b>		
ELT.100	Electrical Fundamentals	3
MAT.101	Technical Mathematics 1	3
MTL.101	Machine Tool Fundamentals 1	3
MTL.103	Manufacturing Processes	2
MFG.100	Introduction to Welding	3
MFG.130	Industrial Safety	2
<b>Spring Semester</b>		
BOC.107	Tech Skills for Business Environment	3
MAT.102	Technical Mathematics 2	3
ENG.101	Freshman Composition 1	3
or ENG.120	or Report Writing	
or RDG.120	or Strategies for Success in College	
RRT.120	Introduction to Railroad	1.5
RRT.142	Locomotive Electricity	3
HYD.101	Hydraulics and Pneumatics	3
<b>Summer Session</b>		
SPE.110	Interpersonal Communication	3
or SPE.120	or Introduction to Public Speaking	
<b>Second Year</b>		
<b>Fall Semester</b>		
ICT.110	Computer Software Applications	3
RRT.101	History of Railroad	3
RRT.137	Locomotive Air Brakes	3
RRT.143	Low Horsepower Electrical	3
RRT.144	EMD Basic Electrical	3
<b>Spring Semester</b>		
ELT.213	Process Control & Instrumentation	3
RRT.138	Locomotive FRA	3
RRT.145	GE Dash 8/9 Electrical System	3
RRT.165	Rail Safety Quality & Environment	3
SOC.101	Introduction to Sociology	3
or PSY.101	or Introduction to Psychology	
or PSY.107	or Positive Psychology	
Total Semester Hours		65.5

**Kellogg, David M**

associate dean of career & corporate development

The Center for Manufacturing Excellence (CME) offers classroom space, a computer lab, and houses Carl Sandburg College's industrial programs. Students may take courses in the following subject areas: welding, biofuels, rail, machine tooling, manufacturing or electrical. The electrical lab features a host of components to aid in student learning including AC/DC trainers. In 2014, Sandburg became a designated National Academy of Railroad Sciences (NARS) training site offering courses in locomotive electrical and locomotive mechanical. Instruction is delivered by individuals with industry-specific expertise and includes specialized coursework using technical equipment. Two diesel engines inside the

CME are available for training opportunities. The College's welding lab offers 16 bay stations and soon will have an additional ten working spaces. The welding area offers a welding simulator, as well as state of the art multi-process welding machines.

## Locomotive Mechanical Associate in Applied Science

<http://www.sandburg.edu/Academics/Degree-Certificates/Locomotive-Mechanical/index.html>

This degree is an extension of the Locomotive Mechanical certificate. This AAS is designated to introduce the student to the basic mechanical theory and concepts related to locomotive electrical systems, including the operations, maintenance, and troubleshooting of EMD and GE diesel engines and support systems. Also, it includes an introduction to the operation, testing, maintenance and trouble shooting for 26L and 30 ACDW locomotive air brake systems. Further, students will get an introduction to the Federal Railway Administration and Department of Transportation Code of Federal Regulations Title 49, Parts 209, 218, 228, 231 and 232. This program will train graduates for entry level positions in the rail transportation including: Rail Locomotive Mechanics and Repairers.

### Certificate

This program is designated to introduce the student to the basic mechanical theory and concepts related to locomotive electrical systems, including the operations, maintenance, and troubleshooting of EMD and GE diesel engines and support systems. Also, it includes an introduction to the operation, testing, maintenance and trouble shooting for 26L and 30 ACDW locomotive air brake systems. Further, students will get an introduction to the Federal Railway Administration and Department of Transportation Code of Federal Regulations Title 49, Parts 209, 218, 228, 231 and 232.

### Admission to the Program: Open First-Time Enrollees

1. Complete an application for admission and, if desired, apply for financial aid.
2. Send an official high school transcript or GED score report to the Admissions and Records Office.
3. Complete the placement exam.
4. Meet with an advisor/counselor to select classes and complete the registration process.

### Department of Career & Corporate Development

2400 Tom L. Wilson Blvd.  
Galesburg, IL 61401  
Phone: 309.341.5313

### For Additional Information Contact:

The Welcome Center  
Phone: 309.345.3500  
welcomecenter@sandburg.edu

### For Graduation Requirements:

See the graduation policies and procedures (p. 22) page for details.

Course	Title	Semester Hours
<b>First Year</b>		
<b>Fall Semester</b>		
ELT.100	Electrical Fundamentals	3
MAT.101	Technical Mathematics 1	3
MTL.101	Machine Tool Fundamentals 1	3
MTL.103	Manufacturing Processes	2
MFG.100	Introduction to Welding	3
MFG.130	Industrial Safety	2
<b>Spring Semester</b>		
BOC.107	Tech Skills for Business Environment	3
MAT.102	Technical Mathematics 2	3
ENG.101	Freshman Composition 1	3
or ENG.120	or Report Writing	
or RDG.120	or Strategies for Success in College	
RRT.120	Introduction to Railroad	1.5
RRT.142	Locomotive Electricity	3
HYD.101	Hydraulics and Pneumatics	3
<b>Summer Session</b>		
SPE.110	Interpersonal Communication	3
or SPE.120	or Introduction to Public Speaking	
<b>Second Year</b>		
<b>Fall Semester</b>		
ICT.110	Computer Software Applications	3
RRT.135	Basic Electro Motive Diesel (EMD)	3
RRT.136	Basic GE Mechanical	3
RRT.137	Locomotive Air Brakes	3
RRT.101	History of Railroad	3
<b>Spring Semester</b>		
ELT.213	Process Control & Instrumentation	3
RRT.138	Locomotive FRA	3
RRT.165	Rail Safety Quality & Environment	3
SOC.101	Introduction to Sociology	3
or PSY.101	or Introduction to Psychology	
or PSY.107	or Positive Psychology	
Total Semester Hours		62.5

**\*All course taken from First Year, Spring Semester must be passed with a "C" or better in order to obtain Basic Industrial & Manufacturing Maintenance Certificate.**

**Kellogg, David M**

associate dean of career & corporate development

The Center for Manufacturing Excellence (CME) offers classroom space, a computer lab, and houses Carl Sandburg College's industrial programs. Students may take courses in the following subject areas: welding, biofuels, rail, machine tooling, manufacturing or electrical. The electrical lab features a host of components to aid in student learning including AC/DC trainers. In 2014, Sandburg became a designated National Academy of Railroad Sciences (NARS) training site offering courses in locomotive electrical and locomotive mechanical. Instruction is delivered by individuals with industry-specific expertise and includes specialized coursework using technical equipment. Two diesel engines inside the CME are available for training opportunities. The College's welding lab offers 16 bay stations and soon will have an additional ten working

spaces. The welding area offers a welding simulator, as well as state of the art multi-process welding machines.

## Magnetic Resonance Imaging (MRI) Advanced Certificate

<http://sandburg.edu/Academics/Degree-Certificates/Magnetic-Resonance-Imaging/index.html>

Magnetic Resonance Imaging (MRI) Advanced Certificate is a one-semester program that prepares radiographers to perform MRI procedures in hospitals and imaging centers.

Magnetic Resonance Imaging is a specialized imaging modality that utilizes computer technology in conjunction with magnetic fields and radio frequency signals to obtain sectional images in any body plane. MRI's ability to distinguish differences in tissue composition has made it the modality of choice in imaging the central nervous system and a variety of soft tissue structures. The curriculum covers all subject areas listed in the A.R.R.T Content Specifications to prepare for the examination in Magnetic Resonance Imaging.

### Working Conditions

MRI technologists may work in a variety of health care facilities, although most are employed in hospitals or imaging centers. Technologists typically work 40-hour weeks that may include evening, weekend or "on-call" hours dependent upon their employment setting. Please refer to the Essential Skills & Abilities of a MRI technologist to determine if you are able to meet these functions with or without reasonable accommodations.

### Employment

As the cost of equipment declines and smaller units become available, MRI and other radiologic procedures are increasingly being used in physicians' offices and walk-in clinics, which increases the demand for technologists to operate the machinery. With the life expectancy increasing, the demands of an aging population increases the need for health care providers. It is expected that employment of Radiologic and MRI technologists will increase by about 28% from 2012-2020, faster than the average for all occupations. U.S. Department of Labor, Bureau of Labor Statistics.

### Accreditation/Approval

Carl Sandburg College is accredited through the North Central Association of Colleges and Schools – The Higher Learning Commission, 30 LaSalle Street, Suite 2400, Chicago, IL. 60602-2504.

### Licensure

Graduates are eligible to apply to take the American Registry of Radiologic Technologists (ARRT) Post Primary Examination in Magnetic Resonance Imaging. This certification is nationally recognized and enables the student to pursue employment throughout the United States.

### Admission Requirements: Selective

The Magnetic Resonance Imaging (MRI) Program has limited enrollment and a selection process for admission into the program. Students must apply and be formally accepted into the program prior to enrolling in any Magnetic Resonance Imaging courses. Students can apply online to the Magnetic Resonance Imaging (MRI) Program June 1 - October 1. The application deadline date is October 1 for Spring enrollment. We notify applicants approximately two weeks after application deadline date whether they have been accepted or not into the program.

1. If you have never attended Carl Sandburg College, complete a general application for admission to the College - <http://www.sandburg.edu/admissions/steps-enroll>
2. Submit official transcripts from high school and all post-secondary educational institutions.
3. Graduate from an A. R. R. T approved radiography program with a 2.5 or higher cumulative G. P. A. on a 4.0 scale.
4. Provide evidence of active registration with the A. R. R. T or registry-eligible status.
5. Complete the online application for the Magnetic Resonance Imaging program.
6. Students admitted must attend the program orientation session.

Program admission is competitive and fulfillment of the basic requirements does not guarantee admission. Class size is limited and is determined by the number of available clinical sites within each community-college district. Participating community college districts (in addition to Carl Sandburg College) include: Black Hawk, Heartland, Illinois Central, Illinois Valley, John Wood, Lincoln Land, Parkland, Richland, Sauk Valley, Scott (IA), Southeastern (IA), and Spoon River.

RDT 255 practicum requires immunizations with titers, TB skin test, current Healthcare Provider CPR certification, drug screen, background check and physical. Students are responsible for all fees incurred. Please refer to the Computed Tomography Program Cost Sheet. Please note that findings on the criminal background check and drug screen may void the conditional admission and prevent entrance to the program. Findings on the physical examination and drug screen may prevent placement at the clinical sites. Technologists employed in MRI may seek enrollment in the online classroom-only portions of the program, if desired.

### College of Nursing & Health Professions

2400 Tom L. Wilson Blvd.  
Galesburg, IL 61401  
Phone: 309.341.5299

### For Additional Information Contact:

The Welcome Center  
Phone:309.345.3500  
[welcomecenter@sandburg.edu](mailto:welcomecenter@sandburg.edu)

### For Graduation Requirements:

See the graduation policies and procedures (p. 22) page for details.

## Advanced Certificate

### Program Curriculum

RDT.262	Sectional Anatomy for Diagnostic Imaging	3
MRI.250	MRI Physics & Instrumentation	4
MRI.252	MR Imaging Procedures	3
MRI.255	MRI Practicum	6
<b>Total Program Requirement</b>		<b>16</b>

NOTE: In order to graduate, each student must complete all required courses with a grade of "C" or better.

NOTE: RDT.262, MRI.250 and MRI.252 are online courses.



# Medical Office Professions Certificate

<http://www.sandburg.edu/Academics/Degree-Certificates/Medical-Office-Professional/index.html>

Medical Office Assistants perform routine clerical and organizational tasks. They organized files, draft message, schedule appointments, and support other staff. Carl Sandburg College offers a certificate program designed to prepare students with the skills needed for medical office work, including keyboarding, electronic health records, word processing, medical terminology, medical transcription and communication skills.

## Associate in Applied Science

Medical Office Professionals perform office managerial tasks. They organize electronic health records, complete insurance, coding and billing records, and oversee other staff. Carl Sandburg College offers an Associate's degree program designed to prepare students with expertise in medical coding, insurance and billing, transcription and electronic health records.

**Working Conditions:** Most medical office assistants work in comfortable office settings. Virtual assistants typically work from a home office.

**Employment:** Graduates are qualified for office positions in a clinic or hospital, for positions as assistants in a medical office, medical transcriptionists or medical billing/insurance assistants.

### Admission to the Program: Open First-Time Enrollees

1. Complete an application for admission and, if desired, apply for financial aid.
2. Send an official high school transcript or GED score report to the Admissions and Records Office.
3. Complete the placement exam.
4. Meet with an advisor/counselor to select classes and complete the registration process.

### Department of Career, Technical & Health Education

2400 Tom L. Wilson Blvd.  
Galesburg, IL 61401  
Phone: 309.341.5363

### For Additional Information Contact:

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Phone: 309.345.3500  
welcomecenter@sandburg.edu

### For Graduation Requirements:

See the graduation policies and procedures (p. 22) page for details.

## Medical Office Assistant Certificate

Course	Title	Semester Hours
<b>First Year</b>		
<b>Fall Semester</b>		
AOP.100	Careers for Office Professional	1
AOP.101	Keyboarding & Formatting 1	3
AOP.130	Electronic Health Records	2

BOC.101	Business Records Management	2
BOC.120	Customer Service	2
PSY.101	Introduction to Psychology	3
or PSY.107	or Positive Psychology	
or SOC.101	or Introduction to Sociology	
MDT.100	Medical Terminology	2
<b>Spring Semester</b>		
AOP.102	Keyboarding & Formatting 2	3
AOP.117	Medical Transcription 1	3
AOP.201	Business English	2
AOP.234	Insurance & Billing in Medical Office	3
ICT.110	Computer Software Applications	3
SPE.110	Interpersonal Communication	3
or SPE.120	or Introduction to Public Speaking	
Total Semester Hours		32

## Medical Office Professional - AAS.

Course	Title	Semester Hours
<b>First Year</b>		
<b>Fall Semester</b>		
AOP.100	Careers for Office Professional	1
AOP.101	Keyboarding & Formatting 1	3
AOP.130	Electronic Health Records	2
BOC.101	Business Records Management	2
BOC.120	Customer Service	2
MDT.100	Medical Terminology	2
PSY.101	Introduction to Psychology	3
or PSY.107	or Positive Psychology	
or SOC.101	or Introduction to Sociology	
<b>Spring Semester</b>		
AOP.102	Keyboarding & Formatting 2	3
AOP.117	Medical Transcription 1	3
AOP.201	Business English	2
AOP.234	Insurance & Billing in Medical Office	3
ICT.110	Computer Software Applications	3
SPE.110	Interpersonal Communication	3
or SPE.120	or Introduction to Public Speaking	
<b>Second Year</b>		
<b>Fall Semester</b>		
AOP.203	Office Procedures	3
AOP.217	Medical Transcription 2	3
BIO.111	Anatomy & Physiology Fundamentals	4
BOC.102	Business Communications	3
MDC.102	Medical Coding Cpt	3
<b>Spring Semester</b>		
AOP.231	Advanced Electronic Health Records	3
MDC.101	Medical Coding Icd	3
PHL.103	Biomedical Ethics	3
SOC.203	Introduction to Diversity	3

AOP.291 or AOP.292	Professional Internship 1 or Professional Internship 2	3
Total Semester Hours		63

**Hawkinson, Carrie A**

associate professor, administrative office professional/business occupations

**Higgins, Diana D**

assistant professor, administrative office professional/business occupations/graphic communications  
associate dean of career technical health education

## Medical Assisting

<http://www.sandburg.edu/Academics/Degree-Certificates/Medical-Assisting/index.html>

The Medical Assistant Program is a one-year certificate that prepares students to perform administrative, clinical, and laboratory duties in a variety of health care settings. As one of the fastest growing health care occupations, medical assistants are most commonly employed in medical offices and clinics.

Their administrative responsibilities may include front office reception, billing, bookkeeping, basic correspondence, and scheduling of appointments. Clinical duties include taking medical histories, recording vital signs, collecting laboratory specimens, performing basic laboratory tests, taking electrocardiograms, and assisting the physician during the examination and treatment of patients.

### Working Conditions

Medical assistants work closely with physicians, nurses, and other health care professionals and office personnel. Although most medical assistants work a regular 40-hour week, they may be assigned evenings or weekends dependent upon their place of employment. The medical assistant provides direct patient care and must be able to obtain the knowledge (cognitive function), skills (psychomotor function), and demonstrate professionalism (affective function).

If you are considering this field, you should be able to accurately record and keep track of information, maintain confidentiality, deal calmly and professionally with patients, follow medical charts and understand diagnoses, and work with electronic health records. Please refer to the Essential Skills & Abilities of a Medical Assistant to determine if you are able to meet these functions with or without reasonable accommodations.

### Employment

Employment of medical assistants is projected to grow 24% over the next ten years, much faster than the average for all healthcare professions. Bureau of Labor Statistics, U.S. Department of Labor.

### Accreditation/Approval

Carl Sandburg College is accredited by the North Central Association of Colleges and Schools – Higher Learning Commission, 30 LaSalle Street, Suite 2400, Chicago, IL 60602-2504.

### Licensure

Upon successful completion of the program, the graduate will be eligible to take the certification exam offered by the American Medical Technologists (AMT).

### Admission to the Program: Selective

The Medical Assistant Program has limited enrollment and a selection process for admission into the program. Applicants need to refer to the Eligibility & Admission Requirements for this program to determine eligibility criteria and selection process. Students interested in this program must attend a Health Professions Informational Session prior to applying to the program. Students can apply online to the Medical Assistant Program June 1 - October 1. Online application deadline date is October 1 for Spring enrollment. We notify applicants approximately two weeks after the application deadline date whether they are accepted into the program or not. Applicants accepted into the Medical Assistant program must attend the program orientation session.

Students accepted will be required to show proof of immunizations and required titers, TB test, physical examination, criminal background check, and drug screen. Students are responsible for all fees incurred, in addition to tuition. Please refer to the Medical Assistant Program Cost Sheet. Please note findings on the criminal background check and drug screen may void conditional admission and prevent entrance to the program. Findings on the physical examination and drug screen may prevent placement at the clinical sites.

### College of Nursing & Health Professions

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Phone: 309.341.5299

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[welcomecenter@sandburg.edu](mailto:welcomecenter@sandburg.edu)

### For Graduation Requirements:

See the graduation policies and procedures (p. 22) page for details.

## Certificate

Course	Title	Semester Hours
<b>First Year</b>		
<b>Fall Semester</b>		
MDA.100	Fundamentals of Medical Assisting	2
MDA.101	Intro to Management of Medical Office	1
MDA.110	Adm Procedures in Medical Assisting	4
MDA.112	Pharmacology & Medication Administration	2
MDA.115	Clinical Medical Assisting 1	5
<b>Spring Semester</b>		
HTH.130	First Aid	2
MDA.120	Financial Procedures in the Medical Off.	4
MDA.125	Clinical Medical Assisting 2	4
MDA.127	Clinical Laboratory Procedures	3
MDA.200	Management of the Medical Office	1
<b>Summer Session</b>		
MDA.205	Medical Assisting Practicum	3
Total Semester Hours		31

NOTE: Students enrolled in the Medical Assisting program must complete all MDA and BIO courses with a grade of "C" or better in order to be

eligible to register for subsequent courses. In order to graduate, students must complete all required courses with a grade of "C" or better.

**Cindy Koeppe, RN, BSN**

Adjunct Faculty, Medical Assistant Instructor

The Medical Assistant Program offers courses on the Galesburg Campus. Labs take place in the College of Nursing Building with access to the skills lab and health assessment lab where essential skills will be demonstrated and practiced. Practicum experiences for the Medical Assistant program will be gained with physician offices and clinics in the Galesburg area such as: Galesburg Cottage Hospital, Galesburg Cottage Physician Offices, OSF St. Mary's Medical Center and Clinics, and other surrounding community agencies as needed.

## Mortuary Science Associate in Applied Science Degree and Accelerated Program

<http://www.sandburg.edu/Academics/Degree-Certificates/Mortuary-Science/index.html>

<http://www.sandburg.edu/Academics/Degree-Certificates/Mortuary-Science-Accelerated/index.html>

Carl Sandburg College offers both a traditional and an accelerated associate degree program for students interested in a career in mortuary science

**Mortuary Science Associate in Applied Science Degree and Mortuary Science Accelerated Option** --Carl Sandburg College offers both a traditional and an accelerated associate degree program for students interested in a career in mortuary science.

**Mortuary Science Program Aims and Objectives** – prepares students to serve within the funeral service profession, adheres to the institutional commitment to student success in both human development and achievement of educational goals. This challenge is met by educating students in all phases of funeral service, with special attention being given to the high ethical standards within the funeral service profession. These goals are accomplished through a wide variety of educational experiences aimed at developing the many skills needed in order to successfully serve within the funeral service profession. This curriculum is based upon the American Board of Funeral Service Education curriculum outlines. Several of the mortuary science classes require some outside work as well as research about various aspects of the funeral service profession. Upon completion of the mortuary science program, each graduate will have attained those skills necessary to uphold and foster the dignity of the funeral service profession.

### Nature of the Work

Funeral directors arrange the details and handle the logistics of funerals. They interview the family to learn what they desire with regard to the nature of the funeral, the clergy members or other persons who will officiate and the final disposition of the remains. Sometimes the deceased leave detailed instructions for their own funerals. Together with family members, funeral directors establish the location, dates and times of wakes, memorial services and burials. Funeral directors also prepare obituary notices and have them placed in newspapers, arrange for pallbearers and clergy, schedule the opening and closing of a grave with the cemetery, decorate and prepare the sites of all services and provide transportation for the remains, mourners and flowers between

sites. Most funeral directors are also trained and licensed embalmers. Embalming is the cosmetic and preservative process through which the body is prepared for interment.

### Employment Opportunities

Opportunities are excellent with many openings in the funeral service profession. These include, but are not limited to; funeral directors, embalmers, grief facilitators, and pre-need sales. Most funeral homes are family-run businesses, and the funeral directors either are owner operators or employees of the operation.

### Admission Requirements

The Mortuary Science program has specific admission requirements and a separate application process. Students who have successfully completed all of the prerequisite courses contained within the mortuary science program course of study are eligible for the accelerated option. Students must apply and be accepted into the program in order to enroll. Completed applications may be submitted beginning Oct. 1 every year for classes that start the next academic year. Admission to the program is on a rolling basis, but new students are only admitted for the fall semester each year. Mortuary science admission requirements are:

1. Meet admission requirements of Sandburg
2. Complete all general education courses
3. Complete an application for the mortuary science program
4. Submit all transcripts (H.S., College or GED) to Sandburg
5. Submit proof of interview with a licensed funeral director
6. The Hepatitis B Vaccination is required prior to admission

Enrollment in the program is limited to a specific number of students due to accreditation requirements. The accelerated program is designed to meet the needs of those applicants who have already attained the necessary educational requirements in order to complete the required Mortuary Science major courses in a two-semester sequence. Students who enroll in the program must earn a minimum grade of "C" (2.0 on a 4.0 scale) in all courses required in the mortuary science program. Failure to attain these grade requirements will result in dismissal from the program with an option to reapply to the program only available on a onetime basis.

### Additional Requirements

Students are expected to purchase required clothing or protective equipment used in the program. Additional living and incidental expenses should be expected by the student.

### Department of Career, Technical & Health Education

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### For Additional Information Contact:

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[welcomecenter@sandburg.edu](mailto:welcomecenter@sandburg.edu)

### For Graduation Requirements:

See the graduation policies and procedures (p. 22) page for details.

## Associate in Applied Science

Course	Title	Semester Hours
<b>First Year</b>		
<b>Summer Session</b>		
ENG.101	Freshman Composition 1	3
<b>Fall Semester</b>		
MTS.150	Psychology of Grief & Death	3
BIO.111	Anatomy & Physiology Fundamentals	4
CHM.100	Concepts of Chemistry	3
MTS.110	History of Mortuary Science	3
MTS.120	Mortuary Law	3
<b>Spring Semester</b>		
MTS.130	Introduction to Microbiology - Mort Sci	2
MTS.131	Introduction to Pathology-Mortuary Sci	2
MTS.210	Funeral Service Counseling	4
BUS.201	Management Fundamentals	3
ACC.101	Principles of Financial Accounting	3
BLA.202	Business Law	3
<b>Second Year</b>		
<b>Fall Semester</b>		
MTS.140	Embalming 1	4
MTS.160	Funeral Service Administration	5
MTS.170	Restorative Art	4
MTS.215	Introduction-Mass Fatalities Incidents	2
MTS.225	Thanatochemistry	3
<b>Spring Semester</b>		
MTS.220	Funeral Directing (First 8-Week Session)	4
MTS.230	Embalming 2 (First 8-Week Session)	4
MTS.240	Funeral Service Seminar (First 8-Week Session)	1
MTS.250	Funeral Service Practicum (Second 8-Week Session)	3
MTS.260	Restorative Arts/Embalming Practicum (Second 8-Week Session)	3
MTS.270	Exam Review Seminar (Second 8-Week Session)	1
Total Semester Hours		70

NOTE: Students enrolled in the Mortuary Science program must complete all MTS courses with a grade of "C" or better in order to be eligible to register for subsequent courses. In order to graduate, students must complete all required courses with a grade of "C" or better.

## Optional Accelerated Program of Study for Mortuary Science

Course	Title	Semester Hours
<b>First Year</b>		
<b>Fall Semester</b>		
MTS.150	Psychology of Grief & Death	3
MTS.110	History of Mortuary Science	3
MTS.120	Mortuary Law	3
MTS.140	Embalming 1	4

MTS.160	Funeral Service Administration	5
MTS.170	Restorative Art	4
MTS.215	Introduction-Mass Fatalities Incidents	2
MTS.225	Thanatochemistry	3
<b>Spring Semester</b>		
MTS.130	Introduction to Microbiology - Mort Sci (First 8-Week Session)	2
MTS.131	Introduction to Pathology-Mortuary Sci (First 8-Week Session)	2
MTS.210	Funeral Service Counseling (First 8-Week Session)	4
MTS.220	Funeral Directing (First 8-Week Session)	4
MTS.230	Embalming 2 (First 8-Week Session)	4
MTS.240	Funeral Service Seminar (First 8-Week Session)	1
MTS.250	Funeral Service Practicum (Second 8-Week Session)	3
MTS.260	Restorative Arts/Embalming Practicum (Second 8-Week Session)	3
MTS.270	Exam Review Seminar (Second 8-Week Session)	1
Total Semester Hours		51

NOTE: Students enrolled in the Mortuary Science program must complete all MTS courses with a grade of "C" or better in order to be eligible to register for subsequent courses. In order to graduate, students must complete all required courses with a grade of "C" or better.

### Kendall, Matthew R

assistant professor, mortuary science

### Krause, Timothy J

professor, mortuary science  
coordinator of mortuary science

### Higgins, Diana D

associate dean of career technical health education

All of our mortuary science courses are taught in newly constructed, state-of-the-art facilities located on the Main Campus in Galesburg. This facility includes two main classrooms, restorative art laboratory, chapel area, arrangement and merchandising areas, fully operational preparation room for embalming and dissection, student lounge areas and offices for the teaching and support staff.

## Network Security Associate

<http://www.sandburg.edu/Academics/Degree-Certificates/Network-Security-Accociate/index.html>

## Certificate

This certificate provides students with entry-level skills for a profession in network security. Managing networks security includes preserving information confidentiality, availability, and integrity. Network security professionals are tasked with performing network risk assessment, implementing safeguards that protect data and system integrity, implementing and maintaining system authentication systems and perimeter protection systems. This program prepares graduates to become employed as network security technicians, network firewall technicians, VPN administrators and remote security communication support specialists. This certificate prepares students to take the CompTIA Security+ certification exams.

**First-Time Enrollees**

1. Complete an application for admission and, if desired, apply for financial aid.
2. Send an official high school transcript or GED score report to the Admissions and Records Office.
3. Complete the placement exam.
4. Meet with an advisor/counselor to select classes and complete the registration process.

**Computer Information Systems Course Completion Requirement**

For credit toward degree requirements, all ICT courses must have been completed during the five school years preceding conference of the degree or must have the approval of the Dean of Career, Technical, and Health Education Programs or Program Coordinator.

\*NOTE: Computer Technician Certificate conferred upon successful completion of the required 30 hours contained in the first and second semesters plus summer session of this program. A.A.S. Degree conferred upon successful completion of all 62 required hours.

**Department of Career, Technical & Health Education**

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welcomecenter@sandburg.edu

**For Graduation Requirements:**

See the graduation policies and procedures (p. 22) page for details.

Course	Title	Semester Hours
<b>First Year</b>		
<b>Fall Semester</b>		
BOC.107	Tech Skills for Business Environment	3
ICT.110	Computer Software Applications	3
ICT.125	Foundations of Information Technology	3
ICT.170	Hardware Installation & Maintenance	3
ICT.180	Windows Networking & Operating System	3
<b>Spring Semester</b>		
BOC.120	Customer Service	2
ICT.135	Mobile Technologies	3
ICT.160	Introduction to Internetworking	3
ICT.182	Implementing Ms Network Infrastructure	3
<b>Second Year</b>		
<b>Fall Semester</b>		
ICT.165	LINUX 1	3
ICT.184	Managing Ms Windows Network Servers	3
ICT.255	Security + Fundamentals	3
ICT.260	Introduction to Internetwork Operating S	3
CRM.172	Introduction to Security	3
Total Semester Hours		41

\*Note that completion of this certificate will also grant you the Computer Support Associate & Computer Technician certificates.

**Higgins, Diana D**

associate dean of career technical health education

**Herath, Suvineetha**

Instructor, ICT

**Nursing Program****Associate Degree - RN**

<http://www.sandburg.edu/academics/associate-degree-nursing>

Carl Sandburg College offers a two-year Associate in Applied Science Degree in Nursing. The Associate Degree Nursing program prepares the student for entry level as a Registered Nurse (RN). Successful graduates will be eligible to take the NCLEX-RN licensure examination.

Registered professional nurses work to promote health, prevent disease, and help patients recover from and cope with illness. Registered professional nurses assess, diagnose, plan, implement and evaluate care to patients; assist physicians with treatments and examinations; administer medications; and assist in convalescence and rehabilitation. Registered professional nurses also provide patient education to clients and families to help improve or maintain the optimum level of health.

**Working Conditions**

Most health care facilities provide a safe and comfortable working environment. Care is required around the clock, often in 8- or 12-hour shifts, weekends and holidays, and may involve on-call work. Schools, offices, and clinics offer more traditional work hours. The Registered Nurse provides direct patient care and must be able to obtain the knowledge (cognitive function), skills (psychomotor function), and demonstrate professionalism (affective function). Please refer to the Essential Skills & Abilities of a Registered Nurse to determine if you are able to meet these functions with or without reasonable accommodations.

**Employment**

Employment opportunities include, but are not limited to hospitals, clinics and physician offices, long-term care/rehabilitation facilities, home health agencies, public health facilities, schools, churches, informatics, correctional facilities and insurance companies. The demand for registered professional nurses is very high and expected to increase. It is projected that employment of RNs will grow 16% from 2014 to 2024, much faster than the average for all occupations. Growth will occur for a number of reasons, including an increased emphasis on preventive care; growing rates of chronic conditions, such as diabetes and obesity; and demand for healthcare services from the baby-boom population, as they live longer and more, active lives. Bureau of Labor Statistics, U.S. Department of Labor.

**Accreditation/Approval**

The Associate Degree Nursing program holds full accreditation by the Accreditation Commission for Education in Nursing (ACEN), 3343 Peachtree Road NE, Suite 850, Atlanta, GA 30326. Illinois State Board of Nursing (ISBN) and Illinois Department of Financial and Professional Regulation (IDFPR) has approved the Associate Degree Nursing program.

**Licensure**

Graduates may apply to write for the National Council Licensing Examination (NCLEX-RN). Upon successful completion of this exam, the student is eligible to apply for Registered Nurse licensure in any state. Graduates will need to complete a criminal background check at time



of licensure application and will be evaluated by ISBN before licensure is granted or denied. Please be advised that the Illinois State Board of Nursing (ISBN) can deny nursing licensure and discipline those that are licensed. You can access all licensing and nursing scope of practice regulations at [www.idfpr.com](http://www.idfpr.com) (<http://www.idfpr.com>).

### Admission to the Program: Selective

The Associate Degree Nursing Program has limited enrollment and a selection process for admission into the program. Applicants need to refer to the Eligibility & Admission Requirements for this program to determine eligibility criteria and the selection process. Students interested in this program must attend a Health Professions Informational Session prior to applying to the program. Students can apply online to the Associate Degree Nursing Program October 1 - March 1. Application deadline date is March 1 for Fall enrollment. We notify applicants approximately two weeks after the application deadline date whether or not they have been accepted into the program. Applicants accepted into the nursing program must attend the program orientation session.

Students accepted will be required to possess Healthcare Provider CPR certification throughout the program, show proof of immunizations and required titers, TB test, physical examination, criminal background check, and a drug screen. Students are responsible for all fees incurred, in addition to tuition. Please refer to the Associate Degree Nursing Program Cost Sheet. Please note findings on the criminal background check and drug screen may void conditional admission and prevent entrance to the program. Findings on the physical examination and drug screen may prevent placement at the clinical sites.

### College of Nursing & Health Professions

2400 Tom L. Wilson Blvd.  
Galesburg, IL 61401  
Phone: 309.341.5299

### For Additional Information Contact:

The Welcome Center  
Phone: 309.345.3500  
[welcomecenter@sandburg.edu](mailto:welcomecenter@sandburg.edu)

### For Graduation Requirements:

See the graduation policies and procedures (p. 22) page for details.

Course	Title	Semester Hours
<b>First Year</b>		
<b>Summer Session</b>		
ENG.101	Freshman Composition 1	3
PSY.101	Introduction to Psychology	3
<b>Fall Semester</b>		
NAD.105	Nursing 1	7
NAD.106	Medication Principles for Nurses	2
NAD.108	Health Assessment & Clinical Reasoning	2
BIO.211	Anatomy & Physiology 1	4
<b>Spring Semester</b>		
NAD.125	Nursing II	8
NAD.130	Pharmacology for Nurses	2
BIO.212	Anatomy & Physiology 2	4
NUT.110	Nutrition	3

### Second Year

#### Summer Session

BIO.200	General Microbiology	4
SOC.101	Introduction to Sociology	3

#### Fall Semester

NAD.200	Nursing 3	8
NAD.205	Community & Mental Health Nursing	3
PSY.265	Developmental Psychology	3

#### Spring Semester

NAD.210	Nursing IV	8
NAD.220	Professional Issues	2
PHL.103	Biomedical Ethics	3

Total Semester Hours 72

## LPN to RN Articulation into Nursing A.A.S.

Prerequisite: Licensed Practical Nurse in Illinois with active license in good standing. Completion of all required courses prior to admission listed below\*\* with a grade of "C" or better. Submission of nursing program application, meets all admission criteria, and admitted into the second year Associate Degree Nursing Program.

Course	Title	Semester Hours
<b>First Year</b>		
<b>Summer Session</b>		
NAD.180	LPN to RN Transition *	4
<b>Fall Semester</b>		
NAD.200	Nursing 3	8
NAD.205	Community & Mental Health Nursing	3
PSY.265	Developmental Psychology	3
<b>Spring Semester</b>		
NAD.210	Nursing IV	8
NAD.220	Professional Issues	2
PHL.103	Biomedical Ethics	3
Total Semester Hours		31

\* NAD 180 must be completed with a grade of "C" or better to progress into the second year Associate Degree Nursing program. All nursing courses must be completed with a grade of "C" or better to progress each Semester.

\*\* Required prior to admission selection 1 year High School Biology or 1 semester College Biology. All of the following courses must have been completed with a grade of "C" or better prior to entering the second year of the Associate Degree Nursing Program:

- ENG 101-Freshman Composition I
- PSY 101-Introduction to Psychology
- BIO 211-Anatomy & Physiology I
- NUT 110-Nutrition
- BIO 212-Anatomy & Physiology II
- BIO 200-General Microbiology
- SOC 101-Introduction to Sociology
- NAD 106-Medication Principles for Nurses
- NAD 108-Health Assessment & Clinical Reasoning
- NAD 130-Pharmacology for Nurses

Application and dates to apply to our nursing program can be found on the College of Nursing webpage. Admission criteria into our nursing program can be found on the College of Nursing webpage: College of Nursing (<http://www.sandburg.edu/academics/college-nursing>)

**Stacy Bainter, RN, MSN**

Instructor, Nursing

**Kari Endres, RN, MSN**

Instructor, Nursing

**Kristina Gray, RN, MSN**

Instructor, Nursing

**Tammi Lewis, RN, BSN**

Coordinator of Clinical & Laboratory Services

**Jan Lundeen, RN, MSN**

Associate Professor, Nursing

**Mischelle Monagle, RN, MSN, MBA**

Dean, College of Nursing & Health Professions

**Mary Pence, RN, MSN**

Instructor, Nursing

**Emily Schaeffer, RN, MSN**

Instructor, Nursing

**Christina Stone, RN, MSN**

Instructor, Nursing

The College of Nursing building (building AA) has two classrooms, health assessment lab, skills lab, and faculty offices. The nursing program has classroom availability in building A and a simulation skills lab in building A. All three labs are used to demonstrate and practice essential nursing skills such as basic patient care skills, assessment skills, catheter insertion, administering medications, IV insertion, airway management, etc. The state of the art simulation skills lab, A035, provides medium to high fidelity simulation learning experiences, fully equipped functioning ICU Room with SimMan®, two medium fidelity med/surg rooms, a maternal/child unit with high fidelity Noelle Birthing Simulator with Neonate Hal, and infant, toddler and child medium fidelity manikins. Clinical experiences for the Associate Degree Nursing program will be gained with acute care, long-term care and rehabilitative facilities, clinics and physician offices in the Galesburg area such as: Galesburg Cottage Hospital, OSF St. Mary Medical Center, OSF Clinics, Knox County Health Department, and other surrounding facilities as needed.

## Practical Nursing (L.P.N.) Certificate

<http://www.sandburg.edu/Academics/Degree-Certificates/Practical-Nursing-LPN/index.html>

Carl Sandburg College offers a one-year certificate in Practical Nursing. The Practical Nursing program prepares the student for entry level as a Licensed Practical Nurse (LPN). As a member of the healthcare team the Licensed Practical Nurse works under the direction of physicians and registered nurses in a variety of health care settings. The LPN provides basic bedside and personal care to clients, takes vital signs, prepares and administers injections, performs wound care, collects samples for testing, and administers prescribed medications as directed.

### Working Conditions

Most health care facilities provide a safe and comfortable working environment. Working hours may include various shifts; including 8 or 12 hours, weekends, and holidays. Schools, offices, and clinics may offer more traditional hours. The Licensed Practical Nurse provides direct patient care and must be able to obtain the knowledge (cognitive function), skills (psychomotor function), and demonstrate professionalism (affective function). Please refer to the Essential Skills & Abilities of LPN to determine if you are able to meet these functions with or without reasonable accommodations.

### Employment

Employment opportunities include, but are not limited to hospitals, long-term care/rehabilitation facilities, clinics and physician offices, schools, home health agencies, and dialysis centers. It is projected that employment of LPNs will grow 16% from 2014 to 2024, much faster than the average for all occupations. As the baby-boom population ages, the overall need for healthcare services is expected to increase. There will be an increased need for LPNs in residential care facilities and in home health environments to care for older patients. Bureau of Labor Statistics, U.S. Department of Labor.

### Accreditation/Approval

The Practical Nursing program holds full accreditation status by the Accreditation Commission for Education in Nursing (ACEN), 3343 Peachtree Road NE, Suite 850, Atlanta, GA 30326. Illinois State Board of Nursing (ISBN) and Illinois Department of Financial and Professional Regulation (IDFPR) has approved the Practical Nursing program.

### Licensure

Graduates may apply to write for the National Council Licensing Examination (NCLEX-PN). Upon successful completion of this exam, the student is eligible to apply for Practical Nurse licensure in any state. Graduates will need to complete a criminal background check at time of licensure application and will be evaluated by ISBN before licensure is granted or denied. Please be advised that the Illinois State Board of Nursing (ISBN) can deny nursing licensure and discipline those that are licensed. You can access all licensing and nursing scope of practice regulations at [www.idfpr.com](http://www.idfpr.com) (<http://www.idfpr.com>).

### Admission to the Program: Selective

The Practical Nursing Program has limited enrollment and a selection process for admission into the program. Applicants need to refer to the Eligibility & Admission Requirements for this program to determine eligibility criteria and selection process. Students interested in this program must attend a Health Professions Informational Session prior to applying to the program. Students can apply online to the Practical

Nursing Program October 1 - March 1. The application deadline date is March 1 for Fall enrollment. The applicant will be notified approximately two weeks after the application deadline date whether or not they have been accepted into the program. Applicants accepted into the Practical Nursing program must attend the program orientation session.

Students accepted will be required to possess Healthcare Provider CPR certification throughout the program, show proof of immunizations and required titers, TB test, physical examination, criminal background check, and drug screen. Students are responsible for all fees incurred, in addition to tuition. Please refer to the Practical Nursing Program Cost Sheet. Please note findings on the criminal background check and drug screen may void conditional admission and prevent entrance to the program. Findings on the physical examination and drug screen may prevent placement at the clinical sites.

### College of Nursing & Health Professions

2400 Tom L. Wilson Blvd.  
Galesburg, IL 61401  
Phone: 309-341-5299

#### For Additional Information Contact:

The Welcome Center  
Phone: 309.345.3500  
welcomecenter@sandburg.edu

#### For Graduation Requirements:

See the graduation policies and procedures (p. 22) page for details.

## Certificate

Course	Title	Semester Hours
<b>First Year</b>		
<b>Summer Session</b>		
ENG.101	Freshman Composition 1	3
PSY.101	Introduction to Psychology	3
<b>Fall Semester</b>		
NUP.105	Practical Nursing I	9
NAD.106	Medication Principles for Nurses	2
NAD.108	Health Assessment & Clinical Reasoning	2
BIO.111	Anatomy & Physiology Fundamentals **	4
<b>Spring Semester</b>		
NUP.125	Practical Nursing II	9
NAD.130	Pharmacology for Nurses	2
PSY.265	Developmental Psychology	3
NUT.110	Nutrition	3
<b>Second Year</b>		
<b>Summer Session</b>		
NUP.130	Practical Nursing III	5
Total Semester Hours		45

\* NUP courses and all BIO courses must be completed with a grade of "C" or better by the end of the scheduled semester in order to progress in the program. Each student must complete all required courses with a grade of "C" or better to graduate.

\*\* **Notice to PN Students Who Plan to Apply for Admission to LPN to RN Articulation into the 2nd Year ADN:** In place of BIO.111 Anatomy & Physiology Fundamentals you may consider enrolling in BIO.211 Anatomy & Physiology 1 and BIO.212 Anatomy & Physiology 2. (BIO.211 Anatomy & Physiology 1 and BIO.212 Anatomy & Physiology 2 are required for the Associate Degree Program.)

\*\*\* LPN's are eligible to enter Second Year Fall Semester of the Associate Degree Nursing Program after completion of NAD.180 and all BIO courses (BIO.211, BIO.212, BIO.200) with a grade of "C" or better and Admission in to the Associate Degree Nursing Program.

#### Stacy Bainter, RN, MSN

Instructor, Nursing

#### Mischelle Monagle, RN, MSN, MBA

Dean, College of Nursing & Health Professions

#### Christina Stone, RN, MSN

Instructor, Nursing

#### Emily Schaeffer, RN, MSN

Instructor, Nursing

The College of Nursing building (building AA) has two classrooms, health assessment lab, skills lab, and faculty offices. The nursing program has classroom availability in building A and a simulation skills lab in building A. All three labs are used to demonstrate and practice essential nursing skills such as basic patient care skills, assessment skills, catheter insertion, administering medications, IV insertion, airway management, etc. The state of the art simulation skills lab, A035, provides medium to high fidelity simulation learning experiences, fully equipped functioning ICU Room with SimMan®, two medium fidelity med/surg rooms, a maternal/child unit with high fidelity Noelle Birthing Simulator with Neonate Hal, and infant, toddler and child medium fidelity manikins. Clinical experiences for the Associate Degree Nursing program will be gained with acute care, long-term care and rehabilitative facilities, clinics and physician offices in the Galesburg area such as: Galesburg Cottage Hospital, OSF Clinics, Knox County Health Department, Seminary Manor, Heartland Health Care and Rehabilitation and other surrounding facilities as needed.

## Radiologic Technology

<http://sandburg.edu/Academics/Degree-Certificates/Radiologic%20Technology/index.html>

Radiologic Technology program is a two-year Associate in Applied Science degree that prepares students to perform diagnostic x-ray examinations for patients in hospitals, imaging centers, physicians' offices and other health-related institutions. The Radiologic Technologist (radiographer) is a member of the health care team who works directly with the patient and the physician who is responsible for accurately positioning patients, manipulating x-ray equipment and ensuring that a high quality diagnostic image is produced.

Radiologic Technologists use x-ray equipment to create images of organs, bones and blood vessels of the body. An x-ray image, or radiograph, is produced when a small amount of radiation passes through a body part and is recorded on film or stored electronically on a computer. They are educated in anatomy, patient positioning, radio-graphic techniques, equipment protocols, radiation safety, radiation protection and basic patient care.

## Working Conditions

Radiologic Technologists may work in a variety of health care facilities, although most are employed in hospitals or major medical centers. Technologists typically work 40-hour weeks that may include evening, weekend, or "on-call" hours dependent upon their employment setting. The Radiologic Technologist provides direct patient care and must be able to obtain the knowledge (cognitive function), skills (psychomotor function), and demonstrate professionalism (affective function). Physical stamina is important in diagnostic imaging because technologists are on their feet for long periods of time and may be required to lift or turn disabled patients. Please refer to the Essential Skills & Abilities of a Radiologic Technologist to determine if you are able to meet these functions with or without reasonable accommodations.

## Employment

With the life expectancy increasing, the demands of an aging population increases the need for health care providers. Employment of Radiologic technologists is expected to increase by about 28% from 2012-2020, faster than the average for all occupations. U.S. Department of Labor, Bureau of Labor Statistics.

## Accreditation/Approval

Carl Sandburg College is accredited through the North Central Association of Colleges and Schools – The Higher Learning Commission, 30 LaSalle Street, Suite 2400, Chicago, IL. 60602-2504.

## Licensure

Graduates are eligible to apply to take the American Registry of Radiologic Technologists A.R.R.T examination for certification in Radiography-RT(R). This certification is nationally recognized and enables the student to pursue employment throughout the United States.

## Admission to the Program: Selective

The Radiologic Technology program has limited enrollment and a selection process for admission into the program. Students must apply and be formally accepted into the program prior to enrolling in any Radiologic Technology courses. Applicants need to refer to the Eligibility & Admission Requirements for this program to determine eligibility criteria and selection process. Student interested in this program must attend a Health Professions Informational Session prior to applying to the program. Students can apply online to the Radiologic Technology program October 1 - February 1. Online application deadline date is February 1 for Summer enrollment. We notify applicants approximately two weeks after the application deadline date whether or not they have been accepted into the program. Applicants accepted into the Radiologic Technology program must attend the program orientation session.

Program admission is competitive and fulfillment of the basic requirements does not guarantee admission. Class size is limited and is determined by the number of available clinical sites within each community-college district. Participating community college districts (in addition to Carl Sandburg College) include: Black Hawk and Spoon River. Applicants accepted into the program must attend the program orientation session.

Students accepted will be required to possess Healthcare Provider CPR certification throughout the program, show proof of immunizations and required titers, TB test, physical examination, criminal background check, and drug screen. Students are responsible for all fees incurred, in addition to tuition. Please refer to the Radiologic Technology Program Cost Sheet. Please note findings on the criminal background check and drug screen may void conditional admission and prevent entrance to the program.

Findings on the physical examination and drug screen may prevent placement at the clinical sites.

## College of Nursing & Health Professions

2400 Tom L. Wilson Blvd.  
Galesburg, IL 61401

### For Additional Information Contact:

The Welcome Center  
Phone: 309-345-3500  
welcomecenter@sandburg.edu

### For Graduation Requirements:

For the graduate requirements see the graduation policies and procedures (p. 22) page for details.

## Associate in Applied Science

Course	Title	Semester Hours
<b>First Year</b>		
<b>Summer Session</b>		
ALH.105	Introduction to Patient Care	1.5
RDT.100	Introduction to Radiologic Technology	3
RDT.101	Radiologic Technology Procedures 1	3
<b>Fall Semester</b>		
ENG.101	Freshman Composition 1	3
RDT.110	Rad Tech Physics & Instrumentation 1	3
RDT.111	Radiologic Technology Procedures 2	4.5
RDT.115	Radiologic Technology Practicum 1	3.5
<b>Spring Semester</b>		
RDT.120	Rad Tech Physics and Instrumentation 2	3
RDT.121	Radiologic Technology Procedures 3	4.5
RDT.123	Principles of Radiologic Technology	3
RDT.125	Radiologic Technology Practicum 2	3.5
SOC.203	Introduction to Diversity	3
<b>Second Year</b>		
<b>Summer Session</b>		
RDT.201	Radiologic Technology Procedures 4	2.5
RDT.205	Radiologic Technology Practicum 3	4
<b>Fall Semester</b>		
RDT.211	Advanced Radiologic Technology Procedure	3
RDT.212	Radiologic Technology Image Critique	3
RDT.215	Radiologic Technology Practicum 4	5
PHL.103	Biomedical Ethics	3
<b>Spring Semester</b>		
RDT.220	Radiologic Technology Capstone	3
RDT.222	Radiation Biology	2
RDT.225	Radiologic Technology Practicum 5	5
SPE.110	Interpersonal Communication	3
or SPE.120	or Introduction to Public Speaking	
Total Semester Hours		72

NOTE: Students enrolled in the Radiologic Technology program must complete all RDT and BIO courses with a grade of "C" or better in order to

register for subsequent courses. In order to graduate, each student must complete all required courses with a grade of "C" or better.

#### Whipple, Jackie D

Assistant Professor, Radiologic Technology

The Radiology Technology program is located in Building C on the Carl Sandburg College Galesburg campus. The program has general classroom space with a radiology technology lab environment for hands-on practice of radiographic techniques, x-ray equipment usage, radiation safety and protection, etc. to prepare the student for their practicum experiences. Practicum experiences for the Radiology Technology program will be gained with hospitals and medical clinics in the Galesburg and surrounding areas such as: Galesburg Cottage Hospital, OSF St. Mary's Medical Center, Methodist Unity Point, Trinity Medical Center, Graham Hospital, OSF Holy Family Medical Center, Hammond Henry Hospital, and Mercer County Hospital.

## Rail/Off Highway Motive Power Electrical Technician Associate in Applied Science and Certificate

<http://www.sandburg.edu/Academics/Degree-Certificates/Rail-Off-Highway-Motive-Power-Electrical-Technician/index.html>

This program provides generalized knowledge of electrical technology for locomotives and off-highway motive powered technologies. Through demonstrations and applications of standard industry techniques and processes that are included / embedded in the program curriculum students will be able to assess, troubleshoot, fix and maintain the electrical components in these technologies. Content includes operation and analysis of industrial electronic circuits and devices as well as principles of automatic process control, measurement, programmable controller and distributed control.

Graduates will assemble and install electrical circuitry, perform troubleshooting to locate electrical problems in a variety of electrical instruments, control systems and equipment, plan preventive maintenance and repairs on electrical systems. Develop work plans and design standard operating procedures. Monitor breakdowns in electrical components using testing devices and equipment. Design wiring structures as per the electrical system or instrument need. Maintain and document records of electrical needs and study blueprints of electrical designs while solving electrical issues.

#### Employment

The current employment projections from the Bureau of Labor Statistics (BLS) and the Illinois Department of Employment Security (IDES) show the following for the district, rail transportation workers (53-4000) IDES reports a 6.45% increase and for rail transportation workers, all other (53-4099), IDES reports a 16.67% increases by the year 2018. For Electrical/Electronic Equipment Mechanics/Installers (49-2000) the IDES indicates a .74% growth by 2018 in the district and 3.84% growth in Illinois by 2020 in the field. The BLS indicates a growth of 3% nationally by 2020. However, Helpers for Electricians (47-3013) shows better growth at 11.11% in the district by 2018 and 6.68% in Illinois by 2020.

#### Admission to the Program: Open First-Time Enrollees

1. Complete an application for admission and, if desired, apply for financial aid.
2. Send an official high school transcript or GED score report to the Admissions and Records Office.
3. Complete the placement exam.
4. Meet with an advisor/counselor to select classes and complete the registration process.

#### Department of Career & Corporate Development

2400 Tom L. Wilson Blvd.

Galesburg, IL 61401

Phone: 309.341.5313

#### For Additional Information Contact:

The Welcome Center

Phone: 309.345.3500

welcomecenter@sandburg.edu (admissions@sandburg.edu)

#### For Graduation Requirements:

See the graduation policies and procedures (p. 22) page for details.

## Certificate

Course	Title	Semester Hours
<b>First Year</b>		
<b>Fall Semester</b>		
ELT.100	Electrical Fundamentals	3
MAT.101	Technical Mathematics 1	3
MTL.101	Machine Tool Fundamentals 1	3
MTL.103	Manufacturing Processes	2
MFG.100	Introduction to Welding	3
MFG.130	Industrial Safety	2
<b>Spring Semester</b>		
ELT.104	Industrial Electrical Control	3
ELT.121	Rail/Off Highway Motive Power Electrical	4
ENG.101 or RDG.120	Freshman Composition 1 or Strategies for Success in College	3
MAT.102	Technical Mathematics 2	3
MFG.125	Industrial Blueprints	3
Total Semester Hours		32

Note: Students enrolled in the Rail Off/Highway Motive Power Electrical Technician program must complete all ELT courses with a grade of C or better in order to register for subsequent courses and continue in the program. In order to graduate, each student must complete ELT, MTL and WEL courses with a grade of C or better.

(Students who do not expect to complete their degree within five years should refer to the Graduation Requirements section in this catalog.)

## Associate in Applied Science

Course	Title	Semester Hours
<b>First Year</b>		
<b>Fall Semester</b>		
ELT.100	Electrical Fundamentals	3



MAT.101	Technical Mathematics 1	3
MTL.101	Machine Tool Fundamentals 1	3
MTL.103	Manufacturing Processes	2
MFG.100	Introduction to Welding	3
MFG.130	Industrial Safety	2
<b>Spring Semester</b>		
ELT.104	Industrial Electrical Control	3
ELT.121	Rail/Off Hiway Motive Power Electrical	4
ENG.101	Freshman Composition 1 or RDG.120 or Strategies for Success in College	3
MAT.102	Technical Mathematics 2	3
MFG.125	Industrial Blueprints	3
<b>Second Year</b>		
<b>Fall Semester</b>		
BOC.107	Tech Skills for Business Environment	3
ELT.119	Industrial Electronic Control	3
ELT.120	Electrical/Electronics Troubleshooting	3
SOC.101	Introduction to Sociology or PSY.101 or Introduction to Psychology	3
RRT.101	History of Railroading	3
SPE.110	Interpersonal Communication or SPE.120 or Introduction to Public Speaking	3
<b>Spring Semester</b>		
ICT.110	Computer Software Applications	3
ELT.209	AC/DC Drives and Servos	3
ELT.212	Industrial Electricity	3
ELT.213	Process Control & Instrumentation	3
PHY.110	Applied Physics	3
Total Semester Hours		65

Students enrolled in the Rail Off/Highway Motive Power Electrical Technician program must complete all ELT courses with a grade of C or better in order to register for subsequent courses and continue in the program. In order to graduate, each student must complete ELT, MTL and WEL courses with a grade of C or better.

#### **Kellogg, David M**

associate dean of career & corporate development

The Center for Manufacturing Excellence (CME) offers classroom space, a computer lab, and houses Carl Sandburg College's industrial programs. Students may take courses in the following subject areas: welding, biofuels, rail, machine tooling, manufacturing or electrical. The electrical lab features a host of components to aid in student learning including AC/DC trainers. In 2014, Sandburg became a designated National Academy of Railroad Sciences (NARS) training site offering courses in locomotive electrical and locomotive mechanical. Instruction is delivered by individuals with industry-specific expertise and includes specialized coursework using technical equipment. Two diesel engines inside the CME are available for training opportunities. The College's welding lab offers 16 bay stations and soon will have an additional ten working spaces. The welding area offers a welding simulator, as well as state of the art multi-process welding machines.

## Small Business Management Certificate

<http://www.sandburg.edu/Academics/Degree-Certificates/Small-Business-Management/index.html>

The Small Business Management certificate is designed for students wishing to start their own business in an entrepreneurial environment or for students who are interested in managing a small business in a variety of business sectors, including wholesale, manufacturing, health care, food service, and governmental agencies. This certificate will provide students with an introduction to business organization and operations. It will also provide students with the knowledge and insight necessary to develop strong management skills, which are often necessary for advancement to supervisory positions in a small business. Students pursuing this certificate are permitted six semester hours of directed electives. This level of flexibility will allow students to select courses specific to their individual strengths, interests, and goals.

#### **Admission to the Program: Open First-Time Enrollees**

1. Complete an application for admission and, if desired, apply for financial aid.
2. Send an official high school transcript or GED score report to the Admissions and Records Office.
3. Complete the placement exam.
4. Meet with an advisor/counselor to select classes and complete the registration process.

#### **Department of Social & Business Sciences**

2400 Tom L. Wilson Blvd.  
Galesburg, IL 61401  
Phone: 309.341.5254

#### **For Additional Information Contact:**

The Welcome Center  
Phone: 309.345.3500  
[welcomecenter@sandburg.edu](mailto:welcomecenter@sandburg.edu)

#### **For Graduation Requirements:**

See the graduation policies and procedures (p. 22) page for details.

## Certificate

Course	Title	Semester Hours
<b>First Year</b>		
<b>Summer Session</b>		
BOC.100	Business Mathematics	3
ENG.101	Freshman Composition 1	3
<b>Fall Semester</b>		
ACC.101	Principles of Financial Accounting	3
BLA.202	Business Law	3
BUS.100	Introduction to Business	3
BUS.111	Small Business Principles	3
ICT.110	Computer Software Applications	3
<b>Spring Semester</b>		
ACC.102	Principles of Managerial Accounting	3
ACC.203	Accounting Software	3

BOC.120	Customer Service	2
BUS.201	Management Fundamentals	3
Directed Electives		6
Total Semester Hours		38

\* Students who do not satisfy the course prerequisites for ICT.110 Computer Software Applications will be required to enroll in preparatory coursework.

### Directed Electives

BUS.291	Professional Internship 1	3
BUS.292	Professional Internship 2	3
BUS.101	Marketing Fundamentals	3
BUS.102	Sales Fundamentals	3
BUS.200	Advertising Fundamentals	3
BOC.107	Tech Skills for Business Environment	3
ENG.120	Report Writing	3
BUS.212	Human Resources Management	3

Students are strongly encouraged to meet with the Dean of Social/Business Sciences prior to enrolling in a directed elective course.

#### Johnson, Jill L

assistant professor, psychology  
associate dean of social & business sciences

#### Williams, Keith W

instructor, economics/business administration  
coordinator, business programs

## Surgical Technology

### Associate in Applied Science

This program is offered by Illinois Central College

#### Program Information

The surgical technologist, working closely with surgeons and registered nurses, functions as a member of the surgical team. Courses include the study of basic patient care practices, sterile technique, surgical anatomy, surgical procedures, working as a team, communication skills, ethical/legal aspects of safe patient care, and surgical supplies and instruments. Today's surgical technologist also must know how to assemble and troubleshoot high tech equipment and instrumentation. Students receive clinical experience in all the surgical specialties at area hospitals. Graduates are eligible to apply to take the national certification examination to become a Certified Surgical Technologist (CST).

#### Admission to the Program: Selective

Admission criteria has been established by Illinois Central College. Students can complete their general education courses at Carl Sandburg College. Professional courses are offered at ICC in Peoria. Five positions in this program are reserved for Carl Sandburg College students.

#### For Additional Program Information Contact

ICC Health Careers & Public Services Dept., William Hammer,  
309.999.4633 or bhammer@icc.edu

## Associate in Applied Science

### Required General Education Courses at Sandburg

BIO.211	Anatomy & Physiology 1 *	4
BIO.212	Anatomy & Physiology 2 *	4
BIO.200	General Microbiology *	4
ENG.101	Freshman Composition 1	3
MDT.100	Medical Terminology	2
PSY.101	Introduction to Psychology	3
SOC.101	Introduction to Sociology	3
SPE.120	Introduction to Public Speaking	3
Humanities Elective (as approved by ICC)		3
Total Semester Hours		29

### Required Program Courses at ICC

Course	Title	Semester Hours
<b>First Year</b>		
<b>Fall Semester</b>		
SURTK 120	Introduction to Surgical Technology	4
HLTH 110	Fundamentals of Sterile Processing	2
<b>Spring Semester</b>		
SURTK 130	Pharmacology for the Surgical Technologist	1
HEOCC 114	Introduction to Interdisciplinary Health Care	1
SURTK 121	Fundamentals of Surgical Technology	7
<b>Summer Session</b>		
SURTK 122	Fundamentals of Surgical Technology II	6
<b>Second Year</b>		
<b>Fall Semester</b>		
SURTK 210	Surgical Technology III	8
<b>Spring Semester</b>		
SURTK 211	Advanced Fundamentals of Surgical Technology	7
Total Semester Hours		36

### Total Program Requirement: 65

NOTE: Students enrolled in the Surgical Technology program must complete all BIO and SURTK courses with a grade of "C" or better in order to remain in and graduate from the program.

\* Students must meet prerequisites for BIO.200 General Microbiology, BIO.211 Anatomy & Physiology 1, & BIO.212 Anatomy & Physiology 2.

## Pipe Welder Specialist

### Certificate

<http://www.sandburg.edu/Academics/Degree-Certificates/Pipe%20Welder/index.html>

The Pipe Welder Specialist Certificate program is a two-semester program designed to provide students a hands-on specialty welding certificate that emphasizes training and the mastery of welding techniques in pipe welding. Students will specialize in ARC and TIG welding and build skill proficiencies aligned with American Welding Society Level II Welder Standards.

**Long-term Benefits:**

1. Increased labor pool to replace retiring workers
2. Increased selection for new hires
3. Overall increased quality of work force
4. Overall increased quality of manufacturing in western Illinois
5. Increased technical expertise of existing work force

**Admission to the Program: Open First-Time Enrollees**

1. Complete an application for admission and, if desired, apply for financial aid.
2. Send an official high school transcript or GED score report to the Admissions and Records Office.
3. Complete the placement exam.
4. Meet with an advisor/counselor to select classes and complete the registration process

**Department of Career & Corporate Development**

2400 Tom L. Wilson Blvd.  
Galesburg, IL 61401  
Phone: 309.341.5363

**For Additional Information Contact:**

The Welcome Center  
Phone: 309.345.3500  
welcomecenter@sandburg.edu

**For Graduation Requirements:**

See the graduation policies and procedures (p. 22) page for details.

**Certificate****Fall Start**

Course	Title	Semester Hours
<b>First Year</b>		
<b>Fall Semester</b>		
WEL.160	Oxyacetylene Welding & Metal Preparation	3
WEL.162	Arc Welding Basics	3
WEL.164	Arc Welding Advanced	3
WEL.166	Gas Shielded Arc Tig	3
MTL.103	Manufacturing Processes	2
MAT.101	Technical Mathematics 1	3
<b>Spring Semester</b>		
WEL.168	Gas Shielded Arc Mig	3
WEL.151	Introduction to Pipe Welding 1G Rolled	1.5
WEL.152	Pipe Welding 2G Horizontal	1.5
WEL.153	Pipe Welding 5G Vertical	1.5
WEL.154	Pipe Welding 6G Inclined	1.5
WEL.125	Welding Blueprints	2
MFG.130	Industrial Safety	2
ENG.101 or RDG.120	Freshman Composition 1 or Strategies for Success in College	3
Total Semester Hours		33

**Spring Start**

Course	Title	Semester Hours
<b>First Year</b>		
<b>Spring Semester</b>		
WEL.160	Oxyacetylene Welding & Metal Preparation	3
WEL.162	Arc Welding Basics	3
WEL.164	Arc Welding Advanced	3
WEL.166	Gas Shielded Arc Tig	3
MTL.103	Manufacturing Processes	2
ENG.101 or RDG.120	Freshman Composition 1 or Strategies for Success in College	3
<b>Fall Semester</b>		
WEL.168	Gas Shielded Arc Mig	3
WEL.151	Introduction to Pipe Welding 1G Rolled	1.5
WEL.152	Pipe Welding 2G Horizontal	1.5
WEL.153	Pipe Welding 5G Vertical	1.5
WEL.154	Pipe Welding 6G Inclined	1.5
WEL.125	Welding Blueprints	2
MAT.101	Technical Mathematics 1	3
MFG.130	Industrial Safety	2
Total Semester Hours		33

**Schave, Jamie**  
instructor, welding

**La Londe, Matthew J**  
instructor, welding

**Kellogg, David M**  
associate dean of career & corporate development

The Center for Manufacturing Excellence (CME) offers classroom space, a computer lab, and houses Carl Sandburg College's industrial programs. Students may take courses in the following subject areas: welding, biofuels, rail, machine tooling, manufacturing or electrical. The electrical lab features a host of components to aid in student learning including AC/DC trainers. In 2014, Sandburg became a designated National Academy of Railroad Sciences (NARS) training site offering courses in locomotive electrical and locomotive mechanical. Instruction is delivered by individuals with industry-specific expertise and includes specialized coursework using technical equipment. Two diesel engines inside the CME are available for training opportunities. The College's welding lab offers 16 bay stations and soon will have an additional ten working spaces. The welding area offers a welding simulator, as well as state of the art multi process welding machines.

# Accounting

## **ACC.100 Procedural Accounting** 3 3

This is a fundamental course for the occupationally-oriented student that emphasizes how to keep records rather than how to analyze them. The course work will be devoted to developing procedures within the framework of acceptable record-keeping concepts. The student will also develop a vocabulary necessary to understand terminology in the accounting area. Any person who desires a basic understanding of bookkeeping prior to pursuing principles of accounting will find this course very helpful.

Offered: Fall or Summer

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AAS, AGS, and Certificates where applicable.

General Education -- Not Applicable

## **ACC.101 Principles of Financial Accounting** 3 3

This is the first of a two course sequence designed to prepare students for a major in accounting. This course presents the following topics: concept of double-entry accounting, completing the accounting cycle, preparing financial statements, accounting for cash and charge transactions, accruals and deferrals, depreciation of physical assets, allowing for doubtful accounts, accounting for receivables and payables, inventories, payroll accounting, systems and controls, and concepts and principles.

Offered: Fall or Spring

Prerequisites: ENG.097 with a grade of C or placement in ENG.101. MAT.080 with a grade of C or better (2) or placement into MAT.083 or higher (including BOC.100).

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education -- Not Applicable Elective Only

## **ACC.102 Principles of Managerial Accounting** 3 3

This is the second of two courses in principles of accounting. During this course the basic accounting theory required for corporations, including accounting for merchandise, receivables, other assets, liabilities, and capital, will be covered. In addition, job costing, unit process costing, decision making, and statement analysis are introduced.

Offered: Fall or Spring

Prerequisites: Take ACC.101.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate ; AA, AS, AAS, AGS, and Certificates where applicable.

General Education -- Not Applicable Elective Only

## **ACC.201 Intermediate Accounting 1** 4 4

This is a course in intermediate accounting for students preparing for employment upon completion of their studies at Sandburg. Students will examine the balance sheet, income statement, and statement of cash flows in detail. The conceptual framework of accounting, concepts of future and present value, cash and receivables, inventory, and the acquisition and disposition of property, plant, and equipment will be given special emphasis. Various methods of presenting financial statements for external users will be studied.

Offered: Fall

Prerequisites: Take ACC.102

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education -- Not Applicable Elective Only

## **ACC.202 Intermediate Accounting 2** 4 4

This course is a continuation of Intermediate Accounting 1. Students will examine the balance sheet and income statement in detail with special emphasis on the liability and stockholder's equity accounts. Various methods of presenting financial statements for external users will be studied.

Offered: Spring

Prerequisites: Take ACC.201

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education -- Not Applicable Elective Only

## **ACC.203 Accounting Software** 2 2 3

This course will use a commercial business accounting software package to familiarize the student with the type of accounting software he/ she could encounter in the business world. Various business types and organizations will be used to demonstrate the various aspects of the accounting cycle including accounts receivable, accounts payable, payroll, inventory, and financial statements. A manual practice set will also be used to familiarize students with subsidiary ledgers, accounts receivable/payable tasks, payroll, and the flow of information in the accounting cycle. This course is appropriate for accounting students preparing for employment upon completion of their studies at Carl Sandburg College.

Offered: Spring or as Needed

Prerequisites: Take ICT.110 and concurrent enrollment in ACC.102.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education -- Not Applicable

**ACC.205 Cost Accounting** 3 3

This is a one-semester course in practices and procedures of cost accounting. It presents job order, process cost and standard cost accounting principles. This course is designed for baccalaureate oriented students. It is also appropriate for persons preparing for employment without completing a bachelor's degree.

Offered: Spring

Prerequisites: Take ACC.102

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**ACC.206 Federal Income Tax** 3 3

This is a course designed to give students a fundamental background of the individual income tax system. The course presents the following topics: the background of the federal income tax withholding system; basic individual income tax; individual income tax structure; identification of inclusions and exclusions from gross income; itemized deductions; business returns for self-employed individuals; special tax situations for individuals; and changes affecting current year's tax laws.

Offered: Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**ACC.207 Payroll Accounting** 2 2 3

This course will focus on payroll accounting and the role that the payroll accountant plays in an organization's management planning process. The need for timely and accurate payroll data will be a major focus of this course. Payroll accounting software and microcomputer spreadsheet applications will be an integral part of this course. The need for payroll and personnel records, computing and paying wages and salaries, payroll taxes, and analyzing and journalizing payroll transactions will be covered.

Offered: Spring or as Needed

Prerequisites: ACC.100 or ACC.101, BOC.100 or MAT.099, and ICT.110.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**ACC.208 Spreadsheet Applications for Business** 2 2 3

This course will focus on developing more advanced skills in microcomputer spreadsheet applications as they relate to accounting and other business applications. Basic knowledge of spreadsheets will be assumed. Topics that may be explored include working with formulas and functions, charts and graphs, working with multiple worksheets and workbooks, integration with other software applications, data tables and scenario management, and other accounting/business applications.

Offered: Fall or as Needed

Prerequisites: Take ACC.102 and concurrent enrollment in ICT.110.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**AGR Agriculture****Courses**

	Hr/Wk Lect/ Disc	Hr/Wk Clin Lab	Sem Cr Hr
<b>AGR.102 Agriculture Bus Technology</b>	1	2	2
General Education – Non Course			
<b>AGR.111 Intro to Agriculture Mechanization</b>	3	2	4
The major topics considered in this course include agricultural power and machinery, agricultural electrification and application, agricultural structures, and soil and water conservation.			
Offered: Fall and Spring			
Applicable toward graduation at Sandburg where program structure permits:			
Degree or Certificate - AA, AS, AAS, AGS, and Certificates where applicable.			
General Education – Not Applicable Elective Only Non Course			
<b>AGR.121 Introduction to Animal Science</b>	3	2	4
This course includes the following major topics regarding animal science: introduction and history; breeds of beef, dairy, horses, and other companion animals, poultry, sheep and swine; breeding and selection; anatomy and physiology; nutrition; growth; environment; health and sanitation; product; marketing; and production, technology and economics. The laboratory portion of this course utilizes field trip experiences.			
Offered: Fall			
Applicable toward graduation at Sandburg where program structure permits:			
Degree or Certificate - AA, AS, AAS, AGS, and Certificates where applicable.			
General Education – Not Applicable Elective Only			
<b>AGR.131 Introduction to Crop Science</b>	3	2	4
This course focuses upon four principle objectives: the importance of crops on world food production, the basic principles of plant growth and the influence of man and environment, the theoretical and practical application of agronomic principles, and the interpretation of scientific data.			
Offered: Fall or Spring			
Applicable toward graduation at Sandburg where program structure permits:			
Degree or Certificate - AA, AS, AAS, AGS, and Certificates where applicable.			
General Education – Not Applicable Elective Only			
<b>AGR.141 Introduction to Agri Economics</b>	3		3
This course provides an introduction to economic principles and the application of those principles to agriculture. The role of agriculture in the United States and the world economics also is included.			
Offered: Fall and Spring			
Applicable toward graduation at Sandburg where program structure permits:			
Degree or Certificate - AA, AS, AAS, AGS, and Certificates where applicable.			
General Education – Not Applicable Elective Only Non Course			



**AGR.151 Introductory Soil Science** 3 2 4

The principle topics considered in this course are: the basic and applied chemical, physical and biological concepts in soils; the origin, classification and distribution of soils and their relationship to people and food production; and the management and conservation of soils. The laboratory portion of this course will utilize a combination of college laboratory and field trip experiences.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AA, AS, AAS, AGS, and Certificates where applicable.

General Education -- Not Applicable Elective Only

**AGR.181 Introduction to Horticultural Science** 2 2 3

This course is an introduction to the principles and practices involved in the development, production, and use of horticulture crops (fruits, vegetables, greenhouse, turf, nursery, floral and landscape). The course will also show the importance of horticulture in providing food and plant ornamentation; plant structure, growth and development; and environmental and biological factors influencing plant growth.

Offered: As Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AA, AS, AAS, AGS, and Certificates where applicable. General Education-not applicable, elective only..

General Education -- Not Applicable Elective Only

Hr/Wk	Hr/Wk	Sem
Lect/	Clin	Cr
Disc	Lab	Hr

**Courses**

**AGR.102 Agriculture Bus Technology** 1 2 2

General Education -- Non Course

**AGR.111 Intro to Agriculture Mechanization** 3 2 4

The major topics considered in this course include agricultural power and machinery, agricultural electrification and application, agricultural structures, and soil and water conservation.

Offered: Fall and Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AA, AS, AAS, AGS, and Certificates where applicable.

General Education -- Not Applicable Elective Only Non Course

**AGR.121 Introduction to Animal Science** 3 2 4

This course includes the following major topics regarding animal science: introduction and history; breeds of beef, dairy, horses, and other companion animals, poultry, sheep and swine; breeding and selection; anatomy and physiology; nutrition; growth; environment; health and sanitation; product; marketing; and production, technology and economics. The laboratory portion of this course utilizes field trip experiences.

Offered: Fall

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AA, AS, AAS, AGS, and Certificates where applicable.

General Education -- Not Applicable Elective Only

**AGR.131 Introduction to Crop Science** 3 2 4

This course focuses upon four principle objectives: the importance of crops on world food production, the basic principles of plant growth and the influence of man and environment, the theoretical and practical application of agronomic principles, and the interpretation of scientific data.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AA, AS, AAS, AGS, and Certificates where applicable.

General Education -- Not Applicable Elective Only

**AGR.141 Introduction to Agri Economics** 3 3

This course provides an introduction to economic principles and the application of those principles to agriculture. The role of agriculture in the United States and the world economics also is included.

Offered: Fall and Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AA, AS, AAS, AGS, and Certificates where applicable.

General Education -- Not Applicable Elective Only Non Course

**AGR.151 Introductory Soil Science** 3 2 4

The principle topics considered in this course are: the basic and applied chemical, physical and biological concepts in soils; the origin, classification and distribution of soils and their relationship to people and food production; and the management and conservation of soils. The laboratory portion of this course will utilize a combination of college laboratory and field trip experiences.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AA, AS, AAS, AGS, and Certificates where applicable.

General Education -- Not Applicable Elective Only

**AGR.181 Introduction to Horticultural Science** 2 2 3

This course is an introduction to the principles and practices involved in the development, production, and use of horticulture crops (fruits, vegetables, greenhouse, turf, nursery, floral and landscape). The course will also show the importance of horticulture in providing food and plant ornamentation; plant structure, growth and development; and environmental and biological factors influencing plant growth.

Offered: As Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AA, AS, AAS, AGS, and Certificates where applicable. General Education-not applicable, elective only..

General Education – Not Applicable Elective Only

## ALH Health Careers

### Courses

**ALH.100 Exploring Health Careers** 1 1

This course is designed to introduce the student who is new to health care or exploring a health career field to basic knowledge and skills for many different health careers. This is an introductory course exploring aspects of infection control, vital signs, patient movement/transport, and patient care in different health career fields. this course is intended for any student interested in a health care field.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**ALH.105 Introduction to Patient Care** 1 1 1.5

This course is designed to introduce the student who is new to health care or exploring a health career field to basic knowledge and skills of patient care for many different health careers. This is an introductory course exploring aspects of infection control, vital signs, patient movement; transport, oxygen administration, recognition of medical emergencies and assisting with drug administration. This course is intended for any student interested in a health care field

Offered: Fall or Spring or Summer

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**ALH.110 Introduction to Pharmacology** 3 3

This course is an overview of pharmacology and its medications as it pertains to allied health professions. Topics will include principles of drug administration and basic mathematics involved in drug calculations. Throughout the course, the commonly used medications within allied health professions will be explored. This course is intended for students intending to enter an Allied Health program.

Offered: Fall or Spring or Summer

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**ALH.115 Basic Health Statistics** 3 3

This course is designed to provide students an introduction to terms, definitions, formulae, and computations used in computing health care statistics. Emphasis is on inpatient health care data and statistical computations, but most applications can be transferred to the outpatient or alternative healthcare settings. Statistical skills will be acquired and developed through actual use and analysis of data.

Offered: Fall

Prerequisites: The appropriate placement exam score or take MAT.080 with a grade of C or better or one year of high school Algebra completed in the last three years with a minimum grade of C.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**ALH.120 Medical Law and Ethics** 3 3

Students will be introduced to legal, moral, and ethical issues that are likely to arise as they practice health information management. This course provides an overview of the laws and the ethics needed to provide competent and compassionate care to patients within legal and ethical boundaries. This course will serve as a guide to assist students in resolving legal and ethical questions encountered as a health care provider.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AGS, AAS and Certificates where applicable.

General Education – Not Applicable

Hr/Wk	Hr/Wk	Sem
Lect/	Clin	Cr
Disc	Lab	Hr

## Courses

**ALH.100 Exploring Health Careers** 1 1

This course is designed to introduce the student who is new to health care or exploring a health career field to basic knowledge and skills for many different health careers. This is an introductory course exploring aspects of infection control, vital signs, patient movement/transport, and patient care in different health career fields. this course is intended for any student interested in a health care field.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**ALH.105 Introduction to Patient Care** 1 1 1.5

This course is designed to introduce the student who is new to health care or exploring a health career field to basic knowledge and skills of patient care for many different health careers. This is an introductory course exploring aspects of infection control, vital signs, patient movement; transport, oxygen administration, recognition of medical emergencies and assisting with drug administration. This course is intended for any student interested in a health care field

Offered: Fall or Spring or Summer

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**ALH.110 Introduction to Pharmacology** 3 3

This course is an overview of pharmacology and its medications as it pertains to allied health professions. Topics will include principles of drug administration and basic mathematics involved in drug calculations. Throughout the course, the commonly used medications within allied health professions will be explored. This course is intended for students intending to enter an Allied Health program.

Offered: Fall or Spring or Summer

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**ALH.115 Basic Health Statistics** 3 3

This course is designed to provide students an introduction to terms, definitions, formulae, and computations used in computing health care statistics. Emphasis is on inpatient health care data and statistical computations, but most applications can be transferred to the outpatient or alternative healthcare settings. Statistical skills will be acquired and developed through actual use and analysis of data.

Offered: Fall

Prerequisites: The appropriate placement exam score or take MAT.080 with a grade of C or better or one year of high school Algebra completed in the last three years with a minimum grade of C.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**ALH.120 Medical Law and Ethics** 3 3

Students will be introduced to legal, moral, and ethical issues that are likely to arise as they practice health information management. This course provides an overview of the laws and the ethics needed to provide competent and compassionate care to patients within legal and ethical boundaries. This course will serve as a guide to assist students in resolving legal and ethical questions encountered as a health care provider.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AGS, AAS and Certificates where applicable.

General Education – Not Applicable

## AOP Administrative Office Professional

Hr/Wk	Hr/Wk	Sem
Lect/	Clin	Cr
Disc	Lab	Hr

### Courses

**AOP.100 Careers for Office Professional** 1 1

This course is an exploration of office careers. Office professionals in areas such as: medical, legal, government, education, manufacturing, and financial services will present synopses of career opportunities. Students will be required to participate in seminars and to discuss and report on the information presented. It is recommended that students take this course during the first semester of an office program.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**AOP.101 Keyboarding & Formatting 1** 2 2 3

This is the first course for individuals who have had no significant prior instruction in keyboarding. Instruction emphasizes the concepts and techniques involved in mastering the computer keyboard, various letter styles, reports, and tables. Minimum five-minute timing speed on straight copy material of 30 gross words per minute (with five errors or less) is required to successfully complete the course.

Offered: Fall or Spring or Summer

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**AOP.102 Keyboarding & Formatting 2** 2 2 3

This is the second semester course in keyboarding. The concepts and techniques presented in AOP 101 will be strengthened with more attention on special letters, forms, tables, and reports. Speed and accuracy development will be stressed. Minimum five-minute timing speed on straight-copy material of 45 gross words per minute (with five errors or less) is required to successfully complete the course. Students also enrolled in AOP 116 are expected to maintain concurrent enrollment to ensure success in this course.

Offered: Fall or Spring or Summer

Prerequisites: AOP.101 with a minimum grade of C and concurrent enrollment in AOP.116. ,Medical Administrative Specialist,and Legal Office Assistant majors are exempt from the,AOP.116 prerequisite.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**AOP.103 Speedwriting 1** 3 3

Speedwriting is an alphabetic system of shorthand based on the letters of the alphabet and common punctuation marks used in longhand. This course is a first course for individuals who have had no significant prior instruction in Speedwriting. It is designed for the student who wants to learn a note taking skill for professional or personal use quickly and easily. Basic theory is introduced with heavy emphasis on reading and theory. Dictation and transcription are also introduced. The minimum speed requirement for satisfactory completion of this course is 60 words per minute for two minutes or 50 words per minute for three minutes with a minimum of 95 percent accuracy. A complete brief form and abbreviation test will also be given and must be passed with 95 percent or better accuracy in order to successfully complete this course.

Offered: Spring

Prerequisites: AOP.101 or concurrent enrollment in AOP.101

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**AOP.107 Website Creation** 3 3

This course teaches the essentials of one of the most powerful tools for building Web sites without HTML. Students will learn the principles of site design and navigational structures, and how to manipulate text, graphics, and buttons. Students will also discover how to organize their pages professionally with tables, how to choose a Web Presence Provider, how to publish their site on the Web, and how to attract visitors to their site. This course will utilize software such as Microsoft FrontPage.

Offered: Fall or as Needed

Prerequisites: ICT.110

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**AOP.113 Machine Transcription** .5 3 2

This course provides students the experience of transcribing documents from a variety of businesses and professions. Upon completion of this course, students will increase their business vocabulary and strengthen their grammar, punctuation, and proofreading skills.

Offered: Fall or Spring or Summer

Prerequisites: AOP.101 with minimum grade of C.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**AOP.116 Introduction to Word Processing** 2 2 3

This course introduces students to creating, formatting, customizing, proofing, editing, maintaining, managing, and printing documents. Additional topics include merging documents, sorting text, selecting records, inserting elements, and creating and enhancing tables and charts.

Offered: Fall or Spring or Summer

Prerequisites: AOP.101 with a minimum grade of C.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**AOP.117 Medical Transcription 1** 1 4 3

This course provides students the experience of transcribing a variety of medical documents through the use of transcription equipment and computers. Students who complete this course will strengthen their medical vocabulary, as well as their grammar, punctuation, and proofreading skills.

Offered: Fall or Spring or Summer

Prerequisites: AOP.102 and concurrent enrollment in MDT.100.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AS, AGS, and Certificates where applicable.

General Education – Not Applicable

**AOP.120 Legal Terminology & Concepts** 2 2

This course provides a logical frame of reference in the study of basic concepts and terminology in the legal field. In addition, this course will provide an analysis of the court system and the procedures involved in practice before the courts.

Offered: Fall

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**AOP.130 Electronic Health Records** 1 2 2

This course introduces students to electronic health records used in different health care settings and will develop student skills in utilizing software to record medical records in an electronic format. Topics covered include converting paper records to electronic format, using electronic health records in a hospital and a medical office, how electronic medical health records interact with other hospital information systems, and the challenges to privacy and security including HIPAA. Students will complete hands-on exercises working with electronic medical records software.

Offered: Fall

Prerequisites: AOP.101 and MDT.100

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**AOP.201 Business English** 2 2

This course provides a comprehensive coverage of effective business communications. In addition, it is designed to review grammar, punctuation, capitalization, number usage, abbreviation styles, and spelling.

Offered: Spring

Prerequisites: The appropriate placement exam score or ENG.097 with a grade of C or better.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**AOP.203 Office Procedures** 3 3

This course introduces a variety of topics and practices intended to promote personal and professional development. Topics covered include professional ethics, theories of leadership, telework, and an overview of job search techniques. Communication techniques will be applied to the process of making effective presentations, providing proper customer service, and communicating effectively using telecommunications. Strong written and oral communication skills will be emphasized. Students will also gain insight into stress, anger and time-management techniques.

Offered: Fall

Prerequisites: AOP.101 with C or better.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**AOP.205 Specialized Software Apps-Legal Office** 2 4 4

This course will introduce the fundamentals of how to use computer technology to accomplish tasks performed by legal assistants in a law office. Programs included will be word processing, spreadsheets, databases and law office-specific software such as timekeeping and billing, case management/docket control, electronic discovery, litigation support, computer assisted research and CD-Rom legal databases, the electronic courthouse/automated courtroom and presentation graphics.

Offered: Spring

Prerequisites: AOP.102 with a grade of C or better and ICT.110 with a grade of C or better.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**AOP.216 Advanced Word Processing** 2 2 3

This course explores advanced features and builds on skills introduced in AOP 116. Topics covered include enhancing, customizing, and organizing document content. Additional advanced features covered pertain to document references, forms, outlines, macros, and document protection.

Offered: Fall or Spring or Summer

Prerequisites: AOP.101 and AOP.102 with grade of C or better or AOP.116.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**AOP.217 Medical Transcription 2** 1 4 3

This course provides students the experience of transcribing a variety of medical documents through the use of transcription equipment and computers. Students who complete this course will strengthen their medical vocabulary, grammar, punctuation, and proofreading skills.

Offered: Fall or Spring or Summer

Prerequisites: AOP.117

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**AOP.220 Legal Document Processing** 1 4 3

This course explores the preparation of legal documents. Emphasis is placed on developing and understanding the different formatting styles used in the legal field. Students will also be introduced to software packages used in the preparation of legal documents. Students who complete this course will strengthen their legal vocabulary, in addition to their grammar, punctuation, and proofreading skills.

Offered: Spring

Prerequisites: AOP.120

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable



**AOP.231 Advanced Electronic Health Records** 3 3

This course is an extension of Electronic Health Records, AOP.130. Further application of skills and knowledge will be implemented with the use of actual electronic health record experiences. Case studies using industry-standard software in a variety of simulated medical environments will prepare students to transform theoretical electronic health record concepts into practical usage.

Offered: Spring

Prerequisites: AOP.130 with a grade of C or better.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**AOP.234 Insurance & Billing in Medical Office** 2 2 3

This course introduces students to the basic information used in medical insurance and patient billing procedures. Topics covered include insurance terminology, government insurance programs, billing practices and computer software used for billing in a hospital or medical office.

Offered: Spring

Prerequisites: AOP.101 and concurrent enrollment in ICT.110.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**AOP.291 Professional Internship 1** 15 3

Students who are currently employed will perform a research project on a topic of interest to the student and his/her firm. The project will be supervised by the supervising instructor and a job site supervisor.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**AOP.292 Professional Internship 2** 15 3

The objective of this course is to integrate classroom theory with business practice. All students will receive on-the-job training with selected area businesses in the public and private sectors. All internship positions will be supervised by the supervising instructor and a job site supervisor. The positions associated with this internship will be non-paying positions. The prerequisite for this course is courses applicable toward the chosen curriculum and permission of supervising instructor, program coordinator or Dean of Career Technical and Health Education programs.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**Courses**

**AOP.100 Careers for Office Professional** 1 1

This course is an exploration of office careers. Office professionals in areas such as: medical, legal, government, education, manufacturing, and financial services will present synopses of career opportunities. Students will be required to participate in seminars and to discuss and report on the information presented. It is recommended that students take this course during the first semester of an office program.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**AOP.101 Keyboarding & Formatting 1** 2 2 3

This is the first course for individuals who have had no significant prior instruction in keyboarding. Instruction emphasizes the concepts and techniques involved in mastering the computer keyboard, various letter styles, reports, and tables. Minimum five-minute timing speed on straight copy material of 30 gross words per minute (with five errors or less) is required to successfully complete the course.

Offered: Fall or Spring or Summer

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**AOP.102 Keyboarding & Formatting 2** 2 2 3

This is the second semester course in keyboarding. The concepts and techniques presented in AOP 101 will be strengthened with more attention on special letters, forms, tables, and reports. Speed and accuracy development will be stressed. Minimum five-minute timing speed on straight-copy material of 45 gross words per minute (with five errors or less) is required to successfully complete the course. Students also enrolled in AOP 116 are expected to maintain concurrent enrollment to ensure success in this course.

Offered: Fall or Spring or Summer

Prerequisites: AOP.101 with a minimum grade of C and concurrent enrollment in AOP.116. ,Medical Administrative Specialist,and Legal Office Assistant majors are exempt from the,AOP.116 prerequisite.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

Hr/Wk Hr/Wk Sem  
Lect/ Clin Cr  
Disc Lab Hr

<b>AOP.103 Speedwriting 1</b>	3	3			
Speedwriting is an alphabetic system of shorthand based on the letters of the alphabet and common punctuation marks used in longhand. This course is a first course for individuals who have had no significant prior instruction in Speedwriting. It is designed for the student who wants to learn a note taking skill for professional or personal use quickly and easily. Basic theory is introduced with heavy emphasis on reading and theory. Dictation and transcription are also introduced. The minimum speed requirement for satisfactory completion of this course is 60 words per minute for two minutes or 50 words per minute for three minutes with a minimum of 95 percent accuracy. A complete brief form and abbreviation test will also be given and must be passed with 95 percent or better accuracy in order to successfully complete this course. Offered: Spring Prerequisites: AOP.101 or concurrent enrollment in AOP.101 Applicable toward graduation at Sandburg where program structure permits: Degree or Certificate: AAS, AGS, and Certificates where applicable. General Education – Not Applicable					
<b>AOP.107 Website Creation</b>	3	3			
This course teaches the essentials of one of the most powerful tools for building Web sites without HTML. Students will learn the principles of site design and navigational structures, and how to manipulate text, graphics, and buttons. Students will also discover how to organize their pages professionally with tables, how to choose a Web Presence Provider, how to publish their site on the Web, and how to attract visitors to their site. This course will utilize software such as Microsoft FrontPage. Offered: Fall or as Needed Prerequisites: ICT.110 Applicable toward graduation at Sandburg where program structure permits: Degree or Certificate: AAS, AGS, and Certificates where applicable. General Education – Not Applicable					
<b>AOP.113 Machine Transcription</b>	.5	3	2		
This course provides students the experience of transcribing documents from a variety of businesses and professions. Upon completion of this course, students will increase their business vocabulary and strengthen their grammar, punctuation, and proofreading skills. Offered: Fall or Spring or Summer Prerequisites: AOP.101 with minimum grade of C. Applicable toward graduation at Sandburg where program structure permits: Degree or Certificate: AAS, AGS, and Certificates where applicable. General Education – Not Applicable					
<b>AOP.116 Introduction to Word Processing</b>	2	2	3		
This course introduces students to creating, formatting, customizing, proofing, editing, maintaining, managing, and printing documents. Additional topics include merging documents, sorting text, selecting records, inserting elements, and creating and enhancing tables and charts. Offered: Fall or Spring or Summer Prerequisites: AOP.101 with a minimum grade of C. Applicable toward graduation at Sandburg where program structure permits: Degree or Certificate: AAS, AGS, and Certificates where applicable. General Education – Not Applicable					
<b>AOP.117 Medical Transcription 1</b>				1	4 3
This course provides students the experience of transcribing a variety of medical documents through the use of transcription equipment and computers. Students who complete this course will strengthen their medical vocabulary, as well as their grammar, punctuation, and proofreading skills. Offered: Fall or Spring or Summer Prerequisites: AOP.102 and concurrent enrollment in MDT.100. Applicable toward graduation at Sandburg where program structure permits: Degree or Certificate: AS, AGS, and Certificates where applicable. General Education – Not Applicable					
<b>AOP.120 Legal Terminology &amp; Concepts</b>				2	2
This course provides a logical frame of reference in the study of basic concepts and terminology in the legal field. In addition, this course will provide an analysis of the court system and the procedures involved in practice before the courts. Offered: Fall Applicable toward graduation at Sandburg where program structure permits: Degree or Certificate: AAS, AGS, and Certificates where applicable. General Education – Not Applicable					
<b>AOP.130 Electronic Health Records</b>				1	2 2
This course introduces students to electronic health records used in different health care settings and will develop student skills in utilizing software to record medical records in an electronic format. Topics covered include converting paper records to electronic format, using electronic health records in a hospital and a medical office, how electronic medical health records interact with other hospital information systems, and the challenges to privacy and security including HIPAA. Students will complete hands-on exercises working with electronic medical records software. Offered: Fall Prerequisites: AOP.101 and MDT.100 Applicable toward graduation at Sandburg where program structure permits: Degree or Certificate: AAS, AGS, and Certificates where applicable. General Education – Not Applicable					
<b>AOP.201 Business English</b>				2	2
This course provides a comprehensive coverage of effective business communications. In addition, it is designed to review grammar, punctuation, capitalization, number usage, abbreviation styles, and spelling. Offered: Spring Prerequisites: The appropriate placement exam score or ENG.097 with a grade of C or better. Applicable toward graduation at Sandburg where program structure permits: Degree or Certificate: AAS, AGS, and Certificates where applicable. General Education – Not Applicable					

**AOP.203 Office Procedures** 3 3

This course introduces a variety of topics and practices intended to promote personal and professional development. Topics covered include professional ethics, theories of leadership, telework, and an overview of job search techniques. Communication techniques will be applied to the process of making effective presentations, providing proper customer service, and communicating effectively using telecommunications. Strong written and oral communication skills will be emphasized. Students will also gain insight into stress, anger and time-management techniques.

Offered: Fall

Prerequisites: AOP.101 with C or better.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**AOP.205 Specialized Software Apps-Legal Office** 2 4 4

This course will introduce the fundamentals of how to use computer technology to accomplish tasks performed by legal assistants in a law office. Programs included will be word processing, spreadsheets, databases and law office-specific software such as timekeeping and billing, case management/docket control, electronic discovery, litigation support, computer assisted research and CD-Rom legal databases, the electronic courthouse/automated courtroom and presentation graphics.

Offered: Spring

Prerequisites: AOP.102 with a grade of C or better and ICT.110 with a grade of C or better.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**AOP.216 Advanced Word Processing** 2 2 3

This course explores advanced features and builds on skills introduced in AOP 116. Topics covered include enhancing, customizing, and organizing document content. Additional advanced features covered pertain to document references, forms, outlines, macros, and document protection.

Offered: Fall or Spring or Summer

Prerequisites: AOP.101 and AOP.102 with grade of C or better or AOP.116.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**AOP.217 Medical Transcription 2** 1 4 3

This course provides students the experience of transcribing a variety of medical documents through the use of transcription equipment and computers. Students who complete this course will strengthen their medical vocabulary, grammar, punctuation, and proofreading skills.

Offered: Fall or Spring or Summer

Prerequisites: AOP.117

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**AOP.220 Legal Document Processing** 1 4 3

This course explores the preparation of legal documents. Emphasis is placed on developing and understanding the different formatting styles used in the legal field. Students will also be introduced to software packages used in the preparation of legal documents. Students who complete this course will strengthen their legal vocabulary, in addition to their grammar, punctuation, and proofreading skills.

Offered: Spring

Prerequisites: AOP.120

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**AOP.231 Advanced Electronic Health Records** 3 3

This course is an extension of Electronic Health Records, AOP.130. Further application of skills and knowledge will be implemented with the use of actual electronic health record experiences. Case studies using industry-standard software in a variety of simulated medical environments will prepare students to transform theoretical electronic health record concepts into practical usage.

Offered: Spring

Prerequisites: AOP.130 with a grade of C or better.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**AOP.234 Insurance & Billing in Medical Office** 2 2 3

This course introduces students to the basic information used in medical insurance and patient billing procedures. Topics covered include insurance terminology, government insurance programs, billing practices and computer software used for billing in a hospital or medical office.

Offered: Spring

Prerequisites: AOP.101 and concurrent enrollment in ICT.110.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**AOP.291 Professional Internship 1** 15 3

Students who are currently employed will perform a research project on a topic of interest to the student and his/her firm. The project will be supervised by the supervising instructor and a job site supervisor.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**AOP.292 Professional Internship 2** 15 3

The objective of this course is to integrate classroom theory with business practice. All students will receive on-the-job training with selected area businesses in the public and private sectors. All internship positions will be supervised by the supervising instructor and a job site supervisor. The positions associated with this internship will be non-paying positions. The prerequisite for this course is courses applicable toward the chosen curriculum and permission of supervising instructor, program coordinator or Dean of Career Technical and Health Education programs.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

## ARB Arabic

Hr/Wk	Hr/Wk	Sem
Lect/	Clin	Cr
Disc	Lab	Hr

### Courses

**ARB.110 Arabic I** 3 3

This is the first of a two-course sequence of elementary Arabic. The emphasis of the course is on acquiring conversational skills through practical use of the language.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AGS, AAS and Certificates where applicable.

General Education – Not Applicable Elective Only

**ARB.111 Arabic II** 3 3

This is the second of a two-course sequence of elementary Arabic. The emphasis of the course is on acquiring conversational skills through practical use of the language..

General Education – Not Applicable

Hr/Wk	Hr/Wk	Sem
Lect/	Clin	Cr
Disc	Lab	Hr

### Courses

**ARB.110 Arabic I** 3 3

This is the first of a two-course sequence of elementary Arabic. The emphasis of the course is on acquiring conversational skills through practical use of the language.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AGS, AAS and Certificates where applicable.

General Education – Not Applicable Elective Only

**ARB.111 Arabic II** 3 3

This is the second of a two-course sequence of elementary Arabic. The emphasis of the course is on acquiring conversational skills through practical use of the language..

General Education – Not Applicable

## ART Art

Hr/Wk	Hr/Wk	Sem
Lect/	Clin	Cr
Disc	Lab	Hr

### Courses

**ART.111 Art Appreciation** 3 3

This course leads students to develop knowledge for experiencing and understanding visual art as an important aspect of culture. Students will be introduced to the nature and purposes of art, principles of visual perception and design, art media and techniques, and a survey of the major art forms produced by ancient, Western and non-Western cultures.

This course is intended for non-art majors, but may also be a useful introduction for anyone who has no previous experience in art.

Offered: Fall or Spring or Summer

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. F2 900*

General Education – Fine Arts Human Relations

**ART.112 Art: Prehistoric to 1400** 3 3

This course is an historical survey of world art, including the prehistoric period, ancient and non-Western civilizations, through the Middle Ages in Europe. The course focuses on the study of architecture, sculpture, painting and other appropriate artforms to lead the student to an understanding of art, processes of cultural and artistic development, and the influence of those developments on the culture in which we live.

This is an essential foundation course for students intending to pursue a baccalaureate degree in art. It is also beneficial for students intending to pursue baccalaureate degrees in the humanities or social sciences.

Offered: Fall

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. F2 901*

General Education – Fine Arts

**ART.113 Art: 1400 to Present Day** 3 3

This course is an historical survey of the art of Western Civilization from the early Renaissance to present-day. The course focuses on the study of architecture, sculpture, painting and other appropriate art forms to lead the student to an understanding of art, processes of cultural and artistic development, and the influences of those developments on the culture in which we live. This is an essential foundation course for students intending to pursue a baccalaureate degree in art. It is also beneficial for students intending to pursue baccalaureate degrees in the humanities or social sciences. This course is intended as the second part of a two-part course sequence, preceded by ART 112, and students will benefit most from it if completed in that sequence. There are, however, no prerequisites for this course.

Offered: Fall or Spring or Summer

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. F2 902*

General Education -- Fine Arts Human Relations

**ART.121 Two Dimensional Design** 1.5 3 3

This course is an introduction to basic visual design theory and practice. Emphasis is on the development of concepts and skills essential to visual thinking and expression through studio project assignments. This is an essential foundation course for students intending to pursue a curriculum in art, but is open to all students who have an interest in visual design, regardless of prior experience. Studio safety will be emphasized.

Offered: Fall

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AA, AS, AFA, AAS, AGS, and Certificates where applicable.

General Education -- Not Applicable Elective Only

**ART.122 Three Dimensional Design** 1.5 3 3

This course introduces principles and media appropriate to the design and production of three-dimensional art forms. Emphasis is on the development of concepts and skills essential to visual thinking and expression through studio project assignments. There are no prerequisites, but art majors are advised to complete ART 121 and/ or ART 131 before this course, in order to enhance transferability as a baccalaureate art degree requirement. Studio safety will be emphasized.

Offered: Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AA, AS, AFA, AAS, AGS, and Certificates where applicable.

General Education -- Not Applicable Elective Only

**ART.131 Drawing 1** 1.5 3 3

This course is an introduction to basic drawing media, techniques and purposes. Emphasis is on the development of concepts and skills essential to visual thinking and expression, through studio exercises. This is an essential foundation course for students intending to pursue further studies in art, but it is open to all students who have an interest in developing drawing skills regardless of prior experience. Studio safety will be emphasized.

Offered: Fall or Spring or Summer

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AA, AS, AFA, AAS, AGS, and Certificates where applicable.

General Education -- Not Applicable Elective Only

**ART.132 Drawing 2** 1.5 3 3

This course is intended to be an extension of ART 131, and emphasizes the development of advanced drawing techniques, pictorial composition, and personal expressiveness. It is recommended as part of a two-course foundation in drawing for students intending to transfer to senior institution in art. Studio safety will be emphasized.

Offered: Fall or Spring or Summer

Prerequisites: ART.131 or equivalent

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AA, AS, AFA, AAS, AGS, and Certificates where applicable.

General Education -- Not Applicable Elective Only

**ART.133 Life Drawing** 1.5 3 3

This course is an introduction to drawing the human figure using a variety of media. Drawings will be derived from direct observation and instruction will emphasize descriptive drawing techniques of the human figure. Drawing activities will emphasize full figure, features, and anatomical differentiation encompassing individual physiognomy. Studio safety will be emphasized.

Offered: Spring

Prerequisites: ART.131

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AA, AS, AFA, AAS, AGS, and Certificates where applicable.

General Education -- Not Applicable Elective Only

**ART.141 Painting** 1.5 3 3

Initially, this course focuses upon the basic principles of art as expressed through painting. Subsequently, the student selects subjects for further development of his/her competence in the implementation of those principles. There are no prerequisites, but art majors are advised to complete ART 131 before this course in order to enhance transferability as a baccalaureate art degree requirement. Studio safety will be emphasized.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AA, AS, AFA, AAS, AGS, and Certificates where applicable.

General Education -- Not Applicable Elective Only



**ART.142 Advanced Painting** 1.5 3 3

This course continues building aesthetic and technical skills begun in ART 141. Emphasis will be placed on the investigation of media usage, color development and painting as a medium of communication. Studio safety will be emphasized.

Offered: Fall or Spring

Prerequisites: ART.141

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AA, AS, AFA, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**ART.151 Printmaking** 1.5 3 3

Printmaking techniques such as relief and silkscreen are studied and practiced in this course to give the student an understanding of the processes of making multiple originals. Attention is given to the principles of design and the use of printing media to express visual ideas. There are no prerequisites, but art majors are advised to completed ART 131 before this course in order to enhance transferability as a baccalaureate art degree requirement. Studio safety will be emphasized.

Offered: As Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AA, AS, AFA, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**ART.152 Printmaking II** 1.5 3 3

Printmaking techniques such as relief, intaglio, and monotype are studied and practiced in this course to give the students an understanding of the processes of making multiple originals. Attention is given to the principles of design and the use of printing media to express visual ideas. This is an expansion of Printmaking I, the students will be concentrating on a theme and work to create a body of work using the techniques acquired from Printmaking I. Studio Safety will be emphasized.

Prerequisite Printmaking I, but no other prerequisites are required. Art majors are advised to complete ART 131 before this course in order to enhance transferability as a baccalaureate art degree requirement.

Prerequisites: Take ART.151 with a grade of C or better.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AFA, AS, AAS, AGS, and Certificates where applicable. General Education: Not Applicable-Elective Only.

General Education – Not Applicable

**ART.161 Intro to Photography** 1.5 3 3

This course will introduce the student to the concepts and skills of basic black-and-white photography and the elements of pictorial form, and will promote use of the medium as a vehicle for creative expression. Emphasis will be placed on the mastery of basic techniques through camera and darkroom projects, and photographic vision through the analysis of exemplary works.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AGS and Certificates where applicable.

General Education–Not applicable, elective only..

General Education – Not Applicable Elective Only

**ART.162 Digital Photography** 1.5 3 3

This course will introduce the student to the skills and concepts of basic digital photography and promote the development of an understanding of the application of the elements and principles of design to the imaging process. It will also promote exploration of the medium for creative expression. Emphasis will be placed on the mastery of basic techniques through camera and computer projects and on photographic vision through the analysis of exemplary works.

Offered: As Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AFA, AS, AAS, AGS and Certificates where applicable General Education: Not applicable-elective only.

General Education – Not Applicable Elective Only

**ART.163 Digital Photography II** 1.5 3 3

This course continues building aesthetic and technical skills begun in Digital Photography (ART 162). This course will introduce the student to advanced skills and concepts of digital photography and image editing, continue the development of understanding in the application of the elements and principles of design to the imaging process, and promote exploration of the medium for creative expression. Emphasis will be placed on the mastery of basic tools and techniques of image editing and enhancement through the use of Adobe Photoshop. Camera and image editing projects will provide students with opportunities for creative and technical growth.

Offered: As Needed

Prerequisites: ART.162

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AA, AS, AFA, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**ART.171 Ceramics 1** 1.5 3 3

This course is an introduction to the medium of clay, from construction through the completion of finished pieces, including handbuilding techniques, glazing and firing. Studio safety will be emphasized. There are no prerequisites, but art majors are advised that some senior institutions may not accept this course as an art degree requirement unless it was preceded by specific art prerequisites.

Offered: Fall or Spring or Summer

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AA, AS, AFA, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**ART.172 Ceramics 2** 1.5 3 3

This course is intended as an extension of ART 171, emphasizing the further development of knowledge and skills regarding form, decorative and conceptual approaches, glaze formulation, and firing technology. The course emphasizes individual instruction, permitting students to focus on handbuilding or potter's wheel techniques. Studio safety will be emphasized.

Offered: Fall or Spring or Summer

Prerequisites: ART.171

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AA, AS, AFA, AAS, AGS, and Certificates where applicable.

General Education -- Not Applicable Elective Only

**ART.191 Creativity for Graphic Design** 1.5 3 3

This course introduces the basic principles and elements of graphic design, the history of graphic design, form/symbol development, typography, and color theory. Students will learn through practical experience in essential studio processes and procedures, critiques, and group discussions how to visually solve graphic design problems. Using industry-standard software, students develop the ability and confidence to determine appropriate and successful designs. The course will focus on fundamental concepts and visual communication skills necessary for graphic design. The creation of multiple-page documents will be required, in both black and white and color, covering document construction, integration of word processing programs, working with images and typography, custom colors and standard output. The course will provide an introduction to the production of printed materials using illustrations and image manipulation software via computer.

Offered: Fall or Spring

Prerequisites: ART.121 or ART.122 or ART.131 or ART.132.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AA, AS, AFA, AAS, AGS, and Certificates where applicable.

General Education -- Not Applicable Elective Only Non Course

**ART.192 Conceptual Skill-Graphic Designers** 1.5 3 3

This course is a continuation of skills and creativity introduced in Graphic Design 191. Conceptual skills in visual language are used in the creation and communication of design systems. Students will create integrated media across a spectrum of applications, generate design criteria research, analysis, and design implications, and refine development for collateral items through web and motion graphics. This course will emphasize the development of graphic abstraction into both black and white and color translations, as well as the use of digital and/or traditional photography. There will be further emphasis on three- and four-dimensional computer modeling. Students will be introduced to the concepts of kinetic imagery and motion graphics. This course is an introduction to multimedia graphic design.

Offered: Fall and Spring

Prerequisites: ART.191

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable.

General Education -- Not Applicable Elective Only Non Course

**ART.193 Computer Art** 1.5 3 3

This course is intended as an introduction to computer applications in the visual arts. Students take a computer software-based approach to image manipulation and generation, including the integration of computer hardware, software, and peripheral devices as tools to create and combine traditional and contemporary visual ideas as applied to art and design. This is not a graphic design computer course. This studio-based course includes appropriate instruction in the health and safety issues relative to the methods of the course and the materials being used.

Offered: Fall

Prerequisites: ART.121 or ART.131

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AA, AS, AFA, AAS, AGS, and Certificates where applicable.

General Education -- Not Applicable Elective Only

Hr/Wk	Hr/Wk	Sem
Lect/	Clin	Cr
Disc	Lab	Hr

**Courses**

**ART.111 Art Appreciation** 3 3

This course leads students to develop knowledge for experiencing and understanding visual art as an important aspect of culture. Students will be introduced to the nature and purposes of art, principles of visual perception and design, art media and techniques, and a survey of the major art forms produced by ancient, Western and non-Western cultures. This course is intended for non-art majors, but may also be a useful introduction for anyone who has no previous experience in art.

Offered: Fall or Spring or Summer

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. F2 900*

General Education -- Fine Arts Human Relations

**ART.112 Art: Prehistoric to 1400** 3 3

This course is an historical survey of world art, including the prehistoric period, ancient and non-Western civilizations, through the Middle Ages in Europe. The course focuses on the study of architecture, sculpture, painting and other appropriate artforms to lead the student to an understanding of art, processes of cultural and artistic development, and the influence of those developments on the culture in which we live. This is an essential foundation course for students intending to pursue a baccalaureate degree in art. It is also beneficial for students intending to pursue baccalaureate degrees in the humanities or social sciences.

Offered: Fall

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. F2 907*

General Education -- Fine Arts

**ART.113 Art: 1400 to Present Day** 3 3

This course is an historical survey of the art of Western Civilization from the early Renaissance to present-day. The course focuses on the study of architecture, sculpture, painting and other appropriate art forms to lead the student to an understanding of art, processes of cultural and artistic development, and the influences of those developments on the culture in which we live. This is an essential foundation course for students intending to pursue a baccalaureate degree in art. It is also beneficial for students intending to pursue baccalaureate degrees in the humanities or social sciences. This course is intended as the second part of a two-part course sequence, preceded by ART 112, and students will benefit most from it if completed in that sequence. There are, however, no prerequisites for this course.

Offered: Fall or Spring or Summer

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. F2 902*

General Education -- Fine Arts Human Relations

**ART.121 Two Dimensional Design** 1.5 3 3

This course is an introduction to basic visual design theory and practice. Emphasis is on the development of concepts and skills essential to visual thinking and expression through studio project assignments. This is an essential foundation course for students intending to pursue a curriculum in art, but is open to all students who have an interest in visual design, regardless of prior experience. Studio safety will be emphasized.

Offered: Fall

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AA, AS, AFA, AAS, AGS, and Certificates where applicable.

General Education -- Not Applicable Elective Only

**ART.122 Three Dimensional Design** 1.5 3 3

This course introduces principles and media appropriate to the design and production of three-dimensional art forms. Emphasis is on the development of concepts and skills essential to visual thinking and expression through studio project assignments. There are no prerequisites, but art majors are advised to complete ART 121 and/ or ART 131 before this course, in order to enhance transferability as a baccalaureate art degree requirement. Studio safety will be emphasized.

Offered: Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AA, AS, AFA, AAS, AGS, and Certificates where applicable.

General Education -- Not Applicable Elective Only

**ART.131 Drawing 1** 1.5 3 3

This course is an introduction to basic drawing media, techniques and purposes. Emphasis is on the development of concepts and skills essential to visual thinking and expression, through studio exercises. This is an essential foundation course for students intending to pursue further studies in art, but it is open to all students who have an interest in developing drawing skills regardless of prior experience. Studio safety will be emphasized.

Offered: Fall or Spring or Summer

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AA, AS, AFA, AAS, AGS, and Certificates where applicable.

General Education -- Not Applicable Elective Only

**ART.132 Drawing 2** 1.5 3 3

This course is intended to be an extension of ART 131, and emphasizes the development of advanced drawing techniques, pictorial composition, and personal expressiveness. It is recommended as part of a two-course foundation in drawing for students intending to transfer to senior institution in art. Studio safety will be emphasized.

Offered: Fall or Spring or Summer

Prerequisites: ART.131 or equivalent

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AA, AS, AFA, AAS, AGS, and Certificates where applicable.

General Education -- Not Applicable Elective Only

**ART.133 Life Drawing** 1.5 3 3

This course is an introduction to drawing the human figure using a variety of media. Drawings will be derived from direct observation and instruction will emphasize descriptive drawing techniques of the human figure. Drawing activities will emphasize full figure, features, and anatomical differentiation encompassing individual physiognomy. Studio safety will be emphasized.

Offered: Spring

Prerequisites: ART.131

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AA, AS, AFA, AAS, AGS, and Certificates where applicable.

General Education -- Not Applicable Elective Only

**ART.141 Painting** 1.5 3 3

Initially, this course focuses upon the basic principles of art as expressed through painting. Subsequently, the student selects subjects for further development of his/her competence in the implementation of those principles. There are no prerequisites, but art majors are advised to complete ART 131 before this course in order to enhance transferability as a baccalaureate art degree requirement. Studio safety will be emphasized.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AA, AS, AFA, AAS, AGS, and Certificates where applicable.

General Education -- Not Applicable Elective Only

**ART.142 Advanced Painting** 1.5 3 3

This course continues building aesthetic and technical skills begun in ART 141. Emphasis will be placed on the investigation of media usage, color development and painting as a medium of communication. Studio safety will be emphasized.

Offered: Fall or Spring

Prerequisites: ART.141

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AA, AS, AFA, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**ART.151 Printmaking** 1.5 3 3

Printmaking techniques such as relief and silkscreen are studied and practiced in this course to give the student an understanding of the processes of making multiple originals. Attention is given to the principles of design and the use of printing media to express visual ideas. There are no prerequisites, but art majors are advised to completed ART 131 before this course in order to enhance transferability as a baccalaureate art degree requirement. Studio safety will be emphasized.

Offered: As Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AA, AS, AFA, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**ART.152 Printmaking II** 1.5 3 3

Printmaking techniques such as relief, intaglio, and monotype are studied and practiced in this course to give the students an understanding of the processes of making multiple originals. Attention is given to the principles of design and the use of printing media to express visual ideas. This is an expansion of Printmaking I, the students will be concentrating on a theme and work to create a body of work using the techniques acquired from Printmaking I. Studio Safety will be emphasized.

Prerequisite Printmaking I, but no other prerequisites are required. Art majors are advised to complete ART 131 before this course in order to enhance transferability as a baccalaureate art degree requirement.

Prerequisites: Take ART.151 with a grade of C or better.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AFA, AS, AAS, AGS, and Certificates where applicable. General Education: Not Applicable-Elective Only.

General Education – Not Applicable

**ART.161 Intro to Photography** 1.5 3 3

This course will introduce the student to the concepts and skills of basic black-and-white photography and the elements of pictorial form, and will promote use of the medium as a vehicle for creative expression. Emphasis will be placed on the mastery of basic techniques through camera and darkroom projects, and photographic vision through the analysis of exemplary works.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AGS and Certificates where applicable.

General Education–Not applicable, elective only..

General Education – Not Applicable Elective Only

**ART.162 Digital Photography** 1.5 3 3

This course will introduce the student to the skills and concepts of basic digital photography and promote the development of an understanding of the application of the elements and principles of design to the imaging process. It will also promote exploration of the medium for creative expression. Emphasis will be placed on the mastery of basic techniques through camera and computer projects and on photographic vision through the analysis of exemplary works.

Offered: As Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AFA, AS, AAS, AGS and Certificates where applicable General Education: Not applicable-elective only.

General Education – Not Applicable Elective Only

**ART.163 Digital Photography II** 1.5 3 3

This course continues building aesthetic and technical skills begun in Digital Photography (ART 162). This course will introduce the student to advanced skills and concepts of digital photography and image editing, continue the development of understanding in the application of the elements and principles of design to the imaging process, and promote exploration of the medium for creative expression. Emphasis will be placed on the mastery of basic tools and techniques of image editing and enhancement through the use of Adobe Photoshop. Camera and image editing projects will provide students with opportunities for creative and technical growth.

Offered: As Needed

Prerequisites: ART.162

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AA, AS, AFA, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**ART.171 Ceramics 1** 1.5 3 3

This course is an introduction to the medium of clay, from construction through the completion of finished pieces, including handbuilding techniques, glazing and firing. Studio safety will be emphasized. There are no prerequisites, but art majors are advised that some senior institutions may not accept this course as an art degree requirement unless it was preceded by specific art prerequisites.

Offered: Fall or Spring or Summer

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AA, AS, AFA, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**ART.172 Ceramics 2** 1.5 3 3

This course is intended as an extension of ART 171, emphasizing the further development of knowledge and skills regarding form, decorative and conceptual approaches, glaze formulation, and firing technology. The course emphasizes individual instruction, permitting students to focus on handbuilding or potter's wheel techniques. Studio safety will be emphasized.

Offered: Fall or Spring or Summer

Prerequisites: ART.171

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AA, AS, AFA, AAS, AGS, and Certificates where applicable.

General Education -- Not Applicable Elective Only

**ART.191 Creativity for Graphic Design** 1.5 3 3

This course introduces the basic principles and elements of graphic design, the history of graphic design, form/symbol development, typography, and color theory. Students will learn through practical experience in essential studio processes and procedures, critiques, and group discussions how to visually solve graphic design problems. Using industry-standard software, students develop the ability and confidence to determine appropriate and successful designs. The course will focus on fundamental concepts and visual communication skills necessary for graphic design. The creation of multiple-page documents will be required, in both black and white and color, covering document construction, integration of word processing programs, working with images and typography, custom colors and standard output. The course will provide an introduction to the production of printed materials using illustrations and image manipulation software via computer.

Offered: Fall or Spring

Prerequisites: ART.121 or ART.122 or ART.131 or ART.132.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AA, AS, AFA, AAS, AGS, and Certificates where applicable.

General Education -- Not Applicable Elective Only Non Course

**ART.192 Conceptual Skill-Graphic Designers** 1.5 3 3

This course is a continuation of skills and creativity introduced in Graphic Design 191. Conceptual skills in visual language are used in the creation and communication of design systems. Students will create integrated media across a spectrum of applications, generate design criteria research, analysis, and design implications, and refine development for collateral items through web and motion graphics. This course will emphasize the development of graphic abstraction into both black and white and color translations, as well as the use of digital and/or traditional photography. There will be further emphasis on three- and four-dimensional computer modeling. Students will be introduced to the concepts of kinetic imagery and motion graphics. This course is an introduction to multimedia graphic design.

Offered: Fall and Spring

Prerequisites: ART.191

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable.

General Education -- Not Applicable Elective Only Non Course

**ART.193 Computer Art** 1.5 3 3

This course is intended as an introduction to computer applications in the visual arts. Students take a computer software-based approach to image manipulation and generation, including the integration of computer hardware, software, and peripheral devices as tools to create and combine traditional and contemporary visual ideas as applied to art and design. This is not a graphic design computer course. This studio-based course includes appropriate instruction in the health and safety issues relative to the methods of the course and the materials being used.

Offered: Fall

Prerequisites: ART.121 or ART.131

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AA, AS, AFA, AAS, AGS, and Certificates where applicable.

General Education -- Not Applicable Elective Only

## AUT Automotive Technology

Hr/Wk Lect/ Disc	Hr/Wk Clin Lab	Sem Cr Hr
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### Courses

**AUT.101 Spark Ignition Engines 1** 1 4 3

This course is designed to introduce the student to the spark ignition engine. Emphasis will be placed on engine nomenclature, operation, rebuild procedure, and precision measuring instruments relative to the course. The student will perform a complete rebuild on a furnished engine with evaluation of the work performed on an engine dynamometer.

Offered: Fall

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AGS and Automotive Technology Certificate.

General Education -- Not Applicable

**AUT.103 Braking Systems** 1 3 2

This course is designed to include all aspects of the braking system with emphasis on brake repair and diagnosis. The student will learn to operate a brake lathe. Students will also utilize computer scanners to diagnose ABS brake problems.

Offered: Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AGS and Automotive Technology Certificate.

General Education -- Not Applicable

**AUT.105 Electrical Systems** 2 2 3

This course is designed to cover the basic electrical systems found on late model automobiles. Electricity/electronic theory will be covered with an emphasis on DC circuits. The student will be exposed to an in-depth use of test equipment relative to diagnosis of electrical systems problems.

Offered: Fall

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AGS and Automotive Technology Certificate.

General Education -- Not Applicable



**AUT.107 Shop Practices 1** 2.5 4.5 4

This course is designed to enhance student skills by repairing automobiles in a simulated dealership setting. Emphasis will be placed on student following repair practices utilized in local dealerships. Customer automobiles will be used in this course.

Offered: Fall

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AGS and Automotive Technology Certificate.  
General Education – Not Applicable

**AUT.110 Auto Math** 1 2 2

This course focuses on the math pertinent to the automotive field. Arithmetic, geometry, trigonometry, and basic algebra are the concepts that will be stressed. Lab assignments applying the aforementioned concepts will be given during this course to enhance the students' practical skills. The metric system will also be discussed and applied throughout the course.

Offered: Fall

Prerequisites: Placement into MAT.083 or equivalent.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.  
General Education – Not Applicable

**AUT.124 Engine Performance Design** .5 1 1

This course pertains to designing an engine to meet performance objectives. Analytical methods of design will be applied before parts are selected. Performance software will be utilized for design analysis.

Offered: As Needed

Prerequisites: AUT.110

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.  
General Education – Not Applicable

**AUT.201 Ignition Systems** 2 2 3

This course is designed to include all aspects of ignition systems with emphasis on operation, repair and diagnosis. The student will utilize electronic ignition test equipment and computer scanners to diagnose and monitor late model computer controlled engines.

Offered: Fall

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AGS and Automotive Technology Certificate.  
General Education – Not Applicable

**AUT.202 Steering Suspension & Front Wheel Dr** 1.5 3 3

This course is designed to expose student to an in-depth use of a four wheel computer controlled alignment machine. Student will inspect/repair front end components of vehicles prior to performing alignment. Shock and strut replacement will be covered along with tire repair and balancing.

Offered: Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AGS and Automotive Technology Certificate.  
General Education – Not Applicable

**AUT.203 Manual Transmission & Dr Trains** 1 3 2

This course is designed to include all aspects of manual transmissions and drive trains with emphasis on repair and diagnosis. The student will be exposed to an in-depth study of gear ratios and their effects on torque and speed. Differential and transaxles will also be covered in this course.

Offered: Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AGS and Automotive Technology Certificate.  
General Education – Not Applicable

**AUT.204 Automatic Transmissions** 1.5 3 3

This course is designed to include repair procedures and diagnosis of automatic transmissions and transaxles. The student will be responsible for rebuilding and testing two transmissions/transaxles. Maintenance procedures will also be covered in this course.

Offered: Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AGS and Automotive Technology Certificate.  
General Education – Not Applicable

**AUT.206 Heating and Air Conditioning** 1 3 2

This course is designed to include all aspects of heating and air conditioning with emphasis on repair, diagnosis and system charging utilizing all safety precautions. The student will operate an AC reclaiming system for removing and charging the AC system.

Offered: Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AGS and Automotive Technology Certificate.  
General Education – Not Applicable

**AUT.209 Shop Practices 2** 6 2

This course is designed to enhance previous skills obtained and apply those skills in a simulated dealership setting. Emphasis will be on accuracy or repair and diagnosis with a decrease in repair time. The student will be required to maintain repair orders and purchase request sheets.

Offered: Spring

Prerequisites: The completion of all technical courses in the automotive technology certificate.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AGS and Certificates where applicable.  
General Education – Not Applicable

**AUT.215 Advanced Braking & Chassis Control** 1 4 3

This course will cover advanced methods of diagnosing more complex systems such as anti-lock brakes, traction and stability controls, and electrical assist steering using diagnostic scan tools and electrical systems diagnostics. Admission into the Advanced Electrical Certificate is required to enroll in this course.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AGS and Certificates where applicable.  
General Education – Not Applicable

**AUT.220 Advanced Electrical Systems** 1 4 3

This course involves testing and repairing non-powertrain electronic systems in vehicles. Diagnostic scantool/on-board diagnosis of vehicle networks will be performed. Hands on experience with common types of switches and sensors. Admission into the Advanced Electrical Certificate is required to enroll in this course.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AGS and Certificates where applicable.

General Education – Not Applicable

**AUT.225 Adv Emissions & Powertrain Control** 2 4 4

This course covers the theory, operation and testing of powertain and emissions control systems in non-hybrid vehicles, with emphasis on real-world hands on testing, inspection and repair. Scan tools and On-board diagnostic testing will be covered, as well as component testing of sensors and control devices. Admission into the Advanced Electrical Certificate is required to enroll in this course.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AGS and Certificates where applicable.

General Education – Not Applicable

**AUT.230 Automotive High Voltage Safety & System** 1 4 3

This course will cover safety concerns and theory of high-voltage electrical systems found in Hybrid electric HEV, and Battery Electric Vehicles, BEV. Emphasis will be on safety equipment and procedures, tools and testing equipment unique to HEV/BEV service; as well as, the theory of HEV/BEV operation including major variant types, regenerative braking and charging. Admission into the Advanced Electrical Certificate is required to enroll in this course.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

Hr/Wk	Hr/Wk	Sem
Lect/	Clin	Cr
Disc	Lab	Hr

**Courses**

**AUT.101 Spark Ignition Engines 1** 1 4 3

This course is designed to introduce the student to the spark ignition engine. Emphasis will be placed on engine nomenclature, operation, rebuild procedure, and precision measuring instruments relative to the course. The student will perform a complete rebuild on a furnished engine with evaluation of the work performed on an engine dynamometer.

Offered: Fall

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AGS and Automotive Technology Certificate.

General Education – Not Applicable

**AUT.103 Braking Systems** 1 3 2

This course is designed to include all aspects of the braking system with emphasis on brake repair and diagnosis. The student will learn to operate a brake lathe. Students will also utilize computer scanners to diagnose ABS brake problems.

Offered: Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AGS and Automotive Technology Certificate.

General Education – Not Applicable

**AUT.105 Electrical Systems** 2 2 3

This course is designed to cover the basic electrical systems found on late model automobiles. Electricity/electronic theory will be covered with an emphasis on DC circuits. The student will be exposed to an in-depth use of test equipment relative to diagnosis of electrical systems problems.

Offered: Fall

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AGS and Automotive Technology Certificate.

General Education – Not Applicable

**AUT.107 Shop Practices 1** 2.5 4.5 4

This course is designed to enhance student skills by repairing automobiles in a simulated dealership setting. Emphasis will be placed on student following repair practices utilized in local dealerships. Customer automobiles will be used in this course.

Offered: Fall

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AGS and Automotive Technology Certificate.

General Education – Not Applicable

**AUT.110 Auto Math** 1 2 2

This course focuses on the math pertinent to the automotive field. Arithmetic, geometry, trigonometry, and basic algebra are the concepts that will be stressed. Lab assignments applying the aforementioned concepts will be given during this course to enhance the students' practical skills. The metric system will also be discussed and applied throughout the course.

Offered: Fall

Prerequisites: Placement into MAT.083 or equivalent.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**AUT.124 Engine Performance Design** .5 1 1

This course pertains to designing an engine to meet performance objectives. Analytical methods of design will be applied before parts are selected. Performance software will be utilized for design analysis.

Offered: As Needed

Prerequisites: AUT.110

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**AUT.201 Ignition Systems** 2 2 3

This course is designed to include all aspects of ignition systems with emphasis on operation, repair and diagnosis. The student will utilize electronic ignition test equipment and computer scanners to diagnose and monitor late model computer controlled engines.

Offered: Fall

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AGS and Automotive Technology Certificate.

General Education – Not Applicable

**AUT.202 Steering Suspension & Front Wheel Dr** 1.5 3 3

This course is designed to expose student to an in-depth use of a four wheel computer controlled alignment machine. Student will inspect/repair front end components of vehicles prior to performing alignment. Shock and strut replacement will be covered along with tire repair and balancing.

Offered: Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AGS and Automotive Technology Certificate.

General Education – Not Applicable

**AUT.203 Manual Transmission & Dr Trains** 1 3 2

This course is designed to include all aspects of manual transmissions and drive trains with emphasis on repair and diagnosis. The student will be exposed to an in-depth study of gear ratios and their effects on torque and speed. Differential and transaxles will also be covered in this course.

Offered: Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AGS and Automotive Technology Certificate.

General Education – Not Applicable

**AUT.204 Automatic Transmissions** 1.5 3 3

This course is designed to include repair procedures and diagnosis of automatic transmissions and transaxles. The student will be responsible for rebuilding and testing two transmissions/transaxles. Maintenance procedures will also be covered in this course.

Offered: Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AGS and Automotive Technology Certificate.

General Education – Not Applicable

**AUT.206 Heating and Air Conditioning** 1 3 2

This course is designed to include all aspects of heating and air conditioning with emphasis on repair, diagnosis and system charging utilizing all safety precautions. The student will operate an AC reclaiming system for removing and charging the AC system.

Offered: Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AGS and Automotive Technology Certificate.

General Education – Not Applicable

**AUT.209 Shop Practices 2** 6 2

This course is designed to enhance previous skills obtained and apply those skills in a simulated dealership setting. Emphasis will be on accuracy or repair and diagnosis with a decrease in repair time. The student will be required to maintain repair orders and purchase request sheets.

Offered: Spring

Prerequisites: The completion of all technical courses in the automotive technology certificate.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AGS and Certificates where applicable.

General Education – Not Applicable

**AUT.215 Advanced Braking & Chassis Control** 1 4 3

This course will cover advanced methods of diagnosing more complex systems such as anti-lock brakes, traction and stability controls, and electrical assist steering using diagnostic scan tools and electrical systems diagnostics. Admission into the Advanced Electrical Certificate is required to enroll in this course.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AGS and Certificates where applicable.

General Education – Not Applicable

**AUT.220 Advanced Electrical Systems** 1 4 3

This course involves testing and repairing non-powertrain electronic systems in vehicles. Diagnostic scantool/on-board diagnosis of vehicle networks will be performed. Hands on experience with common types of switches and sensors. Admission into the Advanced Electrical Certificate is required to enroll in this course.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AGS and Certificates where applicable.

General Education – Not Applicable

**AUT.225 Adv Emissions & Powertrain Control** 2 4 4

This course covers the theory, operation and testing of powertrain and emissions control systems in non-hybrid vehicles, with emphasis on real-world hands on testing, inspection and repair. Scan tools and On-board diagnostic testing will be covered, as well as component testing of sensors and control devices. Admission into the Advanced Electrical Certificate is required to enroll in this course.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AGS and Certificates where applicable.

General Education – Not Applicable

**AUT.230 Automotive High Voltage Safety & System** 1 4 3

This course will cover safety concerns and theory of high-voltage electrical systems found in Hybrid electric HEV, and Battery Electric Vehicles, BEV. Emphasis will be on safety equipment and procedures, tools and testing equipment unique to HEV/BEV service; as well as, the theory of HEV/BEV operation including major variant types, regenerative braking and charging. Admission into the Advanced Electrical Certificate is required to enroll in this course.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

## BFM Biofuels Manufacturing Technology

Hr/Wk Lect/ Disc	Hr/Wk Clin Lab	Sem Cr Hr
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### Courses

**BFM.101 Biofuels Fundamentals** 2 2

This course is an overview of the biofuels industry. It introduces biodiesel and ethanol in relation to traditional transportation fuels, markets, and regulatory constraints. This course also includes discussion of careers in the biofuels industry, and is the first in a series of classes in the AAS Degree in Biofuels Manufacturing Technology.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**BFM.201 Ethanol Production** 3 2 4

This course will cover the history, rationale, and overall fundamental process and quality control of ethanol production. The course is designed to study the relationship of science, technology and management areas in ethanol processing operations. A Process Flow Demonstrator of a typical dry mill ethanol plant will be used to examine the sequence of operations seen in various stages of production. This course will explain the rationale for feedstocks used in ethanol processing as well as product and co-product production and use. Labs will provide hands-on training of ethanol production with the Ethanol Trainer equipment.

Offered: Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**BFM.202 Biodiesel Production** 3 2 4

This course will cover the history, rationale, and overall fundamental process and quality control of Biodiesel production. The course is designed to study the relationships of science, chemistry, technology, fuel standards, and management areas in Biodiesel processing operations. A Process Flow Demonstrator of a typical biodiesel plant will be used to examine the sequence of operations seen in various stages of production. This course will explain the rationale for feedstocks used in biodiesel processing. Labs will provide hands-on training of biodiesel production with the Biodiesel Trainer equipment.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**BFM.203 Water Treatment & Control** 3 3

The course covers the basic understanding of primary water treatment systems and chlorination. Students will be able to describe problems that can be caused by impurities in the water and explain how they can be removed physically and chemically. This course will also familiarize students with the basic concepts of treating industrial water during biofuels manufacturing so it can be reused or discharged into the environment.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**BFM.291 Professional Internship 1** 15 3

Students who are currently employed in the biofuels industry will perform a related research project on a topic of interest, outside the scope of normal job duties, to the student and his/her firm. The project will be supervised by the supervising instructor and a job site supervisor. Consent of Instructor, Program Coordinator or Dean of Career Technical and Health Education is required to enroll in this course.

Offered: Spring or Summer

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS,AGS and Certificates where applicable.

General Education – Not Applicable

**BFM.292 Professional Internship 2** 15 3

The objective of this course is to integrate classroom theory with business practice. Students will receive on-the-job training with select industry partners. All internship positions will be supervised by the supervising instructor and a job site supervisor. The positions associated with this internship will be non-paying positions. Consent of Instructor, Program Coordinator or Dean of Career Technical and Health Education is required to enroll in this course.

Offered: Spring or Summer

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

## Courses

### ***BFM.101 Biofuels Fundamentals***

Hr/Wk Lect/ Disc	Hr/Wk Clin Lab	Sem Cr Hr
2		2

This course is an overview of the biofuels industry. It introduces biodiesel and ethanol in relation to traditional transportation fuels, markets, and regulatory constraints. This course also includes discussion of careers in the biofuels industry, and is the first in a series of classes in the AAS Degree in Biofuels Manufacturing Technology.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

### ***BFM.201 Ethanol Production***

Hr/Wk Lect/ Disc	Hr/Wk Clin Lab	Sem Cr Hr
3	2	4

This course will cover the history, rationale, and overall fundamental process and quality control of ethanol production. The course is designed to study the relationship of science, technology and management areas in ethanol processing operations. A Process Flow Demonstrator of a typical dry mill ethanol plant will be used to examine the sequence of operations seen in various stages of production. This course will explain the rationale for feedstocks used in ethanol processing as well as product and co-product production and use. Labs will provide hands-on training of ethanol production with the Ethanol Trainer equipment.

Offered: Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

### ***BFM.202 Biodiesel Production***

Hr/Wk Lect/ Disc	Hr/Wk Clin Lab	Sem Cr Hr
3	2	4

This course will cover the history, rationale, and overall fundamental process and quality control of Biodiesel production. The course is designed to study the relationships of science, chemistry, technology, fuel standards, and management areas in Biodiesel processing operations. A Process Flow Demonstrator of a typical biodiesel plant will be used to examine the sequence of operations seen in various stages of production. This course will explain the rationale for feedstocks used in biodiesel processing. Labs will provide hands-on training of biodiesel production with the Biodiesel Trainer equipment.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

### ***BFM.203 Water Treatment & Control***

Hr/Wk Lect/ Disc	Hr/Wk Clin Lab	Sem Cr Hr
3		3

The course covers the basic understanding of primary water treatment systems and chlorination. Students will be able to describe problems that can be caused by impurities in the water and explain how they can be removed physically and chemically. This course will also familiarize students with the basic concepts of treating industrial water during biofuels manufacturing so it can be reused or discharged into the environment.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

### ***BFM.291 Professional Internship 1***

Hr/Wk Lect/ Disc	Hr/Wk Clin Lab	Sem Cr Hr
15		3

Students who are currently employed in the biofuels industry will perform a related research project on a topic of interest, outside the scope of normal job duties, to the student and his/her firm. The project will be supervised by the supervising instructor and a job site supervisor.

Consent of Instructor, Program Coordinator or Dean of Career Technical and Health Education is required to enroll in this course.

Offered: Spring or Summer

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS,AGS and Certificates where applicable.

General Education – Not Applicable

### ***BFM.292 Professional Internship 2***

Hr/Wk Lect/ Disc	Hr/Wk Clin Lab	Sem Cr Hr
15		3

The objective of this course is to integrate classroom theory with business practice. Students will receive on-the-job training with select industry partners. All internship positions will be supervised by the supervising instructor and a job site supervisor. The positions associated with this internship will be non-paying positions. Consent of Instructor, Program Coordinator or Dean of Career Technical and Health Education is required to enroll in this course.

Offered: Spring or Summer

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

## BIO Biology

Hr/Wk Lect/ Disc	Hr/Wk Clin Lab	Sem Cr Hr
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## Courses

### ***BIO.090 Foundation for Biology***

Hr/Wk Lect/ Disc	Hr/Wk Clin Lab	Sem Cr Hr
2		2

Understanding science requires the ability to speak the language, skill in the scientific measuring systems as well as knowledge of the scientific method. Foundation for Biology prepares the student for college level science courses. This class teaches the essential knowledge of scientific terminology, metric system, scientific method and basic chemistry.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: Not Applicable.

General Education – Not Applicable



**BIO.095 Foundation for Anatomy & Physiology** 2 2

Understanding of anatomy and physiology begins with a firm grasp of cell structure and function. Foundation for Anatomy and Physiology prepares the student for college level anatomy and physiology courses by explaining the functions of cells. This class teaches the essential knowledge of cell morphology, cell physiology, membrane transport, cell division as well as basics of tissues, organ systems and anatomical regions.

Offered: Fall or Spring or Summer

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: Not Applicable.

General Education – Not Applicable

**BIO.101 General Biology** 3 2 4

This course introduces the student to the chemical and physical principles of life especially as they relate to humans. The major topics covered include cell structure/function, the energy flow, organismic biology, evolution, genetics, and ecology. General Biology is designed to meet the laboratory science requirement of the non-major as well as providing an appropriate background for science majors.

Offered: Fall or Spring or Summer

Prerequisites: The appropriate placement exam score or ENG.097 with a grade of C or better.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. L1 900L*

General Education – Science Lab Science

**BIO.102 General Zoology** 3 2 4

This course provides an introduction to the animal kingdom with topics covering embryonic development, morphology and physiology, behavior, ecology, and evolution. Included are surveys of the protozoans and the animal kingdom.

Offered: Spring

Prerequisites: BIO.101 or equivalent

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. L1 902L*

General Education – Science Lab Science

**BIO.103 General Botany** 3 2 4

This course provides an introduction to the plant kingdom with an emphasis on structure, basic principles of growth and development, reproductive biology, and ecology. Included will be surveys of bacteria, algae, fungi, and the plant kingdom.

Offered: Spring

Prerequisites: Take BIO.101 or equivalent

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. L1 907L*

General Education – Science Lab Science

**BIO.108 Ecological Principles** 3 2 4

This course introduces the student to the basic concepts of ecology and the interrelationships between organisms and their environment. The major topics covered will include natural cycles, energy flow, population ecology, communities and ecosystems, and biotic interactions.

Ecological Principles is designed to provide an appropriate background for science majors but will also meet the laboratory science requirement of the non-major with an interest in science. It is also recommended to take BIO 102, BIO 103, and CHM 100.

Offered: Fall

Prerequisites: BIO.101 and MAT.109 with a grade of C or better.

Recommended to also take BIO.102, BIO.103, and CHM.100

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**BIO.111 Anatomy & Physiology Fundamentals** 4 4

This is a one-semester, general survey course intended primarily for LPN and mortuary science students. The course includes a systems approach to anatomy and physiology and many additional topics such as nutrition, metabolism, and fluid-electrolyte and acid-base balance.

Offered: Fall or Spring or Summer

Prerequisites: The appropriate placement exam score or ENG.097 with a grade of C or better.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**BIO.120 Environmental Science** 3 3

This course is intended to provide an introduction to the study of food production, human cultures, energy and mineral use, economics, politics, and land usage from an environmental viewpoint. Studied are the major ecosystems on Earth (deserts, forests, etc.) and their individual characteristics. Also included will be current major problems such as global warming and ozone loss and the effects of all environmental problems on plant and animal species. Emphasis will be on actions that individuals and groups can do to reduce environmental degradation. The course is designed for non-majors.

Offered: Fall or Spring or Summer

Prerequisites: BIO.101 CHM.100

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. L1 905*

General Education – Science

**BIO.200 General Microbiology** 3 2 4

The purpose of this course is to provide a brief study of the morphology, physiology, cultural characteristics, isolation methods, classification methods and distribution of microbes as related to public health, agriculture, medicine and industry. In addition, recent advances in recombinant DNA research will be discussed. This course is appropriate for students planning to pursue a baccalaureate degree. Also, BIO 200 is a requirement for students enrolled either in the Associate Degree Nursing program or in the Dental Hygiene program.

Offered: Spring or Summer

Prerequisites: BIO.101 and CHM.100 or equivalent as evaluated by Biology faculty

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**BIO.205 Human Biology** 3 2 4

This is a one-semester course in anatomy and physiology designed to meet the needs of students who need a laboratory science course for associate degree or baccalaureate programs. The course will be an integrated systems approach emphasizing principles of homeostasis.

Laboratory work will include fetal pig dissection, as well as other appropriate activities. Successful completion of one year of high school Biology and one year of high school Chemistry no longer than five years prior to enrollment is strongly recommended.

Offered: Fall or Spring or Summer

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable. *IAI Course No. L1 904L*

General Education – Science Lab Science

**BIO.211 Anatomy & Physiology 1** 3 2 4

This is the first of a two-course sequence in anatomy and physiology for students who are intending to pursue a baccalaureate degree. Also, Anatomy 1 & 2 are required in the Associate Degree in Nursing Program. This course will be presented as an integrated systems approach emphasizing principles of homeostasis. There will be discussion of pathophysiological and anatomical changes that occur as a result of disease.

Offered: Fall

Prerequisites: BIO.101 and CHM.100 with a grade of C or better or the equivalent as evaluated by Biology faculty

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**BIO.212 Anatomy & Physiology 2** 3 2 4

This course is a continuation of BIO 211. There will be special emphasis on the cardiovascular system; fluid, electrolyte, and acid base balance; and exercise physiology. Laboratory work will include dissection of a fetal pig.

Offered: Spring

Prerequisites: BIO.211

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable. General Education – Not Applicable Elective Only

Hr/Wk	Hr/Wk	Sem
Lect/	Clin	Cr
Disc	Lab	Hr

**Courses****BIO.090 Foundation for Biology** 2 2

Understanding science requires the ability to speak the language, skill in the scientific measuring systems as well as knowledge of the scientific method. Foundation for Biology prepares the student for college level science courses. This class teaches the essential knowledge of scientific terminology, metric system, scientific method and basic chemistry.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: Not Applicable.

General Education – Not Applicable

**BIO.095 Foundation for Anatomy & Physiology** 2 2

Understanding of anatomy and physiology begins with a firm grasp of cell structure and function. Foundation for Anatomy and Physiology prepares the student for college level anatomy and physiology courses by explaining the functions of cells. This class teaches the essential knowledge of cell morphology, cell physiology, membrane transport, cell division as well as basics of tissues, organ systems and anatomical regions.

Offered: Fall or Spring or Summer

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: Not Applicable.

General Education – Not Applicable

**BIO.101 General Biology** 3 2 4

This course introduces the student to the chemical and physical principles of life especially as they relate to humans. The major topics covered include cell structure/function, the energy flow, organismic biology, evolution, genetics, and ecology. General Biology is designed to meet the laboratory science requirement of the non-major as well as providing an appropriate background for science majors.

Offered: Fall or Spring or Summer

Prerequisites: The appropriate placement exam score or ENG.097 with a grade of C or better.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. L1 900L*

General Education – Science Lab Science

**BIO.102 General Zoology** 3 2 4

This course provides an introduction to the animal kingdom with topics covering embryonic development, morphology and physiology, behavior, ecology, and evolution. Included are surveys of the protozoans and the animal kingdom.

Offered: Spring

Prerequisites: BIO.101 or equivalent

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. L1 902L*

General Education – Science Lab Science

**BIO.103 General Botany** 3 2 4

This course provides an introduction to the plant kingdom with an emphasis on structure, basic principles of growth and development, reproductive biology, and ecology. Included will be surveys of bacteria, algae, fungi, and the plant kingdom.

Offered: Spring

Prerequisites: Take BIO.101 or equivalent

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. L1 907L*

General Education – Science Lab Science

**BIO.108 Ecological Principles** 3 2 4

This course introduces the student to the basic concepts of ecology and the interrelationships between organisms and their environment. The major topics covered will include natural cycles, energy flow, population ecology, communities and ecosystems, and biotic interactions.

Ecological Principles is designed to provide an appropriate background for science majors but will also meet the laboratory science requirement of the non-major with an interest in science. It is also recommended to take BIO 102, BIO 103, and CHM 100.

Offered: Fall

Prerequisites: BIO.101 and MAT.109 with a grade of C or better.

Recommended to also take BIO.102, BIO.103, and CHM.100

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**BIO.111 Anatomy & Physiology Fundamentals** 4 4

This is a one-semester, general survey course intended primarily for LPN and mortuary science students. The course includes a systems approach to anatomy and physiology and many additional topics such as nutrition, metabolism, and fluid-electrolyte and acid-base balance.

Offered: Fall or Spring or Summer

Prerequisites: The appropriate placement exam score or ENG.097 with a grade of C or better.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**BIO.120 Environmental Science** 3 3

This course is intended to provide an introduction to the study of food production, human cultures, energy and mineral use, economics, politics, and land usage from an environmental viewpoint. Studied are the major ecosystems on Earth (deserts, forests, etc.) and their individual characteristics. Also included will be current major problems such as global warming and ozone loss and the effects of all environmental problems on plant and animal species. Emphasis will be on actions that individuals and groups can do to reduce environmental degradation. The course is designed for non-majors.

Offered: Fall or Spring or Summer

Prerequisites: BIO.101 CHM.100

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. L1 905*

General Education – Science

**BIO.200 General Microbiology** 3 2 4

The purpose of this course is to provide a brief study of the morphology, physiology, cultural characteristics, isolation methods, classification methods and distribution of microbes as related to public health, agriculture, medicine and industry. In addition, recent advances in recombinant DNA research will be discussed. This course is appropriate for students planning to pursue a baccalaureate degree. Also, BIO 200 is a requirement for students enrolled either in the Associate Degree Nursing program or in the Dental Hygiene program.

Offered: Spring or Summer

Prerequisites: BIO.101 and CHM.100 or equivalent as evaluated by Biology faculty

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**BIO.205 Human Biology** 3 2 4

This is a one-semester course in anatomy and physiology designed to meet the needs of students who need a laboratory science course for associate degree or baccalaureate programs. The course will be an integrated systems approach emphasizing principles of homeostasis. Laboratory work will include fetal pig dissection, as well as other appropriate activities. Successful completion of one year of high school Biology and one year of high school Chemistry no longer than five years prior to enrollment is strongly recommended.

Offered: Fall or Spring or Summer

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable. *IAI Course No. L1 904L*

General Education – Science Lab Science

**BIO.211 Anatomy & Physiology 1** 3 2 4

This is the first of a two-course sequence in anatomy and physiology for students who are intending to pursue a baccalaureate degree. Also, Anatomy 1 & 2 are required in the Associate Degree in Nursing Program. This course will be presented as an integrated systems approach emphasizing principles of homeostasis. There will be discussion of pathophysiological and anatomical changes that occur as a result of disease.

Offered: Fall

Prerequisites: BIO.101 and CHM.100 with a grade of C or better or the equivalent as evaluated by Biology faculty

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**BIO.212 Anatomy & Physiology 2** 3 2 4

This course is a continuation of BIO 211. There will be special emphasis on the cardiovascular system; fluid, electrolyte, and acid base balance; and exercise physiology. Laboratory work will include dissection of a fetal pig.

Offered: Spring

Prerequisites: BIO.211

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

## BLA Business Law

Hr/Wk	Hr/Wk	Sem
Lect/	Clin	Cr
Disc	Lab	Hr

### Courses

**BLA.201 Legal Environment of Business** 3 3

This course is the study of the economic, business, political, and social values or forces which cause laws related to business activities to come into existence and change. Topics include legal history, philosophy, and judicial processes related to contracts, agencies, sales, and secured transactions.

Offered: Fall

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**BLA.202 Business Law** 3 3

This course is a basic explanation of the legal rights and responsibilities of businesses in both the public and private sectors. It is relevant to future managers and integrates ethics and social responsibility, international and contemporary business issues, and e-commerce in organizations. Current legal cases and ethical dilemmas are used to illustrate and reinforce legal regulations.

Offered: Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

Hr/Wk	Hr/Wk	Sem
Lect/	Clin	Cr
Disc	Lab	Hr

### Courses

**BLA.201 Legal Environment of Business** 3 3

This course is the study of the economic, business, political, and social values or forces which cause laws related to business activities to come into existence and change. Topics include legal history, philosophy, and judicial processes related to contracts, agencies, sales, and secured transactions.

Offered: Fall

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**BLA.202 Business Law** 3 3

This course is a basic explanation of the legal rights and responsibilities of businesses in both the public and private sectors. It is relevant to future managers and integrates ethics and social responsibility, international and contemporary business issues, and e-commerce in organizations. Current legal cases and ethical dilemmas are used to illustrate and reinforce legal regulations.

Offered: Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

## BOC Business Occupations

Hr/Wk	Hr/Wk	Sem
Lect/	Clin	Cr
Disc	Lab	Hr

## Courses

### **BOC.100 Business Mathematics** 3 3

This course introduces students to basic mathematical functions as applied to the business world and to banking services. In addition, the process of calculating sales discounts and markup, interest, employee compensation, and sales discounts will be covered.

Offered: Fall

Prerequisites: The appropriate placement exam score or MAT.080 with a grade of C or better.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

### **BOC.101 Business Records Management** 2 2

This course focuses on the development, management, and maintenance of a record management system. Basic storage and retrieval methods will be discussed and applied. Records retention, transfer, and disposition, according to records retention schedules, will also be presented. In addition, records and information management technology will be discussed.

Offered: Fall or Spring or Summer

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

### **BOC.102 Business Communications** 3 3

This course covers the fundamental principles and modes of business communications. Students will be introduced to a variety of professional letters, the appropriate use of electronic mail, and the principles of oral communication. In addition, professional development topics such as resume writing and interviewing techniques will be explored.

Offered: Fall

Prerequisites: The appropriate placement exam score or ENG.097 with a grade of C or better or AOP.201.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

### **BOC.103 Office Technology** 2 2 3

This course introduces students to a personal information management program, the electronic search and retrieval of information, basic office machines, and voice recognition software. In addition, an in-depth study of a personal information management system; voice recognition software; navigating, searching, and downloading files on the Internet; and using basic office machines will be included.

Offered: Spring

Prerequisites: AOP.101 with a grade of C or better

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

### **BOC.104 Mathematics of Finance** 3 3

This course is a continuation of BOC 100. Students will learn how to apply basic mathematical functions to more advanced business activities. Students will utilize basic concepts of accounting for analyzing business situations. In addition, students will analyze financial statements, interest earnings, discounts, annuities, insurance and the distribution of working capital. Introductory statistical methods will also be covered.

Offered: Spring

Prerequisites: BOC.100

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

### **BOC.107 Tech Skills for Business Environment** 2 2 3

This course provides students with instruction in basic computer skills including keyboarding, 10- key, file management, data storage and retrieval, collaborative technology, and computer hardware and software. Basic formatting rules for letters, memos, reports and tables will be covered as well as basic word processing concepts and proofreading skills. Spreadsheet and database basic terminology and usage will also be introduced. This course is designed for students who are not majoring in an office occupations program.

Offered: Fall or Spring or Summer

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

### **BOC.109 Voice Recognition I** .5 1 1

This course will be a basic introduction to voice recognition software. Topics to be covered will include adjusting and tuning the microphone, training voice recognition software to recognize the user's voice, correcting speech errors in the voice recognition software, dictating and manipulating text using basic commands and formatting basic documents. Voice recognition software uses and possibilities will be explored as they relate to business, educational, and personal environments.

Offered: As Needed

Prerequisites: BOC.107

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

### **BOC.120 Customer Service** 2 2

This course introduces students to the concepts and skills needed for success in retail and business careers. Topics include listening techniques, verbal and non-verbal communication skills, and the effective use of technology. The ability to effectively interact with customers, to handle customer service issues, and to establish customer relationships and loyalty will be emphasized. Students will also be introduced to methods for effectively managing stress and conflict.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable



**BOC.201 Professional Internship 1** 15 3

Students who are currently employed will perform a research project on a topic of interest to the student and to his/her firm. The project will be supervised by the supervising instructor and by the job site supervisor. Permission of supervising instructor, program coordinator or Dean of Career, Technical and Health Education.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**BOC.202 Professional Internship 2** 15 3

The objective of this course is to integrate classroom theory with business practice. Students will receive on-the-job training with selected area businesses in the public and private sector. All internship positions will be supervised by the supervising instructor and a job site supervisor. The positions associated with this internship will be non-paying positions. Courses applicable toward the chosen curriculum and permission of the supervising instructor, program coordinator or Dean of Career, Technical and Health Education required.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

Hr/Wk Lect/ Disc	Hr/Wk Clin Lab	Sem Cr Hr
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**Courses**

**BOC.100 Business Mathematics** 3 3

This course introduces students to basic mathematical functions as applied to the business world and to banking services. In addition, the process of calculating sales discounts and markup, interest, employee compensation, and sales discounts will be covered.

Offered: Fall

Prerequisites: The appropriate placement exam score or MAT.080 with a grade of C or better.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**BOC.101 Business Records Management** 2 2

This course focuses on the development, management, and maintenance of a record management system. Basic storage and retrieval methods will be discussed and applied. Records retention, transfer, and disposition, according to records retention schedules, will also be presented. In addition, records and information management technology will be discussed.

Offered: Fall or Spring or Summer

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**BOC.102 Business Communications** 3 3

This course covers the fundamental principles and modes of business communications. Students will be introduced to a variety of professional letters, the appropriate use of electronic mail, and the principles of oral communication. In addition, professional development topics such as resume writing and interviewing techniques will be explored.

Offered: Fall

Prerequisites: The appropriate placement exam score or ENG.097 with a grade of C or better or AOP.201.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**BOC.103 Office Technology** 2 2 3

This course introduces students to a personal information management program, the electronic search and retrieval of information, basic office machines, and voice recognition software. In addition, an in-depth study of a personal information management system; voice recognition software; navigating, searching, and downloading files on the Internet; and using basic office machines will be included.

Offered: Spring

Prerequisites: AOP.101 with a grade of C or better

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**BOC.104 Mathematics of Finance** 3 3

This course is a continuation of BOC 100. Students will learn how to apply basic mathematical functions to more advanced business activities. Students will utilize basic concepts of accounting for analyzing business situations. In addition, students will analyze financial statements, interest earnings, discounts, annuities, insurance and the distribution of working capital. Introductory statistical methods will also be covered.

Offered: Spring

Prerequisites: BOC.100

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**BOC.107 Tech Skills for Business Environment** 2 2 3

This course provides students with instruction in basic computer skills including keyboarding, 10-key, file management, data storage and retrieval, collaborative technology, and computer hardware and software. Basic formatting rules for letters, memos, reports and tables will be covered as well as basic word processing concepts and proofreading skills. Spreadsheet and database basic terminology and usage will also be introduced. This course is designed for students who are not majoring in an office occupations program.

Offered: Fall or Spring or Summer

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**BOC.109 Voice Recognition I** .5 1 1

This course will be a basic introduction to voice recognition software. Topics to be covered will include adjusting and tuning the microphone, training voice recognition software to recognize the user's voice, correcting speech errors in the voice recognition software, dictating and manipulating text using basic commands and formatting basic documents. Voice recognition software uses and possibilities will be explored as they relate to business, educational, and personal environments.

Offered: As Needed

Prerequisites: BOC.107

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**BOC.120 Customer Service** 2 2

This course introduces students to the concepts and skills needed for success in retail and business careers. Topics include listening techniques, verbal and non-verbal communication skills, and the effective use of technology. The ability to effectively interact with customers, to handle customer service issues, and to establish customer relationships and loyalty will be emphasized. Students will also be introduced to methods for effectively managing stress and conflict.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**BOC.201 Professional Internship 1** 15 3

Students who are currently employed will perform a research project on a topic of interest to the student and to his/her firm. The project will be supervised by the supervising instructor and by the job site supervisor. Permission of supervising instructor, program coordinator or Dean of Career, Technical and Health Education.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**BOC.202 Professional Internship 2** 15 3

The objective of this course is to integrate classroom theory with business practice. Students will receive on-the-job training with selected area businesses in the public and private sector. All internship positions will be supervised by the supervising instructor and a job site supervisor. The positions associated with this internship will be non-paying positions. Courses applicable toward the chosen curriculum and permission of the supervising instructor, program coordinator or Dean of Career, Technical and Health Education required.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

Hr/Wk Lect/ Disc	Hr/Wk Clin Lab	Sem Cr Hr
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**Courses****BUS.100 Introduction to Business** 3 3

This course is a comprehensive overview of business principles, practices, and trends that are influencing today's business and affecting tomorrow's competitive environment. The impact of globalization, technology, ethics, diversity, and culture, in addition to various emerging issues, is studied in application or relation to all business disciplines. This course provides a general orientation to business organizations for students who plan to pursue a bachelor's degree. Also, it is useful to individuals who desire a basic understanding of the business community for occupational or personal reasons.

Offered: Fall or Spring or Summer

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**BUS.101 Marketing Fundamentals** 3 3

This course introduces the business activities involved in planning, pricing, promoting, and distributing want-satisfying goods and services to present and potential customers.

Offered: Spring

Prerequisites: BUS.100

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**BUS.102 Sales Fundamentals** 3 3

This course presents the basic principles underlying the sales process. The basic philosophy is to promote an understanding of the salespersons' obligation to themselves, the company, the customer, and society.

Offered: Fall

Prerequisites: BUS.100

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**BUS Business Administration**

**BUS.108 Personal Finance** 3 3

This course provides the foundation and skills necessary for effective personal financial decision making. Students will gain an understanding of financial products and strategies and will develop the tools needed to analyze and evaluate alternatives. Topics covered include money management, budgeting, consumer credit, banking services, savings, investments, insurance, securities, real estate, income taxes, and estate planning.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AGS, AAS, and Certificates where applicable..

General Education – Elective Only

**BUS.111 Small Business Principles** 3 3

This course provides an overview for students interested in creating and operating a small business. Basic accounting principles, organizational business structures, operational and supervisory skills, and oral and written communications will be covered in this course.

Offered: Fall and Spring

Applicable toward graduation at Sandburg where program structure permits: Degree or Certification: AAS, AGS, and Certificates where applicable. General Education: Not applicable..

General Education – Not Applicable

**BUS.112 Supervision Fundamentals** 3 3

This course is intended for persons who desire to become supervisors and those who are currently in supervisory positions, but wish to improve their performance. It will provide a basic knowledge of the duties and responsibilities common to various types of supervisory jobs and how to avoid common mistakes of supervisors. Leadership skills will be discussed along with suggestions on the development of leadership qualities. Basic concepts of organization, management and planning as well as organizing work, directing work, and improving work methods will be studied. Evaluation of worker performance, along with teaching supervisors how to instruct workers will be covered. Some attention will be given to developing good public relations.

Offered: Fall

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**BUS.114 Skills for Business Careers** 1 1

This course is designed to prepare students for entering a career in business. Topics include: employer expectations, success skills, basic business etiquette, and business professionalism. The course may include field site visits and guest speakers to provide students with the opportunity to interact with business professionals..

General Education – Not Applicable

**BUS.200 Advertising Fundamentals** 3 3

This course presents a general survey of the field of advertising and is designed for students seeking initial or improved employment opportunities. Concepts included are those which relate to three basic questions: 1) What is advertising? 2) Why is advertising used? and 3) How can advertising be used effectively?

Offered: Spring

Prerequisites: BUS.101

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**BUS.201 Management Fundamentals** 3 3

This course provides a basic study of the field of management for individuals preparing for initial or improved employment. Several streams of management theory are reviewed. The basic functions of the business manager (planning, organizing, leading and controlling) are considered. Management in a global business environment and current management technologies and processes are stressed.

Offered: Spring

Prerequisites: BUS.100 or equivalent background as evaluated by instructor.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**BUS.204 Business Ethics** 2 2

This course introduces philosophical ethical theory and its application to business decisions. It considers theories of economic justice, social responsibility of corporations, regulation, conflict of interest and obligation, ethics of advertising, product quality and safety, environmental responsibility, hiring practices, and rights of employees and employers.

Offered: As Needed

Prerequisites: BUS.100

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS,AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**BUS.206 Principles of Finance** 3 3

This course provides students the fundamentals of financial management of a firm. Principles and methods of obtaining, managing, controlling and using capital in the operation of a business are studied. Topics include Time Value of Money, financial analysis, financial institutions, cost of capital, return on investment, and short-term and long term financing..

General Education – Not Applicable

**BUS.208 Marketing Promotion** 3 3

Students will study the promotion and communication element of Marketing, which includes: Advertising, Public Relations, Personal Selling, and Sales Promotion..

General Education – Not Applicable

**BUS.212 Human Resources Management** 3 3

This course focuses on recruitment and personnel planning; employment, placement, compensation, and benefits; training and development; employee and labor relations; health, safety, and security; and personnel management in the global community.

Offered: Fall

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**BUS.291 Professional Internship 1** 15 3

Students who are currently employed will perform a business-related research project on a topic of interest to the student and his/her firm. The project will be supervised by the supervising instructor and a job site supervisor. Permission of the supervising instructor, program Coordinator, or Associate Dean of Social and Behavioral Science.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**BUS.292 Professional Internship 2** 15 3

The objective of this course is to integrate classroom theory with business practice. Students will receive on-the-job training with selected area businesses in the public and private sectors. All internship positions will be supervised by the supervising instructor and a job site supervisor. The positions associated with this internship will be non-paying positions. Courses applicable toward the chosen curriculum and permission of supervising instructor, Program Coordinator or Associate Dean of Social and Behavioral Science programs. Applicable towards graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

Hr/Wk Lect/ Disc	Hr/Wk Clin Lab	Sem Cr Hr
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**Courses**

**BUS.100 Introduction to Business** 3 3

This course is a comprehensive overview of business principles, practices, and trends that are influencing today's business and affecting tomorrow's competitive environment. The impact of globalization, technology, ethics, diversity, and culture, in addition to various emerging issues, is studied in application or relation to all business disciplines.

This course provides a general orientation to business organizations for students who plan to pursue a bachelor's degree. Also, it is useful to individuals who desire a basic understanding of the business community for occupational or personal reasons.

Offered: Fall or Spring or Summer

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**BUS.101 Marketing Fundamentals** 3 3

This course introduces the business activities involved in planning, pricing, promoting, and distributing want-satisfying goods and services to present and potential customers.

Offered: Spring

Prerequisites: BUS.100

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**BUS.102 Sales Fundamentals** 3 3

This course presents the basic principles underlying the sales process. The basic philosophy is to promote an understanding of the salespersons' obligation to themselves, the company, the customer, and society.

Offered: Fall

Prerequisites: BUS.100

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**BUS.108 Personal Finance** 3 3

This course provides the foundation and skills necessary for effective personal financial decision making. Students will gain an understanding of financial products and strategies and will develop the tools needed to analyze and evaluate alternatives. Topics covered include money management, budgeting, consumer credit, banking services, savings, investments, insurance, securities, real estate, income taxes, and estate planning.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AGS, AAS, and Certificates where applicable..

General Education – Elective Only

**BUS.111 Small Business Principles** 3 3

This course provides an overview for students interested in creating and operating a small business. Basic accounting principles, organizational business structures, operational and supervisory skills, and oral and written communications will be covered in this course.

Offered: Fall and Spring

Applicable toward graduation at Sandburg where program structure permits: Degree or Certification: AAS, AGS, and Certificates where applicable. General Education: Not applicable..

General Education – Not Applicable

**BUS.112 Supervision Fundamentals** 3 3

This course is intended for persons who desire to become supervisors and those who are currently in supervisory positions, but wish to improve their performance. It will provide a basic knowledge of the duties and responsibilities common to various types of supervisory jobs and how to avoid common mistakes of supervisors. Leadership skills will be discussed along with suggestions on the development of leadership qualities. Basic concepts of organization, management and planning as well as organizing work, directing work, and improving work methods will be studied. Evaluation of worker performance, along with teaching supervisors how to instruct workers will be covered. Some attention will be given to developing good public relations.

Offered: Fall

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**BUS.114 Skills for Business Careers** 1 1

This course is designed to prepare students for entering a career in business. Topics include: employer expectations, success skills, basic business etiquette, and business professionalism. The course may include field site visits and guest speakers to provide students with the opportunity to interact with business professionals..

General Education – Not Applicable

**BUS.200 Advertising Fundamentals** 3 3

This course presents a general survey of the field of advertising and is designed for students seeking initial or improved employment opportunities. Concepts included are those which relate to three basic questions: 1) What is advertising? 2) Why is advertising used? and 3) How can advertising be used effectively?

Offered: Spring

Prerequisites: BUS.101

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**BUS.201 Management Fundamentals** 3 3

This course provides a basic study of the field of management for individuals preparing for initial or improved employment. Several streams of management theory are reviewed. The basic functions of the business manager (planning, organizing, leading and controlling) are considered. Management in a global business environment and current management technologies and processes are stressed.

Offered: Spring

Prerequisites: BUS.100 or equivalent background as evaluated by instructor.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**BUS.204 Business Ethics** 2 2

This course introduces philosophical ethical theory and its application to business decisions. It considers theories of economic justice, social responsibility of corporations, regulation, conflict of interest and obligation, ethics of advertising, product quality and safety, environmental responsibility, hiring practices, and rights of employees and employers.

Offered: As Needed

Prerequisites: BUS.100

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS,AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**BUS.206 Principles of Finance** 3 3

This course provides students the fundamentals of financial management of a firm. Principles and methods of obtaining, managing, controlling and using capital in the operation of a business are studied. Topics include Time Value of Money, financial analysis, financial institutions, cost of capital, return on investment, and short-term and long term financing..

General Education – Not Applicable

**BUS.208 Marketing Promotion** 3 3

Students will study the promotion and communication element of Marketing, which includes: Advertising, Public Relations, Personal Selling, and Sales Promotion..

General Education – Not Applicable

**BUS.212 Human Resources Management** 3 3

This course focuses on recruitment and personnel planning; employment, placement, compensation, and benefits; training and development; employee and labor relations; health, safety, and security; and personnel management in the global community.

Offered: Fall

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**BUS.291 Professional Internship 1** 15 3

Students who are currently employed will perform a business-related research project on a topic of interest to the student and his/her firm. The project will be supervised by the supervising instructor and a job site supervisor. Permission of the supervising instructor, program Coordinator, or Associate Dean of Social and Behavioral Science.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable



**BUS.292 Professional Internship 2** 15 3

The objective of this course is to integrate classroom theory with business practice. Students will receive on-the-job training with selected area businesses in the public and private sectors. All internship positions will be supervised by the supervising instructor and a job site supervisor. The positions associated with this internship will be non-paying positions. Courses applicable toward the chosen curriculum and permission of supervising instructor, Program Coordinator or Associate Dean of Social and Behavioral Science programs. Applicable towards graduation at Sandburg where program structure permits:  
Degree or Certificate: AAS, AGS and Certificates where applicable.  
General Education – Not Applicable

**CHD.102 Child Growth & Development 1** 3 3

This course provides a foundation in the theories and principles of development from conception through early adolescence, with an emphasis on the young child. An in-depth study is made in the areas of physical, social, emotional, cognitive, language, and aesthetic development. Special emphasis is placed on the theories of Piaget, Vygotsky, Skinner, Erickson, and Gardner. Development is studied in the context of gender, family, culture, and society with an emphasis on implications for professional practice. Field observations are required. Offered: Fall  
Applicable toward graduation at Sandburg where program structure permits:  
Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable. *IAI Course No. ECE 912*  
General Education – Not Applicable Elective Only

## CHD Child Development

Hr/Wk Lect/ Disc	Hr/Wk Clin Lab	Sem Cr Hr
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### Courses

**CHD.100 Observation & Guidance Young Child** 2 2 3

This course introduces students to the study of child behavior through direct observation. Theory and practice of techniques for observing and recording child behavior are provided. Various guidance techniques will be introduced. Analysis of child behavior will lead to an understanding of the individual child as well as appropriate guidance techniques. Students will develop an understanding of the relationship between careful observation, analysis of behavior, communication, and effective interaction with children. Weekly participation in the campus child care is required. Prior to enrollment in any course requiring participation in the campus child care center, a student must meet all DCFS requirements, pursuant to the Illinois Child Care Act [225 ILCS 10] Reg. 923, effective 1998. An orientation of the child care center, physical exam, negative TB test, DCFS background check, and electronic fingerprinting are required prior to participation at the center.  
Offered: Fall  
Applicable toward graduation at Sandburg where program structure permits:  
Degree or Certificate: AAS, AGS, and Certificates where applicable.  
General Education – Not Applicable

**CHD.101 Introduction to Early Childhood** 3 1 3.5

This survey course provides an overview of early childhood care and education including historical perspectives, basic values, structure, organization, and programming in early childhood. Professional practices of early childhood educators are outlined with an emphasis on their ability to enhance personal skills of children at these ages and stages of development. Examination of the students personal qualities in relationship to the expectations of the field is addressed throughout the course. Students will spend a minimum of 15 hours of direct observation in a variety of early childhood settings.  
Offered: Fall  
Applicable toward graduation at Sandburg where program structure permits:  
Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable. *IAI Course No. ECE 911*  
General Education – Not Applicable Elective Only

**CHD.103 Curriculum for Early Childhood** 2 4 4

This course examines the principles involved in planning, implementing and evaluating developmentally appropriate curriculum for young children. The course focuses on relationships between developmental theory, philosophy, and practice. Development of curriculum based on the needs and interests of young children and the analysis of a wide range of early childhood curriculum models is emphasized.  
Offered: Spring  
Prerequisites: CHD.100 and CHD.102  
Applicable toward graduation at Sandburg where program structure permits:  
Degree or Certificate - AA, AS, AAS,AGS, and Certificates where applicable.  
General Education – Not Applicable Elective Only

**CHD.106 Health Safety & Nutrition** 3 3

This course provides an overview of the health, safety and nutritional needs of young children and early childhood practices to ensure children's well-being in group settings. Content includes roles and responsibilities of adults in meeting children's needs; the promotion of healthy life style practices; understanding common childhood illnesses and injuries; meeting health, nutrition and safety standards; and planning nutritionally appropriate meals.  
Offered: As Needed  
Applicable toward graduation at Sandburg where program structure permits:  
Degree or Certificate: AAS, AGS, and Certificates where applicable. *IAI Course No. ECE 902*  
General Education – Not Applicable

**CHD.131 Observation and Assessment** 2 4 4

This course is designed to demonstrate to the student how to do authentic, alternative, classroom based assessment on young children. It will further provide the student with the knowledge and skills to interpret and use the information gained to plan curriculum that is responsive to and supportive of children's learning and development. Students Will have the opportunity to engage in assessment processes through means of classroom observations, providing each student with a stronger understanding of child development skills. Students will take responsibility for using a variety of age, developmentally, linguistically and culturally appropriate formal and informal assessment to gather and share information on each child's skills, abilities, interests and needs, birth through age 8.

Offered: As Needed

Prerequisites: CHD.103

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education -- Not Applicable

**CHD.204 Exceptional Children** 3 3

This course is an overview of children with exceptional cognitive, physical, social and emotional characteristics. The curriculum includes an analysis of developmental and educational needs imposed by exceptionality. It also offers identification, and intervention strategies, methods, and programs that are designed to meet the needs, including, but not limited to, children identified as learning disabled. The course includes the historical, philosophical and legal foundations of special education, including the study of applicable federal and state laws and requirements: Individuals with Disabilities Education Act, Americans with Disabilities Act, Individualized Family Service Plan, Individualized Education Plan, and inclusive programs. The course fulfills requirements of School Code, Article 21-2a.

Offered: As Needed

Prerequisites: CHD.102

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable. *IAI Course No. ECE 913*

General Education -- Not Applicable Elective Only

**CHD.205 Child-Family-Community Relations** 3 3

This course focuses on the child in the context of family, school and community. An analysis of the contemporary American family will be discussed with emphasis on family interactions which largely dictate the child's behavior and way of relating to people. Included are knowledge of other cultures, the diversity of life styles, issues of communication and the role of the school and community as social agents with our changing society. Students will gain an understanding of their professional role in strengthening family/child relationships through effective use of community resources.

Offered: As Needed

Prerequisites: CHD.102

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education -- Not Applicable

**CHD.207 Supervision & Administration** 3 3

The purpose of this course is to provide students with the skills and knowledge to successfully supervise and administer a child care program. Topics include: administrative organization, personnel policies, licensing regulation, planning and evaluation.

Offered: Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education -- Not Applicable

Hr/Wk	Hr/Wk	Sem
Lect/	Clin	Cr
Disc	Lab	Hr

**Courses**

**CHD.100 Observation & Guidance Young Child** 2 2 3

This course introduces students to the study of child behavior through direct observation. Theory and practice of techniques for observing and recording child behavior are provided. Various guidance techniques will be introduced. Analysis of child behavior will lead to an understanding of the individual child as well as appropriate guidance techniques. Students will develop an understanding of the relationship between careful observation, analysis of behavior, communication, and effective interaction with children. Weekly participation in the campus child care is required. Prior to enrollment in any course requiring participation in the campus child care center, a student must meet all DCFS requirements, pursuant to the Illinois Child Care Act [225 ILCS 10] Reg. 923, effective 1998. An orientation of the child care center, physical exam, negative TB test, DCFS background check, and electronic fingerprinting are required prior to participation at the center.

Offered: Fall

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education -- Not Applicable

**CHD.101 Introduction to Early Childhood** 3 1 3.5

This survey course provides an overview of early childhood care and education including historical perspectives, basic values, structure, organization, and programming in early childhood. Professional practices of early childhood educators are outlined with an emphasis on their ability to enhance personal skills of children at these ages and stages of development. Examination of the students personal qualities in relationship to the expectations of the field is addressed throughout the course. Students will spend a minimum of 15 hours of direct observation in a variety of early childhood settings.

Offered: Fall

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable. *IAI Course No. ECE 911*

General Education -- Not Applicable Elective Only

**CHD.102 Child Growth & Development 1** 3 3

This course provides a foundation in the theories and principles of development from conception through early adolescence, with an emphasis on the young child. An in-depth study is made in the areas of physical, social, emotional, cognitive, language, and aesthetic development. Special emphasis is placed on the theories of Piaget, Vygotsky, Skinner, Erickson, and Gardner. Development is studied in the context of gender, family, culture, and society with an emphasis on implications for professional practice. Field observations are required.

Offered: Fall

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable. *IAI Course No. ECE 912*

General Education – Not Applicable Elective Only

**CHD.103 Curriculum for Early Childhood** 2 4 4

This course examines the principles involved in planning, implementing and evaluating developmentally appropriate curriculum for young children. The course focuses on relationships between developmental theory, philosophy, and practice. Development of curriculum based on the needs and interests of young children and the analysis of a wide range of early childhood curriculum models is emphasized.

Offered: Spring

Prerequisites: CHD.100 and CHD.102

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AA, AS, AAS,AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**CHD.106 Health Safety & Nutrition** 3 3

This course provides an overview of the health, safety and nutritional needs of young children and early childhood practices to ensure children's well-being in group settings. Content includes roles and responsibilities of adults in meeting children's needs; the promotion of healthy life style practices; understanding common childhood illnesses and injuries; meeting health, nutrition and safety standards; and planning nutritionally appropriate meals.

Offered: As Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable. *IAI Course No. ECE 902*

General Education – Not Applicable

**CHD.131 Observation and Assessment** 2 4 4

This course is designed to demonstrate to the student how to do authentic, alternative, classroom based assessment on young children.

It will further provide the student with the knowledge and skills to interpret and use the information gained to plan curriculum that is responsive to and supportive of children's learning and development.

Students Will have the opportunity to engage in assessment processes through means of classroom observations, providing each student with a stronger understanding of child development skills. Students will take responsibility for using a variety of age, developmentally, linguistically and culturally appropriate formal and informal assessment to gather and share information on each child's skills, abilities, interests and needs, birth through age 8.

Offered: As Needed

Prerequisites: CHD.103

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**CHD.204 Exceptional Children** 3 3

This course is an overview of children with exceptional cognitive, physical, social and emotional characteristics. The curriculum includes an analysis of developmental and educational needs imposed by exceptionality. It also offers identification, and intervention strategies, methods, and programs that are designed to meet the needs, including, but not limited to, children identified as learning disabled. The course includes the historical, philosophical and legal foundations of special education, including the study of applicable federal and state laws and requirements: Individuals with Disabilities Education Act, Americans with Disabilities Act, Individualized Family Service Plan, Individualized Education Plan, and inclusive programs. The course fulfills requirements of School Code, Article 21-2a.

Offered: As Needed

Prerequisites: CHD.102

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable. *IAI Course No. ECE 913*

General Education – Not Applicable Elective Only

**CHD.205 Child-Family-Community Relations** 3 3

This course focuses on the child in the context of family, school and community. An analysis of the contemporary American family will be discussed with emphasis on family interactions which largely dictate the child's behavior and way of relating to people. Included are knowledge of other cultures, the diversity of life styles, issues of communication and the role of the school and community as social agents with our changing society. Students will gain an understanding of their professional role in strengthening family/child relationships through effective use of community resources.

Offered: As Needed

Prerequisites: CHD.102

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**CHD.207 Supervision & Administration** 3 3

The purpose of this course is to provide students with the skills and knowledge to successfully supervise and administer a child care program. Topics include: administrative organization, personnel policies, licensing regulation, planning and evaluation.

Offered: Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**CHI Chinese**

Hr/Wk	Hr/Wk	Sem
Lect/	Clin	Cr
Disc	Lab	Hr

**Courses****CHI.101 Beginning Chinese** 4 4

This is a Chinese language course for beginners. Its aim is to help students to develop communicative competence in the four basic skills of listening, speaking, reading and writing the Chinese language. Students will learn basic vocabulary and sentence structures for use in essential everyday situations through various forms of oral and written practice. Pinyin (the most widely used Chinese phonetic system) will be taught as a tool to learn the spoken language. Students will also learn Chinese characters in order to be able to communicate effectively in real Chinese situations. Approximately 200 words and expressions in both Pinyin and characters will be taught.

Offered: As Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

Hr/Wk	Hr/Wk	Sem
Lect/	Clin	Cr
Disc	Lab	Hr

**Courses****CHI.101 Beginning Chinese** 4 4

This is a Chinese language course for beginners. Its aim is to help students to develop communicative competence in the four basic skills of listening, speaking, reading and writing the Chinese language. Students will learn basic vocabulary and sentence structures for use in essential everyday situations through various forms of oral and written practice. Pinyin (the most widely used Chinese phonetic system) will be taught as a tool to learn the spoken language. Students will also learn Chinese characters in order to be able to communicate effectively in real Chinese situations. Approximately 200 words and expressions in both Pinyin and characters will be taught.

Offered: As Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**CHM Chemistry**

Hr/Wk	Hr/Wk	Sem
Lect/	Clin	Cr
Disc	Lab	Hr

**Courses****CHM.100 Concepts of Chemistry** 2 2 3

This one-semester course is designed for individuals who have completed less than the equivalent of one year of chemistry. The fundamental concepts of general chemistry developed are appropriate for students interested in further study of chemistry as well as those students who have immediate needs for chemistry. Primary emphasis is placed upon matter, atomic structure, nuclear chemistry, periodicity, stoichiometry, and organic chemistry. A student may NOT count this course toward graduation at CSC if he/she has satisfactorily completed CHM 110 or an equivalent course prior to enrollment in CHM100.

Offered: Fall or Spring or Summer

Prerequisites: MAT.093 or MAT.083 or MAT.086 with a grade of C or better.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. P1 902L*

General Education – Science Lab Science

**CHM.110 General Chemistry 1** 3 2 4

This is the first semester of two courses that constitute a year's study of general chemistry. It is designed for the student planning to major in chemistry, engineering, mathematics, science, and related fields that require a comprehensive study of general chemistry. The principal emphasis is upon bonding, gas laws, stoichiometry, nuclear chemistry, and fundamental principles and theories. Laboratory experiments are designed to focus on analytical techniques of volumetric and gravimetric analysis.

Offered: Fall

Prerequisites: One year of high school chemistry or CHM.100 and MAT.099 or its equivalent

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. P1 902L*

General Education – Science Lab Science

**CHM.120 General Chemistry 2** 3 2 4

This is the second course finishing the year's study of general chemistry. Primary emphasis is placed upon qualitative and quantitative instrumental techniques involving visible and infrared spectroscopy, and gas chromatographic analysis. Special emphasis is given to chemical thermodynamics, electrochemistry, and other selected topics as time permits.

Offered: Spring

Prerequisites: CHM.110

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**CHM.140 Organic and Biochemistry** 3 2 4

This one-semester course is designed for individuals who need an introduction to modern organic and biochemistry. The primary interest of the student may be in agriculture, nursing, home economics, or the health sciences - areas of science requiring various degrees of background in organic and biochemistry.

Offered: Spring

Prerequisites: CHM.100 or CHM.110

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**CHM.210 Organic Chemistry 1** 4 2 5

This is the first course of two which constitute a year's study of organic chemistry. Organic Chemistry 1 is required for students planning a major in chemistry and related fields. Primary lecture emphasis is placed upon the study of organic functional groups, reaction mechanisms, nomenclature, structure, stereochemistry, and spectroscopy. The laboratory emphasizes the development of techniques to run organic reactions, to isolate and characterize the products, and the use of computational molecular modeling to gain insight into the structure and reactivity of organic molecules.

Offered: Fall

Prerequisites: CHM.110

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**CHM.220 Organic Chemistry 2** 3 2 4

This is the second course of two which constitute a year's study of organic chemistry. The emphasis in lecture and laboratory is similar to that in Organic Chemistry 1, with the continued study of new functional groups and new reaction mechanisms. Further emphasis is placed upon biomolecules such as carbohydrates and proteins, with a bottom up approach (moving from small molecules to large ones) that contrasts with the top down approach typically used in biology and biochemistry courses.

Offered: Spring

Prerequisites: CHM.210

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

Hr/Wk Lect/ Disc	Hr/Wk Clin Lab	Sem Cr Hr
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**Courses****CHM.100 Concepts of Chemistry** 2 2 3

This one-semester course is designed for individuals who have completed less than the equivalent of one year of chemistry. The fundamental concepts of general chemistry developed are appropriate for students interested in further study of chemistry as well as those students who have immediate needs for chemistry. Primary emphasis is placed upon matter, atomic structure, nuclear chemistry, periodicity, stoichiometry, and organic chemistry. A student may NOT count this course toward graduation at CSC if he/she has satisfactorily completed CHM 110 or an equivalent course prior to enrollment in CHM100.

Offered: Fall or Spring or Summer

Prerequisites: MAT.093 or MAT.083 or MAT.086 with a grade of C or better.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. P1 902L*

General Education – Science Lab Science

**CHM.110 General Chemistry 1** 3 2 4

This is the first semester of two courses that constitute a year's study of general chemistry. It is designed for the student planning to major in chemistry, engineering, mathematics, science, and related fields that require a comprehensive study of general chemistry. The principal emphasis is upon bonding, gas laws, stoichiometry, nuclear chemistry, and fundamental principles and theories. Laboratory experiments are designed to focus on analytical techniques of volumetric and gravimetric analysis.

Offered: Fall

Prerequisites: One year of high school chemistry or CHM.100 and MAT.099 or its equivalent

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. P1 902L*

General Education – Science Lab Science

**CHM.120 General Chemistry 2** 3 2 4

This is the second course finishing the year's study of general chemistry. Primary emphasis is placed upon qualitative and quantitative instrumental techniques involving visible and infrared spectroscopy, and gas chromatographic analysis. Special emphasis is given to chemical thermodynamics, electrochemistry, and other selected topics as time permits.

Offered: Spring

Prerequisites: CHM.110

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only



**CHM.140 Organic and Biochemistry** 3 2 4

This one-semester course is designed for individuals who need an introduction to modern organic and biochemistry. The primary interest of the student may be in agriculture, nursing, home economics, or the health sciences - areas of science requiring various degrees of background in organic and biochemistry.

Offered: Spring

Prerequisites: CHM.100 or CHM.110

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education -- Not Applicable Elective Only

**CHM.210 Organic Chemistry 1** 4 2 5

This is the first course of two which constitute a year's study of organic chemistry. Organic Chemistry 1 is required for students planning a major in chemistry and related fields. Primary lecture emphasis is placed upon the study of organic functional groups, reaction mechanisms, nomenclature, structure, stereochemistry, and spectroscopy. The laboratory emphasizes the development of techniques to run organic reactions, to isolate and characterize the products, and the use of computational molecular modeling to gain insight into the structure and reactivity of organic molecules.

Offered: Fall

Prerequisites: CHM.110

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education -- Not Applicable Elective Only

**CHM.220 Organic Chemistry 2** 3 2 4

This is the second course of two which constitute a year's study of organic chemistry. The emphasis in lecture and laboratory is similar to that in Organic Chemistry 1, with the continued study of new functional groups and new reaction mechanisms. Further emphasis is placed upon biomolecules such as carbohydrates and proteins, with a bottom up approach (moving from small molecules to large ones) that contrasts with the top down approach typically used in biology and biochemistry courses.

Offered: Spring

Prerequisites: CHM.210

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education -- Not Applicable Elective Only

**CRM Criminal Justice**

Hr/Wk	Hr/Wk	Sem
Lect/	Clin	Cr
Disc	Lab	Hr

**Courses****CRM.101 Introduction to Criminal Justice** 3 3

This course will constitute a survey of the entire triad of the American criminal justice system: law enforcement, judiciary, and corrections. Basic terminology and concepts, the foundation philosophy, general examination of criminal law, survey of each area of the triad and their interrelatedness, and the role of the social sciences will be emphasized.

In addition, a general examination will also be made of American civil law.

Offered: Fall or as Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education -- Not Applicable Elective Only

**CRM.102 Police Administration & Management** 3 3

This course will examine the evolution of American policing, external influences and controls on the police, organizational theory, management styles, labor relations, and the selection process for police personnel.

Offered: Fall or as Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education -- Not Applicable Elective Only

**CRM.103 Intro to Crime Scene Technology** 2 1 3

An in-depth study of the nature of physical evidence including techniques and methods for proper collection and preservation of evidence. This course will place an emphasis on the analysis of forensics as it relates to physical and biological evidence found at crime scenes. This course examines the general principles and methodologies used in collecting and documenting particular types of evidence. Classes are held in a crime lab environment and students will use practical hands-on exercises to demonstrate competencies of presented material.

Offered: Fall or Summer

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education -- Not Applicable

**CRM.121 Juvenile Justice** 3 3

This course covers the history and philosophy of the juvenile justice system, legal procedure in the juvenile court, characteristics of juvenile offenders, theories of causation, and treatment and control of offenders. Special emphasis will be placed on the failure of *parens patriae* and the birth of constitutional rights for juveniles, and the increased emphasis on personal accountability.

Offered: Spring or as Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education -- Not Applicable Elective Only

**CRM.141 Introduction to Corrections** 3 3

This course is concerned with the evolution of societal reaction to law breakers, the sentences and the goals they seek to obtain, and the influence of the ongoing struggle between the rights of the individual and society on the correctional system. Furthermore, within the context of the individual versus society struggle, there is a detailed examination of rehabilitation versus punitive philosophies, why rehabilitation failed, and the current philosophical foundation of American corrections.

Offered: Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**CRM.151 Criminal Justice & Community Relations** 3 3

This course is designed to provide the student with an awareness of the problems confronting police in our turbulent society and possible courses of action which they might pursue in coping with these problems. The emphasis will be on the American pluralistic society, the various ethnic and racial groups, and their relations with each other and the police.

Offered: Spring or as Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**CRM.172 Introduction to Security** 3 3

This course provides students with an understanding of the basic principles underlying private security issues. The core of the course content deals with risk and threat assessment. The course examines the relationship between the private and public sectors. Legal issues, as well as ethical issues, pertaining to security will be discussed. Other topics include theory and history of security, physical security, interruption, disaster preparedness, employee theft, substance abuse in the workplace, and security management. It is designed for students seeking a career in private and public security services.

Offered: Spring or as Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**CRM.222 Communication in Criminal Justice** 3 3

This course presents the basic concepts of the communication process as it applies to law enforcement. Emphasis will be placed on the importance of written, verbal and nonverbal communication within the criminal justice field. An individual may not count ENG 120, in addition to this course, toward graduation.

Offered: Fall or Spring

Prerequisites: CRM.101 or concurrent enrollment and ENG.101 or concurrent enrollment.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**CRM.231 Procedural Law for Police** 3 3

Since procedural criminal law is concerned with the proper implementation of substantive criminal law, this course will provide the student with the opportunity to study and analyze the laws behind the various procedures dealing with the questioning of suspects through testifying in court.

Offered: Fall or as Needed

Prerequisites: CRM.101 or concurrent enrollment and ENG.101 or concurrent enrollment.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**CRM.261 Criminal Law** 3 3

This course will inquire into basic concepts of criminal law, crimes against persons and property, other criminal conduct, and the punishments as designated by the nature of the crimes.

Offered: Spring

Prerequisites: CRM.101 or concurrent enrollment and ENG.101 or concurrent enrollment.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**CRM.262 Criminal Justice Internship** 15 3

This work experience in criminal justice provides the student an opportunity for practical application of the fundamentals and techniques studied in the classroom. The student will be required to spend 200 hours or more within the criminal justice agency most appropriate to their career orientation. Any student working full time within a criminal justice agency will be allowed credit for this course upon approval by the Criminal Justice Coordinator. Any student with a grade point average of less than 2.0 will be required to take another course selected in consultation with the Criminal Justice Coordinator in lieu thereof.

Offered: As Needed

Prerequisites: CRM.101, CRM 102, CRM 231, CRM 271, CRM 121, CRM 261, CRM 222, CRM 141, SOC.205, and ENG 101 or concurrent enrollment and a grade point average of at least a 2.0, plus permission of the Criminal Justice Coordinator.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**CRM.271 Criminal Investigation** 3 3

In the in-depth study of the nature of physical evidence including descriptions of forensic analysis, techniques for proper collection and preservation of evidence, and interpreting the significance of scientifically evaluated evidence. Specifically, the use of such techniques as they relate to violent and property crimes, evidentiary processes, police personnel response to crime scenes, the gathering of information from witnesses, victims, and suspects, and the preparation of cases for presentation in court.

Offered: Fall

Prerequisites: CRM.101 or concurrent enrollment and ENG 101 or concurrent enrollment.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

Hr/Wk Lect/ Disc	Hr/Wk Clin Lab	Sem Cr Hr
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**Courses**

**CRM.101 Introduction to Criminal Justice** 3 3

This course will constitute a survey of the entire triad of the American criminal justice system: law enforcement, judiciary, and corrections. Basic terminology and concepts, the foundation philosophy, general examination of criminal law, survey of each area of the triad and their interrelatedness, and the role of the social sciences will be emphasized. In addition, a general examination will also be made of American civil law.

Offered: Fall or as Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**CRM.102 Police Administration & Management** 3 3

This course will examine the evolution of American policing, external influences and controls on the police, organizational theory, management styles, labor relations, and the selection process for police personnel.

Offered: Fall or as Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**CRM.103 Intro to Crime Scene Technology** 2 1 3

An in-depth study of the nature of physical evidence including techniques and methods for proper collection and preservation of evidence. This course will place an emphasis on the analysis of forensics as it relates to physical and biological evidence found at crime scenes. This course examines the general principles and methodologies used in collecting and documenting particular types of evidence. Classes are held in a crime lab environment and students will use practical hands-on exercises to demonstrate competencies of presented material.

Offered: Fall or Summer

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**CRM.121 Juvenile Justice** 3 3

This course covers the history and philosophy of the juvenile justice system, legal procedure in the juvenile court, characteristics of juvenile offenders, theories of causation, and treatment and control of offenders. Special emphasis will be placed on the failure of *parens patriae* and the birth of constitutional rights for juveniles, and the increased emphasis on personal accountability.

Offered: Spring or as Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**CRM.141 Introduction to Corrections** 3 3

This course is concerned with the evolution of societal reaction to law breakers, the sentences and the goals they seek to obtain, and the influence of the ongoing struggle between the rights of the individual and society on the correctional system. Furthermore, within the context of the individual versus society struggle, there is a detailed examination of rehabilitation versus punitive philosophies, why rehabilitation failed, and the current philosophical foundation of American corrections.

Offered: Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**CRM.151 Criminal Justice & Community Relations** 3 3

This course is designed to provide the student with an awareness of the problems confronting police in our turbulent society and possible courses of action which they might pursue in coping with these problems. The emphasis will be on the American pluralistic society, the various ethnic and racial groups, and their relations with each other and the police.

Offered: Spring or as Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**CRM.172 Introduction to Security** 3 3

This course provides students with an understanding of the basic principles underlying private security issues. The core of the course content deals with risk and threat assessment. The course examines the relationship between the private and public sectors. Legal issues, as well as ethical issues, pertaining to security will be discussed. Other topics include theory and history of security, physical security, interruption, disaster preparedness, employee theft, substance abuse in the workplace, and security management. It is designed for students seeking a career in private and public security services.

Offered: Spring or as Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**CRM.222 Communication in Criminal Justice** 3 3

This course presents the basic concepts of the communication process as it applies to law enforcement. Emphasis will be placed on the importance of written, verbal and nonverbal communication within the criminal justice field. An individual may not count ENG 120, in addition to this course, toward graduation.

Offered: Fall or Spring

Prerequisites: CRM.101 or concurrent enrollment and ENG.101 or concurrent enrollment.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**CRM.231 Procedural Law for Police** 3 3

Since procedural criminal law is concerned with the proper implementation of substantive criminal law, this course will provide the student with the opportunity to study and analyze the laws behind the various procedures dealing with the questioning of suspects through testifying in court.

Offered: Fall or as Needed

Prerequisites: CRM.101 or concurrent enrollment and ENG.101 or concurrent enrollment.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**CRM.261 Criminal Law** 3 3

This course will inquire into basic concepts of criminal law, crimes against persons and property, other criminal conduct, and the punishments as designated by the nature of the crimes.

Offered: Spring

Prerequisites: CRM.101 or concurrent enrollment and ENG.101 or concurrent enrollment.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**CRM.262 Criminal Justice Internship** 15 3

This work experience in criminal justice provides the student an opportunity for practical application of the fundamentals and techniques studied in the classroom. The student will be required to spend 200 hours or more within the criminal justice agency most appropriate to their career orientation. Any student working full time within a criminal justice agency will be allowed credit for this course upon approval by the Criminal Justice Coordinator. Any student with a grade point average of less than 2.0 will be required to take another course selected in consultation with the Criminal Justice Coordinator in lieu thereof.

Offered: As Needed

Prerequisites: CRM.101, CRM 102, CRM 231, CRM 271, CRM 121, CRM 261, CRM 222, CRM 141, SOC.205, and ENG 101 or concurrent enrollment and a grade point average of at least a 2.0, plus permission of the Criminal Justice Coordinator.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**CRM.271 Criminal Investigation** 3 3

In the in-depth study of the nature of physical evidence including descriptions of forensic analysis, techniques for proper collection and preservation of evidence, and interpreting the significance of scientifically evaluated evidence. Specifically, the use of such techniques as they relate to violent and property crimes, evidentiary processes, police personnel response to crime scenes, the gathering of information from witnesses, victims, and suspects, and the preparation of cases for presentation in court.

Offered: Fall

Prerequisites: CRM.101 or concurrent enrollment and ENG 101 or concurrent enrollment.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

## DHG Dental Hygiene

Hr/Wk	Hr/Wk	Sem
Lect/	Clin	Cr
Disc	Lab	Hr

### Courses

**DHG.109 Preclinic Laboratory** 3 1.5

Preclinic Laboratory is designed to provide the student with the opportunity to develop skills and apply didactic information from Fundamentals of Dental Hygiene (DHG 110) while working in the simulation laboratory. Instrumentation techniques are introduced to the student via instructor demonstrations and other visual aids followed by students practicing on manikins in the simulation laboratory. Admission to the Dental Hygiene program is required to enroll in this course.

Offered: Fall

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**DHG.110 Fundamentals of Dental Hygiene** 2 2

Fundamentals of Dental Hygiene, in conjunction with Preclinical Lab and Dental Hygiene Practice I, is designed to introduce the student to the fundamental concepts of dental hygiene practice: instrumentation; instrument sharpening; assessment of health; dental and periodontal status of patients; infection control and OSHA regulations. This course closely integrates theory and practice thus providing a base from which the learner may develop the skills, knowledge, and judgment required to adequately serve the public in the profession of Dental Hygiene. Admission to the Dental Hygiene program is required to enroll in this course.

Offered: Fall

Prerequisites: Admission to the Dental Hygiene program

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**DHG.112 Dental Radiology** 2 2 3

This course prepares the student to obtain the necessary fundamentals and background to expose and process dental radiographs. Emphasis is placed on the characteristics of radiation, radiation safety and monitoring, radiation production, operation of the x-ray unit, intraoral and extraoral radiographic films, processing and mounting radiographs, and identification of anatomical landmarks. Admission to the Dental Hygiene program is required to enroll in this course.

Offered: Fall

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**DHG.113 Preventive Dentistry** 2 2

This course provides the learner with the basic understanding of patient education with an emphasis on individual oral health counseling. Preventative Dentistry introduces the learner to the fundamental concepts of dental plaque, healthy and diseased gingival tissues, oral hygiene aids and techniques, dental caries, fluorides, and other topics and techniques related to the prevention of oral diseases. Admission to the Dental Hygiene program is required to enroll in this course.

Offered: Fall

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**DHG.114 Head/Neck & Oral Anatomy** 3 3

Head, Neck and Oral Anatomy is a fundamental, basic theory course upon which other dental hygiene courses are built. This course includes concepts of dental nomenclature, tooth development, dental anatomy, functions of the teeth, identification of oral structures, and occlusion. It also contains information specific to the nerve and blood supply to the head and neck as well as osteology of the skull and muscles of facial expression and mastication. Learning experiences are provided in both the classroom and laboratory settings. Admission to the Dental Hygiene program is required to enroll in this course.

Offered: Fall

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**DHG.115 Dental Hygiene Practice 1** 6 2

Dental Hygiene Practice I is designed to provide the student with the opportunity to develop skills and apply didactic information from Preclinic Laboratory (DHG 109) and Fundamentals of Dental Hygiene (DHG 110) to the clinical setting. Instrumentation techniques are introduced to the student via instructor demonstrations and other visual aids followed by students practicing with peer patients in the clinical setting. Dental Hygiene Practice I provides the student with the opportunity to develop data collection skills, i.e. intra and extraoral examinations, dental and periodontal assessments and charting through practice with classmates in the clinic. Admission to the Dental Hygiene program is required to enroll in this course.

Offered: Fall

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**DHG.118 Oral Histology & Embryology** 1 1

This course includes concepts of the embryological development of orofacial organs and structures as well as microscopic investigation of oral tissues and structures. Students will become acquainted with the derivation and maturation of the hard and soft tissues of the oral cavity that will be necessary to analyze and/or provide treatment in the clinical setting.

Offered: Spring

Prerequisites: Successful completion of first year, fall semester dental hygiene courses.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable



**DHG.119 Periodontology 1**

2 2

This course includes study of the histologic and clinical characteristics of periodontal diseases. Study of the supporting structures of teeth in health and disease will be included. Normal, pathological and etiological considerations are discussed. Emphasis is placed on recognition of causative factors and preventive measures, which might control the advancement of destructive periodontal disease. Synthesis of knowledge for case application is emphasized. Current research in periodontology and the role of the dental hygienist in periodontal therapy will be investigated.

Offered: Spring

Prerequisites: Successful completion of first year, fall semester dental hygiene courses.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**DHG.120 Dental Hygiene 2**

2 2

This course focuses on the fundamental knowledge and skills necessary to begin to provide dental hygiene services for patients in the dental hygiene clinic. Concepts in treatment planning, assessment of the oral cavity for the clinical patient, preventive dentistry for the clinical patient, debridement of hard and soft deposits in the oral cavity for the clinical patient, and evaluation of dental hygiene services will utilize information and skills learned in the previous semester. Along with building upon previously learned concepts, information concerning common medical emergencies in the dental office, tobacco prevention and cessation intervention, and pain control, will also be covered.

Offered: Spring

Prerequisites: Successful completion of first year, fall semester dental hygiene courses.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**DHG.125 Dental Hygiene Practice 2**

12 4

The purpose of Dental Hygiene Practice II is to further the students clinical experience in the clinical setting. Application of dental hygiene clinical techniques learned in Preclinic Laboratory (DHG 109), Fundamentals of Dental Hygiene (DHG 110) and Dental Hygiene Practice I (DHG 115) will be built upon. Emphasis will be placed on skills for patient assessment, instrumentation, evaluation and documentation during the dental hygiene appointment. Other areas of focus include sequencing of treatment according to patient needs and time factors and comprehensive care for the dental hygiene patient. The first two weeks of the course will focus toward treatment of the first patient to be appointed with the student.

Offered: Spring

Prerequisites: Successful completion of first year, fall semester dental hygiene courses.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**DHG.200 Dental Hygiene 3**

2 2

The purpose of this course is to further the student's ability to provide comprehensive dental hygiene care to clinical patients. It will cover the didactic information necessary to enable the student to correctly perform various procedures for patients in Dental Hygiene Practice III (DHG 205) and to understand the rationale behind the indications and contraindications for the procedures learned. Procedures that will be learned include advanced instrumentation, pit and fissure sealants, periodontal debridement involving the ultrasonic scaler, use of the air polisher for stain removal, application of chemotherapeutic agents, alginate impressions and pouring of study models, and analyzing diet record for nutritional counseling. The concepts of decision making, responsibility, accountability, and professionalism will be expanded upon to assist the student in enhancing proficiency in the development of dental hygiene treatment plans, as well as the assessment of medical, dental, and periodontal status of patients.

Offered: Summer

Prerequisites: Successful completion of first year, spring semester dental hygiene courses.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**DHG.205 Dental Hygiene Practice 3**

9 3

The purpose of this course is to further the development of the instrumentation and assessment skills acquired in previous dental hygiene courses through treatment of patients of a more difficult caliber. Integration of didactic and clinical experiences will allow for the introduction and development of pit and fissure sealant placement, ultrasonic scaling, air polishing, periodontal debridement, application of chemotherapeutics, caries counseling, and alginate impressions. Emphasis will be placed on improvement of instrumentation, enhancing proficiency in the development of dental hygiene treatment plans, assessment of medical, dental, and periodontal status of patients, and increasing efficiency with patient treatment.

Offered: Summer

Prerequisites: Successful completion of first year, spring semester dental hygiene courses.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**DHG.210 Dental Hygiene 4**

2 2

This course is designed to aid the student in understanding the numerous special needs that are present in people in our society, ranging from cardiovascular disease to mental disorders, childhood diseases to geriatrics. Emphasis will be placed on the medically/physically compromised patients who present for dental hygiene treatment either in a clinical setting or hospital setting. Treatment planning for these compromised patients will be discussed.

Offered: Fall

Prerequisites: Successful completion of second summer session dental hygiene courses and BIO.200 BIO.211 and BIO.212.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**DHG.211 Community Dental Health**

2 2

This course provides a spectrum of experience, which contributes to the continuing development of insight into community problems and understanding the needs of people. It stimulates awareness of community action and community dental health program development. It provides an understanding of how private practice dentistry and community dental health can work together to meet the needs of the community. When completed, the student has a working knowledge of community dental health.

Offered: Fall

Prerequisites: Successful completion of second summer session dental hygiene courses.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**DHG.212 Pathology**

2 2

This course is an introduction to pathology relating causative factors to clinical manifestations. The study of gross and microscopic lesions of the teeth and related oral tissues will be included. Emphasis is placed on concepts of development/growth disturbances, diseases of microbiological origin, injury and repair, metabolic disturbances, and oral manifestations of various diseases and conditions.

Offered: Fall

Prerequisites: Successful completion of second summer session dental hygiene courses, BIO 211, BIO 212 and DHG 118.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**DHG.213 Pharmacology**

2 2

The purpose of this course is to familiarize dental hygiene students with drugs most used and/or prescribed by dental offices as well as drug groups used to treat medical conditions. Emphasis will be placed on appropriate and thorough evaluation of medical histories. Referencing material related to pharmacology will also be emphasized.

Offered: Fall

Prerequisites: Successful completion of second summer session dental hygiene courses and BIO.211 BIO.212 BIO.200 with a grade of C or better.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**DHG.215 Dental Hygiene Practice 4**

15 5

The purpose of this course is to further clinical experience in the practical application of oral prophylaxis techniques. Emphasis will be placed on improvement of the student's abilities in periodontal debridement, professionalism, and treatment planning. Students will be responsible for patient care including assessment, thorough in-depth treatment planning, plaque control programs, tobacco cessation education, nutritional counseling, periodontal debridement of periodontally involved patients and medically compromised patients, polishing, fluoride therapy, and maintenance therapy. Completion of these services will further the student's abilities to provide comprehensive dental hygiene treatment based on the individual patient needs.

Offered: Fall

Prerequisites: Successful completion of second summer session dental hygiene courses.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**DHG.217 Clinical Applications Pain/Anxiety Ctrl**

2 1

This course focuses on the clinical applications of controlling the dental hygiene patient's pain and anxiety through the administration of local anesthesia and/or nitrous oxide. The student will develop skills in the administration of local anesthesia in the oral cavity along with learning how to administer and monitor nitrous oxide.

Offered: Spring

Prerequisites: Successful completion of second year, fall semester dental hygiene courses.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**DHG.218 Dental Office Management & Jurisprudence 2**

2

This course prepares the graduating dental hygiene student to manage the telephone, schedule appointments, maintain patient records, receive payment, and complete third-party reimbursement forms in the private practice dental setting. The student will also learn to enter date for charges and payments, manage recall systems, maintain inventory, and written correspondence with other dental professionals. Along with the office skills, students will discuss legal and ethical dental hygiene practice issues, develop a resume, and learn interviewing skills. Students will also review for the state dental hygiene practice acts for Illinois and Iowa in preparation for the state jurisprudence examination.

Offered: Spring

Prerequisites: Successful completion of second year, fall semester dental hygiene courses.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**DHG.219 Periodontology 2** 2 2

This course focuses on surgical aspects of periodontology. The student will develop basic knowledge on the role of occlusion in periodontal health and disease, principles of periodontal surgery, management of soft tissue, dental implants, implant maintenance, and periodontal emergencies.

Offered: Spring

Prerequisites: Successful completion of second year, fall semester dental hygiene courses.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**DHG.220 Dental Hygiene 5** 1 2 2

This course is designed to prepare the student to make the transition from the educational setting to the real world of dental hygiene by covering dental specialties, advanced treatment planning, and preparation for the National Dental Hygiene Board Examination. This course includes a study of the rationale, indications and/or contraindications for amalgam polishing, periodontal dressings, rubber dams, suture removal, and dental cements/liners/varnishes. Emphasis will be placed on treatment planning for comprehensive dental hygiene care as would be expected in private practice. Preparation for the National Dental Hygiene Board Examination will involve deliberation of case studies as a review of all topics covered on the examination.

Offered: Spring

Prerequisites: Successful completion of second year, fall semester dental hygiene courses.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**DHG.225 Dental Hygiene Practice 5** 15 5

The purpose of this course is to further clinical experience in the practical application of dental hygiene clinical techniques and providing comprehensive care for the patient in preparation of the student entering the real world of dental hygiene. Emphasis will be placed on the student's ability to improve upon periodontal debridement, professionalism, and treatment planning. Students will be responsible for patient care including assessment, thorough in-depth treatment planning, plaque control programs, tobacco cessation education, nutritional counseling, periodontal debridement of periodontally involved patients and medically compromised patients, polishing, fluoride therapy, and maintenance therapy. Completion of these services will further the student's abilities to provide comprehensive dental hygiene treatment based on the individual patient needs in an efficient manner as expected in private practice.

Offered: Spring

Prerequisites: Successful completion of second year, fall semester dental hygiene courses.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**Courses**

**DHG.109 Preclinic Laboratory** 3 1.5

Preclinic Laboratory is designed to provide the student with the opportunity to develop skills and apply didactic information from Fundamentals of Dental Hygiene (DHG 110) while working in the simulation laboratory. Instrumentation techniques are introduced to the student via instructor demonstrations and other visual aids followed by students practicing on manikins in the simulation laboratory. Admission to the Dental Hygiene program is required to enroll in this course.

Offered: Fall

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**DHG.110 Fundamentals of Dental Hygiene** 2 2

Fundamentals of Dental Hygiene, in conjunction with Preclinical Lab and Dental Hygiene Practice I, is designed to introduce the student to the fundamental concepts of dental hygiene practice: instrumentation; instrument sharpening; assessment of health; dental and periodontal status of patients; infection control and OSHA regulations. This course closely integrates theory and practice thus providing a base from which the learner may develop the skills, knowledge, and judgment required to adequately serve the public in the profession of Dental Hygiene. Admission to the Dental Hygiene program is required to enroll in this course.

Offered: Fall

Prerequisites: Admission to the Dental Hygiene program

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**DHG.112 Dental Radiology** 2 2 3

This course prepares the student to obtain the necessary fundamentals and background to expose and process dental radiographs. Emphasis is placed on the characteristics of radiation, radiation safety and monitoring, radiation production, operation of the x-ray unit, intraoral and extraoral radiographic films, processing and mounting radiographs, and identification of anatomical landmarks. Admission to the Dental Hygiene program is required to enroll in this course.

Offered: Fall

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

Hr/Wk	Hr/Wk	Sem
Lect/	Clin	Cr
Disc	Lab	Hr

**DHG.113 Preventive Dentistry**

2 2

This course provides the learner with the basic understanding of patient education with an emphasis on individual oral health counseling. Preventative Dentistry introduces the learner to the fundamental concepts of dental plaque, healthy and diseased gingival tissues, oral hygiene aids and techniques, dental caries, fluorides, and other topics and techniques related to the prevention of oral diseases. Admission to the Dental Hygiene program is required to enroll in this course.

Offered: Fall

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**DHG.114 Head/Neck & Oral Anatomy**

3 3

Head, Neck and Oral Anatomy is a fundamental, basic theory course upon which other dental hygiene courses are built. This course includes concepts of dental nomenclature, tooth development, dental anatomy, functions of the teeth, identification of oral structures, and occlusion. It also contains information specific to the nerve and blood supply to the head and neck as well as osteology of the skull and muscles of facial expression and mastication. Learning experiences are provided in both the classroom and laboratory settings. Admission to the Dental Hygiene program is required to enroll in this course.

Offered: Fall

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**DHG.115 Dental Hygiene Practice 1**

6 2

Dental Hygiene Practice I is designed to provide the student with the opportunity to develop skills and apply didactic information from Preclinic Laboratory (DHG 109) and Fundamentals of Dental Hygiene (DHG 110) to the clinical setting. Instrumentation techniques are introduced to the student via instructor demonstrations and other visual aids followed by students practicing with peer patients in the clinical setting. Dental Hygiene Practice I provides the student with the opportunity to develop data collection skills, i.e. intra and extraoral examinations, dental and periodontal assessments and charting through practice with classmates in the clinic. Admission to the Dental Hygiene program is required to enroll in this course.

Offered: Fall

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**DHG.118 Oral Histology & Embryology**

1 1

This course includes concepts of the embryological development of orofacial organs and structures as well as microscopic investigation of oral tissues and structures. Students will become acquainted with the derivation and maturation of the hard and soft tissues of the oral cavity that will be necessary to analyze and/or provide treatment in the clinical setting.

Offered: Spring

Prerequisites: Successful completion of first year, fall semester dental hygiene courses.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**DHG.119 Periodontology 1**

2 2

This course includes study of the histologic and clinical characteristics of periodontal diseases. Study of the supporting structures of teeth in health and disease will be included. Normal, pathological and etiological considerations are discussed. Emphasis is placed on recognition of causative factors and preventive measures, which might control the advancement of destructive periodontal disease. Synthesis of knowledge for case application is emphasized. Current research in periodontology and the role of the dental hygienist in periodontal therapy will be investigated.

Offered: Spring

Prerequisites: Successful completion of first year, fall semester dental hygiene courses.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**DHG.120 Dental Hygiene 2**

2 2

This course focuses on the fundamental knowledge and skills necessary to begin to provide dental hygiene services for patients in the dental hygiene clinic. Concepts in treatment planning, assessment of the oral cavity for the clinical patient, preventive dentistry for the clinical patient, debridement of hard and soft deposits in the oral cavity for the clinical patient, and evaluation of dental hygiene services will utilize information and skills learned in the previous semester. Along with building upon previously learned concepts, information concerning common medical emergencies in the dental office, tobacco prevention and cessation intervention, and pain control, will also be covered.

Offered: Spring

Prerequisites: Successful completion of first year, fall semester dental hygiene courses.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**DHG.125 Dental Hygiene Practice 2**

12 4

The purpose of Dental Hygiene Practice II is to further the students clinical experience in the clinical setting. Application of dental hygiene clinical techniques learned in Preclinic Laboratory (DHG 109), Fundamentals of Dental Hygiene (DHG 110) and Dental Hygiene Practice I (DHG 115) will be built upon. Emphasis will be placed on skills for patient assessment, instrumentation, evaluation and documentation during the dental hygiene appointment. Other areas of focus include sequencing of treatment according to patient needs and time factors and comprehensive care for the dental hygiene patient. The first two weeks of the course will focus toward treatment of the first patient to be appointed with the student.

Offered: Spring

Prerequisites: Successful completion of first year, fall semester dental hygiene courses.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**DHG.200 Dental Hygiene 3**

2 2

The purpose of this course is to further the student's ability to provide comprehensive dental hygiene care to clinical patients. It will cover the didactic information necessary to enable the student to correctly perform various procedures for patients in Dental Hygiene Practice III (DHG 205) and to understand the rationale behind the indications and contraindications for the procedures learned. Procedures that will be learned include advanced instrumentation, pit and fissure sealants, periodontal debridement involving the ultrasonic scaler, use of the air polisher for stain removal, application of chemotherapeutic agents, alginate impressions and pouring of study models, and analyzing diet record for nutritional counseling. The concepts of decision making, responsibility, accountability, and professionalism will be expanded upon to assist the student in enhancing proficiency in the development of dental hygiene treatment plans, as well as the assessment of medical, dental, and periodontal status of patients.

Offered: Summer

Prerequisites: Successful completion of first year, spring semester dental hygiene courses.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**DHG.205 Dental Hygiene Practice 3**

9 3

The purpose of this course is to further the development of the instrumentation and assessment skills acquired in previous dental hygiene courses through treatment of patients of a more difficult caliber. Integration of didactic and clinical experiences will allow for the introduction and development of pit and fissure sealant placement, ultrasonic scaling, air polishing, periodontal debridement, application of chemotherapeutics, caries counseling, and alginate impressions. Emphasis will be placed on improvement of instrumentation, enhancing proficiency in the development of dental hygiene treatment plans, assessment of medical, dental, and periodontal status of patients, and increasing efficiency with patient treatment.

Offered: Summer

Prerequisites: Successful completion of first year, spring semester dental hygiene courses.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**DHG.210 Dental Hygiene 4**

2 2

This course is designed to aid the student in understanding the numerous special needs that are present in people in our society, ranging from cardiovascular disease to mental disorders, childhood diseases to geriatrics. Emphasis will be placed on the medically/physically compromised patients who present for dental hygiene treatment either in a clinical setting or hospital setting. Treatment planning for these compromised patients will be discussed.

Offered: Fall

Prerequisites: Successful completion of second summer session dental hygiene courses and BIO.200 BIO.211 and BIO.212.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**DHG.211 Community Dental Health**

2 2

This course provides a spectrum of experience, which contributes to the continuing development of insight into community problems and understanding the needs of people. It stimulates awareness of community action and community dental health program development. It provides an understanding of how private practice dentistry and community dental health can work together to meet the needs of the community. When completed, the student has a working knowledge of community dental health.

Offered: Fall

Prerequisites: Successful completion of second summer session dental hygiene courses.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable



**DHG.212 Pathology** 2 2

This course is an introduction to pathology relating causative factors to clinical manifestations. The study of gross and microscopic lesions of the teeth and related oral tissues will be included. Emphasis is placed on concepts of development/growth disturbances, diseases of microbiological origin, injury and repair, metabolic disturbances, and oral manifestations of various diseases and conditions.

Offered: Fall

Prerequisites: Successful completion of second summer session dental hygiene courses, BIO 211, BIO 212 and DHG 118.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**DHG.213 Pharmacology** 2 2

The purpose of this course is to familiarize dental hygiene students with drugs most used and/or prescribed by dental offices as well as drug groups used to treat medical conditions. Emphasis will be placed on appropriate and thorough evaluation of medical histories. Referencing material related to pharmacology will also be emphasized.

Offered: Fall

Prerequisites: Successful completion of second summer session dental hygiene courses and BIO.211 BIO.212 BIO.200 with a grade of C or better.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**DHG.215 Dental Hygiene Practice 4** 15 5

The purpose of this course is to further clinical experience in the practical application of oral prophylaxis techniques. Emphasis will be placed on improvement of the student's abilities in periodontal debridement, professionalism, and treatment planning. Students will be responsible for patient care including assessment, thorough in-depth treatment planning, plaque control programs, tobacco cessation education, nutritional counseling, periodontal debridement of periodontally involved patients and medically compromised patients, polishing, fluoride therapy, and maintenance therapy. Completion of these services will further the student's abilities to provide comprehensive dental hygiene treatment based on the individual patient needs.

Offered: Fall

Prerequisites: Successful completion of second summer session dental hygiene courses.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**DHG.217 Clinical Applications Pain/Anxiety Ctrl** 2 1

This course focuses on the clinical applications of controlling the dental hygiene patient's pain and anxiety through the administration of local anesthesia and/or nitrous oxide. The student will develop skills in the administration of local anesthesia in the oral cavity along with learning how to administer and monitor nitrous oxide.

Offered: Spring

Prerequisites: Successful completion of second year, fall semester dental hygiene courses.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**DHG.218 Dental Office Management & Jurisprudence** 2 2

This course prepares the graduating dental hygiene student to manage the telephone, schedule appointments, maintain patient records, receive payment, and complete third-party reimbursement forms in the private practice dental setting. The student will also learn to enter date for charges and payments, manage recall systems, maintain inventory, and written correspondence with other dental professionals. Along with the office skills, students will discuss legal and ethical dental hygiene practice issues, develop a resume, and learn interviewing skills. Students will also review for the state dental hygiene practice acts for Illinois and Iowa in preparation for the state jurisprudence examination.

Offered: Spring

Prerequisites: Successful completion of second year, fall semester dental hygiene courses.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**DHG.219 Periodontology** 2 2

This course focuses on surgical aspects of periodontology. The student will develop basic knowledge on the role of occlusion in periodontal health and disease, principles of periodontal surgery, management of soft tissue, dental implants, implant maintenance, and periodontal emergencies.

Offered: Spring

Prerequisites: Successful completion of second year, fall semester dental hygiene courses.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**DHG.220 Dental Hygiene 5** 1 2 2

This course is designed to prepare the student to make the transition from the educational setting to the real world of dental hygiene by covering dental specialties, advanced treatment planning, and preparation for the National Dental Hygiene Board Examination. This course includes a study of the rationale, indications and/or contraindications for amalgam polishing, periodontal dressings, rubber dams, suture removal, and dental cements/liners/varnishes. Emphasis will be placed on treatment planning for comprehensive dental hygiene care as would be expected in private practice. Preparation for the National Dental Hygiene Board Examination will involve deliberation of case studies as a review of all topics covered on the examination. Offered: Spring  
Prerequisites: Successful completion of second year, fall semester dental hygiene courses.  
Applicable toward graduation at Sandburg where program structure permits:  
Degree or Certificate: AAS, AGS, and Certificates where applicable.  
General Education – Not Applicable

**DHG.225 Dental Hygiene Practice 5** 15 5

The purpose of this course is to further clinical experience in the practical application of dental hygiene clinical techniques and providing comprehensive care for the patient in preparation of the student entering the real world of dental hygiene. Emphasis will be placed on the student's ability to improve upon periodontal debridement, professionalism, and treatment planning. Students will be responsible for patient care including assessment, thorough in-depth treatment planning, plaque control programs, tobacco cessation education, nutritional counseling, periodontal debridement of periodontally involved patients and medically compromised patients, polishing, fluoride therapy, and maintenance therapy. Completion of these services will further the student's abilities to provide comprehensive dental hygiene treatment based on the individual patient needs in an efficient manner as expected in private practice. Offered: Spring  
Prerequisites: Successful completion of second year, fall semester dental hygiene courses.  
Applicable toward graduation at Sandburg where program structure permits:  
Degree or Certificate: AAS, AGS, and Certificates where applicable.  
General Education – Not Applicable

## DRF Drafting

Hr/Wk Lect/ Disc	Hr/Wk Clin Lab	Sem Cr Hr
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### Courses

**DRF.100 Basic Drafting** 1 3 2

This introductory course in drafting is for students who either did not have a previous drafting course or wish a review of previous work taken. Students will have the opportunity to obtain proficiency and skill in lettering, geometric construction, object visualization, sectional views, auxiliary views and revolutions..  
General Education – Not Applicable

**DRF.200 Descriptive Geometry** 2 2 3

This course presents a comprehensive study of graphic analysis and accurate solutions based on the principles of orthographic projection. Offered: As Needed  
Applicable toward graduation at Sandburg where program structure permits:  
Degree or Certificate: AAS, AGS and Certificates where applicable.  
General Education – Not Applicable

Hr/Wk Lect/ Disc	Hr/Wk Clin Lab	Sem Cr Hr
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### Courses

**DRF.100 Basic Drafting** 1 3 2

This introductory course in drafting is for students who either did not have a previous drafting course or wish a review of previous work taken. Students will have the opportunity to obtain proficiency and skill in lettering, geometric construction, object visualization, sectional views, auxiliary views and revolutions..  
General Education – Not Applicable

**DRF.200 Descriptive Geometry** 2 2 3

This course presents a comprehensive study of graphic analysis and accurate solutions based on the principles of orthographic projection. Offered: As Needed  
Applicable toward graduation at Sandburg where program structure permits:  
Degree or Certificate: AAS, AGS and Certificates where applicable.  
General Education – Not Applicable

## ECO Economics

Hr/Wk Lect/ Disc	Hr/Wk Clin Lab	Sem Cr Hr
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### Courses

**ECO.101 Introduction to Economics** 3 3

This is a survey course designed to expose students to economics, providing a broad introduction to the theory, problems and applications found in daily life from the view of households, business and government. The course is designed for the social science major as well as the student who wants a greater understanding of economic basics, including economic fluctuations. Among the topics to be covered are the concepts of incentives, information, supply and demand, trade and globalization, international economics, money and banking. Offered: Fall or as Needed  
Applicable toward graduation at Sandburg where program structure permits:  
Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable.. *IAI Course No. S3 900*  
General Education – Social Science

**ECO.201 Principles of Macro Economics** 3 3

This course is designed to introduce students to the basic economic principles and how to think about the economy in terms of the impact of these principles. Topics include: economic systems, demand and supply theory, government and its role, and fiscal and monetary policies. The course is intended for students who plan to pursue a bachelor's degree as well as those who desire a better understanding of the economy.

While there is no prerequisite for this course, students are encouraged to complete basic courses in related areas prior to enrollment.

Offered: Fall or Spring

Prerequisites: The appropriate placement exam score or ENG.097 with a grade of C or better and MAT.083 with a grade of C or better.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. S3 901*

General Education – Social Science

**ECO.202 Principles of Micro Economics** 3 3

This course focuses on industrial and labor organizations, supply and demand, and profit maximization under varying conditions of competition. Current topics, such as the environment and public policy, are considered. The course is designed for students planning to pursue a bachelor's degree as well as those who desire a better understanding of the economy. While there is no prerequisite for this course, completion of ECO 201 is recommended before enrollment.

Offered: Fall or Spring

Prerequisites: The appropriate placement exam score or ENG.097 with a grade of C or better and MAT.083 with minimum grade of C or better.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. S3 902*

General Education – Social Science

Hr/Wk	Hr/Wk	Sem
Lect/	Clin	Cr
Disc	Lab	Hr

**Courses**

**ECO.101 Introduction to Economics** 3 3

This is a survey course designed to expose students to economics, providing a broad introduction to the theory, problems and applications found in daily life from the view of households, business and government.

The course is designed for the social science major as well as the student who wants a greater understanding of economic basics, including economic fluctuations. Among the topics to be covered are the concepts of incentives, information, supply and demand, trade and globalization, international economics, money and banking.

Offered: Fall or as Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable.. *IAI Course No. S3 900*

General Education – Social Science

**ECO.201 Principles of Macro Economics** 3 3

This course is designed to introduce students to the basic economic principles and how to think about the economy in terms of the impact of these principles. Topics include: economic systems, demand and supply theory, government and its role, and fiscal and monetary policies. The course is intended for students who plan to pursue a bachelor's degree as well as those who desire a better understanding of the economy.

While there is no prerequisite for this course, students are encouraged to complete basic courses in related areas prior to enrollment.

Offered: Fall or Spring

Prerequisites: The appropriate placement exam score or ENG.097 with a grade of C or better and MAT.083 with a grade of C or better.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. S3 901*

General Education – Social Science

**ECO.202 Principles of Micro Economics** 3 3

This course focuses on industrial and labor organizations, supply and demand, and profit maximization under varying conditions of competition. Current topics, such as the environment and public policy, are considered. The course is designed for students planning to pursue a bachelor's degree as well as those who desire a better understanding of the economy. While there is no prerequisite for this course, completion of ECO 201 is recommended before enrollment.

Offered: Fall or Spring

Prerequisites: The appropriate placement exam score or ENG.097 with a grade of C or better and MAT.083 with minimum grade of C or better.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. S3 902*

General Education – Social Science

Hr/Wk	Hr/Wk	Sem
Lect/	Clin	Cr
Disc	Lab	Hr

**EDU Education**

**Courses**

**EDU.101 Introduction to Education** 3 2 4

This course provides an orientation to the teaching profession. It is designed for those who are considering a career in education. Among the topics studied are Motives for Teaching, Social Problems and Tensions Points in schools, Curriculum, Technology, Legal and Ethical issues, and Philosophical Foundations. In addition, there is a minimum 32 hours required for the field experience component. One hour of the 4 credit hours is for field experience. The Field Experience component includes meeting two times a week as a cohort that benefits from discussion, reading, and exchange of ideas from the field experience.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**EDU.120 Introduction to Technology in Education** 3 3

This course introduces educators to the skills and knowledge necessary to demonstrate their proficiency in current technology standards. The course will focus on current technologies that can be used to for instruction and communication in the K-12 classroom. The course outcomes are aligned with the Illinois Professional Teaching Standards, Illinois Technology Standards and the National Council for the Accreditation of Teacher Education. This course is taught using a combination of whole class instruction, individual projects and group work. Class work and projects will require work outside of class time. Experience with Word, Power Point, and Excel.

Offered: As Needed

Prerequisites: ICT.110 or Consent of Instructor

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**EDU.201 Educational Psychology** 3 3

Educational Psychology examines psychological principles as they apply to education in the areas of learning, a lifespan approach to child and adolescent development, social influences on learning, and the teacher as a classroom leader. Both the individual and the peer group are studied from physical, mental, emotional, and social points of view. There will be opportunities in professional activities. Some examples are Phi Delta Kappa, Council for Exceptional Children, Illinois Science Teachers' Association and the K-8 Science Update Conference.

Offered: Fall or Spring or Summer

Prerequisites: PSY.101

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**EDU.220 Foundations of Teaching Reading** 3 3

The Foundations of Teaching Reading is an introduction to the theory and practice in teaching reading as well the related language arts areas. Included is information on basic components of reading and language arts instruction. The importance of literacy is emphasized. The Illinois Learning Standards in the areas of reading and language arts will be introduced.

Offered: Fall or Spring or Summer

Prerequisites: PSY.101

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

Hr/Wk Hr/Wk Sem  
Lect/ Clin Cr  
Disc Lab Hr

**Courses**

**EDU.101 Introduction to Education** 3 2 4

This course provides an orientation to the teaching profession. It is designed for those who are considering a career in education. Among the topics studied are Motives for Teaching, Social Problems and Tensions Points in schools, Curriculum, Technology, Legal and Ethical issues, and Philosophical Foundations. In addition, there is a minimum 32 hours required for the field experience component. One hour of the 4 credit hours is for field experience. The Field Experience component includes meeting two times a week as a cohort that benefits from discussion, reading, and exchange of ideas from the field experience.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**EDU.120 Introduction to Technology in Education** 3 3

This course introduces educators to the skills and knowledge necessary to demonstrate their proficiency in current technology standards. The course will focus on current technologies that can be used to for instruction and communication in the K-12 classroom. The course outcomes are aligned with the Illinois Professional Teaching Standards, Illinois Technology Standards and the National Council for the Accreditation of Teacher Education. This course is taught using a combination of whole class instruction, individual projects and group work. Class work and projects will require work outside of class time. Experience with Word, Power Point, and Excel.

Offered: As Needed

Prerequisites: ICT.110 or Consent of Instructor

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**EDU.201 Educational Psychology** 3 3

Educational Psychology examines psychological principles as they apply to education in the areas of learning, a lifespan approach to child and adolescent development, social influences on learning, and the teacher as a classroom leader. Both the individual and the peer group are studied from physical, mental, emotional, and social points of view. There will be opportunities in professional activities. Some examples are Phi Delta Kappa, Council for Exceptional Children, Illinois Science Teachers' Association and the K-8 Science Update Conference.

Offered: Fall or Spring or Summer

Prerequisites: PSY.101

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**EDU.220 Foundations of Teaching Reading** 3 3

The Foundations of Teaching Reading is an introduction to the theory and practice in teaching reading as well the related language arts areas. Included is information on basic components of reading and language arts instruction. The importance of literacy is emphasized. The Illinois Learning Standards in the areas of reading and language arts will be introduced.

Offered: Fall or Spring or Summer

Prerequisites: PSY.101

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

## ELT Electricity

### Courses

**ELT.100 Electrical Fundamentals** 2 3 3

This course introduces the fundamentals of electrical and electronic circuits. Calculation and measurement of voltage, current, and resistance are emphasized. Through the use of lab activities, various wiring and testing methods utilizing multimeters are investigated.

Offered: Fall and Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**ELT.104 Industrial Electrical Control** 2 3 3

This course introduces the fundamentals of industrial electrical control. Basic theory including electron flow, Ohm's Law, series parallel circuit characteristics, and electrical power calculations as applied to industrial control applications is covered. Lab work involves the construction and testing of representative industrial electronic control circuitry.

Offered: Spring

Prerequisites: ELT.100

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**ELT.107 Digital Logic & Circuits** 2 2 3

This course covers the fundamentals of digital logic. It will also include some of the procedures and tools used for troubleshooting digital circuits. Simple switching circuits will be covered first as a simple but concrete introduction to the concepts of Boolean Algebra. Then modern integrated circuit realizations of digital logic gates will be discussed. Basic principles of analysis and design using these gates will be covered. Basic coverage will include basic combinatorial and sequential circuits. Basic trouble-shooting techniques using a logic probe will be employed.

Offered: Fall

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Lab Science Not Applicable

**ELT.119 Industrial Electronic Control** 2 3 3

This course is an in-depth evaluation of industrial electronic control methods and devices. The operating characteristics of various types of solid state controls and sensors, including proximity, photoelectric, thermistors, thermocouples, SCR, triacs, thyristors, transistors, timers, counters, and advanced electronic motor controls are studied. The lab work involves the operation and analysis of industrial electronic circuits and devices.

Offered: Fall

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**ELT.120 Electrical/Electronics Troubleshooting** 2 3 3

This course covers the essential techniques of troubleshooting industrial electrical and electronic circuits and devices. The lab work includes the use of test equipment, instrumentation, and computer simulation to develop the skills necessary to improve troubleshooting accuracy and cut troubleshooting time.

Offered: Fall

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**ELT.121 Rail/Off Hiway Motive Power Electrical** 3 3 4

Building on fundamentals of basic electrical and electronic circuits, students will study AC and DC fundamentals and safety, power generation, inverters and VFDs, propulsion, dynamic braking, ground fault protection, AC/DC motors, low voltage and high voltage control systems, lockout tagout, and digital and analog controls. Through theory and laboratory activities students will gain a practical understanding of the electrical fundamentals for supplying power to an engine, vehicle, etc.

Offered: Fall or Spring

Prerequisites: ELT.100

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable



**ELT.200 National Electrical Code** 3 3

Using the National Electrical Code as a reference, students will be trained on how to design and construct electrical systems according to NEL requirements. Residential, industrial, and commercial wiring and power distribution systems will be investigated. Included will be residential/commercial/industrial circuits, lighting requirements, grounding, wiring methods, and hazardous locations.  
 Offered: Fall  
 Prerequisites: ELT.110  
 Applicable toward graduation at Sandburg where program structure permits:  
 Degree or Certificate: AAS, AGS and Certificates where applicable.  
 General Education – Not Applicable

**ELT.207 Electrohydra Process Control** 2 3 3

This is a course designed to provide the student with a solid background in fluid power control principles and theory, as well as modern techniques for interfacing industrial muscle (hydraulic, pneumatic, vacuum operated devices) with the ubiquitous industrial brain (electronic-microprocessor) generation of controllers. There will be discussions of electric motor drives, solenoid operated devices, pressure switches/transducers, relays, limit switches, programmable controls, servo systems, analog and digital control, open and closed loop control, feedback, symbology, instrumentation, etc. There will be emphasis on demonstration of relevant hardware, as well as class participation in design and troubleshooting of industrial types of circuits.  
 Offered: Spring  
 Applicable toward graduation at Sandburg where program structure permits:  
 Degree or Certificate: AAS, AGS and Certificates where applicable.  
 General Education – Not Applicable

**ELT.208 Programmable Controllers** 2 2 3

This course will introduce the student to the fundamental concepts of programmable controllers. Through lecture and lab exercises, the student will be exposed to the hardware, troubleshooting, and programming of controllers. Relevant examples of programmable controller types will be covered.  
 Offered: Spring  
 Prerequisites: ELT.102  
 Applicable toward graduation at Sandburg where program structure permits:  
 Degree or Certificate: AAS, AGS and Certificates where applicable.  
 General Education – Not Applicable

**ELT.209 AC/DC Drives and Servos** 2 2 3

This course investigates modern trends in industrial motor controls. Students will be exposed to the advantages and disadvantages of AC and DC solutions. Discussions will include soft start and servo control. Much emphasis will be on AC Variable Frequency Drives.  
 Offered: Spring  
 Prerequisites: ELT.104  
 Applicable toward graduation at Sandburg where program structure permits:  
 Degree or Certificate: AAS, AGS and Certificates where applicable.  
 General Education – Not Applicable

**ELT.212 Industrial Electricity** 2 3 3

This course provides a basic overview of various industrial topics such as distribution, wiring methods, and enclosures.  
 Offered: Spring  
 Prerequisites: ELT.119  
 Applicable toward graduation at Sandburg where program structure permits:  
 Degree or Certificate: AAS, AGS and Certificates where applicable.  
 General Education – Not Applicable

**ELT.213 Process Control & Instrumentation** 2 3 3

This course covers the field of industrial measurement and control. Data acquisition methods, including the sensing, measuring, and transmission of industrial process variables, are introduced. The principles of automatic process control, measurement, programmable controller and distributed control are studied.  
 Offered: Spring  
 Prerequisites: ELT.100 with a grade of C or better.  
 Applicable toward graduation at Sandburg where program structure permits:  
 Degree or Certificate: AAS, AGS and Certificates where applicable.  
 General Education – Not Applicable

**ELT.214 Advanced Program Controllers** 2 2 3

This course will extend student knowledge of programmable controllers to include proprietary and open networks, automation equipment interfacing, and operator interfaces. Through the use of lab activities, various network protocols, remote I/O and touch screens will be interfaced and programmed.  
 Offered: Spring  
 Applicable toward graduation at Sandburg where program structure permits:  
 Degree or Certificate: AAS, AGS and Certificates where applicable.  
 General Education – Not Applicable

**ELT.215 Design of Industrial Control Systems** 2 2 3

This is an integration course utilizing knowledge gained in previous courses and applied to the design of a typical industrial control system. Computer-aided design software is introduced and utilized to create drawings required for the construction of a control panel. Lab activities will include generation of control system CAD drawings and the construction of a control panel which includes both electrical and electrohydraulic components. The use of vendor-supplied product configuration software and CAD blocks will be emphasized.  
 Offered: Fall  
 Prerequisites: ELT.104 and ELT.208  
 Applicable toward graduation at Sandburg where program structure permits:  
 Degree or Certificate: AAS, AGS and Certificates where applicable.  
 General Education – Not Applicable

**ELT.216 Data Acquisition Systems Program & Apps** 2 2 3

This course will emphasize the use and application of Data Acquisition Systems and associated programming software. Instrumentation circuitry and sensors will be interfaced to an industrial data acquisition system.

Offered: Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**ELT.219 Industrial Automation Applications** 1 4 3

This course will explore the integration of modern industrial control systems and instrumentation to automated industrial equipment. Prototype machinery will be constructed in the laboratory and programmed to perform a selected task.

Offered: Fall

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

Hr/Wk Lect/ Disc	Hr/Wk Clin Lab	Sem Cr Hr
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**Courses**

**ELT.100 Electrical Fundamentals** 2 3 3

This course introduces the fundamentals of electrical and electronic circuits. Calculation and measurement of voltage, current, and resistance are emphasized. Through the use of lab activities, various wiring and testing methods utilizing multimeters are investigated.

Offered: Fall and Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**ELT.104 Industrial Electrical Control** 2 3 3

This course introduces the fundamentals of industrial electrical control. Basic theory including electron flow, Ohm's Law, series parallel circuit characteristics, and electrical power calculations as applied to industrial control applications is covered. Lab work involves the construction and testing of representative industrial electronic control circuitry.

Offered: Spring

Prerequisites: ELT.100

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**ELT.107 Digital Logic & Circuits** 2 2 3

This course covers the fundamentals of digital logic. It will also include some of the procedures and tools used for troubleshooting digital circuits. Simple switching circuits will be covered first as a simple but concrete introduction to the concepts of Boolean Algebra. Then modern integrated circuit realizations of digital logic gates will be discussed. Basic principles of analysis and design using these gates will be covered. Basic coverage will include basic combinatorial and sequential circuits. Basic trouble-shooting techniques using a logic probe will be employed.

Offered: Fall

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Lab Science Not Applicable

**ELT.119 Industrial Electronic Control** 2 3 3

This course is an in-depth evaluation of industrial electronic control methods and devices. The operating characteristics of various types of solid state controls and sensors, including proximity, photoelectric, thermistors, thermocouples, SCR, triacs, thyristors, transistors, timers, counters, and advanced electronic motor controls are studied. The lab work involves the operation and analysis of industrial electronic circuits and devices.

Offered: Fall

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**ELT.120 Electrical/Electronics Troubleshooting** 2 3 3

This course covers the essential techniques of troubleshooting industrial electrical and electronic circuits and devices. The lab work includes the use of test equipment, instrumentation, and computer simulation to develop the skills necessary to improve troubleshooting accuracy and cut troubleshooting time.

Offered: Fall

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**ELT.121 Rail/Off Hiway Motive Power Electrical** 3 3 4

Building on fundamentals of basic electrical and electronic circuits, students will study AC and DC fundamentals and safety, power generation, inverters and VFDs, propulsion, dynamic braking, ground fault protection, AC/DC motors, low voltage and high voltage control systems, lockout tagout, and digital and analog controls. Through theory and laboratory activities students will gain a practical understanding of the electrical fundamentals for supplying power to an engine, vehicle, etc.

Offered: Fall or Spring

Prerequisites: ELT.100

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**ELT.200 National Electrical Code** 3 3

Using the National Electrical Code as a reference, students will be trained on how to design and construct electrical systems according to NEL requirements. Residential, industrial, and commercial wiring and power distribution systems will be investigated. Included will be residential/commercial/industrial circuits, lighting requirements, grounding, wiring methods, and hazardous locations.

Offered: Fall

Prerequisites: ELT.110

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**ELT.207 Electrohydra Process Control** 2 3 3

This is a course designed to provide the student with a solid background in fluid power control principles and theory, as well as modern techniques for interfacing industrial muscle (hydraulic, pneumatic, vacuum operated devices) with the ubiquitous industrial brain (electronic-microprocessor) generation of controllers. There will be discussions of electric motor drives, solenoid operated devices, pressure switches/transducers, relays, limit switches, programmable controls, servo systems, analog and digital control, open and closed loop control, feedback, symbology, instrumentation, etc. There will be emphasis on demonstration of relevant hardware, as well as class participation in design and troubleshooting of industrial types of circuits.

Offered: Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**ELT.208 Programmable Controllers** 2 2 3

This course will introduce the student to the fundamental concepts of programmable controllers. Through lecture and lab exercises, the student will be exposed to the hardware, troubleshooting, and programming of controllers. Relevant examples of programmable controller types will be covered.

Offered: Spring

Prerequisites: ELT.102

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**ELT.209 AC/DC Drives and Servos** 2 2 3

This course investigates modern trends in industrial motor controls. Students will be exposed to the advantages and disadvantages of AC and DC solutions. Discussions will include soft start and servo control. Much emphasis will be on AC Variable Frequency Drives.

Offered: Spring

Prerequisites: ELT.104

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**ELT.212 Industrial Electricity** 2 3 3

This course provides a basic overview of various industrial topics such as distribution, wiring methods, and enclosures.

Offered: Spring

Prerequisites: ELT.119

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**ELT.213 Process Control & Instrumentation** 2 3 3

This course covers the field of industrial measurement and control. Data acquisition methods, including the sensing, measuring, and transmission of industrial process variables, are introduced. The principles of automatic process control, measurement, programmable controller and distributed control are studied.

Offered: Spring

Prerequisites: ELT.100 with a grade of C or better.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**ELT.214 Advanced Program Controllers** 2 2 3

This course will extend student knowledge of programmable controllers to include proprietary and open networks, automation equipment interfacing, and operator interfaces. Through the use of lab activities, various network protocols, remote I/O and touch screens will be interfaced and programmed.

Offered: Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**ELT.215 Design of Industrial Control Systems** 2 2 3

This is an integration course utilizing knowledge gained in previous courses and applied to the design of a typical industrial control system. Computer-aided design software is introduced and utilized to create drawings required for the construction of a control panel. Lab activities will include generation of control system CAD drawings and the construction of a control panel which includes both electrical and electrohydraulic components. The use of vendor-supplied product configuration software and CAD blocks will be emphasized.

Offered: Fall

Prerequisites: ELT.104 and ELT.208

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**ELT.216 Data Acquisition Systems Program & Apps** 2 2 3

This course will emphasize the use and application of Data Acquisition Systems and associated programming software. Instrumentation circuitry and sensors will be interfaced to an industrial data acquisition system.

Offered: Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**ELT.219 Industrial Automation Applications** 1 4 3

This course will explore the integration of modern industrial control systems and instrumentation to automated industrial equipment. Prototype machinery will be constructed in the laboratory and programmed to perform a selected task.

Offered: Fall

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

## EMS Emergency Medical Services

	Hr/Wk	Hr/Wk	Sem
	Lect/	Clin	Cr
	Disc	Lab	Hr

### Courses

**EMS.101 Emergency Medical Technician** 7.5 1 8

This is an entry level course in the field of Emergency Medical Services. The course emphasizes the development of student skills in recognition of illnesses and injuries and proper procedures of emergency care. The training promotes an assessment based approach to identifying illness and injury and developing an appropriate plan of treatment within the limitations of basic life support practices, including the use of prehospital patient care and rescue equipment. The roles, responsibilities and skills required by state and national standards are defined. The student will develop skills to provide basic emergency care, communication and interpersonal relationships, handling and positioning, documentation, transportation methods, and extrication of the critically ill and injured person. This course includes 120 hours of classroom and laboratory instruction plus 16 hours of clinical in-hospital experience. Upon completion of this course students are eligible to take the Illinois EMT licensure exam. Licensure is required for employment as an EMT..  
General Education – Not Applicable

**EMS.110 Fundamentals of Paramedic** 2 2

This course, in conjunction with Paramedic Practice 1, is designed to introduce the student to the fundamentals of paramedic services including a historical perspective of the EMS system in comparison to the current operations, the roles and responsibilities, safety and well being of the paramedic, legal issues and regulatory issues, communication and documentation, and basic patient assessment skills. This course closely integrates theory with practice, thus providing the foundational base from which the learner may develop further skills, knowledge and judgment of the paramedic.

Offered: Fall

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**EMS.112 Paramedic Pharmacology** 2 1 2.5

This course provides the paramedic student with the comprehensive knowledge of emergency pharmacology, pharmacokinetics, and pharmacodynamics related to paramedic practice, includes cardiovascular, respiratory, analgesic, gastrointestinal, antibiotic and central nervous system medications. Sources of drugs, reference materials for drugs, and legal considerations will be discussed as well as classification of drugs and how each affects the respective body system. The student will gain the knowledge and psychomotor skills required to safely and precisely prepare and administer drugs that a paramedic may commonly administer according to local protocol. The student will learn proper procedures for the administration of medications, equipment needed, techniques used with various routes of administration and how to calculate drug doses utilizing mathematical principles. This course provides 32 theory hours and 16 lab hours.

Offered: Fall

Prerequisites: EMS.101 with grade of C or better and active EMT-B License.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where program structure permits..

General Education – Not Applicable

**EMS.115 Paramedic Practice 1** 6 2

Paramedic Practice 1 is designed to provide the student with the opportunity to develop skills and apply didactic information from Fundamentals of Paramedic (EMS.110) and Paramedic I (EMS.112) to the clinical and field settings respectively. Paramedic Practice 1 provides the student with the opportunity to become familiar with equipment and procedures used in the profession as well develop assessment skills. The course culminates in applying skills and knowledge learned to given case studies.

Offered: Fall

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**EMS.120 Paramedic I**

6 2 7

This course is designed to introduce and prepare the students to develop proficiency in the roles, responsibilities, and skill level required by state and national standards for licensing as a Paramedic. This course will familiarize the paramedic student with the EMS systems, legal and regulatory issues, professionalism, therapeutic communication, documentation, critical thinking, safety, and quality care standards. The paramedic student will be provided with relevant anatomy and physiology and lifespan development as it applies to the various medical situations for which EMS is summoned. The student will learn basic patient assessment skills to begin pre-hospital assessment and treatment for each type of medical situation(s) discussed in this course. Emphasis is placed on emergency pharmacology, medication administration and intravenous access, patient monitoring technology, pathophysiology and patient assessment, cardiac management, and airway management. The course closely integrates theory with laboratory practice, thus providing the foundational base from which the learner may develop psychomotor skills, knowledge and judgment of the paramedic by studying the different medical situations to gain a high level of understanding through discussion, learning activities, case studies, skills, and simulation in the class and lab environment. This course provides 96 theory hours and 32 laboratory hours.

Offered: Fall

Prerequisites: EMS.101 with a grade of C or better and/or Active, EMT-B License. Corequisite EMS.125.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable..

General Education – Not Applicable

**EMS.125 Paramedic Practice I**

7.5 2.5

Paramedic Practice I, EMS 125 is a paramedic practicum that will provide students the opportunity to complete a minimum of 90 hours clinical experience and a minimum of 30 hours field experience under the supervision of preceptors. Paramedic Practice I is designed to provide the student with the opportunity to build upon cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains from Paramedic I, EMS 120. Student-instructor conferences are scheduled throughout the practicum to evaluate progress. Students will gain these clinical and field experiences through observation and hands-on experiences at Galesburg Cottage Hospital, OSF St. Mary's Medical Center, and Galesburg Hospitals Ambulance Service. Paramedic Practice I provides the student with the opportunity to become familiar with equipment and procedures used in the profession as well develop assessment skills.

Offered: Fall

Prerequisites: Take EMS.101 with a grade of C or better Corequisite EMS.120

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**EMS.130 Paramedic II**

7 2 8

This course will build on information learned in EMS 120, Paramedic I and EMS 125, Paramedic Practice I as the student will continue studying the different medical and trauma emergencies for which EMS is summoned and care is provided by pre-hospital personnel to help reduce morbidity and mortality. Coupled with EMS 135, Paramedic Practice II, a high level of understanding will be developed for situations involving systems such as pulmonology, cardiology, neurology, endocrine, immunology, hematology, gastrointestinal, genitourinary, musculoskeletal, and integumentary, including disorders of those systems. The student will also learn about infectious and communicable diseases, psychiatric and behavioral disorders. A brief review of important anatomy and physiology as it applies to the different medical and trauma emergencies in question will be included, as well as relevant pathophysiology, providing the student with the needed information to begin pre-hospital assessment and treatment for each type of medical and trauma emergency discussed. Students will gain this high level of understanding for patient(s) with medical emergencies and trauma emergencies based on the body systems involved through discussion, learning activities, laboratory activities, and case studies. This course provides 112 theory hours and 32 laboratory hours.

Offered: Spring

Prerequisites: Take EMS.120 with a grade of C or better and EMS.125 with a grade of C or better. Take EMS.135

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable..

General Education – Not Applicable

**EMS.135 Paramedic Practice II**

12 4

Paramedic Practice II, EMS 135 is a paramedic practicum that will provide students the opportunity to complete a minimum of 150 hours clinical experience and a minimum of 60-130 hours field experience under the supervision of preceptors. Paramedic Practice II is designed to provide the student with the opportunity to build upon cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains from Paramedic I, EMS 120 and Paramedic II, EMS 130. Students will gain experience in the delivery of prehospital advanced life support patient care. Student-instructor conferences are scheduled throughout the practicum to evaluate progress.

Offered: Spring

Prerequisites: Take EMS.120 with a grade of C or better and EMS.125 with a grade of C or better. Take EMS.130

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable..

General Education – Not Applicable



**EMS.200 Paramedic IV** 2 2

The student will study the different trauma emergencies for which EMS is summoned for which care is provided by pre-hospital personnel to help reduce morbidity and mortality. Coupled with EMS.205, Paramedic Practice 4, a high level of understanding for the pediatric and geriatric patient(s) and traumatic emergencies based on the body systems involved will be gained through discussion and learning activities and case studies.

Offered: Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**EMS.205 Paramedic Practice 4** 6 2

Through simulations and case studies, this course will allow students to learn how to provide care for pediatric and geriatric patient(s) and trauma emergencies for which care is provided by pre-hospital personnel to help reduce morbidity and mortality. Further experience will be gained through clinical experience at area medical institutions through observation or hands-on experiences.

Offered: Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**EMS.210 Paramedic III** 2.5 1 3

This course prepares the graduating paramedic student with the knowledge and principles associated with the acute management of medical or traumatic emergencies for the pediatric, obstetric, geriatric, and the challenged patient(s). Coupled with EMS 215, Paramedic Field Internship, a high level of understanding for the pediatric, obstetric, and geriatric patient(s) with traumatic emergencies based on the body systems involved will be gained through discussion, learning activities, laboratory activities, and case studies. Students will learn about operations of an ambulance as well as medical incident management, environmental emergencies, rescue awareness and operations, hazardous material incidents, crime scene awareness, and terrorism. Preparation for entry level paramedic practice will be supported with discussion of contemporary paramedic practice and current Illinois laws related to the paramedic profession. The student will be prepared to take the state or national examination upon completion of this course and EMS 215 Paramedic Field Internship. This course provides 40 theory hours and 16 laboratory hours.

Offered: Summer

Prerequisites: Take EMS.130 with a grade of C or better and EMS.135 with a grade of C or better. Corequisite: Take EMS.215

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable..

General Education – Not Applicable

**EMS.215 Paramedic Field Internship** 15 5

Paramedic Field Internship, EMS 215 will provide students the opportunity to work 40 clinical - personal preference hours under the supervision of a preceptor and 200-300 field internship hours under the supervision of an Illinois licensed EMT-Paramedic preceptor, gaining experience in the delivery of prehospital advanced life support patient care. Students get ambulance experience and must meet a minimum of 40 ALS patient contacts, and must be documented as the Team Leader in 20 of those patients. The 40 hours clinical experiences will be in Pediatrics, Obstetrics, Geriatrics, and Psychiatrics. Student-instructor conferences are scheduled throughout the internship to evaluate progress. Students completing EMS 125 Paramedic Practice I, EMS 135 Paramedic Practice II, and EMS 215 Paramedic Field Internship will have completed 280 clinical hours and 360 field internship hours to meet program requirements. On successful completion of EMS 210 and EMS 215, students are eligible to take the state or national examination.

Offered: Summer

Prerequisites: Take EMS.130 and EMS.135 with grades of C or better

Take EMS.210

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

Hr/Wk	Hr/Wk	Sem
Lect/	Clin	Cr
Disc	Lab	Hr

**Courses**

**EMS.101 Emergency Medical Technician** 7.5 1 8

This is an entry level course in the field of Emergency Medical Services. The course emphasizes the development of student skills in recognition of illnesses and injuries and proper procedures of emergency care. The training promotes an assessment based approach to identifying illness and injury and developing an appropriate plan of treatment within the limitations of basic life support practices, including the use of prehospital patient care and rescue equipment. The roles, responsibilities and skills required by state and national standards are defined. The student will develop skills to provide basic emergency care, communication and interpersonal relationships, handling and positioning, documentation, transportation methods, and extrication of the critically ill and injured person. This course includes 120 hours of classroom and laboratory instruction plus 16 hours of clinical in-hospital experience. Upon completion of this course students are eligible to take the Illinois EMT licensure exam. Licensure is required for employment as an EMT..

General Education – Not Applicable

**EMS.110 Fundamentals of Paramedic** 2 2

This course, in conjunction with Paramedic Practice 1, is designed to introduce the student to the fundamentals of paramedic services including a historical perspective of the EMS system in comparison to the current operations, the roles and responsibilities, safety and well being of the paramedic, legal issues and regulatory issues, communication and documentation, and basic patient assessment skills. This course closely integrates theory with practice, thus providing the foundational base from which the learner may develop further skills, knowledge and judgment of the paramedic.

Offered: Fall

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**EMS.112 Paramedic Pharmacology** 2 1 2.5

This course provides the paramedic student with the comprehensive knowledge of emergency pharmacology, pharmacokinetics, and pharmacodynamics related to paramedic practice, includes cardiovascular, respiratory, analgesic, gastrointestinal, antibiotic and central nervous system medications. Sources of drugs, reference materials for drugs, and legal considerations will be discussed as well as classification of drugs and how each affects the respective body system. The student will gain the knowledge and psychomotor skills required to safely and precisely prepare and administer drugs that a paramedic may commonly administer according to local protocol. The student will learn proper procedures for the administration of medications, equipment needed, techniques used with various routes of administration and how to calculate drug doses utilizing mathematical principles. This course provides 32 theory hours and 16 lab hours.

Offered: Fall

Prerequisites: EMS.101 with grade of C or better and active EMT-B License.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where program structure permits..

General Education – Not Applicable

**EMS.115 Paramedic Practice 1** 6 2

Paramedic Practice 1 is designed to provide the student with the opportunity to develop skills and apply didactic information from Fundamentals of Paramedic (EMS.110) and Paramedic I (EMS.112) to the clinical and field settings respectively. Paramedic Practice 1 provides the student with the opportunity to become familiar with equipment and procedures used in the profession as well develop assessment skills. The course culminates in applying skills and knowledge learned to given case studies.

Offered: Fall

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**EMS.120 Paramedic I** 6 2 7

This course is designed to introduce and prepare the students to develop proficiency in the roles, responsibilities, and skill level required by state and national standards for licensing as a Paramedic. This course will familiarize the paramedic student with the EMS systems, legal and regulatory issues, professionalism, therapeutic communication, documentation, critical thinking, safety, and quality care standards. The paramedic student will be provided with relevant anatomy and physiology and lifespan development as is applies to the various medical situations for which EMS is summoned. The student will learn basic patient assessment skills to begin pre-hospital assessment and treatment for each type of medical situation(s) discussed in this course. Emphasis is placed on emergency pharmacology, medication administration and intravenous access, patient monitoring technology, pathophysiology and patient assessment, cardiac management, and airway management. The course closely integrates theory with laboratory practice, thus providing the foundational base from which the learner may develop psychomotor skills, knowledge and judgment of the paramedic by studying the different medical situations to gain a high level of understanding through discussion, learning activities, case studies, skills, and simulation in the class and lab environment. This course provides 96 theory hours and 32 laboratory hours.

Offered: Fall

Prerequisites: EMS.101 with a grade of C or better and/or Active,EMT-B License. Corequisite EMS.125.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable..

General Education – Not Applicable

**EMS.125 Paramedic Practice 1** 7.5 2.5

Paramedic Practice I, EMS 125 is a paramedic practicum that will provide students the opportunity to complete a minimum of 90 hours clinical experience and a minimum of 30 hours field experience under the supervision of preceptors. Paramedic Practice I is designed to provide the student with the opportunity to build upon cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains from Paramedic I, EMS 120. Student-instructor conferences are scheduled throughout the practicum to evaluate progress. Students will gain these clinical and field experiences through observation and hands-on experiences at Galesburg Cottage Hospital, OSF St. Mary's Medical Center, and Galesburg Hospitals Ambulance Service. Paramedic Practice 1 provides the student with the opportunity to become familiar with equipment and procedures used in the profession as well develop assessment skills.

Offered: Fall

Prerequisites: Take EMS.101 with a grade of C or better Corequisite EMS.120

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**EMS.130 Paramedic II**

7 2 8

This course will build on information learned in EMS 120, Paramedic I and EMS 125, Paramedic Practice I as the student will continue studying the different medical and trauma emergencies for which EMS is summoned and care is provided by pre-hospital personnel to help reduce morbidity and mortality. Coupled with EMS 135, Paramedic Practice II, a high level of understanding will be developed for situations involving systems such as pulmonology, cardiology, neurology, endocrine, immunology, hematology, gastrointestinal, genitourinary, musculoskeletal, and integumentary, including disorders of those systems. The student will also learn about infectious and communicable diseases, psychiatric and behavioral disorders. A brief review of important anatomy and physiology as it applies to the different medical and trauma emergencies in question will be included, as well as relevant pathophysiology, providing the student with the needed information to begin pre-hospital assessment and treatment for each type of medical and trauma emergency discussed. Students will gain this high level of understanding for patient(s) with medical emergencies and trauma emergencies based on the body systems involved through discussion, learning activities, laboratory activities, and case studies. This course provides 112 theory hours and 32 laboratory hours.

Offered: Spring

Prerequisites: Take EMS.120 with a grade of C or better and EMS.125 with a grade of C or better. Take EMS.135

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable..

General Education – Not Applicable

**EMS.135 Paramedic Practice II**

12 4

Paramedic Practice II, EMS 135 is a paramedic practicum that will provide students the opportunity to complete a minimum of 150 hours clinical experience and a minimum of 60-130 hours field experience under the supervision of preceptors. Paramedic Practice II is designed to provide the student with the opportunity to build upon cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains from Paramedic I, EMS 120 and Paramedic II, EMS 130. Students will gain experience in the delivery of prehospital advanced life support patient care. Student-instructor conferences are scheduled throughout the practicum to evaluate progress.

Offered: Spring

Prerequisites: Take EMS.120 with a grade of C or better and EMS.125 with a grade of C or better. Take EMS.130

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable..

General Education – Not Applicable

**EMS.200 Paramedic IV**

2 2

The student will study the different trauma emergencies for which EMS is summoned for which care is provided by pre-hospital personnel to help reduce morbidity and mortality. Coupled with EMS.205, Paramedic Practice 4, a high level of understanding for the pediatric and geriatric patient(s) and traumatic emergencies based on the body systems involved will be gained through discussion and learning activities and case studies.

Offered: Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**EMS.205 Paramedic Practice 4**

6 2

Through simulations and case studies, this course will allow students to learn how to provide care for pediatric and geriatric patient(s) and trauma emergencies for which care is provided by pre-hospital personnel to help reduce morbidity and mortality. Further experience will be gained through clinical experience at area medical institutions through observation or hands-on experiences.

Offered: Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**EMS.210 Paramedic III**

2.5 1 3

This course prepares the graduating paramedic student with the knowledge and principles associated with the acute management of medical or traumatic emergencies for the pediatric, obstetric, geriatric, and the challenged patient(s). Coupled with EMS 215, Paramedic Field Internship, a high level of understanding for the pediatric, obstetric, and geriatric patient(s) with traumatic emergencies based on the body systems involved will be gained through discussion, learning activities, laboratory activities, and case studies. Students will learn about operations of an ambulance as well as medical incident management, environmental emergencies, rescue awareness and operations, hazardous material incidents, crime scene awareness, and terrorism. Preparation for entry level paramedic practice will be supported with discussion of contemporary paramedic practice and current Illinois laws related to the paramedic profession. The student will be prepared to take the state or national examination upon completion of this course and EMS 215 Paramedic Field Internship. This course provides 40 theory hours and 16 laboratory hours.

Offered: Summer

Prerequisites: Take EMS.130 with a grade of C or better and EMS.135 with a grade of C or better. Corequisite: Take EMS.215

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable..

General Education – Not Applicable

**EMS.215 Paramedic Field Internship** 15 5

Paramedic Field Internship, EMS 215 will provide students the opportunity to work 40 clinical - personal preference hours under the supervision of a preceptor and 200-300 field internship hours under the supervision of an Illinois licensed EMT-Paramedic preceptor, gaining experience in the delivery of prehospital advanced life support patient care. Students get ambulance experience and must meet a minimum of 40 ALS patient contacts, and must be documented as the Team Leader in 20 of those patients. The 40 hours clinical experiences will be in Pediatrics, Obstetrics, Geriatrics, and Psychiatrics. Student-instructor conferences are scheduled throughout the internship to evaluate progress. Students completing EMS 125 Paramedic Practice I, EMS 135 Paramedic Practice II, and EMS 215 Paramedic Field Internship will have completed 280 clinical hours and 360 field internship hours to meet program requirements. On successful completion of EMS 210 and EMS 215, students are eligible to take the state or national examination. Offered: Summer  
Prerequisites: Take EMS.130 and EMS.135 with grades of C or better  
Take EMS.210  
Applicable toward graduation at Sandburg where program structure permits:  
Degree or Certificate: AAS, AGS, and Certificates where applicable.  
General Education – Not Applicable

## ENG English

### Courses

**ENG.095 Esst. Reading & Writing Strategies** 4 4

This course is the first course in a two-part preparatory sequence that precedes transfer-level composition courses. This course is designed to help students improve their comprehension, vocabulary, and critical reading skills through intensive writing assignments. It introduces students to the connection between the reading and writing processes. Students will participate in a variety of activities and projects to become more successful in reading and writing for college-level courses. These activities and projects include but are not limited to group discussions, reading responses, peer workshops, and essays. This course includes the content from ENG 099. Placement in ENG 095 is based upon the student's entrance exam score. Offered: Fall, Spring & Summer  
Prerequisites: Appropriate Placement Score  
Applicable toward graduation at Sandburg where program structure permits:  
General Education – Not Applicable

Hr/Wk	Hr/Wk	Sem
Lect/	Clin	Cr
Disc	Lab	Hr

**ENG.097 Introduction to Composition** 3 3

This course is the second course in a two-part preparatory sequence that precedes transfer-level composition courses. This course is designed to encourage the student to develop his or her voice and to write and read at the college level. It provides a solid foundation in grammar, mechanics, and organizational skills. The course requires substantial practice in writing coherent essays about readings in order to demonstrate critical thinking skills. Placement in ENG 097 is based upon completion of ENG 095 with a grade of C or higher or upon the student's entrance exam score.  
General Education – Not Applicable

**ENG.099 Writing Lab** 2 1

This course is embedded into the ENG 095 curriculum and a required component for ENG 097 if students have not already completed ENG 095. Additionally, this course is also intended for students placing into ENG 101 but who feel a need for a refresher course in written expression. Course topics focus on word processing essays, essay structure and development, grammar, mechanics, and revision techniques. This course is graded on a pass/fail basis. Offered: Fall, Spring & Summer  
Applicable toward graduation at Sandburg where program structure permits:  
General Education – Not Applicable

**ENG.101 Freshman Composition 1** 3 3

This course is the first in a sequence of two freshman composition and rhetoric courses. It is designed for individuals planning to pursue a bachelor's degree as well as those who wish to develop proficiency in writing. Emphasis is on critical reading, organization, logical thought, paragraphing, sentence structure, grammar and punctuation. Also studied will be argumentation and inductive/deductive reasoning. Offered: Fall or Spring or Summer  
Prerequisites: The appropriate placement exam score or ENG.097 with a grade of C or better.  
Applicable toward graduation at Sandburg where program structure permits:  
Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. C1 900*  
General Education – Communications

**ENG.102 Freshman Composition 2** 3 3

This course is second in a sequence of two freshman composition and rhetoric courses. Emphasis is on reading and discussing various types of prose to generate ideas for writing critical and persuasive papers, including one documented research paper. Offered: Fall or Spring or Summer  
Prerequisites: ENG.101 with a grade of C or better and a passing mark on the Comp I Proficiency Exam.  
Applicable toward graduation at Sandburg where program structure permits:  
Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. C1 901*  
General Education – Communications

**ENG.120 Report Writing** 3 3

This course is designed to teach the basic concepts of report writing for the business and industrial environment. Students will be taught techniques for gathering information, audience analysis, expository writing techniques, information organizational procedures, and methods of achieving a clear style of writing. Students will study routine and non-routine reports, business research reports, and business plans, policies and procedures.

Offered: Spring

Prerequisites: The appropriate placement exam score or ENG.097 with a grade of C or better.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**ENG.130 Introduction to Journalism** 3 3

This course introduces the student to the functions of mass media with emphasis on the recognition of what makes news; the obtaining of facts through interview, investigation and research; and the writing of types of stories such as feature, news story, and editorial in an acceptable journalistic style. Also, the student has an opportunity to develop a working knowledge of the mechanics of producing a newspaper, e.g., paper layout, advertising, etc. Underlying the course is the ideal of the dedication of the news media and the responsibility of the journalist to the public interest. Students who have completed or are currently enrolled in this course are eligible for enrollment in ENG 140 (College Newspaper).

Offered: As Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable

General Education: Not applicable-elective only.

General Education – Not Applicable Elective Only

**ENG.132 Introduction to Mass Communication** 3 3

This This course provides an overview of the nature, functions, and responsibilities of the mass communication industries in a global environment with an emphasis on the media's role in American society. This course is an introduction to how the mass media are organized and how they function in modern society, their technological bases, economic and political foundations, and social implications.. *IAI Course No. MC 911*

General Education – Elective Only

**ENG.140 College Newspaper** 2 1

This course provides training in news reporting and writing, feature writing, make-up, and editorial work. In addition, the development of policy for publication and the implementation of that policy are included. Course work is directly concerned with publication of the College newspaper. This course allows students who work on the College newspaper staff an opportunity to receive credit for one semester of such participation, up to a maximum of four semester hours.

Offered: Fall or Spring

Prerequisites: ENG.130 or concurrent enrollment

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS and Certificates where applicable

General Education: Not Applicable-Elective Only.

General Education – Not Applicable Elective Only

**ENG.141 College Literary Magazine** 2 1

This course provides experience in writing, editing, layout, coordinating, resource management, printing and publication of Carl Sandburg College's literary magazine, Phizzogs. The course may be repeated once for credit.

Offered: Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**ENG.151 Introduction to Film Art** 2 2 3

This course examines the film as an art form. It includes historical development and trends; aesthetic importance; social impact; technical aspects; production methods; and screening, discussion, and critical evaluation of selected films.

Offered: As Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**ENG.160 Introduction to Fiction** 3 3

This course is a survey of the short story and the novelette.

Emphasis is placed on the analysis of the elements of fiction, such as characterization, conflict, symbol and plot. How to write about fiction will also be studied.

Offered: Fall

Prerequisites: ENG.101

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. H3 901*

General Education – Humanities Human Relations

**ENG.170 Introduction to Drama** 3 3

A survey of drama as literature, this course explores various periods and traditions throughout theatre history so that students become familiar with the major styles, techniques, and conventions that characterize dramatic literature. Through critical analysis and discussions, students learn the historical and cultural contexts that shape and influence the drama.

Offered: As Needed

Prerequisites: ENG.101

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. H3 902*

General Education – Humanities Human Relations



**ENG.180 Introduction to Poetry** 3 3

Fostering an appreciation of poetry through analysis is the aim of this course. Samples of many periods, including contemporary works, will be studied, as well as the elements of poetry: diction, image, theme, symbol, rhythm, and meter. Skills of reading poetry will also be emphasized. Thematic concerns of race, gender, and ethnicity are, of course, included in the written and oral analysis of these poems.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. H3 903*

General Education -- Humanities Human Relations

**ENG.211 Creative Writing 1** 3 3

The student's writings are appraised by the tutorial method and group critique. The concept of audience and the development of individual style, approach and vision are stressed. In addition to writing assignments, readings in contemporary fiction, poetry, drama and discursive writing are recommended here appropriate. While there is no formal prerequisite, the ability to handle standard English usage is essential.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education -- Not Applicable Elective Only

**ENG.212 Creative Writing 2** 3 3

This is a second course in creative writing. Again, the student's writing is appraised by the tutorial method and group critique. The concept of audience and the development of individual style, approach and vision are emphasized further. Readings which are pertinent to writing assignments are recommended as appropriate.

Offered: Fall or Spring

Prerequisites: ENG.211

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education -- Not Applicable Elective Only

**ENG.221 American Literature 1** 3 3

This course surveys the major literary works by American authors from Colonial times to and including the Transcendentalists.

Offered: As Needed

Prerequisites: ENG.101

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. H3 914*

General Education -- Humanities Human Relations

**ENG.222 American Literature 2** 3 3

This course surveys major literary works by American authors from the emergence of modern American literature, including the Realists and the Regionalists, to the present.

Offered: As Needed

Prerequisites: ENG.101

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. H3 915*

General Education -- Humanities Human Relations

**ENG.231 British Literature 1** 3 3

This course is a survey of the great literary works by British authors from the beginning to the 19th century.

Offered: As Needed

Prerequisites: ENG.101

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. H3 912*

General Education -- Humanities

**ENG.232 British Literature 2** 3 3

This course is a survey of the great literary works by British authors from the 19th century to the present.

Offered: As Needed

Prerequisites: ENG.101

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. H3 913*

General Education -- Humanities

**ENG.240 Women and Literature** 3 3

This course focuses on literature written primarily by, but not limited to, women from various historical and literary periods. It will explore significant historical, societal conditions and contributions through readings, film, and other mediums with specific emphasis on how women have presented themselves and have been presented by others.

Offered: Fall or Spring

Prerequisites: ENG.101

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. H3 911D*

General Education -- Humanities

**ENG.250 African American Literature** 3 3

This course is an examination of the literature of African Americans with emphasis on interpretative and critical skills of all genres of several periods. Study of the oral tradition as a distinctive literary mode of expression is also included.

Offered: As Needed

Prerequisites: ENG.101

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable.

General Education – Human Relations

Hr/Wk	Hr/Wk	Sem
Lect/	Clin	Cr
Disc	Lab	Hr

## Courses

**ENG.095 Esst. Reading & Writing Strategies** 4 4

This course is the first course in a two-part preparatory sequence that precedes transfer-level composition courses. This course is designed to help students improve their comprehension, vocabulary, and critical reading skills through intensive writing assignments. It introduces students to the connection between the reading and writing processes. Students will participate in a variety of activities and projects to become more successful in reading and writing for college-level courses. These activities and projects include but are not limited to group discussions, reading responses, peer workshops, and essays. This course includes the content from ENG 099. Placement in ENG 095 is based upon the student's entrance exam score.

Offered: Fall, Spring & Summer

Prerequisites: Appropriate Placement Score

Applicable toward graduation at Sandburg where program structure permits:

General Education – Not Applicable

**ENG.097 Introduction to Composition** 3 3

This course is the second course in a two-part preparatory sequence that precedes transfer-level composition courses. This course is designed to encourage the student to develop his or her voice and to write and read at the college level. It provides a solid foundation in grammar, mechanics, and organizational skills. The course requires substantial practice in writing coherent essays about readings in order to demonstrate critical thinking skills. Placement in ENG 097 is based upon completion of ENG 095 with a grade of C or higher or upon the student's entrance exam score..

General Education – Not Applicable

**ENG.099 Writing Lab** 2 1

This course is embedded into the ENG 095 curriculum and a required component for ENG 097 if students have not already completed ENG 095. Additionally, this course is also intended for students placing into ENG 101 but who feel a need for a refresher course in written expression. Course topics focus on word processing essays, essay structure and development, grammar, mechanics, and revision techniques. This course is graded on a pass/fail basis.

Offered: Fall, Spring & Summer

Applicable toward graduation at Sandburg where program structure permits:

General Education – Not Applicable

**ENG.101 Freshman Composition 1** 3 3

This course is the first in a sequence of two freshman composition and rhetoric courses. It is designed for individuals planning to pursue a bachelor's degree as well as those who wish to develop proficiency in writing. Emphasis is on critical reading, organization, logical thought, paragraphing, sentence structure, grammar and punctuation. Also studied will be argumentation and inductive/deductive reasoning.

Offered: Fall or Spring or Summer

Prerequisites: The appropriate placement exam score or ENG.097 with a grade of C or better.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. C1 900*

General Education – Communications

**ENG.102 Freshman Composition 2** 3 3

This course is second in a sequence of two freshman composition and rhetoric courses. Emphasis is on reading and discussing various types of prose to generate ideas for writing critical and persuasive papers, including one documented research paper.

Offered: Fall or Spring or Summer

Prerequisites: ENG.101 with a grade of C or better and a passing mark on the Comp I Proficiency Exam.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. C1 901*

General Education – Communications

**ENG.120 Report Writing** 3 3

This course is designed to teach the basic concepts of report writing for the business and industrial environment. Students will be taught techniques for gathering information, audience analysis, expository writing techniques, information organizational procedures, and methods of achieving a clear style of writing. Students will study routine and non-routine reports, business research reports, and business plans, policies and procedures.

Offered: Spring

Prerequisites: The appropriate placement exam score or ENG.097 with a grade of C or better.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**ENG.130 Introduction to Journalism** 3 3

This course introduces the student to the functions of mass media with emphasis on the recognition of what makes news; the obtaining of facts through interview, investigation and research; and the writing of types of stories such as feature, news story, and editorial in an acceptable journalistic style. Also, the student has an opportunity to develop a working knowledge of the mechanics of producing a newspaper, e.g., paper layout, advertising, etc. Underlying the course is the ideal of the dedication of the news media and the responsibility of the journalist to the public interest. Students who have completed or are currently enrolled in this course are eligible for enrollment in ENG 140 (College Newspaper).

Offered: As Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable  
General Education: Not applicable-elective only.

General Education – Not Applicable Elective Only

**ENG.132 Introduction to Mass Communication** 3 3

This This course provides an overview of the nature, functions, and responsibilities of the mass communication industries in a global environment with an emphasis on the media's role in American society. This course is an introduction to how the mass media are organized and how they function in modern society, their technological bases, economic and political foundations, and social implications.. *IAI Course No. MC 911*  
General Education – Elective Only

**ENG.140 College Newspaper** 2 1

This course provides training in news reporting and writing, feature writing, make-up, and editorial work. In addition, the development of policy for publication and the implementation of that policy are included. Course work is directly concerned with publication of the College newspaper. This course allows students who work on the College newspaper staff an opportunity to receive credit for one semester of such participation, up to a maximum of four semester hours.

Offered: Fall or Spring

Prerequisites: ENG.130 or concurrent enrollment

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS and Certificates where applicable

General Education: Not Applicable-Elective Only.

General Education – Not Applicable Elective Only

**ENG.141 College Literary Magazine** 2 1

This course provides experience in writing, editing, layout, coordinating, resource management, printing and publication of Carl Sandburg College's literary magazine, Phizzogs. The course may be repeated once for credit.

Offered: Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**ENG.151 Introduction to Film Art** 2 2 3

This course examines the film as an art form. It includes historical development and trends; aesthetic importance; social impact; technical aspects; production methods; and screening, discussion, and critical evaluation of selected films.

Offered: As Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**ENG.160 Introduction to Fiction** 3 3

This course is a survey of the short story and the novelette.

Emphasis is placed on the analysis of the elements of fiction, such as characterization, conflict, symbol and plot. How to write about fiction will also be studied.

Offered: Fall

Prerequisites: ENG.101

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. H3 901*

General Education – Humanities Human Relations

**ENG.170 Introduction to Drama** 3 3

A survey of drama as literature, this course explores various periods and traditions throughout theatre history so that students become familiar with the major styles, techniques, and conventions that characterize dramatic literature. Through critical analysis and discussions, students learn the historical and cultural contexts that shape and influence the drama.

Offered: As Needed

Prerequisites: ENG.101

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. H3 902*

General Education – Humanities Human Relations

**ENG.180 Introduction to Poetry** 3 3

Fostering an appreciation of poetry through analysis is the aim of this course. Samples of many periods, including contemporary works, will be studied, as well as the elements of poetry: diction, image, theme, symbol, rhythm, and meter. Skills of reading poetry will also be emphasized.

Thematic concerns of race, gender, and ethnicity are, of course, included in the written and oral analysis of these poems.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. H3 903*

General Education – Humanities Human Relations

**ENG.211 Creative Writing 1** 3 3

The student's writings are appraised by the tutorial method and group critique. The concept of audience and the development of individual style, approach and vision are stressed. In addition to writing assignments, readings in contemporary fiction, poetry, drama and discursive writing are recommended here appropriate. While there is no formal prerequisite, the ability to handle standard English usage is essential.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education -- Not Applicable Elective Only

**ENG.212 Creative Writing 2** 3 3

This is a second course in creative writing. Again, the student's writing is appraised by the tutorial method and group critique. The concept of audience and the development of individual style, approach and vision are emphasized further. Readings which are pertinent to writing assignments are recommended as appropriate.

Offered: Fall or Spring

Prerequisites: ENG.211

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education -- Not Applicable Elective Only

**ENG.221 American Literature 1** 3 3

This course surveys the major literary works by American authors from Colonial times to and including the Transcendentalists.

Offered: As Needed

Prerequisites: ENG.101

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. H3 914*

General Education -- Humanities Human Relations

**ENG.222 American Literature 2** 3 3

This course surveys major literary works by American authors from the emergence of modern American literature, including the Realists and the Regionalists, to the present.

Offered: As Needed

Prerequisites: ENG.101

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. H3 915*

General Education -- Humanities Human Relations

**ENG.231 British Literature 1** 3 3

This course is a survey of the great literary works by British authors from the beginning to the 19th century.

Offered: As Needed

Prerequisites: ENG.101

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. H3 912*

General Education -- Humanities

**ENG.232 British Literature 2** 3 3

This course is a survey of the great literary works by British authors from the 19th century to the present.

Offered: As Needed

Prerequisites: ENG.101

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. H3 913*

General Education -- Humanities

**ENG.240 Women and Literature** 3 3

This course focuses on literature written primarily by, but not limited to, women from various historical and literary periods. It will explore significant historical, societal conditions and contributions through readings, film, and other mediums with specific emphasis on how women have presented themselves and have been presented by others.

Offered: Fall or Spring

Prerequisites: ENG.101

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. H3 911D*

General Education -- Humanities

**ENG.250 African American Literature** 3 3

This course is an examination of the literature of African Americans with emphasis on interpretative and critical skills of all genres of several periods. Study of the oral tradition as a distinctive literary mode of expression is also included.

Offered: As Needed

Prerequisites: ENG.101

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable.

General Education -- Human Relations

**ESC Earth Science**

Hr/Wk	Hr/Wk	Sem
Lect/	Clin	Cr
Disc	Lab	Hr

## Courses

**ESC.100 Introduction to Earth Science** 3 2 4

This course introduces the student to the study of the forces shaping Earth's surface with an emphasis on geological formation processes and the human impact on the environment. Topics will include the study of rocks and minerals, plate tectonics, hydrology, resource conservation, pollution, climatology, and volcanic processes.

Offered: Spring or as Needed

Prerequisites: The appropriate placement exam score or ENG.097 with a grade of C or better.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable.

General Education – Science Lab Science

Hr/Wk	Hr/Wk	Sem
Lect/	Clin	Cr
Disc	Lab	Hr

## Courses

**ESC.100 Introduction to Earth Science** 3 2 4

This course introduces the student to the study of the forces shaping Earth's surface with an emphasis on geological formation processes and the human impact on the environment. Topics will include the study of rocks and minerals, plate tectonics, hydrology, resource conservation, pollution, climatology, and volcanic processes.

Offered: Spring or as Needed

Prerequisites: The appropriate placement exam score or ENG.097 with a grade of C or better.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable.

General Education – Science Lab Science

Hr/Wk	Hr/Wk	Sem
Lect/	Clin	Cr
Disc	Lab	Hr

## Courses

**FRE.101 Elementary French 1** 4 4

This is the first sequence of two semesters providing a first year college study of French. It will provide the fundamentals for transfer credit or a review of basic skills.

Offered: As Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**FRE.102 Elementary French 2** 4 4

This is the second sequence of two semesters providing a first year college study of French. It will provide the fundamentals for transfer credit or a review of basic skills.

Offered: As Needed

Prerequisites: FRE.101

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, and Certificates where applicable.

General Education – Not Applicable Elective Only

Hr/Wk	Hr/Wk	Sem
Lect/	Clin	Cr
Disc	Lab	Hr

## Courses

**FRE.101 Elementary French 1** 4 4

This is the first sequence of two semesters providing a first year college study of French. It will provide the fundamentals for transfer credit or a review of basic skills.

Offered: As Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**FRE.102 Elementary French 2** 4 4

This is the second sequence of two semesters providing a first year college study of French. It will provide the fundamentals for transfer credit or a review of basic skills.

Offered: As Needed

Prerequisites: FRE.101

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, and Certificates where applicable.

General Education – Not Applicable Elective Only

## GEO Geography

Hr/Wk	Hr/Wk	Sem
Lect/	Clin	Cr
Disc	Lab	Hr

## Courses

**GEO.100 Human Geography** 3 3

The purpose of this course is to introduce students to the study of geography as a social science by emphasizing the relevance of the basic concepts in geography to cultural and human concerns. A primary learning objective is the understanding of the impact on the natural environment from natural resources, economic activity, and cultural characteristics.

Offered: Fall

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. S4 900*

General Education – Social Science Human Relations



**GEO.110 World Regional Geography** 3 3

A survey of the world's regions, emphasizing the spatial arrangements of resources, population, institutions, economic activities, and cultural landscapes, and their significance for distinctive regional problems.

Offered: Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. S4 901*

General Education – Social Science Human Relations

Hr/Wk Lect/ Disc	Hr/Wk Clin Lab	Sem Cr Hr
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**Courses**

**GEO.100 Human Geography** 3 3

The purpose of this course is to introduce students to the study of geography as a social science by emphasizing the relevance of the basic concepts in geography to cultural and human concerns. A primary learning objective is the understanding of the impact on the natural environment from natural resources, economic activity, and cultural characteristics.

Offered: Fall

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. S4 900*

General Education – Social Science Human Relations

**GEO.110 World Regional Geography** 3 3

A survey of the world's regions, emphasizing the spatial arrangements of resources, population, institutions, economic activities, and cultural landscapes, and their significance for distinctive regional problems.

Offered: Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. S4 901*

General Education – Social Science Human Relations

**GER German**

Hr/Wk Lect/ Disc	Hr/Wk Clin Lab	Sem Cr Hr
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**Courses**

**GER.101 Elementary German 1** 4 4

This is the first semester of two semesters providing a first year of college study of German. The course will offer speaking, reading, writing, listening comprehension and essentials of grammar, as well as a cultural background of the three German-speaking countries. It will provide the fundamentals for transfer credit or a review of basic language skills.

Offered: As Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**GER.102 Elementary German 2** 4 4

This is the second semester of two semesters providing a first year of college study of German. This course offers basic tools for communicating in both written and spoken German. It will provide the fundamentals for transfer credit or a review of basic skills.

Offered: As Needed

Prerequisites: GER.101

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

Hr/Wk Lect/ Disc	Hr/Wk Clin Lab	Sem Cr Hr
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**Courses**

**GER.101 Elementary German 1** 4 4

This is the first semester of two semesters providing a first year of college study of German. The course will offer speaking, reading, writing, listening comprehension and essentials of grammar, as well as a cultural background of the three German-speaking countries. It will provide the fundamentals for transfer credit or a review of basic language skills.

Offered: As Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**GER.102 Elementary German 2** 4 4

This is the second semester of two semesters providing a first year of college study of German. This course offers basic tools for communicating in both written and spoken German. It will provide the fundamentals for transfer credit or a review of basic skills.

Offered: As Needed

Prerequisites: GER.101

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

# HIM Health Information Management

Hr/Wk	Hr/Wk	Sem
Lect/	Clin	Cr
Disc	Lab	Hr

## Courses

**HIM.100 Introduction to Health Information Mgmt** 3 3

This course introduces students to numerous aspects of health information management. Emphasis is placed on health care delivery systems, health information management professions, and health care settings. Patient records, filing systems, record storage, circulation and retention, indexes, registers, health data collection, and legal issues are also covered as they relate to different types of health care facilities and practices.

Offered: Fall

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AGS AAS and Certificates where applicable.

General Education – Not Applicable

**HIM.205 Health Information Mgmt Tech Practicum** 15 3

The purpose of this course is to integrate classroom theory with practical experience. The student will be placed in a medical agency where the skills and knowledge of a health information management technician will be applied. The practicum will be supervised by a College faculty member and a job-site supervisor. Consent of instructor is required to enroll in this course.

Offered: Summer

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AGS, AAS and Certificates where applicable.

General Education – Not Applicable

Hr/Wk	Hr/Wk	Sem
Lect/	Clin	Cr
Disc	Lab	Hr

## Courses

**HIM.100 Introduction to Health Information Mgmt** 3 3

This course introduces students to numerous aspects of health information management. Emphasis is placed on health care delivery systems, health information management professions, and health care settings. Patient records, filing systems, record storage, circulation and retention, indexes, registers, health data collection, and legal issues are also covered as they relate to different types of health care facilities and practices.

Offered: Fall

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AGS AAS and Certificates where applicable.

General Education – Not Applicable

**HIM.205 Health Information Mgmt Tech Practicum** 15 3

The purpose of this course is to integrate classroom theory with practical experience. The student will be placed in a medical agency where the skills and knowledge of a health information management technician will be applied. The practicum will be supervised by a College faculty member and a job-site supervisor. Consent of instructor is required to enroll in this course.

Offered: Summer

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AGS, AAS and Certificates where applicable.

General Education – Not Applicable

# HIS History

Hr/Wk	Hr/Wk	Sem
Lect/	Clin	Cr
Disc	Lab	Hr

## Courses

**HIS.105 American History to 1877** 3 3

This course presents a survey of United States history from the European discovery to the close of the Reconstruction Era. It emphasizes the economic, cultural, and political factors which led to the development of one nation from a diversity of peoples. Topics studied are the religious and social structure of colonial America, the factors leading to the break with England, the democratization of America, Manifest Destiny, sectional and social tensions leading to the Civil War, Reconstruction, and the beginnings of industrialization. The course is intended for individuals who plan to pursue a bachelor's degree and those who desire to strengthen their understanding of the development of our national institutions.

Offered: Fall

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. S2 900*

General Education – Social Science

**HIS.106 American Hist From 1877** 3 3

This course is a survey of major economic, political, and social trends from the Reconstruction Era to the present. Among the topics examined are the growth of America as a major industrial and military power, the problems of minorities, the Cold War, and the post-Cold War era.

Offered: Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. S2 901*

General Education – Social Science

**HIS.125 Western Civilization 1** 3 3

This course surveys the evolution of European civilization from prehistory through the age of Renaissance and the Reformation concluding with the end of the Thirty Years War in 1648. Economic, political, and social developments are examined. Analogies are drawn between historical and contemporary problems in order to allow the student to view the contemporary world from different perspectives. The course is intended for individuals who plan to pursue a bachelor's degree and for those who desire to broaden their understanding of the people and events that shaped our world.

Offered: Fall

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. S2 902*

General Education – Social Science Human Relations

**HIS.126 Western Civilization 2** 3 3

This course surveys the rise of the modern European state system from the era of religious wars to the present. Major social, economic, artistic, and political trends are traced to include the development of ideologies such as fascism and Marxism. Africa and Asia are covered in terms of their relationship to the West.

Offered: Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. S2 903*

General Education – Social Science Human Relations

**HIS.217 History of New York** 3 3

This course is designed to introduce students to the history of New York City. The course will include emphasis on the unique social and cultural characteristics; political institutions; technological, environmental and geographic elements that make New York City a unique environment. The instructional approach will be that of a seminar and the course will include a one-week field research experience in New York City visiting various historical locations examined in the course study. The course is not to be taken more than once.

Offered: Summer

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS and Certificates where applicable.

General Education – Not Applicable Elective Only

**HIS.260 US History-The Sixties** 3 3

This course examines political, social and cultural changes in the United States during the 1960's. It begins with a study of major events in the 1950's that set the tone for the social movements that developed during the 1960's. Special attention and focus will be given to the origins and evolution of various social movements and the interrelationships among these movements. The course also examines the impact the 1960's has had on individuals and future social movements, including how current political discourse has been influenced by the decade.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS and Certificates where applicable.

General Education – Not Applicable Elective Only

**HIS.270 World War II and the Holocaust** 3 3

Examines the causes and course of World War II and the Holocaust, including the rise of fascism; European, Japanese, and U.S. imperialism in Asia; the course of the war in Europe and Asia; the home fronts of the belligerent countries; and the march toward the final solution.

Offered: Fall or Spring

Prerequisites: Take HIS.106.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS and Certificates where applicable.

General Education – Not Applicable Elective Only

**HIS.285 History of Africa: 1500 to Present** 3 3

This course is designed to survey the history of the African continent since 1500, giving specific attention to its people, cultures, social structures, and political interactions with the rest of the world. Students will gain insight into the roles that Africa, specifically Africans, have played in the development of modern societies.

Offered: As Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Social Science Human Relations

**HIS.294 American Military History** 3 3

This course is a survey of American military history from the colonial period through Vietnam. The course examines the evolution of America's military forces to meet changing defense requirements. Selected campaigns from Americas wars are analyzed in light of the principles of war to determine how these principles were followed or violated. The impact of civilian attitudes on the conduct of operations is also discussed.

Offered: As Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

Hr/Wk	Hr/Wk	Sem
Lect/	Clin	Cr
Disc	Lab	Hr

## Courses

### **HIS.105 American History to 1877** 3 3

This course presents a survey of United States history from the European discovery to the close of the Reconstruction Era. It emphasizes the economic, cultural, and political factors which led to the development of one nation from a diversity of peoples. Topics studied are the religious and social structure of colonial America, the factors leading to the break with England, the democratization of America, Manifest Destiny, sectional and social tensions leading to the Civil War, Reconstruction, and the beginnings of industrialization. The course is intended for individuals who plan to pursue a bachelor's degree and those who desire to strengthen their understanding of the development of our national institutions.

Offered: Fall

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. S2 900*

General Education – Social Science

### **HIS.106 American Hist From 1877** 3 3

This course is a survey of major economic, political, and social trends from the Reconstruction Era to the present. Among the topics examined are the growth of America as a major industrial and military power, the problems of minorities, the Cold War, and the post-Cold War era.

Offered: Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. S2 901*

General Education – Social Science

### **HIS.125 Western Civilization 1** 3 3

This course surveys the evolution of European civilization from prehistory through the age of Renaissance and the Reformation concluding with the end of the Thirty Years War in 1648. Economic, political, and social developments are examined. Analogies are drawn between historical and contemporary problems in order to allow the student to view the contemporary world from different perspectives. The course is intended for individuals who plan to pursue a bachelor's degree and for those who desire to broaden their understanding of the people and events that shaped our world.

Offered: Fall

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. S2 902*

General Education – Social Science Human Relations

### **HIS.126 Western Civilization 2** 3 3

This course surveys the rise of the modern European state system from the era of religious wars to the present. Major social, economic, artistic, and political trends are traced to include the development of ideologies such as fascism and Marxism. Africa and Asia are covered in terms of their relationship to the West.

Offered: Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. S2 903*

General Education – Social Science Human Relations

### **HIS.217 History of New York** 3 3

This course is designed to introduce students to the history of New York City. The course will include emphasis on the unique social and cultural characteristics; political institutions; technological, environmental and geographic elements that make New York City a unique environment. The instructional approach will be that of a seminar and the course will include a one-week field research experience in New York City visiting various historical locations examined in the course study. The course is not to be taken more than once.

Offered: Summer

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS and Certificates where applicable.

General Education – Not Applicable Elective Only

### **HIS.260 US History-The Sixties** 3 3

This course examines political, social and cultural changes in the United States during the 1960's. It begins with a study of major events in the 1950's that set the tone for the social movements that developed during the 1960's. Special attention and focus will be given to the origins and evolution of various social movements and the interrelationships among these movements. The course also examines the impact the 1960's has had on individuals and future social movements, including how current political discourse has been influenced by the decade.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS and Certificates where applicable.

General Education – Not Applicable Elective Only

### **HIS.270 World War II and the Holocaust** 3 3

Examines the causes and course of World War II and the Holocaust, including the rise of fascism; European, Japanese, and U.S. imperialism in Asia; the course of the war in Europe and Asia; the home fronts of the belligerent countries; and the march toward the final solution.

Offered: Fall or Spring

Prerequisites: Take HIS.106.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS AAS, AGS and Certificates where applicable.

General Education – Not Applicable Elective Only

**HIS.285 History of Africa: 1500 to Present** 3 3

This course is designed to survey the history of the African continent since 1500, giving specific attention to its people, cultures, social structures, and political interactions with the rest of the world. Students will gain insight into the roles that Africa, specifically Africans, have played in the development of modern societies.

Offered: As Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Social Science Human Relations

**HIS.294 American Military History** 3 3

This course is a survey of American military history from the colonial period through Vietnam. The course examines the evolution of America's military forces to meet changing defense requirements. Selected campaigns from Americas wars are analyzed in light of the principles of war to determine how these principles were followed or violated. The impact of civilian attitudes on the conduct of operations is also discussed.

Offered: As Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

## HTH Health

### Courses

**HTH.120 Health** 3 3

This course focuses on the dynamics and relationships of family, community, and personal health issues. The course content includes units on mental health, sexuality, disease, death, and other issues of current concern. The Internet is used extensively as a supplement and assignments using the Internet will be required.

Offered: Fall or Spring or Summer

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**HTH.130 First Aid** 2 2

In this course students will be learning how to make appropriate decisions regarding first aid care and how to respond correctly to emergencies. Students will develop first aid skills via practice on mannequins and may be eligible for CPR and/or First Aid certification by the American Red Cross. Other medical emergency situations studied include water safety, substance abuse, poisoning, bleeding, shock, and injuries of various types. Also emphasized is the importance of a person's maintenance of a safe and healthy lifestyle.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**HTH.140 Wellness** 1 2 2

Students will learn the importance of life-long physical fitness and the desirability of adhering to positive lifestyle behaviors. The physical, emotional, vocational, intellectual, and spiritual aspects of wellness will be explored. Internet assignments will be required. Students will be expected to exercise during each week at a CSC facility. Concurrent enrollment in KIN 140, KIN 141, KIN 142, KIN 143 or KIN 145 is prohibited.

Offered: As Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**HTH.150 Drug Use and Abuse** 3 3

This course is designed to introduce the many-sided problems of drugs in our society including the psychological, sociological, and physiological effects of drug use and abuse. This course encourages students to explore their own decisions on use or abstinence and teaches assertiveness skills to protect and defend this choice with others. Personal motivations and behaviors are identified. The intent of the course is to provide facts, attitudes, and opinions necessary to understand what drugs do, how they do it, who uses them, and why. Also, modes of treatment as well as legal and ethical issues in drug abuse are discussed. Students will also learn how to access online Web resources.

Offered: Fall or Spring or Summer

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

Hr/Wk Hr/Wk Sem  
Lect/ Clin Cr  
Disc Lab Hr



## Courses

**HTH.120 Health** 3 3

This course focuses on the dynamics and relationships of family, community, and personal health issues. The course content includes units on mental health, sexuality, disease, death, and other issues of current concern. The Internet is used extensively as a supplement and assignments using the Internet will be required.

Offered: Fall or Spring or Summer

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**HTH.130 First Aid** 2 2

In this course students will be learning how to make appropriate decisions regarding first aid care and how to respond correctly to emergencies. Students will develop first aid skills via practice on mannequins and may be eligible for CPR and/or First Aid certification by the American Red Cross. Other medical emergency situations studied include water safety, substance abuse, poisoning, bleeding, shock, and injuries of various types. Also emphasized is the importance of a person's maintenance of a safe and healthy lifestyle.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**HTH.140 Wellness** 1 2 2

Students will learn the importance of life-long physical fitness and the desirability of adhering to positive lifestyle behaviors. The physical, emotional, vocational, intellectual, and spiritual aspects of wellness will be explored. Internet assignments will be required. Students will be expected to exercise during each week at a CSC facility. Concurrent enrollment in KIN 140, KIN 141, KIN 142, KIN 143 or KIN 145 is prohibited. Offered: As Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**HTH.150 Drug Use and Abuse** 3 3

This course is designed to introduce the many-sided problems of drugs in our society including the psychological, sociological, and physiological effects of drug use and abuse. This course encourages students to explore their own decisions on use or abstinence and teaches assertiveness skills to protect and defend this choice with others. Personal motivations and behaviors are identified. The intent of the course is to provide facts, attitudes, and opinions necessary to understand what drugs do, how they do it, who uses them, and why. Also, modes of treatment as well as legal and ethical issues in drug abuse are discussed. Students will also learn how to access online Web resources. Offered: Fall or Spring or Summer

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

## HYD Hydraulics

Hr/Wk	Hr/Wk	Sem
Lect/	Clin	Cr
Disc	Lab	Hr

### Courses

**HYD.101 Hydraulics and Pneumatics** 2 3 3

This course is designed for persons who desire to become employed, or upgrade their employment, in any area which demands a basic knowledge about hydraulics and pneumatics. It provides an opportunity to learn the fundamental concepts regarding the transmission of power through liquids and gases. Also, the structure and function of the various pieces of equipment which are used to contain or transfer those liquids or gases are studied, such as pumps, valves, hoses, etc.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

Hr/Wk	Hr/Wk	Sem
Lect/	Clin	Cr
Disc	Lab	Hr

### Courses

**HYD.101 Hydraulics and Pneumatics** 2 3 3

This course is designed for persons who desire to become employed, or upgrade their employment, in any area which demands a basic knowledge about hydraulics and pneumatics. It provides an opportunity to learn the fundamental concepts regarding the transmission of power through liquids and gases. Also, the structure and function of the various pieces of equipment which are used to contain or transfer those liquids or gases are studied, such as pumps, valves, hoses, etc.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

# ICT Information and Communication Technology

Hr/Wk	Hr/Wk	Sem
Lect/	Clin	Cr
Disc	Lab	Hr

## Courses

**ICT.110 Computer Software Applications** 3 3

This course in software applications will provide students with an overview of a computer operating system and commonly used computer software. Students will gain experience with word processing and database management tasks, presentation software, and spreadsheets. Additional software programs associated with the Windows environment will be explored. This course may be used to satisfy the computer requirement common for students planning to transfer to a four-year college or university.

Offered: Fall or Spring or Summer

Prerequisites: AOP.101 or BOC.107 or appropriate articulated high school credit.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**ICT.112 Microcomputer Spreadsheet Applications 1** 1 2 2

This course will provide students with skills necessary to develop and maintain a spreadsheet. students need no prior knowledge of a spreadsheet application program for this course. The use of basic business mathematical formulas, functions, and statistics will be introduced. In addition, the processes for formatting and editing worksheets, managing files, creating graphs and web pages will be covered.

Offered: As Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**ICT.114 Microcomputer Database Applications 1** 1 2 2

This course is an introduction to the management of data on personal computers. It covers the database operations that allow a personal computer user to create and update files; order and search files; generate reports and labels; use memory variables for more complex data manipulation; and produce custom input and output forms.

Offered: Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**ICT.115 Website Support** 1 2 2

Today's businesses understand the value and importance of a company website, although many do not understand the factors which contribute to its success. Students will be introduced to determining the best way to keep the content and design of a company website up-to-date. Students will explore various strategies that can simplify and streamline what has been called the most difficult task in web development-maintenance.

Students will be exposed to proper procedures for text, images, and hyperlinks that are suitable for professional purposes.

Offered: Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**ICT.120 Computer Information Systems** 3 3

This course is an overview of computer information systems. It is designed for the student majoring in computer information systems or various business curricula. The course may be used to fulfill the introductory course requirement in the Computer Information Systems Specialist A.A.S. degree or to meet the introductory computing course requirements for business majors at four-year colleges or universities. Computer concepts, terminology, hardware, software, operating systems, networks and career preparation topics are surveyed and discussed.

Offered: Fall or as Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**ICT.125 Foundations of Information Technology** 2 2 3

Foundations of Information Technology is designed for the degree seeking Computer Information System Students. This course is an overview of basic computer technology. This is a hands-on course that introduces the student to core concepts of computer technology in order to be successful in more advanced computer courses. Topics include but are not limited to: Computers and Digital Basics, Hardware, Software, Operating Systems, File Management, LANs, WANs, The Internet, The Web, E-mail and Digital Media. This course also gives the student a foundation in basic office application software as well as research and presentation skills necessary to be a successful computer professional.

Offered: Fall

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**ICT.130 Fundamentals of Programming** 2 2 3

This course introduces a disciplined approach to problem-solving and algorithm development, and the use of various software planning and development tools necessary for the efficient solution of problems requiring computer programmed solutions. The topics of selection, repetition, and sequence control structures and program design, testing, and documentation using good programming style are covered in this course. This course will also introduce the C programming language. Emphasis is on high-level block-structure including: syntax, operators, data types, program control, pointers, arrays, I/O and disk file processing, parameters and libraries. Students will focus on analyzing, coding, compiling and debugging programs which are developed using modular and structured programming techniques. In addition to procedural methods students will also be introduced to data abstraction concepts. Offered: Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**ICT.135 Mobile Technologies** 2 2 3

This course will expose students to emerging technologies, issues, and concepts in wireless and mobile networks. A variety of technologies will be studied on how they exist and function. Technologies may vary each time this course is offered as this type of technology is rapidly changing. Offered: Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**ICT.160 Introduction to Internetworking** 2 2 3

This is the first of four courses providing students with classroom and laboratory experience in networking technologies that will provide them with entry-level skills in computer networking. Course content includes, but is not limited to, safety practices, networking, network terminology and protocols, network standards, working with LANs and WANs, understanding the OSI model, cabling and use of cabling tools, working with routers and doing router programming, network topologies (primarily the star topology) and IP addressing. Emphasis is given to decision-making and problem-solving techniques in applying scientific, mathematical, communication and social studies skills and concepts to network problems. Instruction and training is also provided in the proper care, maintenance and use of networking software, tools and equipment as well as the consideration of local, state and federal safety, building and environmental codes and regulations. Offered: Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**ICT.165 LINUX 1** 2 2 3

This course aligns to the Linux Professional Institute (LPI) Linux Essentials Professional Development Certificate (PDC), an entry level credential. Linux adoption continues to rise world-wide. This course provides the foundational skills for working in Linux open source technologies environment.

Offered: Fall

Prerequisites: ICT.180

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGE, and Certificate where applicable. General Education: Not applicable..

General Education – Not Applicable

**ICT.170 Hardware Installation & Maintenance** 2 2 3

This course covers the basic hardware of a microcomputer. Topics include component identification, memory systems, internal and external component installation and configuration, preventive maintenance, procedures, upgrading, documentation procedures, diagnosis and troubleshooting, and basic component repair. Upon completion of the course, students should be able to select appropriate microcomputer equipment, upgrade and maintain existing equipment, and diagnose and repair non-functional components.

Offered: Fall

Prerequisites: ICT.180 previous or concurrent enrollment.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education: Not applicable..

General Education – Not Applicable

**ICT.180 Windows Networking & Operating System** 2 2 3

This course is to provide individuals who are new to Microsoft Windows with the knowledge necessary to understand and to identify the tasks involved in supporting Windows networks. This is an introductory course designed to provide an overview of networking concepts and how they are implemented in Windows. This course will help the student prepare for the Microsoft Certified Technology Specialist examination.

Offered: Fall

Prerequisites: ICT.125 or concurrent enrollment.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education: Not applicable..

General Education – Not Applicable

**ICT.182 Implementing Ms Network Infrastructure** 2 2 3

This course is for support professionals who are new to Microsoft Windows and will be responsible for installing, configuring, managing, and supporting a network infrastructure that uses the Microsoft Windows Server products. This course will help the student prepare for the Microsoft Certified Technology Specialist examination.

Offered: Spring

Prerequisites: ICT.180

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education: Not applicable..

General Education – Not Applicable

**ICT.184 Managing Ms Windows Network Servers** 2 2 3

This course helps students build the skills they need on the job as a Network Administrator to manage a Microsoft Windows Server. This course will examine issues of network management, implementation, and troubleshooting of existing network and system environments based on Microsoft Windows. This course will help students prepare for the Microsoft Certified Professional examination: Managing a Microsoft Windows Network Environment.

Offered: Fall

Prerequisites: ICT.180 or have consent of Instructor.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates were applicable. General Education: Not Applicable..

General Education – Not Applicable

**ICT.190 Presentation Graphics & Multimedia** 2 2 3

This course is designed for the student to explore the capabilities of presentation graphics programs and multimedia presentation options. Audio, video and screen casting programs will be explored.

Offered: As Needed

Prerequisites: ICT.110

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, or Certificates were applicable. General Education: Not Applicable..

General Education – Not Applicable

**ICT.205 Visual Basic Programming** 2 2 3

This course uses Visual BASIC in the Windows environment. It introduces event-driven computer programming to develop graphical user interfaces in an object-oriented environment. Topics include input/output operations, sequence, interaction, arithmetic operations, array, forms sequential files and other related topics.

Offered: Spring

Prerequisites: ICT.130 prior to or concurrently.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education: Not applicable..

General Education – Not Applicable

**ICT.210 Advanced Microcomputer Software Application** 2 2 3

In this course—designed as a continuation of ICT.110—students will be empowered and encouraged to develop advanced skills in the use of word processing, spreadsheet, database, presentation, and other software programs as they apply to the Windows environment.

Offered: Spring

Prerequisites: ICT.110;

Applicable toward graduation at Sandburg where program structure permits: Degree or Certificate: AAS, AGS, and Certificates were applicable. General Education: Not applicable..

General Education – Not Applicable

**ICT.212 Microcomputer Spreadsheet App2** 2 2 3

In this course students will apply the concepts learned in ICT 112 to realistic business problems. Advanced spreadsheet concepts will be covered, including formatting techniques, templates, functions, lists, filters, analysis tools, workgroups, and the process for importing and exporting data.

Offered: As Needed

Prerequisites: ICT.112

Applicable toward graduation at Sandburg where program structure permits: Degrees and Certifications: AAS, AGS, and Certificates where applicable. General Education: Not applicable..

General Education – Not Applicable

**ICT.214 Microcomputer Database Applications 2** 2 2 3

This course is a continuation of ICT 114. Students will explore the database operations needed to create and update files; order and search files; generate reports and labels; use memory variables for more complex data manipulation; and produce custom input and output forms.

Offered: Spring

Prerequisites: ICT.114

Applicable toward graduation at Sandburg where program structure permits: Degree and Certificate: AAS, AGS, and Certificates where applicable. General Education: Not applicable..

General Education – Not Applicable

**ICT.225 Sql/Database Application** 2 2 3

This course is designed to teach the use of Structures Query Language (SQL) to construct, modify, and maintain relational databases. Emphasis is on SQL and its uses in business applications. Hierarchical, network, and relational models are covered. Additional topics include data redundancy, data independence, security, and data integrity.

Offered: Spring

Prerequisites: Take ICT.130 concurrently.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education: Not applicable..

General Education – Not Applicable

**ICT.250 Ethical Hacking & Network Defense** 2 2 3

Hands-on Ethical Hacking and Network Defense introduces the art of ethical hacking and security testing and prepares students to be efficient security professionals. This course covers the tools and techniques that ethical hackers and security testers use to discover vulnerabilities and offers solutions to protect computer networks. In addition to learning fundamental security testing concepts, students gain practical knowledge in computer programming in documentation of security tests and in ethical and legal ramifications and discover that critical thinking skills and creativity are essential in security testing.

Offered: Fall

Prerequisites: ICT.180

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education: Not applicable..

General Education – Not Applicable

**ICT.255 Security + Fundamentals** 2 2 3

In this course, we will take an in-depth look at network security concepts and techniques, including basic security principles, establishing security baselines, and the most recent attack and defense techniques and technologies. We will learn how to harden a network to resist attacks, protect basic and advanced communications, and use cryptography and Public Key Infrastructure (PKI) to thwart attacks. We will also discuss establishing security policies and procedures and managing security efforts to prepare students.

Offered: Fall

Prerequisites: ICT.180

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates were applicable. General Education: Not applicable..

General Education – Not Applicable

**ICT.260 Introduction to Internetwork Operating S** 2 2 3

This is the second of four courses providing students with classroom and laboratory experience in current and emerging networking technology that will provide them with entry-level skills in computer networking.

Course content includes, but is not limited to, safety practices, networking terminology and protocols, network standards, working with LANs and WANs, additional discussion of the OSI model, discussion of Ethernet, Token Ring, Fiber Distributed Data Interface, TCP/IP addressing protocol, dynamic routing, and the network administrator's role and function. Emphasis is given to the use of decision-making and problem-solving techniques in applying scientific mathematical, communication and social studies skills and concepts to solve networking problems.

Instruction and training are also provided in the proper care, maintenance and use of networking software, tools, and equipment as well as the consideration of local state and federal safety, building and environmental codes and regulations.

Offered: Fall

Prerequisites: ICT.160

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable

General Education: Not Applicable..

General Education – Not Applicable

**ICT.261 Introduction to Local Area Networks** 1 4 3

This is the third of four semester courses designed to provide students with classroom and laboratory experience in current and emerging networking technology that will empower them to enter employment and/or further education and training in the computer networking field. Instruction includes, but is not limited to, safety, networking, network terminology and protocols, LAN segmentation, IPX addressing, and Fast Ethernet standards. Particular emphasis is given to the use of IPX access lists, full and half duplex Interior Gateway Routing Protocol and Virtual Local Area Networks. Application toward graduation at Sandburg where program structure permits: Degree or Certificate: AAS, AGS, and Certificates where applicable. General Education: Not applicable..

General Education – Not Applicable

**ICT.262 Introduction to Wide Area Networks** 2 2 3

this is the fourth of four semester courses designed to provide students with classroom and laboratory experience in current and emerging network technology that will empower them to enter employment and/or further education and training in the computer networking field. Instruction includes, but is not limited to, safety, networking, network terminology and protocols, WAN services, Frame Relay, and emphasis is given to the use of Frame Relay operation, use and operation of Integrated Services Digital(ISDN), and the operation and function of Point to Point Protocols.

Offered: Spring

Prerequisites: ICT.261

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education: Not applicable..

General Education – Not Applicable

**ICT.265 Linux 2** 2 2 3

This course is the second course in the Linux series. This course aligns to both the LPIC Level 1 certification and CompTIA Linux+ certification.

Students will be prepared to be Linux administrators, managing, configuring and securing the Linux operating system and network.

Application toward graduation at Sandburg where program structure permits: Degree or Certificate: AAS, AGS and Certificate where applicable.

General education: Not applicable..

General Education – Not Applicable

**ICT.270 Cisco Security** 2 2 3

This course provides an introduction to the core security concepts and skills needed for the installation, troubleshooting, and monitoring of network devices to maintain the integrity, confidentiality, and availability of data and devices.

Offered: Spring

Prerequisites: ICT.260 or have CCNA Certification.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education: Not applicable..

General Education – Not Applicable

**ICT.275 Virtualization** 2 2 3

This hands-on training course explores installation, configuration, and management of a virtualized networking environment. Latest virtualization technologies and software will be used and will align to the current entry-level certification exam.

Offered: Spring

Prerequisites: ICT.182 or ICT.184

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable



**ICT.295 Internship** 10 2

This course is a planned and supervised occupation work experience at selected work sites using microcomputer systems. Job tasks are organized to include those of a beginning, intermediate, and advanced nature so as to provide exposure to the total operation of a microcomputer-based data processing/information system. This internship requires a minimum of 160 clock hours of on-the-job activities.  
 Offered: Spring or Summer  
 Applicable toward graduation at Sandburg where program structure permits:  
 Degree or Certificate: AAS, AGS, and Certificates where applicable.  
 General Education: Not applicable. A GPA of 3.0 is required; This internship is also subject to availability of a work site; and, successful completion of an interview with the work site supervisor. Students who do not meet the prerequisite requirements will be required to enroll in another ICT course approved by the Associate Dean of CTHE programs.  
 General Education – Not Applicable

Hr/Wk Lect/ Disc	Hr/Wk Clin Lab	Sem Cr Hr
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**Courses**

**ICT.110 Computer Software Applications** 3 3

This course in software applications will provide students with an overview of a computer operating system and commonly used computer software. Students will gain experience with word processing and database management tasks, presentation software, and spreadsheets. Additional software programs associated with the Windows environment will be explored. This course may be used to satisfy the computer requirement common for students planning to transfer to a four-year college or university.  
 Offered: Fall or Spring or Summer  
 Prerequisites: AOP.101 or or BOC.107 or appropriate articulated high school credit.  
 Applicable toward graduation at Sandburg where program structure permits:  
 Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.  
 General Education – Not Applicable Elective Only

**ICT.112 Microcomputer Spreadsheet Applications 1** 1 2 2

This course will provide students with skills necessary to develop and maintain a spreadsheet. students need no prior knowledge of a spreadsheet application program for this course. The use of basic business mathematical formulas, functions, and statistics will be introduced. In addition, the processes for formatting and editing worksheets, managing files, creating graphs and web pages will be covered.  
 Offered: As Needed  
 Applicable toward graduation at Sandburg where program structure permits:  
 Degree or Certificate: AAS, AGS, and Certificates where applicable.  
 General Education – Not Applicable

**ICT.114 Microcomputer Database Applications 1** 1 2 2

This course is an introduction to the management of data on personal computers. It covers the database operations that allow a personal computer user to create and update files; order and search files; generate reports and labels; use memory variables for more complex data manipulation; and produce custom input and output forms.  
 Offered: Spring  
 Applicable toward graduation at Sandburg where program structure permits:  
 Degree or Certificate: AAS, AGS, and Certificates where applicable.  
 General Education – Not Applicable

**ICT.115 Website Support** 1 2 2

Today's businesses understand the value and importance of a company website, although many do not understand the factors which contribute to its success. Students will be introduced to determining the best way to keep the content and design of a company website up-to-date. Students will explore various strategies that can simplify and streamline what has been called the most difficult task in web development-maintenance. Students will be exposed to proper procedures for text, images, and hyperlinks that are suitable for professional purposes.  
 Offered: Spring  
 Applicable toward graduation at Sandburg where program structure permits:  
 Degree or Certificate: AAS, AGS, and Certificates where applicable.  
 General Education – Not Applicable

**ICT.120 Computer Information Systems** 3 3

This course is an overview of computer information systems. It is designed for the student majoring in computer information systems or various business curricula. The course may be used to fulfill the introductory course requirement in the Computer Information Systems Specialist A.A.S. degree or to meet the introductory computing course requirements for business majors at four- year colleges or universities. Computer concepts, terminology, hardware, software, operating systems, networks and career preparation topics are surveyed and discussed.  
 Offered: Fall or as Needed  
 Applicable toward graduation at Sandburg where program structure permits:  
 Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.  
 General Education – Not Applicable Elective Only

**ICT.125 Foundations of Information Technology** 2 2 3

Foundations of Information Technology is designed for the degree seeking Computer Information System Students. This course is an overview of basic computer technology. This is a hands-on course that introduces the student to core concepts of computer technology in order to be successful in more advanced computer courses. Topics include but are not limited to: Computers and Digital Basics, Hardware, Software, Operating Systems, File Management, LANs, WANs, The Internet, The Web, E-mail and Digital Media. This course also gives the student a foundation in basic office application software as well as research and presentation skills necessary to be a successful computer professional.  
 Offered: Fall  
 Applicable toward graduation at Sandburg where program structure permits:  
 Degree or Certificate: AAS, AGS and Certificates where applicable.  
 General Education – Not Applicable

**ICT.130 Fundamentals of Programming** 2 2 3

This course introduces a disciplined approach to problem-solving and algorithm development, and the use of various software planning and development tools necessary for the efficient solution of problems requiring computer programmed solutions. The topics of selection, repetition, and sequence control structures and program design, testing, and documentation using good programming style are covered in this course. This course will also introduce the C programming language. Emphasis is on high-level block-structure including: syntax, operators, data types, program control, pointers, arrays, I/O and disk file processing, parameters and libraries. Students will focus on analyzing, coding, compiling and debugging programs which are developed using modular and structured programming techniques. In addition to procedural methods students will also be introduced to data abstraction concepts. Offered: Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**ICT.135 Mobile Technologies** 2 2 3

This course will expose students to emerging technologies, issues, and concepts in wireless and mobile networks. A variety of technologies will be studied on how they exist and function. Technologies may vary each time this course is offered as this type of technology is rapidly changing. Offered: Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**ICT.160 Introduction to Internetworking** 2 2 3

This is the first of four courses providing students with classroom and laboratory experience in networking technologies that will provide them with entry-level skills in computer networking. Course content includes, but is not limited to, safety practices, networking, network terminology and protocols, network standards, working with LANs and WANs, understanding the OSI model, cabling and use of cabling tools, working with routers and doing router programming, network topologies (primarily the star topology) and IP addressing. Emphasis is given to decision-making and problem-solving techniques in applying scientific, mathematical, communication and social studies skills and concepts to network problems. Instruction and training is also provided in the proper care, maintenance and use of networking software, tools and equipment as well as the consideration of local, state and federal safety, building and environmental codes and regulations. Offered: Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**ICT.165 LINUX 1** 2 2 3

This course aligns to the Linux Professional Institute (LPI) Linux Essentials Professional Development Certificate (PDC), an entry level credential. Linux adoption continues to rise world-wide. This course provides the foundational skills for working in Linux open source technologies environment.

Offered: Fall

Prerequisites: ICT.180

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGE, and Certificate where applicable. General Education: Not applicable..

General Education – Not Applicable

**ICT.170 Hardware Installation & Maintenance** 2 2 3

This course covers the basic hardware of a microcomputer. Topics include component identification, memory systems, internal and external component installation and configuration, preventive maintenance, procedures, upgrading, documentation procedures, diagnosis and troubleshooting, and basic component repair. Upon completion of the course, students should be able to select appropriate microcomputer equipment, upgrade and maintain existing equipment, and diagnose and repair non-functional components.

Offered: Fall

Prerequisites: ICT.180 previous or concurrent enrollment.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education: Not applicable..

General Education – Not Applicable

**ICT.180 Windows Networking & Operating System** 2 2 3

This course is to provide individuals who are new to Microsoft Windows with the knowledge necessary to understand and to identify the tasks involved in supporting Windows networks. This is an introductory course designed to provide an overview of networking concepts and how they are implemented in Windows. This course will help the student prepare for the Microsoft Certified Technology Specialist examination.

Offered: Fall

Prerequisites: ICT.125 or concurrent enrollment.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education: Not applicable..

General Education – Not Applicable

**ICT.182 Implementing Ms Network Infrastructure** 2 2 3

This course is for support professionals who are new to Microsoft Windows and will be responsible for installing, configuring, managing, and supporting a network infrastructure that uses the Microsoft Windows Server products. This course will help the student prepare for the Microsoft Certified Technology Specialist examination.

Offered: Spring

Prerequisites: ICT.180

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education: Not applicable..

General Education – Not Applicable

**ICT.184 Managing Ms Windows Network Servers** 2 2 3

This course helps students build the skills they need on the job as a Network Administrator to manage a Microsoft Windows Server. This course will examine issues of network management, implementation, and troubleshooting of existing network and system environments based on Microsoft Windows. This course will help students prepare for the Microsoft Certified Professional examination: Managing a Microsoft Windows Network Environment.

Offered: Fall

Prerequisites: ICT.180 or have consent of Instructor.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates were applicable. General Education: Not Applicable..

General Education – Not Applicable

**ICT.190 Presentation Graphics & Multimedia** 2 2 3

This course is designed for the student to explore the capabilities of presentation graphics programs and multimedia presentation options. Audio, video and screen casting programs will be explored.

Offered: As Needed

Prerequisites: ICT.110

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, or Certificates were applicable. General Education: Not Applicable..

General Education – Not Applicable

**ICT.205 Visual Basic Programming** 2 2 3

This course uses Visual BASIC in the Windows environment. It introduces event-driven computer programming to develop graphical user interfaces in an object-oriented environment. Topics include input/output operations, sequence, interaction, arithmetic operations, array, forms sequential files and other related topics.

Offered: Spring

Prerequisites: ICT.130 prior to or concurrently.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education: Not applicable..

General Education – Not Applicable

**ICT.210 Advanced Microcomputer Software Application** 2 2 3

In this course—designed as a continuation of ICT.110—students will be empowered and encouraged to develop advanced skills in the use of word processing, spreadsheet, database, presentation, and other software programs as they apply to the Windows environment.

Offered: Spring

Prerequisites: ICT.110;

Applicable toward graduation at Sandburg where program structure permits: Degree or Certificate: AAS, AGS, and Certificates were applicable. General Education: Not applicable..

General Education – Not Applicable

**ICT.212 Microcomputer Spreadsheet App2** 2 2 3

In this course students will apply the concepts learned in ICT 112 to realistic business problems. Advanced spreadsheet concepts will be covered, including formatting techniques, templates, functions, lists, filters, analysis tools, workgroups, and the process for importing and exporting data.

Offered: As Needed

Prerequisites: ICT.112

Applicable toward graduation at Sandburg where program structure permits: Degrees and Certifications: AAS, AGS, and Certificates where applicable. General Education: Not applicable..

General Education – Not Applicable

**ICT.214 Microcomputer Database Applications 2** 2 2 3

This course is a continuation of ICT 114. Students will explore the database operations needed to create and update files; order and search files; generate reports and labels; use memory variables for more complex data manipulation; and produce custom input and output forms.

Offered: Spring

Prerequisites: ICT.114

Applicable toward graduation at Sandburg where program structure permits: Degree and Certificate: AAS, AGS, and Certificates where applicable. General Education: Not applicable..

General Education – Not Applicable

**ICT.225 Sql/Database Application** 2 2 3

This course is designed to teach the use of Structures Query Language (SQL) to construct, modify, and maintain relational databases. Emphasis is on SQL and its uses in business applications. Hierarchical, network, and relational models are covered. Additional topics include data redundancy, data independence, security, and data integrity.

Offered: Spring

Prerequisites: Take ICT.130 concurrently.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education: Not applicable..

General Education – Not Applicable

**ICT.250 Ethical Hacking & Network Defense** 2 2 3

Hands-on Ethical Hacking and Network Defense introduces the art of ethical hacking and security testing and prepares students to be efficient security professionals. This course covers the tools and techniques that ethical hackers and security testers use to discover vulnerabilities and offers solutions to protect computer networks. In addition to learning fundamental security testing concepts, students gain practical knowledge in computer programming in documentation of security tests and in ethical and legal ramifications and discover that critical thinking skills and creativity are essential in security testing.

Offered: Fall

Prerequisites: ICT.180

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education: Not applicable..

General Education – Not Applicable

**ICT.255 Security + Fundamentals** 2 2 3

In this course, we will take an in-depth look at network security concepts and techniques, including basic security principles, establishing security baselines, and the most recent attack and defense techniques and technologies. We will learn how to harden a network to resist attacks, protect basic and advanced communications, and use cryptography and Public Key Infrastructure (PKI) to thwart attacks. We will also discuss establishing security policies and procedures and managing security efforts to prepare students.

Offered: Fall

Prerequisites: ICT.180

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates were applicable. General Education: Not applicable..

General Education – Not Applicable

**ICT.260 Introduction to Internetwork Operating S** 2 2 3

This is the second of four courses providing students with classroom and laboratory experience in current and emerging networking technology that will provide them with entry-level skills in computer networking.

Course content includes, but is not limited to, safety practices, networking terminology and protocols, network standards, working with LANs and WANs, additional discussion of the OSI model, discussion of Ethernet, Token Ring, Fiber Distributed Data Interface, TCP/IP addressing protocol, dynamic routing, and the network administrator's role and function. Emphasis is given to the use of decision-making and problem-solving techniques in applying scientific mathematical, communication and social studies skills and concepts to solve networking problems.

Instruction and training are also provided in the proper care, maintenance and use of networking software, tools, and equipment as well as the consideration of local state and federal safety, building and environmental codes and regulations.

Offered: Fall

Prerequisites: ICT.160

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable

General Education: Not Applicable..

General Education – Not Applicable

**ICT.261 Introduction to Local Area Networks** 1 4 3

This is the third of four semester courses designed to provide students with classroom and laboratory experience in current and emerging networking technology that will empower them to enter employment and/or further education and training in the computer networking field. Instruction includes, but is not limited to, safety, networking, network terminology and protocols, LAN segmentation, IPX addressing, and Fast Ethernet standards. Particular emphasis is given to the use of IPX access lists, full and half duplex Interior Gateway Routing Protocol and Virtual Local Area Networks. Application toward graduation at Sandburg where program structure permits: Degree or Certificate: AAS, AGS, and Certificates where applicable. General Education: Not applicable..

General Education – Not Applicable

**ICT.262 Introduction to Wide Area Networks** 2 2 3

this is the fourth of four semester courses designed to provide students with classroom and laboratory experience in current and emerging network technology that will empower them to enter employment and/or further education and training in the computer networking field. Instruction includes, but is not limited to, safety, networking, network terminology and protocols, WAN services, Frame Relay, and emphasis is given to the use of Frame Relay operation, use and operation of Integrated Services Digital(ISDN), and the operation and function of Point to Point Protocols.

Offered: Spring

Prerequisites: ICT.261

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education: Not applicable..

General Education – Not Applicable

**ICT.265 Linux 2** 2 2 3

This course is the second course in the Linux series. This course aligns to both the LPIC Level 1 certification and CompTIA Linux+ certification. Students will be prepared to be Linux administrators, managing, configuring and securing the Linux operating system and network.

Application toward graduation at Sandburg where program structure permits: Degree or Certificate: AAS, AGS and Certificate where applicable.

General education: Not applicable..

General Education – Not Applicable

**ICT.270 Cisco Security** 2 2 3

This course provides an introduction to the core security concepts and skills needed for the installation, troubleshooting, and monitoring of network devices to maintain the integrity, confidentiality, and availability of data and devices.

Offered: Spring

Prerequisites: ICT.260 or have CCNA Certification.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education: Not applicable..

General Education – Not Applicable

**ICT.275 Virtualization** 2 2 3

This hands-on training course explores installation, configuration, and management of a virtualized networking environment. Latest virtualization technologies and software will be used and will align to the current entry-level certification exam.

Offered: Spring

Prerequisites: ICT.182 or ICT.184

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**ICT.295 Internship** 10 2

This course is a planned and supervised occupation work experience at selected work sites using microcomputer systems. Job tasks are organized to include those of a beginning, intermediate, and advanced nature so as to provide exposure to the total operation of a microcomputer-based data processing/information system. This internship requires a minimum of 160 clock hours of on-the-job activities. Offered: Spring or Summer  
 Applicable toward graduation at Sandburg where program structure permits:  
 Degree or Certificate: AAS, AGS, and Certificates where applicable.  
 General Education: Not applicable. A GPA of 3.0 is required; This internship is also subject to availability of a work site; and, successful completion of an interview with the work site supervisor. Students who do not meet the prerequisite requirements will be required to enroll in another ICT course approved by the Associate Dean of CTHE programs..  
 General Education – Not Applicable

## INS International Studies

	Hr/Wk	Hr/Wk	Sem
	Lect/	Clin	Cr
	Disc	Lab	Hr

### Courses

**INS.100 Introduction to International Studies** 2 2

This course will enrich students with cultural knowledge and will enhance their abilities to see the world from a global perspective. It will introduce students to the culture, history, geography, politics and common linguistic phrases of the countries for which the College offers linguistic study and/or study abroad opportunities.  
 Offered: Fall  
 Applicable toward graduation at Sandburg where program structure permits:  
 Degree or Certificate: AAS, AGS and Certificates where applicable.  
 General Education – Not Applicable

**INS.155 Latin Amer Civ & Culture** 3 3

A survey of the history and cultures of Latin America with an emphasis on a particular country of interest where students will be traveling abroad. Topics covered will include the geography and environment, history, economy, art, literature and culture. Hands-on experience will be required. This course is taught overseas as part of the ICISP International Studies Program.  
 Offered: Summer  
 Applicable toward graduation at Sandburg where program structure permits:  
 Degree or Certificate: AA, AS, AAS AGS and Certificates where applicable.  
 General Education – Not Applicable

	Hr/Wk	Hr/Wk	Sem
	Lect/	Clin	Cr
	Disc	Lab	Hr

### Courses

**INS.100 Introduction to International Studies** 2 2

This course will enrich students with cultural knowledge and will enhance their abilities to see the world from a global perspective. It will introduce students to the culture, history, geography, politics and common linguistic phrases of the countries for which the College offers linguistic study and/or study abroad opportunities.  
 Offered: Fall  
 Applicable toward graduation at Sandburg where program structure permits:  
 Degree or Certificate: AAS, AGS and Certificates where applicable.  
 General Education – Not Applicable

**INS.155 Latin Amer Civ & Culture** 3 3

A survey of the history and cultures of Latin America with an emphasis on a particular country of interest where students will be traveling abroad. Topics covered will include the geography and environment, history, economy, art, literature and culture. Hands-on experience will be required. This course is taught overseas as part of the ICISP International Studies Program.  
 Offered: Summer  
 Applicable toward graduation at Sandburg where program structure permits:  
 Degree or Certificate: AA, AS, AAS AGS and Certificates where applicable.  
 General Education – Not Applicable

## ISP Independent Studies

	Hr/Wk	Hr/Wk	Sem
	Lect/	Clin	Cr
	Disc	Lab	Hr

### Courses

**ISP.199 Independent Study Project** 1-4

This course is intended for the student who has satisfactorily completed all, or most of, the course work in a specific baccalaureate oriented subject area (botany, zoology, ceramics, etc.) which is available at CSC and desires to develop a special project for further learning in that subject area. Also, it is appropriate for the pursuit of an independent study project which provides the student an opportunity to apply previously learned principles to a related area for which there are no courses available at CSC. The identification of the project, determination of nature of result(s) to be achieved, design of problem solving approach, nature of report or finished product and commitment for supervision must be worked out between the student and a particular faculty member. The project proposal is then subject to approval by the appropriate Dean and the Vice President of Instruction. If the proposal is approved, the student then must register for the course in the Admissions and Records Office. The course description title entered on the registration and transcript will reflect the topic of that particular study project. A student may earn a maximum of four semester hours of credit in ISP 199.  
 Offered: As Needed  
 Applicable toward graduation at Sandburg where program structure permits:  
 Degree or Certificate - AA, AS, AFA, AAS, AGS, and Certificates where applicable.  
 General Education – Not Applicable Elective Only



Hr/Wk Hr/Wk Sem  
Lect/ Clin Cr  
Disc Lab Hr

**KIN.106 Muscle Conditioning** 2 0.5

This course may be repeated by a student for a maximum of two semester hours of credit. This activity is designed to strengthen, tone, and stretch the major muscle groups while improving flexibility and range of motion. Exercises utilizing light weights and resistance bands will be performed to music. The length of the course is eight weeks. It is recommended that anyone over 35 years of age obtain a physical examination from a physician.

Offered: Fall or Spring  
Applicable toward graduation at Sandburg where program structure permits:  
Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.  
General Education -- Not Applicable Elective Only

**KIN.107 Zumba 1** 2 1

Zumba is a high-energy program with motivational music and dance moves from Salsa, Merengue, other Latin steps and free-form styles. It integrates some of the basic principles of aerobic, resistance, and interval training to tone and sculpt the body, burn fat, maximize caloric output, and benefit heart and mind. Students need to wear low tread shoes or dance shoes.

Offered: Fall or Spring  
Applicable toward graduation at Sandburg where program structure permits:  
Degree or Certificate: AAS, AGS and Certificates where applicable.  
General Education -- Not Applicable Elective Only

**KIN.108 Pilates 1** 2 1

Students participate in a series of stretching and strengthening exercises based on the Joseph Pilates (pil-LAH-teez) method of body conditioning. Pilates is a method of body conditioning that strengthens and tones muscles, improves posture, provides flexibility and balance, unites body and mind, and creates a more streamlined shape. A variety of equipment may be used including small ball, big ball, body bar, bands, and weights. This is a mat course, machines are not used.

Offered: Fall or Spring  
Applicable toward graduation at Sandburg where program structure permits:  
Degree or Certificate: AAS, AGS and Certificates where applicable.  
General Education -- Not Applicable Elective Only

**KIN.110 Badminton** 1 0.5

In this course the student will learn the basic skills and strategies involved in the sport of badminton. Actual participation in badminton matches will be a major emphasis. Students will study the rules, scoring procedures, and the vocabulary of the sport.

Offered: As Needed  
Applicable toward graduation at Sandburg where program structure permits:  
Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.  
General Education -- Not Applicable Elective Only

**Courses**

**ISP.199 Independent Study Project** 1-4

This course is intended for the student who has satisfactorily completed all, or most of, the course work in a specific baccalaureate oriented subject area (botany, zoology, ceramics, etc.) which is available at CSC and desires to develop a special project for further learning in that subject area. Also, it is appropriate for the pursuit of an independent study project which provides the student an opportunity to apply previously learned principles to a related area for which there are no courses available at CSC. The identification of the project, determination of nature of result(s) to be achieved, design of problem solving approach, nature of report or finished product and commitment for supervision must be worked out between the student and a particular faculty member. The project proposal is then subject to approval by the appropriate Dean and the Vice President of Instruction. If the proposal is approved, the student then must register for the course in the Admissions and Records Office. The course description title entered on the registration and transcript will reflect the topic of that particular study project. A student may earn a maximum of four semester hours of credit in ISP 199.

Offered: As Needed  
Applicable toward graduation at Sandburg where program structure permits:  
Degree or Certificate - AA, AS, AFA, AAS, AGS, and Certificates where applicable.  
General Education -- Not Applicable Elective Only

**KIN Kinesiology & Exercise**

Hr/Wk Hr/Wk Sem  
Lect/ Clin Cr  
Disc Lab Hr

**Courses**

**KIN.105 Aerobics** 1 0.5

Any student may enroll in this physical education activity course although it is recommended that anyone over 35 years of age obtain a physical examination from a physician first. Emphasis is on cardiovascular endurance and the development of muscle tone and flexibility. The method of instruction will include step aerobic routines. This course may be repeated by a student for a maximum of two semester hours of credit. The length of each course is eight weeks.

Offered: Fall or Spring  
Applicable toward graduation at Sandburg where program structure permits:  
Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.  
General Education -- Not Applicable Elective Only

**KIN.115 Introduction to Leisure Services** 3 3

This course examines the purpose and function of leisure services delivered by governmental, non-profit, and private agencies. This introductory course is a requirement for the associates's degree for transfer to the Recreation, Park and Tourism program at Western Illinois University. Assignments, projects and learning experiences are designed to give students an in-depth and comprehensive understanding of leisure; the infrastructures that have developed to provide leisure opportunities for the widest possible range of people; and expose students to the variety of careers in leisure services.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Elective Only

**KIN.120 Bowling** 2 1

In this course a student will learn basic skills and the strategies involved in the sport of bowling. Actual participation in the sport will be a major emphasis. The student will study the rules, scoring procedures, and the vocabulary of the sport. No previous bowling experience is assumed.

Offered: As Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**KIN.130 Personal Training I: Exercise Physiology** 2 2 3

This course provides an overview of seven physiological systems of the human body and the impact of exercise on these systems. It also provides standards for the development of exercise and fitness programs in relationship to the physiological adaptations of the human body, the principles and concepts of human movement, nutritional guidelines for optimum performance, and consideration of physical (age, gender, health, size) characteristics of individuals and environmental conditions. Designed for students who plan to take the certification test from the American Council on Exercise to be a certified personal fitness trainer.

Offered: Fall

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS and Certificates where applicable.

General Education – Elective Only Non Course

**KIN.131 Personal Training II: Personal Fitness** 1 2 2

Provides the academic and practical experience that will enable students to design personalized fitness training solutions for clients based on physical, health, and behavioral assessments and employing the American Council for Exercise (ACE) Integrated Fitness Model Components and Phases. Designed for students who plan to take the certification test from the American Council on Exercise (ACE) to be a certified personal fitness trainer.

Offered: Fall or Spring

Prerequisites: Take KIN.130 with a minimum grade of C

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS and Certificates where applicable.

General Education – Elective Only Non Course

**KIN.132 Personal Training III: Fitness Assessment** 1 2 2

Provides an overview of the five functional assessments as well as the physiological assessments that are necessary for the development of personalized fitness programming for clients under the American Council on Exercise (ACE) Integrated Fitness Model. Provides information on the legal and business principles for practicing personal trainers. Designed for students who plan to take the certification test from the American Council on Exercise to be a certified personal fitness trainer.

Offered: Fall or Spring

Prerequisites: Take KIN.131 with a minimum grade C;

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS and Certificates where applicable.

General Education – Elective Only Non Course

**KIN.133 Personal Train IV: Practicum** 2 1

The objective of the practicum is to integrate classroom theory and skill practice in a fitness center environment where the student can practice under the supervision of a personal fitness trainer. The student will be supervised in conducting assessments and developing and initiating fitness programs employing the American Council on Exercise (ACE) Integrated Fitness Model. This is the final course for students who plan to take the certification test from the American Council on Exercise (ACE) to be a certified personal trainer.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS and Certificates where applicable.

General Education – Elective Only Non Course

**KIN.140 Physical Fitness 1** 2 1

This physical education activity course is open to all students. It is designed as an open lab to accommodate each student's needs. Emphasis is placed in three areas of physical fitness, strength, flexibility and cardiovascular endurance. Universal equipment and cardiovascular equipment will be used to develop more effectively one's level of physical fitness. This course may be repeated for credit one time. Note: In any one academic term, a student may not enroll in more than one KIN course which requires the use of the Fitness Center.

Offered: Fall

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**KIN.141 Physical Fitness 2** 2 1

This physical education activity course parallels PED 140 and is open to all students. Emphasis is placed in three areas of physical fitness: strength, flexibility and cardiovascular endurance. Universal equipment and cardiovascular equipment will be used to develop more effectively one's level of physical fitness. This course may be repeated for credit one time. Note: In any one academic term, a student may not enroll in more than one KIN course which requires the use of the Fitness Center.

Offered: Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**KIN.142 Physical Fitness 3** 2 1

This physical education activity course parallels PED 140 and is open to all students. Emphasis is placed in three areas of physical fitness, strength, flexibility and cardiovascular endurance. Universal equipment and cardiovascular equipment will be used to develop more effectively one's level of physical fitness. This course may be repeated for credit one time. Note: In any one academic term, a student may not enroll in more than one KIN course which requires the use of the Fitness Center.

Offered: Fall

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education -- Not Applicable Elective Only

**KIN.143 Physical Fitness 4** 2 1

This physical education activity course parallels PED 140 and is open to all students. Emphasis is placed in three areas of physical fitness: strength, flexibility and cardiovascular endurance. Universal equipment and cardiovascular equipment will be used to develop more effectively one's level of physical fitness. This course may be repeated for credit one time. Note: In any one academic term, a student may not enroll in more than one KIN course which requires the use of the Fitness Center.

Offered: Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education -- Not Applicable Elective Only

**KIN.145 Physical Fitness 5** 1 0.5

This physical education activity course parallels PED 140 and is open to all students. Emphasis is placed in three areas of physical fitness, strength, flexibility and cardiovascular endurance. Universal equipment and cardiovascular equipment will be used to develop more effectively one's level of physical fitness. This course may be repeated for credit one time. Note: In any one academic term, a student may not enroll in more than one KIN course which requires the use of the Fitness Center.

Offered: Fall or Spring or Summer

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education -- Not Applicable Elective Only

**KIN.155 Beginning Swimming** 2 1

Many physical education activity courses are available and open to all students. However, due to limitations of space and the fact that the offering of some courses is rare, a detailed course description is not presented for this class.

Offered: As Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS and Certificates where applicable.

General Education -- Not Applicable Elective Only

**KIN.156 Intermediate Swimming** 2 1

Many physical education activity courses are available and open to all students. However, due to limitations of space and the fact that the offering of some courses is rare, a detailed course description is not presented for this class.

Offered: As Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS and Certificates where applicable.

General Education -- Not Applicable Elective Only

**KIN.157 Advanced Swimming** 2 1

Many physical education activity courses are available and open to all students. However, due to limitations of space and the fact that the offering of some courses is rare, a detailed course description is not presented for this class.

Offered: As Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS and Certificates where applicable.

General Education -- Not Applicable Elective Only

**KIN.158 Lifeguard Training** 2 1

Many physical education activity courses are available and open to all students. However, due to limitations of space and the fact that the offering of some courses is rare, a detailed course description is not presented for this class.

Offered: As Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS and Certificates where applicable.

General Education -- Not Applicable Elective Only

**KIN.161 Tennis 1** 1 0.5

Many physical education activity courses are available and open to all students. However, due to limitations of space and the fact that the offering of some courses is rare, a detailed course description is not presented for this class.

Offered: As Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS and Certificates where applicable.

General Education -- Not Applicable Elective Only

**KIN.162 Tennis 2** 1 0.5

Many physical education activity courses are available and open to all students. However, due to limitations of space and the fact that the offering of some courses is rare, a detailed course description is not presented for this class.

Offered: As Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS and Certificates where applicable.

General Education -- Not Applicable Elective Only

**KIN.171 Volleyball 1** 1 0.5

In this course the student will learn the basic skills and strategies involved in the sport of volleyball. Actual participation in volleyball games will be a major emphasis. Students will study the rules, scoring procedures, and the vocabulary of the sport.

Offered: As Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**KIN.172 Volleyball 2** 1 0.5

Many physical education activity courses are available and open to all students. However, due to limitations of space and the fact that the offering of some courses is rare, a detailed course description is not presented for this class.

Offered: As Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS and Certificates where applicable.

General Education – Not Applicable Elective Only

**KIN.180 Weight Training** 2 1

The purpose of this course is to teach the basic knowledge and concepts in the use of resistive exercises designed to increase muscular strength and endurance. Students will participate in an individual weight-training program.

Offered: As Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**KIN.193 Golf** 1 0.5

The student will receive instruction in the basic rules and skills of golf. There will be a considerable amount of time spent actually on the golf course. This course is suitable for both beginners and experienced golfers. No prior knowledge of the sport is assumed.

Offered: Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**KIN.200 Foundations of Physical Education** 3 3

This course is a study of the development of physical education programs in K-12 schools. The student will also learn about the possibilities of professional opportunities in the area of physical education and the role of sports in non-school (recreational) settings. Internet assignments will be required.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**KIN.202 Sports in Society** 3 3

In this course students will study current sports-related controversies and issues from a global perspective. The role of various sports and their historical influence on American society will be emphasized. Included will be the study of the effects of related social factors such as gender, race, sexuality, nationalism, and media on the evolution of the sports culture.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**KIN.205 Coaching Volleyball** 2 2

This course is designed to teach the student who wants to coach volleyball the procedures that will effectively develop the skills of volleyball for athletes. The specific areas covered include: assessing current performances, alternate teaching methods, motivating the athlete, guidelines for conducting a competitive program, and basic training and nutrition.

Offered: As Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**KIN.210 Coach Football Tech & Tact Skl** 3 3

In this course the student will learn how to teach the skills, strategies, techniques, and tactics of football. Topics studied include the games approach to coaching as an alternative to drills-based coaching. Students will develop a season plan and a series of practice plans. The ability to successfully coach during games will be emphasized. This course is suitable for persons who are interested in coaching at the club, high school, or college levels. Students will have the opportunity to earn coaching certification through the American Sport Education Program (ASEP)..

General Education – Not Applicable Elective Only Non Course

**KIN.215 Coaching Baseball Tech and Tac** 3 3

In this course the student will learn how to teach the skills, strategies, techniques, and tactics of baseball. Topics studied include the games-approach to coaching as an alternative to drills-based coaching. Students will develop a season plan and a series of practice plans. The ability to successfully coach during games will be emphasized. This course is suitable for persons who are interested in coaching at the club, high school, or college levels. Students will have the opportunity to earn coaching certification through the American Sport Education Program (ASEP)..

General Education – Not Applicable Elective Only Non Course

**KIN.220 Coaching Basketball** 2 2

This course presents the theory and techniques of coaching basketball. It is open to interested students regardless of their vocational plans. The student is provided an opportunity to develop a personal approach to coaching and teaching techniques. Topics include offensive/defensive strategies, teaching specific skills, motivational techniques, and general management skills needed by basketball coaches.

Offered: Fall or Spring or Summer  
 Applicable toward graduation at Sandburg where program structure permits:  
 Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.  
 General Education – Not Applicable Elective Only

**KIN.221 Basketball 1** 1 0.5

In this course the student will learn the basic skills and strategies involved in the sport of basketball. Actual participation in basketball games will be a major emphasis. The student will learn the procedures of scoring, the rules, and the vocabulary of the sport.

Offered: As Needed  
 Applicable toward graduation at Sandburg where program structure permits:  
 Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.  
 General Education – Not Applicable Elective Only

**KIN.222 Basketball 2** 1 0.5

General Education – Not Applicable Elective Only Non Course

**KIN.230 Sports Officiating** 2 2

This course is designed to assist students in interpreting the rules and regulations of the National Federation of State High School Athletic Association. The opportunity to learn and practice proper officiating mechanics is also provided through actual participation. Sports especially emphasized in the course are basketball and volleyball.

Offered: As Needed  
 Applicable toward graduation at Sandburg where program structure permits:  
 Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.  
 General Education – Not Applicable Elective Only

**KIN.241 Softball 1** 1 0.5

In this course the student will learn the basic skills and strategies involved in the sport of softball. Actual participation in softball games will be a major emphasis. The student will learn the procedures of scoring, the rules, and the vocabulary of the sport.

Offered: As Needed  
 Applicable toward graduation at Sandburg where program structure permits:  
 Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.  
 General Education – Not Applicable Elective Only

**KIN.242 Softball 2** 1 0.5

General Education – Not Applicable Elective Only Non Course

**KIN.260 Coaching Principles & Sports First Aid** 3 3

Students enrolled in this course will study the general principles underlying the profession of coaching athletic teams and individual athletes. This course will address the essential elements of successful coaching from proven coaching techniques to effective risk management. Students will also be taught how to be safe, capable, and effective as first responders to injured athletes. Students will have the opportunity to earn certification through the American Sport Education Program. Internet assignments may be required.

Offered: Fall or Spring or Summer  
 Applicable toward graduation at Sandburg where program structure permits:  
 Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.  
 General Education – Not Applicable Elective Only

**KIN.280 Athletic Injuries** 3 3

This is an introductory course in the study of sports medicine. Included are topics which address the treatment and rehabilitation of athletic injuries, human and environmental factors in sport injury, accident prevention and injury control, and safety factors in sport activities. Students will also study the operation, maintenance, and administration of a typical athletic training room.

Offered: Spring or as Needed  
 Prerequisites: KIN.200, KIN.260 and HTH.130; BIO.111 is a recommended preparatory course  
 Applicable toward graduation at Sandburg where program structure permits:  
 Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.  
 General Education – Not Applicable Elective Only

Hr/Wk	Hr/Wk	Sem
Lect/	Clin	Cr
Disc	Lab	Hr

**Courses**

**KIN.105 Aerobics** 1 0.5

Any student may enroll in this physical education activity course although it is recommended that anyone over 35 years of age obtain a physical examination from a physician first. Emphasis is on cardiovascular endurance and the development of muscle tone and flexibility. The method of instruction will include step aerobic routines. This course may be repeated by a student for a maximum of two semester hours of credit. The length of each course is eight weeks.

Offered: Fall or Spring  
 Applicable toward graduation at Sandburg where program structure permits:  
 Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.  
 General Education – Not Applicable Elective Only



**KIN.106 Muscle Conditioning** 2 0.5

This course may be repeated by a student for a maximum of two semester hours of credit. This activity is designed to strengthen, tone, and stretch the major muscle groups while improving flexibility and range of motion. Exercises utilizing light weights and resistance bands will be performed to music. The length of the course is eight weeks. It is recommended that anyone over 35 years of age obtain a physical examination from a physician.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**KIN.107 Zumba 1** 2 1

Zumba is a high-energy program with motivational music and dance moves from Salsa, Merengue, other Latin steps and free-form styles. It integrates some of the basic principles of aerobic, resistance, and interval training to tone and sculpt the body, burn fat, maximize caloric output, and benefit heart and mind. Students need to wear low tread shoes or dance shoes.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable Elective Only

**KIN.108 Pilates 1** 2 1

Students participate in a series of stretching and strengthening exercises based on the Joseph Pilates (pil-LAH-teez) method of body conditioning.

Pilates is a method of body conditioning that strengthens and tones muscles, improves posture, provides flexibility and balance, unites body and mind, and creates a more streamlined shape. A variety of equipment may be used including small ball, big ball, body bar, bands, and weights. This is a mat course, machines are not used.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable Elective Only

**KIN.110 Badminton** 1 0.5

In this course the student will learn the basic skills and strategies involved in the sport of badminton. Actual participation in badminton matches will be a major emphasis. Students will study the rules, scoring procedures, and the vocabulary of the sport.

Offered: As Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**KIN.115 Introduction to Leisure Services** 3 3

This course examines the purpose and function of leisure services delivered by governmental, non-profit, and private agencies. This introductory course is a requirement for the associates's degree for transfer to the Recreation, Park and Tourism program at Western Illinois University. Assignments, projects and learning experiences are designed to give students an in-depth and comprehensive understanding of leisure; the infrastructures that have developed to provide leisure opportunities for the widest possible range of people; and expose students to the variety of careers in leisure services.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Elective Only

**KIN.120 Bowling** 2 1

In this course a student will learn basic skills and the strategies involved in the sport of bowling. Actual participation in the sport will be a major emphasis. The student will study the rules, scoring procedures, and the vocabulary of the sport. No previous bowling experience is assumed.

Offered: As Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**KIN.130 Personal Training I: Exercise Physiology** 2 2 3

This course provides an overview of seven physiological systems of the human body and the impact of exercise on these systems. It also provides standards for the development of exercise and fitness programs in relationship to the physiological adaptations of the human body, the principles and concepts of human movement, nutritional guidelines for optimum performance, and consideration of physical (age, gender, health, size) characteristics of individuals and environmental conditions. Designed for students who plan to take the certification test from the American Council on Exercise to be a certified personal fitness trainer.

Offered: Fall

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS and Certificates where applicable.

General Education – Elective Only Non Course

**KIN.131 Personal Training II: Personal Fitness** 1 2 2

Provides the academic and practical experience that will enable students to design personalized fitness training solutions for clients based on physical, health, and behavioral assessments and employing the American Council for Exercise (ACE) Integrated Fitness Model Components and Phases. Designed for students who plan to take the certification test from the American Council on Exercise (ACE) to be a certified personal fitness trainer.

Offered: Fall or Spring

Prerequisites: Take KIN.130 with a minimum grade of C

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS and Certificates where applicable.

General Education – Elective Only Non Course

**KIN.132 Personal Training III: Fitness Assessment** 1 2 2

Provides an overview of the five functional assessments as well as the physiological assessments that are necessary for the development of personalized fitness programming for clients under the American Council on Exercise (ACE) Integrated Fitness Model. Provides information on the legal and business principles for practicing personal trainers. Designed for students who plan to take the certification test from the American Council on Exercise to be a certified personal fitness trainer.

Offered: Fall or Spring

Prerequisites: Take KIN.131 with a minimum grade C;

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS and Certificates where applicable.

General Education – Elective Only Non Course

**KIN.133 Personal Train IV: Practicum** 2 1

The objective of the practicum is to integrate classroom theory and skill practice in a fitness center environment where the student can practice under the supervision of a personal fitness trainer. The student will be supervised in conducting assessments and developing and initiating fitness programs employing the American Council on Exercise (ACE) Integrated Fitness Model. This is the final course for students who plan to take the certification test from the American Council on Exercise (ACE) to be a certified personal trainer.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS and Certificates where applicable.

General Education – Elective Only Non Course

**KIN.140 Physical Fitness 1** 2 1

This physical education activity course is open to all students. It is designed as an open lab to accommodate each student's needs. Emphasis is placed in three areas of physical fitness, strength, flexibility and cardiovascular endurance. Universal equipment and cardiovascular equipment will be used to develop more effectively one's level of physical fitness. This course may be repeated for credit one time. Note: In any one academic term, a student may not enroll in more than one KIN course which requires the use of the Fitness Center.

Offered: Fall

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**KIN.141 Physical Fitness 2** 2 1

This physical education activity course parallels PED 140 and is open to all students. Emphasis is placed in three areas of physical fitness: strength, flexibility and cardiovascular endurance. Universal equipment and cardiovascular equipment will be used to develop more effectively one's level of physical fitness. This course may be repeated for credit one time. Note: In any one academic term, a student may not enroll in more than one KIN course which requires the use of the Fitness Center.

Offered: Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**KIN.142 Physical Fitness 3** 2 1

This physical education activity course parallels PED 140 and is open to all students. Emphasis is placed in three areas of physical fitness, strength, flexibility and cardiovascular endurance. Universal equipment and cardiovascular equipment will be used to develop more effectively one's level of physical fitness. This course may be repeated for credit one time. Note: In any one academic term, a student may not enroll in more than one KIN course which requires the use of the Fitness Center.

Offered: Fall

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**KIN.143 Physical Fitness 4** 2 1

This physical education activity course parallels PED 140 and is open to all students. Emphasis is placed in three areas of physical fitness: strength, flexibility and cardiovascular endurance. Universal equipment and cardiovascular equipment will be used to develop more effectively one's level of physical fitness. This course may be repeated for credit one time. Note: In any one academic term, a student may not enroll in more than one KIN course which requires the use of the Fitness Center.

Offered: Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**KIN.145 Physical Fitness 5** 1 0.5

This physical education activity course parallels PED 140 and is open to all students. Emphasis is placed in three areas of physical fitness, strength, flexibility and cardiovascular endurance. Universal equipment and cardiovascular equipment will be used to develop more effectively one's level of physical fitness. This course may be repeated for credit one time. Note: In any one academic term, a student may not enroll in more than one KIN course which requires the use of the Fitness Center.

Offered: Fall or Spring or Summer

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**KIN.155 Beginning Swimming** 2 1

Many physical education activity courses are available and open to all students. However, due to limitations of space and the fact that the offering of some courses is rare, a detailed course description is not presented for this class.

Offered: As Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS and Certificates where applicable.

General Education – Not Applicable Elective Only

**KIN.156 Intermediate Swimming** 2 1

Many physical education activity courses are available and open to all students. However, due to limitations of space and the fact that the offering of some courses is rare, a detailed course description is not presented for this class.

Offered: As Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS and Certificates where applicable.

General Education – Not Applicable Elective Only

**KIN.157 Advanced Swimming** 2 1

Many physical education activity courses are available and open to all students. However, due to limitations of space and the fact that the offering of some courses is rare, a detailed course description is not presented for this class.

Offered: As Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS and Certificates where applicable.

General Education – Not Applicable Elective Only

**KIN.158 Lifeguard Training** 2 1

Many physical education activity courses are available and open to all students. However, due to limitations of space and the fact that the offering of some courses is rare, a detailed course description is not presented for this class.

Offered: As Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS and Certificates where applicable.

General Education – Not Applicable Elective Only

**KIN.161 Tennis 1** 1 0.5

Many physical education activity courses are available and open to all students. However, due to limitations of space and the fact that the offering of some courses is rare, a detailed course description is not presented for this class.

Offered: As Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS and Certificates where applicable.

General Education – Not Applicable Elective Only

**KIN.162 Tennis 2** 1 0.5

Many physical education activity courses are available and open to all students. However, due to limitations of space and the fact that the offering of some courses is rare, a detailed course description is not presented for this class.

Offered: As Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS and Certificates where applicable.

General Education – Not Applicable Elective Only

**KIN.171 Volleyball 1** 1 0.5

In this course the student will learn the basic skills and strategies involved in the sport of volleyball. Actual participation in volleyball games will be a major emphasis. Students will study the rules, scoring procedures, and the vocabulary of the sport.

Offered: As Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**KIN.172 Volleyball 2** 1 0.5

Many physical education activity courses are available and open to all students. However, due to limitations of space and the fact that the offering of some courses is rare, a detailed course description is not presented for this class.

Offered: As Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS and Certificates where applicable.

General Education – Not Applicable Elective Only

**KIN.180 Weight Training** 2 1

The purpose of this course is to teach the basic knowledge and concepts in the use of resistive exercises designed to increase muscular strength and endurance. Students will participate in an individual weight-training program.

Offered: As Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**KIN.193 Golf** 1 0.5

The student will receive instruction in the basic rules and skills of golf. There will be a considerable amount of time spent actually on the golf course. This course is suitable for both beginners and experienced golfers. No prior knowledge of the sport is assumed.

Offered: Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**KIN.200 Foundations of Physical Education** 3 3

This course is a study of the development of physical education programs in K-12 schools. The student will also learn about the possibilities of professional opportunities in the area of physical education and the role of sports in non-school (recreational) settings. Internet assignments will be required.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**KIN.202 Sports in Society** 3 3

In this course students will study current sports-related controversies and issues from a global perspective. The role of various sports and their historical influence on American society will be emphasized. Included will be the study of the effects of related social factors such as gender, race, sexuality, nationalism, and media on the evolution of the sports culture.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**KIN.205 Coaching Volleyball** 2 2

This course is designed to teach the student who wants to coach volleyball the procedures that will effectively develop the skills of volleyball for athletes. The specific areas covered include: assessing current performances, alternate teaching methods, motivating the athlete, guidelines for conducting a competitive program, and basic training and nutrition.

Offered: As Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**KIN.210 Coach Football Tech & Tact Skl** 3 3

In this course the student will learn how to teach the skills, strategies, techniques, and tactics of football. Topics studied include the games approach to coaching as an alternative to drills-based coaching. Students will develop a season plan and a series of practice plans. The ability to successfully coach during games will be emphasized. This course is suitable for persons who are interested in coaching at the club, high school, or college levels. Students will have the opportunity to earn coaching certification through the American Sport Education Program (ASEP)..

General Education – Not Applicable Elective Only Non Course

**KIN.215 Coaching Baseball Tech and Tac** 3 3

In this course the student will learn how to teach the skills, strategies, techniques, and tactics of baseball. Topics studied include the games approach to coaching as an alternative to drills-based coaching. Students will develop a season plan and a series of practice plans. The ability to successfully coach during games will be emphasized. This course is suitable for persons who are interested in coaching at the club, high school, or college levels. Students will have the opportunity to earn coaching certification through the American Sport Education Program (ASEP)..

General Education – Not Applicable Elective Only Non Course

**KIN.220 Coaching Basketball** 2 2

This course presents the theory and techniques of coaching basketball. It is open to interested students regardless of their vocational plans. The student is provided an opportunity to develop a personal approach to coaching and teaching techniques. Topics include offensive/defensive strategies, teaching specific skills, motivational techniques, and general management skills needed by basketball coaches.

Offered: Fall or Spring or Summer

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**KIN.221 Basketball 1** 1 0.5

In this course the student will learn the basic skills and strategies involved in the sport of basketball. Actual participation in basketball games will be a major emphasis. The student will learn the procedures of scoring, the rules, and the vocabulary of the sport.

Offered: As Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**KIN.222 Basketball 2** 1 0.5

General Education – Not Applicable Elective Only Non Course

**KIN.230 Sports Officiating** 2 2

This course is designed to assist students in interpreting the rules and regulations of the National Federation of State High School Athletic Association. The opportunity to learn and practice proper officiating mechanics is also provided through actual participation. Sports especially emphasized in the course are basketball and volleyball.

Offered: As Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**KIN.241 Softball 1** 1 0.5

In this course the student will learn the basic skills and strategies involved in the sport of softball. Actual participation in softball games will be a major emphasis. The student will learn the procedures of scoring, the rules, and the vocabulary of the sport.

Offered: As Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**KIN.242 Softball 2** 1 0.5

General Education – Not Applicable Elective Only Non Course

**KIN.260 Coaching Principles & Sports First Aid** 3 3

Students enrolled in this course will study the general principles underlying the profession of coaching athletic teams and individual athletes. This course will address the essential elements of successful coaching from proven coaching techniques to effective risk management. Students will also be taught how to be safe, capable, and effective as first responders to injured athletes. Students will have the opportunity to earn certification through the American Sport Education Program. Internet assignments may be required.

Offered: Fall or Spring or Summer

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**KIN.280 Athletic Injuries** 3 3

This is an introductory course in the study of sports medicine. Included are topics which address the treatment and rehabilitation of athletic injuries, human and environmental factors in sport injury, accident prevention and injury control, and safety factors in sport activities. Students will also study the operation, maintenance, and administration of a typical athletic training room.

Offered: Spring or as Needed

Prerequisites: KIN.200, KIN.260 and HTH.130; BIO.111 is a recommended preparatory course

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

## MAT Mathematics

**MAT.080 Basic Mathematics W/Geometry** 4 4

This course is designed for the student who is in need of proficiency in basic arithmetic processes with integrated geometry. Topics to be covered in this course include: basic operations and problem solving with whole numbers, fractions, and decimals; ratio, rate and proportion; percent; geometry and measurement; statistics real number system; and basic algebraic concepts. This course will require the use of an online computer assisted program both in and outside of class time.

Offered: Fall or Spring or Summer

Prerequisites: The appropriate placement exam score and a high school diploma or equivalent.

Applicable toward graduation at Sandburg where program structure permits; Not applicable..

General Education – Not Applicable

**MAT.083 Beginning Algebra W Geometry** 4 4

This course is designed as an introductory algebra course with integrated geometry. Topics to be covered in this course include: real number system; simplifying and evaluating algebraic expressions; solving linear equations and inequalities; graphing linear equations and inequalities; solving systems of linear equations; introduction to function; exponents; roots; polynomials; and factoring techniques. This course will require the use of an online computer assisted program both in and outside of class time..

General Education – Not Applicable

**MAT.086 Math Literacy** 6 6

Math Literacy is a preparatory course for college-level general education mathematics and statistics courses that includes content that is relevant for non-STEM majors. Topics in this course are presented in context and focus on numeracy, functions, and modeling. In addition to algebra topics, this course promotes data literacy and incorporates reading, writing and technology. Students will be required to participate in group work and use an online computer assisted program outside of classroom time.

Offered: Fall or Spring or Summer

Prerequisites: The appropriate placement exam score or MAT.080 or Mat.090 with a grade of C or better is required to enroll in this course.

Applicable toward graduation at Sandburg where program structure permits: Not applicable.

General Education – Not Applicable

**MAT.090 Arithmetic Fundamentals** 3 1-3

This is a basic foundation course in computational mathematics offered for students whose current skills in elementary arithmetic need improvement. The specific topics included are fractions and decimals; percentages, proportions, and ratios; metric and English measurements; and the fundamentals of integer arithmetic and elementary algebraic operations. This course serves as a basis for students who plan to study business mathematics, algebra, or technical mathematics. This course may be repeated three times (four total) by students needing additional help. Both self-paced and lecture sections are available.

Offered: Fall or Spring or Summer

Prerequisites: High school graduation or GED equivalency

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: Not Applicable.

General Education – Not Applicable

**MAT.093 Fundamentals of Algebra** 3 1-3

This course is designed for students who have not had algebra in high school or who need a review of basic algebraic concepts. Topics covered in this course include properties of integers, real, and rational numbers; polynomials; and rational and quadratic expressions. Techniques for solving problems involving these types of expressions are also covered. This course may be repeated three times (four total) by students needing additional help.

Offered: Fall or Spring or Summer

Prerequisites: The appropriate placement exam score or completion of MAT.090 with a grade of C or better

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: Not Applicable.

General Education – Not Applicable



**MAT.095 Geometry and Trigonometry Review** 3 1-3

This course is intended for persons who did not take geometry or trigonometry in high school as well as those who did take those subjects but now need a review. While it may not be a required prerequisite for other courses, it is very helpful for students planning to take the technical math series. The topics covered include angles, triangles and quadrilaterals; basic geometric measures and properties; the circle and solid geometric figures; the number and changing between degrees and radians; tangent of an angle; the sine and cosine of an angle; the Pythagorean theorem; and solving application problems involving right triangles. This course may be repeated three times (four total) by students needing additional help.

Offered: Fall or Spring or Summer

Prerequisites: MAT.093 with a grade of C or better

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: Not Applicable.

General Education – Not Applicable

**MAT.096 Arithmetic Fundamentals** 3 1-3

This is a basic foundation course in computational mathematics offered for students whose current skills in elementary arithmetic need improvement. The specific topics included are fractions and decimals, percentages, proportions, and ratios; metric and English measurements, and the fundamentals of integer arithmetic and elementary algebraic operations. This course serves as a basis for students who plan to study business mathematics, algebra, or technical mathematics. This course may be repeated three times (four total) by students needing additional help. This course is recommended for students who score below 12.9 on the numerical skills section of the TABE test. Student is required to have a High School Diploma or GED equivalency.

Offered: Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: Not Applicable.

General Education – Not Applicable

**MAT.097 Geometry** 3 3

This course will introduce students to undefined terms, axioms and postulates, and theorems. Specific topics include plane and solid geometry, properties of congruence, similarity, ratio and proportion, area, perimeter, and volume of basic figures. Constructions and the writing of inductive, deductive, and indirect proofs will be included.

Offered: As Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: Not Applicable.

General Education – Not Applicable

**MAT.098 Gen Ed Preparatory Math** 4 4

This course is an alternate to MAT 099 Intermediate Algebra for students who are non-STEM (Science Technology Engineering and Math) majors who plan to take MAT 109 Concepts of Math and/or MAT 110 Statistics (Note: STEM and education majors cannot use this to substitute for Intermediate Algebra.) The course focuses on problem solving, critical thinking, and data analysis. Linear equations, quadratics, functions, basic exponents and factoring will be included with modeling and some basic probability and statistics. Group work and projects may be part of the course. The use of technology will be encouraged.

Offered: Fall or Spring

Prerequisites: Appropriate placement exam score or MAT.083 with a grade of C or better.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: Not applicable.

General Education – Not Applicable

**MAT.099 Intermediate Algebra** 4 4

This course builds upon a student's early preparation in algebra to provide those skills needed in further study of mathematics, science, or related fields. Topics include the study of the properties of the real number system, polynomials, rational expressions, first-degree equations and inequalities, exponents and radicals, quadratic equations, graphs, functions, systems of linear equations, and logarithms.

Offered: Fall or Spring or Summer

Prerequisites: One year of high school algebra and one year of high school geometry with grades of C or better; or the appropriate placement exam score; or take MAT.083 with a grade of C or better.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**MAT.101 Technical Mathematics 1** 3 3

This course is designed to serve students enrolled in vocational or technical programs. The emphasis is on skill-building and the applications of mathematics. Topics studied include a review of arithmetic, measurement, approximations, basic algebra, applied geometry, and right triangle trigonometry. Scientific calculators are used and are required of students.

Offered: Fall

Prerequisites: Appropriate placement exam score or MAT.080 with a grade of C or better.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Math AGS Only

**MAT.102 Technical Mathematics 2** 3 3

This course is a continuation of MAT 101. Topics include linear functions and graphs, laws of sines and cosines, systems of linear equation, exponents and radicals, complex numbers, quadratic equations, logarithms, and other topics from trigonometry. The emphasis is on skill-building and applications of mathematics. A scientific calculator is needed.

Offered: Fall or Spring

Prerequisites: MAT.101

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Math

**MAT.109 Concepts of Mathematics** 3 3

This course is designed to fulfill general education requirements. In the development of topics, the focus shall be on mathematical reasoning and the solving of real-life problems. Calculators and computers will be used regularly. The units studied include probability and counting techniques, logic and set theory, the mathematics of finance, and statistics. Included in the approach to these topics shall be the use of mathematical models and group projects.

Offered: Fall or Spring or Summer

Prerequisites: Two years of high school algebra and one year of high school geometry with grades of C or better; or an ACT Math score of 25; or a score of 4 or 5 on the PARCC exam; or the appropriate placement exam score; or take MAT.086 with a grade of C or better; or MAT.098 with a grade of C or better; or MAT.099 with a grade of C or better.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. M1 904*

General Education – Math

**MAT.110 General Education Statistics** 3 3

Using simulations and data collection, students will learn how to organize and interpret data. Real-life examples will serve as the focus as students develop mathematical reasoning skills and the ability to read and interpret statistical reports. Calculators and computers will be used extensively. Topics include descriptive statistics (graphs, averages, variability), elementary probability theory, probability distributions, hypothesis testing of a single parameter, and correlation and linear regression.

Offered: Spring or Summer

Prerequisites: Two years of high school algebra and one year of high school geometry with grades of C or better; or an ACT Math score of 25; or a score of 4 or 5 on the PARCC exam; or appropriate placement exam score; or take MAT.086 with a grade of C or better or MAT.098 with a grade of C or better or MAT.099 with a grade of C or better.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. M1 902*

General Education – Math

**MAT.111 Mathematics for Elementary Teaching 1** 3 3

This course is designed primarily for those students who intend to become elementary school teachers. The emphasis in this course is on problem solving, logic, and mathematical reasoning. The topics studied include sets, logic and reasoning, number bases, modular arithmetic, combinations, and probability.

Offered: Fall

Prerequisites: MAT.099 with a grade of C or better or two years of high school algebra and one year of high school geometry with minimum grades of C and a satisfactory score on the department Gateway exam.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**MAT.112 Math for Elementary Teaching 2** 3 3

This course is designed primarily for those students planning to become elementary school teachers. The course content includes the study of the properties of the major subsets of real numbers, elementary number theory, the metric system and measurement, and selected topics from descriptive statistics and geometry. Problem solving will be emphasized and calculators will be used extensively.

Offered: Spring

Prerequisites: MAT.111 with a grade of C or better and a satisfactory score on the department Gateway exam.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. M1 903*

General Education – Math

**MAT.130 College Algebra** 4 4

This pre-calculus course is appropriate for students whose major interest is in mathematics, science, engineering, or other disciplines requiring a strong preparation in mathematics. The content of this course includes real number properties, linear equations and inequalities, the algebra of functions, exponents, logarithms, systems of linear equations, and sequences and series. Students intending to enter the calculus sequence (MAT 240-242) should also enroll in MAT 140 (Trigonometry).

Offered: Fall or Spring or Summer

Prerequisites: Take MAT.099 with a grade of C or better or two years of high school algebra and one year of geometry with grades of C or better, and a satisfactory score on the department's Gateway Examination.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**MAT.131 Finite Mathematics** 3 3

This course is designed for students intending to pursue a baccalaureate degree in an area of business or the social sciences. Topics include the study of the mathematics of finance, matrices, systems of linear equations and inequalities, linear programming, combinations, probability, and Markov Chains.

Offered: Fall or Summer

Prerequisites: MAT.130 with a grade of C or better

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. M1 906*

General Education – Math

**MAT.132 Calculus for Business Or Social Science** 3 3

In this course the major ideas of calculus differentiation and integration are developed in an intuitive manner. The emphasis is on skill building and on applications of calculus to the areas of business, economics, and social science. The types of functions studied include polynomials, rational, exponential, and logarithmic. Multivariable content includes applications of partial derivatives.

Offered: Spring or Summer

Prerequisites: MAT.130 with a grade of C or better

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. M1 900*

General Education – Math

**MAT.140 Trigonometry** 3 3

This pre-calculus course is designed for students whose primary interest is in mathematics, science, or engineering. Students intending to complete the calculus sequence (MAT 240-242) should also enroll in MAT 130. Topics included are in-depth study of trigonometry functions, graphs, identities, trigonometric equations, oblique triangles, complex numbers, and DeMoivre's Theorem.

Offered: Fall

Prerequisites: MAT.130 with a grade of C or better or concurrent enrollment

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**MAT.210 Statistics** 3 3

This course is appropriate for those pursuing careers in the social or natural sciences or in business. Included are units on descriptive statistics, probability theory, random samples, hypothesis testing, regression and correlation, chi-square tests, and an introduction to ANOVA.

Offered: Spring or Summer

Prerequisites: MAT.130 with a grade of C or better

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. M1 902*

General Education – Math

**MAT.240 Calculus With Analytic Geometry 1** 5 5

The calculus sequence is intended for those students whose major interest is in mathematics, engineering, or the physical sciences. Major topics covered include a review of lines and functions, limits, the derivative, applications of differentiation, the definite integral, and selected topics from analytic geometry.

Offered: Spring

Prerequisites: MAT.130 and MAT.140, with a grade of C or better in each.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. M1 900*

General Education – Math

**MAT.241 Calculus With Analytic Geometry 2** 5 5

This course is a continuation of MAT 240. Topics covered include applications and techniques of integration, inverse trigonometric functions, improper integrals, polar coordinates, parametric equations, conic sections, infinite series, and Taylor series. Additional topics from analytic geometry may be included.

Offered: Fall

Prerequisites: MAT.240 with a grade of C or better.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. M1 900*

General Education – Math

**MAT.242 Calculus With Analytic Geometry 3** 4 4

This course is a continuation of MAT 241. Topics covered include vectors in 2-space and 3-space, vector-valued functions, partial derivatives and applications, and applications involving multiple variable integration.

Offered: Spring

Prerequisites: MAT.241 with a grade of C or better

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. M1 900*

General Education – Math

**MAT.260 Differential Equations** 3 3

This course is suitable for students pursuing a career in engineering, physical science, or mathematics. Included are these topics involving solutions to ordinary differential equations: first and second order equations; linear equations; systems of linear equations; Laplace transforms; applications; numerical approximations.

Offered: As Needed

Prerequisites: MAT.242 with a grade of C or better

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

Hr/Wk	Hr/Wk	Sem
Lect/	Clin	Cr
Disc	Lab	Cr

## Courses

### **MAT.080 Basic Mathematics W/Geometry** 4 4

This course is designed for the student who is in need of proficiency in basic arithmetic processes with integrated geometry. Topics to be covered in this course include: basic operations and problem solving with whole numbers, fractions, and decimals; ratio, rate and proportion; percent; geometry and measurement; statistics real number system; and basic algebraic concepts. This course will require the use of an online computer assisted program both in and outside of class time.

Offered: Fall or Spring or Summer

Prerequisites: The appropriate placement exam score and a high school diploma or equivalent.

Applicable toward graduation at Sandburg where program structure permits; Not applicable.

General Education – Not Applicable

### **MAT.083 Beginning Algebra W Geometry** 4 4

This course is designed as an introductory algebra course with integrated geometry. Topics to be covered in this course include: real number system; simplifying and evaluating algebraic expressions; solving linear equations and inequalities; graphing linear equations and inequalities; solving systems of linear equations; introduction to function; exponents; roots; polynomials; and factoring techniques. This course will require the use of an online computer assisted program both in and outside of class time..

General Education – Not Applicable

### **MAT.086 Math Literacy** 6 6

Math Literacy is a preparatory course for college-level general education mathematics and statistics courses that includes content that is relevant for non-STEM majors. Topics in this course are presented in context and focus on numeracy, functions, and modeling. In addition to algebra topics, this course promotes data literacy and incorporates reading, writing and technology. Students will be required to participate in group work and use an online computer assisted program outside of classroom time.

Offered: Fall or Spring or Summer

Prerequisites: The appropriate placement exam score or MAT.080 or Mat.090 with a grade of C or better is required to enroll in this course.

Applicable toward graduation at Sandburg where program structure permits: Not applicable.

General Education – Not Applicable

### **MAT.090 Arithmetic Fundamentals** 3 1-3

This is a basic foundation course in computational mathematics offered for students whose current skills in elementary arithmetic need improvement. The specific topics included are fractions and decimals; percentages, proportions, and ratios; metric and English measurements; and the fundamentals of integer arithmetic and elementary algebraic operations. This course serves as a basis for students who plan to study business mathematics, algebra, or technical mathematics. This course may be repeated three times (four total) by students needing additional help. Both self-paced and lecture sections are available.

Offered: Fall or Spring or Summer

Prerequisites: High school graduation or GED equivalency

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: Not Applicable.

General Education – Not Applicable

### **MAT.093 Fundamentals of Algebra** 3 1-3

This course is designed for students who have not had algebra in high school or who need a review of basic algebraic concepts. Topics covered in this course include properties of integers, real, and rational numbers; polynomials; and rational and quadratic expressions. Techniques for solving problems involving these types of expressions are also covered. This course may be repeated three times (four total) by students needing additional help.

Offered: Fall or Spring or Summer

Prerequisites: The appropriate placement exam score or completion of MAT.090 with a grade of C or better

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: Not Applicable.

General Education – Not Applicable

### **MAT.095 Geometry and Trigonometry Review** 3 1-3

This course is intended for persons who did not take geometry or trigonometry in high school as well as those who did take those subjects but now need a review. While it may not be a required prerequisite for other courses, it is very helpful for students planning to take the technical math series. The topics covered include angles, triangles and quadrilaterals; basic geometric measures and properties; the circle and solid geometric figures; the number and changing between degrees and radians; tangent of an angle; the sine and cosine of an angle; the Pythagorean theorem; and solving application problems involving right triangles. This course may be repeated three times (four total) by students needing additional help.

Offered: Fall or Spring or Summer

Prerequisites: MAT.093 with a grade of C or better

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: Not Applicable.

General Education – Not Applicable

### **MAT.096 Arithmetic Fundamentals** 3 1-3

This is a basic foundation course in computational mathematics offered for students whose current skills in elementary arithmetic need improvement. The specific topics included are fractions and decimals, percentages, proportions, and ratios; metric and English measurements, and the fundamentals of integer arithmetic and elementary algebraic operations. This course serves as a basis for students who plan to study business mathematics, algebra, or technical mathematics. This course may be repeated three times (four total) by students needing additional help. This course is recommended for students who score below 12.9 on the numerical skills section of the TABE test. Student is required to have a High School Diploma or GED equivalency.

Offered: Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: Not Applicable.

General Education – Not Applicable

**MAT.097 Geometry** 3 3

This course will introduce students to undefined terms, axioms and postulates, and theorems. Specific topics include plane and solid geometry, properties of congruence, similarity, ratio and proportion, area, perimeter, and volume of basic figures. Constructions and the writing of inductive, deductive, and indirect proofs will be included.

Offered: As Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: Not Applicable.

General Education – Not Applicable

**MAT.098 Gen Ed Preparatory Math** 4 4

This course is an alternate to MAT 099 Intermediate Algebra for students who are non-STEM (Science Technology Engineering and Math) majors who plan to take MAT 109 Concepts of Math and/or MAT 110 Statistics (Note: STEM and education majors cannot use this to substitute for Intermediate Algebra.) The course focuses on problem solving, critical thinking, and data analysis. Linear equations, quadratics, functions, basic exponents and factoring will be included with modeling and some basic probability and statistics. Group work and projects may be part of the course. The use of technology will be encouraged.

Offered: Fall or Spring

Prerequisites: Appropriate placement exam score or MAT.083 with a grade of C or better.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: Not applicable.

General Education – Not Applicable

**MAT.099 Intermediate Algebra** 4 4

This course builds upon a student's early preparation in algebra to provide those skills needed in further study of mathematics, science, or related fields. Topics include the study of the properties of the real number system, polynomials, rational expressions, first-degree equations and inequalities, exponents and radicals, quadratic equations, graphs, functions, systems of linear equations, and logarithms.

Offered: Fall or Spring or Summer

Prerequisites: One year of high school algebra and one year of high school geometry with grades of C or better; or the appropriate placement exam score; or take MAT.083 with a grade of C or better.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**MAT.101 Technical Mathematics 1** 3 3

This course is designed to serve students enrolled in vocational or technical programs. The emphasis is on skill-building and the applications of mathematics. Topics studied include a review of arithmetic, measurement, approximations, basic algebra, applied geometry, and right triangle trigonometry. Scientific calculators are used and are required of students.

Offered: Fall

Prerequisites: Appropriate placement exam score or MAT.080 with a grade of C or better.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Math AGS Only

**MAT.102 Technical Mathematics 2** 3 3

This course is a continuation of MAT 101. Topics include linear functions and graphs, laws of sines and cosines, systems of linear equation, exponents and radicals, complex numbers, quadratic equations, logarithms, and other topics from trigonometry. The emphasis is on skill-building and applications of mathematics. A scientific calculator is needed.

Offered: Fall or Spring

Prerequisites: MAT.101

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Math

**MAT.109 Concepts of Mathematics** 3 3

This course is designed to fulfill general education requirements. In the development of topics, the focus shall be on mathematical reasoning and the solving of real-life problems. Calculators and computers will be used regularly. The units studied include probability and counting techniques, logic and set theory, the mathematics of finance, and statistics. Included in the approach to these topics shall be the use of mathematical models and group projects.

Offered: Fall or Spring or Summer

Prerequisites: Two years of high school algebra and one year of high school geometry with grades of C or better; or an ACT Math score of 25; or a score of 4 or 5 on the PARCC exam; or the appropriate placement exam score; or take MAT.086 with a grade of C or better; or MAT.098 with a grade of C or better; or MAT.099 with a grade of C or better.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. M1 904*

General Education – Math

**MAT.110 General Education Statistics** 3 3

Using simulations and data collection, students will learn how to organize and interpret data. Real-life examples will serve as the focus as students develop mathematical reasoning skills and the ability to read and interpret statistical reports. Calculators and computers will be used extensively. Topics include descriptive statistics (graphs, averages, variability), elementary probability theory, probability distributions, hypothesis testing of a single parameter, and correlation and linear regression.

Offered: Spring or Summer

Prerequisites: Two years of high school algebra and one year of high school geometry with grades of C or better; or an ACT Math score of 25; or a score of 4 or 5 on the PARCC exam; or appropriate placement exam score; or take MAT.086 with a grade of C or better or MAT.098 with a grade of C or better or MAT.099 with a grade of C or better.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. M1 902*

General Education – Math



**MAT.111 Mathematics for Elementary Teaching 1** 3 3

This course is designed primarily for those students who intend to become elementary school teachers. The emphasis in this course is on problem solving, logic, and mathematical reasoning. The topics studied include sets, logic and reasoning, number bases, modular arithmetic, combinations, and probability.

Offered: Fall

Prerequisites: MAT.099 with a grade of C or better or two years of high school algebra and one year of high school geometry with minimum grades of C and a satisfactory score on the department Gateway exam.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**MAT.112 Math for Elementary Teaching 2** 3 3

This course is designed primarily for those students planning to become elementary school teachers. The course content includes the study of the properties of the major subsets of real numbers, elementary number theory, the metric system and measurement, and selected topics from descriptive statistics and geometry. Problem solving will be emphasized and calculators will be used extensively.

Offered: Spring

Prerequisites: MAT.111 with a grade of C or better and a satisfactory score on the department Gateway exam.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. M1 903*

General Education – Math

**MAT.130 College Algebra** 4 4

This pre-calculus course is appropriate for students whose major interest is in mathematics, science, engineering, or other disciplines requiring a strong preparation in mathematics. The content of this course includes real number properties, linear equations and inequalities, the algebra of functions, exponents, logarithms, systems of linear equations, and sequences and series. Students intending to enter the calculus sequence (MAT 240-242) should also enroll in MAT 140 (Trigonometry).

Offered: Fall or Spring or Summer

Prerequisites: Take MAT.099 with a grade of C or better or two years of high school algebra and one year of geometry with grades of C or better, and a satisfactory score on the department's Gateway Examination.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**MAT.131 Finite Mathematics** 3 3

This course is designed for students intending to pursue a baccalaureate degree in an area of business or the social sciences. Topics include the study of the mathematics of finance, matrices, systems of linear equations and inequalities, linear programming, combinations, probability, and Markov Chains.

Offered: Fall or Summer

Prerequisites: MAT.130 with a grade of C or better

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. M1 906*

General Education – Math

**MAT.132 Calculus for Business Or Social Science** 3 3

In this course the major ideas of calculus differentiation and integration are developed in an intuitive manner. The emphasis is on skill building and on applications of calculus to the areas of business, economics, and social science. The types of functions studied include polynomials, rational, exponential, and logarithmic. Multivariable content includes applications of partial derivatives.

Offered: Spring or Summer

Prerequisites: MAT.130 with a grade of C or better

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. M1 900*

General Education – Math

**MAT.140 Trigonometry** 3 3

This pre-calculus course is designed for students whose primary interest is in mathematics, science, or engineering. Students intending to complete the calculus sequence (MAT 240-242) should also enroll in MAT 130. Topics included are in-depth study of trigonometry functions, graphs, identities, trigonometric equations, oblique triangles, complex numbers, and DeMoivre's Theorem.

Offered: Fall

Prerequisites: MAT.130 with a grade of C or better or concurrent enrollment

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**MAT.210 Statistics** 3 3

This course is appropriate for those pursuing careers in the social or natural sciences or in business. Included are units on descriptive statistics, probability theory, random samples, hypothesis testing, regression and correlation, chi-square tests, and an introduction to ANOVA.

Offered: Spring or Summer

Prerequisites: MAT.130 with a grade of C or better

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. M1 902*

General Education – Math

**MAT.240 Calculus With Analytic Geometry 1** 5 5

The calculus sequence is intended for those students whose major interest is in mathematics, engineering, or the physical sciences. Major topics covered include a review of lines and functions, limits, the derivative, applications of differentiation, the definite integral, and selected topics from analytic geometry.

Offered: Spring

Prerequisites: MAT.130 and MAT.140, with a grade of C or better in each.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. M1 900*

General Education – Math

**MAT.241 Calculus With Analytic Geometry 2** 5 5

This course is a continuation of MAT 240. Topics covered include applications and techniques of integration, inverse trigonometric functions, improper integrals, polar coordinates, parametric equations, conic sections, infinite series, and Taylor series. Additional topics from analytic geometry may be included.

Offered: Fall

Prerequisites: MAT.240 with a grade of C or better.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. M1 900*

General Education – Math

**MAT.242 Calculus With Analytic Geometry 3** 4 4

This course is a continuation of MAT 241. Topics covered include vectors in 2-space and 3-space, vector-valued functions, partial derivatives and applications, and applications involving multiple variable integration.

Offered: Spring

Prerequisites: MAT.241 with a grade of C or better

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. M1 900*

General Education – Math

**MAT.260 Differential Equations** 3 3

This course is suitable for students pursuing a career in engineering, physical science, or mathematics. Included are these topics involving solutions to ordinary differential equations: first and second order equations; linear equations; systems of linear equations; LaPlace transforms; applications; numerical approximations.

Offered: As Needed

Prerequisites: MAT.242 with a grade of C or better

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

Hr/Wk	Hr/Wk	Sem
Lect/	Clin	Cr
Disc	Lab	Hr

**Courses**

**MAT.080 Basic Mathematics W/Geometry** 4 4

This course is designed for the student who is in need of proficiency in basic arithmetic processes with integrated geometry. Topics to be covered in this course include: basic operations and problem solving with whole numbers, fractions, and decimals; ratio, rate and proportion; percent; geometry and measurement; statistics real number system; and basic algebraic concepts. This course will require the use of an online computer assisted program both in and outside of class time.

Offered: Fall or Spring or Summer

Prerequisites: The appropriate placement exam score and a high school diploma or equivalent.

Applicable toward graduation at Sandburg where program structure permits; Not applicable..

General Education – Not Applicable

**MAT.083 Beginning Algebra W Geometry** 4 4

This course is designed as an introductory algebra course with integrated geometry. Topics to be covered in this course include: real number system; simplifying and evaluating algebraic expressions; solving linear equations and inequalities; graphing linear equations and inequalities; solving systems of linear equations; introduction to function; exponents; roots; polynomials; and factoring techniques. This course will require the use of an online computer assisted program both in and outside of class time..

General Education – Not Applicable

**MAT.086 Math Literacy** 6 6

Math Literacy is a preparatory course for college-level general education mathematics and statistics courses that includes content that is relevant for non-STEM majors. Topics in this course are presented in context and focus on numeracy, functions, and modeling. In addition to algebra topics, this course promotes data literacy and incorporates reading, writing and technology. Students will be required to participate in group work and use an online computer assisted program outside of classroom time.

Offered: Fall or Spring or Summer

Prerequisites: The appropriate placement exam score or MAT.080 or Mat.090 with a grade of C or better is required to enroll in this course.

Applicable toward graduation at Sandburg where program structure permits: Not applicable.

General Education – Not Applicable

**MAT.090 Arithmetic Fundamentals** 3 1-3

This is a basic foundation course in computational mathematics offered for students whose current skills in elementary arithmetic need improvement. The specific topics included are fractions and decimals; percentages, proportions, and ratios; metric and English measurements; and the fundamentals of integer arithmetic and elementary algebraic operations. This course serves as a basis for students who plan to study business mathematics, algebra, or technical mathematics. This course may be repeated three times (four total) by students needing additional help. Both self-paced and lecture sections are available.

Offered: Fall or Spring or Summer

Prerequisites: High school graduation or GED equivalency

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: Not Applicable.

General Education – Not Applicable

**MAT.093 Fundamentals of Algebra** 3 1-3

This course is designed for students who have not had algebra in high school or who need a review of basic algebraic concepts. Topics covered in this course include properties of integers, real, and rational numbers; polynomials; and rational and quadratic expressions. Techniques for solving problems involving these types of expressions are also covered. This course may be repeated three times (four total) by students needing additional help.

Offered: Fall or Spring or Summer

Prerequisites: The appropriate placement exam score or completion of MAT.090 with a grade of C or better

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: Not Applicable.

General Education – Not Applicable

**MAT.095 Geometry and Trigonometry Review** 3 1-3

This course is intended for persons who did not take geometry or trigonometry in high school as well as those who did take those subjects but now need a review. While it may not be a required prerequisite for other courses, it is very helpful for students planning to take the technical math series. The topics covered include angles, triangles and quadrilaterals; basic geometric measures and properties; the circle and solid geometric figures; the number and changing between degrees and radians; tangent of an angle; the sine and cosine of an angle; the Pythagorean theorem; and solving application problems involving right triangles. This course may be repeated three times (four total) by students needing additional help.

Offered: Fall or Spring or Summer

Prerequisites: MAT.093 with a grade of C or better

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: Not Applicable.

General Education – Not Applicable

**MAT.096 Arithmetic Fundamentals** 3 1-3

This is a basic foundation course in computational mathematics offered for students whose current skills in elementary arithmetic need improvement. The specific topics included are fractions and decimals, percentages, proportions, and ratios; metric and English measurements, and the fundamentals of integer arithmetic and elementary algebraic operations. This course serves as a basis for students who plan to study business mathematics, algebra, or technical mathematics. This course may be repeated three times (four total) by students needing additional help. This course is recommended for students who score below 12.9 on the numerical skills section of the TABE test. Student is required to have a High School Diploma or GED equivalency.

Offered: Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: Not Applicable.

General Education – Not Applicable

**MAT.097 Geometry** 3 3

This course will introduce students to undefined terms, axioms and postulates, and theorems. Specific topics include plane and solid geometry, properties of congruence, similarity, ratio and proportion, area, perimeter, and volume of basic figures. Constructions and the writing of inductive, deductive, and indirect proofs will be included.

Offered: As Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: Not Applicable.

General Education – Not Applicable

**MAT.098 Gen Ed Preparatory Math** 4 4

This course is an alternate to MAT 099 Intermediate Algebra for students who are non-STEM (Science Technology Engineering and Math) majors who plan to take MAT 109 Concepts of Math and/or MAT 110 Statistics (Note: STEM and education majors cannot use this to substitute for Intermediate Algebra.) The course focuses on problem solving, critical thinking, and data analysis. Linear equations, quadratics, functions, basic exponents and factoring will be included with modeling and some basic probability and statistics. Group work and projects may be part of the course. The use of technology will be encouraged.

Offered: Fall or Spring

Prerequisites: Appropriate placement exam score or MAT.083 with a grade of C or better.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: Not applicable.

General Education – Not Applicable

**MAT.099 Intermediate Algebra** 4 4

This course builds upon a student's early preparation in algebra to provide those skills needed in further study of mathematics, science, or related fields. Topics include the study of the properties of the real number system, polynomials, rational expressions, first-degree equations and inequalities, exponents and radicals, quadratic equations, graphs, functions, systems of linear equations, and logarithms.

Offered: Fall or Spring or Summer

Prerequisites: One year of high school algebra and one year of high school geometry with grades of C or better; or the appropriate placement exam score; or take MAT.083 with a grade of C or better.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**MAT.101 Technical Mathematics 1** 3 3

This course is designed to serve students enrolled in vocational or technical programs. The emphasis is on skill-building and the applications of mathematics. Topics studied include a review of arithmetic, measurement, approximations, basic algebra, applied geometry, and right triangle trigonometry. Scientific calculators are used and are required of students.

Offered: Fall

Prerequisites: Appropriate placement exam score or MAT.080 with a grade of C or better.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Math AGS Only

**MAT.102 Technical Mathematics 2** 3 3

This course is a continuation of MAT 101. Topics include linear functions and graphs, laws of sines and cosines, systems of linear equation, exponents and radicals, complex numbers, quadratic equations, logarithms, and other topics from trigonometry. The emphasis is on skill-building and applications of mathematics. A scientific calculator is needed.

Offered: Fall or Spring

Prerequisites: MAT.101

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Math

**MAT.109 Concepts of Mathematics** 3 3

This course is designed to fulfill general education requirements. In the development of topics, the focus shall be on mathematical reasoning and the solving of real-life problems. Calculators and computers will be used regularly. The units studied include probability and counting techniques, logic and set theory, the mathematics of finance, and statistics. Included in the approach to these topics shall be the use of mathematical models and group projects.

Offered: Fall or Spring or Summer

Prerequisites: Two years of high school algebra and one year of high school geometry with grades of C or better; or an ACT Math score of 25; or a score of 4 or 5 on the PARCC exam; or the appropriate placement exam score; or take MAT.086 with a grade of C or better; or MAT.098 with a grade of C or better; or MAT.099 with a grade of C or better.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. M1 904*

General Education – Math

**MAT.110 General Education Statistics** 3 3

Using simulations and data collection, students will learn how to organize and interpret data. Real-life examples will serve as the focus as students develop mathematical reasoning skills and the ability to read and interpret statistical reports. Calculators and computers will be used extensively. Topics include descriptive statistics (graphs, averages, variability), elementary probability theory, probability distributions, hypothesis testing of a single parameter, and correlation and linear regression.

Offered: Spring or Summer

Prerequisites: Two years of high school algebra and one year of high school geometry with grades of C or better; or an ACT Math score of 25; or a score of 4 or 5 on the PARCC exam; or appropriate placement exam score; or take MAT.086 with a grade of C or better or MAT.098 with a grade of C or better or MAT.099 with a grade of C or better.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. M1 902*

General Education – Math

**MAT.111 Mathematics for Elementary Teaching 1** 3 3

This course is designed primarily for those students who intend to become elementary school teachers. The emphasis in this course is on problem solving, logic, and mathematical reasoning. The topics studied include sets, logic and reasoning, number bases, modular arithmetic, combinations, and probability.

Offered: Fall

Prerequisites: MAT.099 with a grade of C or better or two years of high school algebra and one year of high school geometry with minimum grades of C and a satisfactory score on the department Gateway exam.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**MAT.112 Math for Elementary Teaching 2** 3 3

This course is designed primarily for those students planning to become elementary school teachers. The course content includes the study of the properties of the major subsets of real numbers, elementary number theory, the metric system and measurement, and selected topics from descriptive statistics and geometry. Problem solving will be emphasized and calculators will be used extensively.

Offered: Spring

Prerequisites: MAT.111 with a grade of C or better and a satisfactory score on the department Gateway exam.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. M1 903*

General Education – Math

**MAT.130 College Algebra** 4 4

This pre-calculus course is appropriate for students whose major interest is in mathematics, science, engineering, or other disciplines requiring a strong preparation in mathematics. The content of this course includes real number properties, linear equations and inequalities, the algebra of functions, exponents, logarithms, systems of linear equations, and sequences and series. Students intending to enter the calculus sequence (MAT 240-242) should also enroll in MAT 140 (Trigonometry).

Offered: Fall or Spring or Summer

Prerequisites: Take MAT.099 with a grade of C or better or two years of high school algebra and one year of geometry with grades of C or better, and a satisfactory score on the department's Gateway Examination.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**MAT.131 Finite Mathematics** 3 3

This course is designed for students intending to pursue a baccalaureate degree in an area of business or the social sciences. Topics include the study of the mathematics of finance, matrices, systems of linear equations and inequalities, linear programming, combinations, probability, and Markov Chains.

Offered: Fall or Summer

Prerequisites: MAT.130 with a grade of C or better

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. M1 906*

General Education – Math

**MAT.132 Calculus for Business Or Social Science** 3 3

In this course the major ideas of calculus differentiation and integration are developed in an intuitive manner. The emphasis is on skill building and on applications of calculus to the areas of business, economics, and social science. The types of functions studied include polynomials, rational, exponential, and logarithmic. Multivariable content includes applications of partial derivatives.

Offered: Spring or Summer

Prerequisites: MAT.130 with a grade of C or better

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. M1 900*

General Education – Math

**MAT.140 Trigonometry** 3 3

This pre-calculus course is designed for students whose primary interest is in mathematics, science, or engineering. Students intending to complete the calculus sequence (MAT 240-242) should also enroll in MAT 130. Topics included are in-depth study of trigonometry functions, graphs, identities, trigonometric equations, oblique triangles, complex numbers, and DeMoivre's Theorem.

Offered: Fall

Prerequisites: MAT.130 with a grade of C or better or concurrent enrollment

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**MAT.210 Statistics** 3 3

This course is appropriate for those pursuing careers in the social or natural sciences or in business. Included are units on descriptive statistics, probability theory, random samples, hypothesis testing, regression and correlation, chi-square tests, and an introduction to ANOVA.

Offered: Spring or Summer

Prerequisites: MAT.130 with a grade of C or better

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. M1 902*

General Education – Math

**MAT.240 Calculus With Analytic Geometry 1** 5 5

The calculus sequence is intended for those students whose major interest is in mathematics, engineering, or the physical sciences. Major topics covered include a review of lines and functions, limits, the derivative, applications of differentiation, the definite integral, and selected topics from analytic geometry.

Offered: Spring

Prerequisites: MAT.130 and MAT.140, with a grade of C or better in each.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. M1 900*

General Education – Math

**MAT.241 Calculus With Analytic Geometry 2** 5 5

This course is a continuation of MAT 240. Topics covered include applications and techniques of integration, inverse trigonometric functions, improper integrals, polar coordinates, parametric equations, conic sections, infinite series, and Taylor series. Additional topics from analytic geometry may be included.

Offered: Fall

Prerequisites: MAT.240 with a grade of C or better.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. M1 900*

General Education – Math

**MAT.242 Calculus With Analytic Geometry 3** 4 4

This course is a continuation of MAT 241. Topics covered include vectors in 2-space and 3-space, vector-valued functions, partial derivatives and applications, and applications involving multiple variable integration.

Offered: Spring

Prerequisites: MAT.241 with a grade of C or better

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. M1 900*

General Education – Math

**MAT.260 Differential Equations** 3 3

This course is suitable for students pursuing a career in engineering, physical science, or mathematics. Included are these topics involving solutions to ordinary differential equations: first and second order equations; linear equations; systems of linear equations; LaPlace transforms; applications; numerical approximations.

Offered: As Needed

Prerequisites: MAT.242 with a grade of C or better

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

## MDA Medical Assisting

Hr/Wk	Hr/Wk	Sem
Lect/	Clin	Cr
Disc	Lab	Hr



## Courses

### **MDA.100 Fundamentals of Medical Assisting** 2 2

This course introduces the student to the professional role and responsibilities of a medical assistant. Emphasis is placed on communication skills and interpersonal relationships in the clinical environment. Legal and ethical considerations are also covered as they relate to medical practice. Special attention is given to issues associated with patient privacy and confidentiality, including a review of HIPAA regulations.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

### **MDA.101 Intro to Management of Medical Office** 1 1

This course will provide an introduction to the administrative responsibilities associated with management of a medical office. Students will be exposed to issues relevant to personnel, office policies and procedures, conflict resolution, and customer service.

Offered: Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

### **MDA.110 Adm Procedures in Medical Assisting** 3.5 1 4

In this course Medical Assisting students are instructed in the performance of clerical and administrative office procedures. Verbal and written communication skills will be stressed as students study patient reception techniques, appointment scheduling, and medical records management.

Offered: Fall or Spring

Prerequisites: BOC.107

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AGS and Certificates where applicable.

General Education – Not Applicable

### **MDA.112 Pharmacology & Medication Administration** 1.5 1 2

This course introduces the student to the principles of pharmacology and the uses and effects of commonly prescribed drugs. The professional role and legal responsibilities of the medical assistant are emphasized as students study the calculation of medication dosages and the techniques of administration.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

### **MDA.115 Clinical Medical Assisting 1** 4 2 5

This course will introduce the student to the clinical aspects of a medical office environment. The student will learn how to assist the physician in the general examination and treatment of patients, take vital signs, collect health information, and perform basic screening procedures. The course will cover the principles of infection control, including the use of standard precautions and adherence to OSHA guidelines. Patient education/instruction will also be emphasized.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

### **MDA.120 Financial Procedures in the Medical Off.** 4 4

Students will explore the financial aspects of a medical office and develop an understanding of coding, billing and third-party reimbursement processes. A basic introduction to banking services and office accounting procedures is also included.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

### **MDA.125 Clinical Medical Assisting 2** 3 2 4

This course expands on the clinical skills learned in MDA 115 by focusing on the duties and responsibilities of a medical assistant employed in a specialty practice. Students will cover examinations, tests and treatments that are common to each specialized clinical practice area. Emphasis will also be placed on the study of disorders and diseases relevant to each medical specialty or associated body system.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

### **MDA.127 Clinical Laboratory Procedures** 1.5 3 3

This course provides instruction in clinical laboratory procedures typically performed by medical assistants. Students are taught collection and processing of specimens as well as the performance of selected laboratory tests. Basic instruction in venous and capillary puncture (phlebotomy) is included in the course.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**MDA.200 Management of the Medical Office** 1 1

In this course, students are provided with a basic introduction to the administrative responsibilities associated with managing a medical practice. The development of problem solving skills is emphasized as issues related to personnel, office policies/procedures, and customer service are presented.

Offered: Fall or Summer

Applicable toward graduation at Sandburg where program structure permits: Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**MDA.205 Medical Assisting Practicum** 15 3

This course provides Medical Assisting students with the opportunity to participate in a clinical externship. Under the supervision of a clinical preceptor, students will gain experience in a local medical facility. The course also includes an orientation prior to assignment and a one week review seminar at the completion of the rotation.

Offered: Fall or Summer

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

Hr/Wk Lect/ Disc	Hr/Wk Clin Lab	Sem Cr Hr
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**Courses**

**MDA.100 Fundamentals of Medical Assisting** 2 2

This course introduces the student to the professional role and responsibilities of a medical assistant. Emphasis is placed on communication skills and interpersonal relationships in the clinical environment. Legal and ethical considerations are also covered as they relate to medical practice. Special attention is given to issues associated with patient privacy and confidentiality, including a review of HIPAA regulations.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**MDA.101 Intro to Management of Medical Office** 1 1

This course will provide an introduction to the administrative responsibilities associated with management of a medical office. Students will be exposed to issues relevant to personnel, office policies and procedures, conflict resolution, and customer service.

Offered: Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**MDA.110 Adm Procedures in Medical Assisting** 3.5 1 4

In this course Medical Assisting students are instructed in the performance of clerical and administrative office procedures. Verbal and written communication skills will be stressed as students study patient reception techniques, appointment scheduling, and medical records management.

Offered: Fall or Spring

Prerequisites: BOC.107

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AGS and Certificates where applicable.

General Education – Not Applicable

**MDA.112 Pharmacology & Medication Administration** 1.5 1 2

This course introduces the student to the principles of pharmacology and the uses and effects of commonly prescribed drugs. The professional role and legal responsibilities of the medical assistant are emphasized as students study the calculation of medication dosages and the techniques of administration.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**MDA.115 Clinical Medical Assisting 1** 4 2 5

This course will introduce the student to the clinical aspects of a medical office environment. The student will learn how to assist the physician in the general examination and treatment of patients, take vital signs, collect health information, and perform basic screening procedures. The course will cover the principles of infection control, including the use of standard precautions and adherence to OSHA guidelines. Patient education/instruction will also be emphasized.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**MDA.120 Financial Procedures in the Medical Off.** 4 4

Students will explore the financial aspects of a medical office and develop an understanding of coding, billing and third-party reimbursement processes. A basic introduction to banking services and office accounting procedures is also included.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**MDA.125 Clinical Medical Assisting 2** 3 2 4

This course expands on the clinical skills learned in MDA 115 by focusing on the duties and responsibilities of a medical assistant employed in a specialty practice. Students will cover examinations, tests and treatments that are common to each specialized clinical practice area. Emphasis will also be placed on the study of disorders and diseases relevant to each medical specialty or associated body system.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**MDA.127 Clinical Laboratory Procedures** 1.5 3 3

This course provides instruction in clinical laboratory procedures typically performed by medical assistants. Students are taught collection and processing of specimens as well as the performance of selected laboratory tests. Basic instruction in venous and capillary puncture (phlebotomy) is included in the course.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**MDA.200 Management of the Medical Office** 1 1

In this course, students are provided with a basic introduction to the administrative responsibilities associated with managing a medical practice. The development of problem solving skills is emphasized as issues related to personnel, office policies/procedures, and customer service are presented.

Offered: Fall or Summer

Applicable toward graduation at Sandburg where program structure permits: Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**MDA.205 Medical Assisting Practicum** 15 3

This course provides Medical Assisting students with the opportunity to participate in a clinical externship. Under the supervision of a clinical preceptor, students will gain experience in a local medical facility. The course also includes an orientation prior to assignment and a one week review seminar at the completion of the rotation.

Offered: Fall or Summer

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

## MDC Medical Coding

Hr/Wk	Hr/Wk	Sem
Lect/	Clin	Cr
Disc	Lab	Hr

## Courses

**MDC.101 Medical Coding Icd** 3 3

Students will be introduced to medical coding principles using the most current version of ICD-CM (International Classification of Diseases - Clinical Modification) necessary to arrive at correct coding assignments for both diagnosis and in-patient procedures. Students will take clinical documentation and modify it into an ICD-CM alphanumeric or numeric code. Students will also be introduced to accurate and ethical coding by correct selection of diagnosis following official guidelines of the UHDDS (uniform hospital discharge data set).

Offered: Spring

Prerequisites: MDT.100 with a minimum grade of C or instructor approval.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**MDC.102 Medical Coding Cpt** 3 3

This course is intended to introduce the student to the concepts of current procedural coding. Through guided instruction and practical experience, students will learn how to apply and where to locate the guidelines for assigning correct procedural codes to physician documentation. At the end of the course, the student should be able to appropriately code procedure codes to the medical record as well as assign any modifiers using the CPT book and concepts learned.

Offered: Fall

Prerequisites: MDT.100 with a minimum grade of C or instructor approval.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

Hr/Wk	Hr/Wk	Sem
Lect/	Clin	Cr
Disc	Lab	Hr

## Courses

**MDC.101 Medical Coding Icd** 3 3

Students will be introduced to medical coding principles using the most current version of ICD-CM (International Classification of Diseases - Clinical Modification) necessary to arrive at correct coding assignments for both diagnosis and in-patient procedures. Students will take clinical documentation and modify it into an ICD-CM alphanumeric or numeric code. Students will also be introduced to accurate and ethical coding by correct selection of diagnosis following official guidelines of the UHDDS (uniform hospital discharge data set).

Offered: Spring

Prerequisites: MDT.100 with a minimum grade of C or instructor approval.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**MDC.102 Medical Coding Cpt** 3 3

This course is intended to introduce the student to the concepts of current procedural coding. Through guided instruction and practical experience, students will learn how to apply and where to locate the guidelines for assigning correct procedural codes to physician documentation. At the end of the course, the student should be able to appropriately code procedure codes to the medical record as well as assign any modifiers using the CPT book and concepts learned.  
 Offered: Fall  
 Prerequisites: MDT.100 with a minimum grade of C or instructor approval.  
 Applicable toward graduation at Sandburg where program structure permits:  
 Degree or Certificate: AAS, AGS, and Certificates where applicable.  
 General Education – Not Applicable

## MDT Medical Terminology

	Hr/Wk	Hr/Wk	Sem
	Lect/	Clin	Cr
	Disc	Lab	Hr

### Courses

**MDT.090 Introduction to Medical Terminology** 2 2

This course is to assist students to effectively communicate in the field of health care. Students who take this course will become familiar with medical terminology by learning to dissect words in order to determine their meaning. A body systems approach to learning medical language will be used. Word parts will be used to build, analyze, define, and spell medical terms. Structural, directional, disease and disorder, surgical, and diagnostic terms; pronunciations; and abbreviations will be included.  
 Offered: Fall or Spring or Summer  
 Applicable toward graduation at Sandburg where program structure permits:  
 Degree or Certificate: AAS, AGS and Certificates where applicable.  
 General Education – Not Applicable

**MDT.100 Medical Terminology** 2 2

This course is designed for anyone desiring a background in the language of medicine, and presents a system of learning medical terms from word roots, combining forms, prefixes and suffixes. By the end of the course the student will be able to recognize, build, define and spell correctly literally thousands of medical words from the elements learned, and be proficient in using a medical dictionary. This course is useful for anyone in the health care professions: those working in hospitals (nurses, radiologic technologists, unit secretaries, people in medical records or the business office, etc.) in a doctor's office, in nursing homes or those in Emergency Medical Technology. Those entering nursing will find Medical Terminology a great asset to understanding lectures and textbooks, making their learning easier.  
 Offered: Fall or Spring or Summer  
 Applicable toward graduation at Sandburg where program structure permits:  
 Degree or Certificate: AAS, AGS, and Certificates where applicable.  
 General Education – Not Applicable

	Hr/Wk	Hr/Wk	Sem
	Lect/	Clin	Cr
	Disc	Lab	Hr

### Courses

**MDT.090 Introduction to Medical Terminology** 2 2

This course is to assist students to effectively communicate in the field of health care. Students who take this course will become familiar with medical terminology by learning to dissect words in order to determine their meaning. A body systems approach to learning medical language will be used. Word parts will be used to build, analyze, define, and spell medical terms. Structural, directional, disease and disorder, surgical, and diagnostic terms; pronunciations; and abbreviations will be included.  
 Offered: Fall or Spring or Summer  
 Applicable toward graduation at Sandburg where program structure permits:  
 Degree or Certificate: AAS, AGS and Certificates where applicable.  
 General Education – Not Applicable

**MDT.100 Medical Terminology** 2 2

This course is designed for anyone desiring a background in the language of medicine, and presents a system of learning medical terms from word roots, combining forms, prefixes and suffixes. By the end of the course the student will be able to recognize, build, define and spell correctly literally thousands of medical words from the elements learned, and be proficient in using a medical dictionary. This course is useful for anyone in the health care professions: those working in hospitals (nurses, radiologic technologists, unit secretaries, people in medical records or the business office, etc.) in a doctor's office, in nursing homes or those in Emergency Medical Technology. Those entering nursing will find Medical Terminology a great asset to understanding lectures and textbooks, making their learning easier.  
 Offered: Fall or Spring or Summer  
 Applicable toward graduation at Sandburg where program structure permits:  
 Degree or Certificate: AAS, AGS, and Certificates where applicable.  
 General Education – Not Applicable

## MET Metallurgy

	Hr/Wk	Hr/Wk	Sem
	Lect/	Clin	Cr
	Disc	Lab	Hr

### Courses

**MET.100 Metallurgy Fundamentals** 1 2 2

This course provides a study of the fundamental chemical and physical concepts of metallurgy for students preparing for initial or improved employment. Emphasis is placed upon measurement of physical properties, chemical properties, grain size and growth, heat treatment, and mechanical testing.  
 Offered: Spring  
 Applicable toward graduation at Sandburg where program structure permits:  
 Degree or Certificate: AAS, AGS, and Certificates where applicable.  
 General Education – Not Applicable

	Hr/Wk	Hr/Wk	Sem
	Lect/	Clin	Cr
	Disc	Lab	Hr

## Courses

**MET.100 Metallurgy Fundamentals** 1 2 2

This course provides a study of the fundamental chemical and physical concepts of metallurgy for students preparing for initial or improved employment. Emphasis is placed upon measurement of physical properties, chemical properties, grain size and growth, heat treatment, and mechanical testing.

Offered: Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

## MFG Manufacturing

Hr/Wk Lect/ Disc	Hr/Wk Clin Lab	Sem Cr Hr
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### Courses

**MFG.100 Introduction to Welding** 2.5 1 3

This class provides an introduction to welding technology with an emphasis on basic welding laboratory principles and operating procedures. Topics include: safety and health practices, hand tool and power machine use, measurement, laboratory operating procedures, welding power sources, weld simulator practice, investigate welding career potentials, and introduction to welding codes and standards.

Offered: Fall or Spring

Prerequisites: Appropriate placement exam scores.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**MFG.125 Industrial Blueprints** 2 2 3

The student will learn how to read and interpret the different types of standard symbols and abbreviations found on industrial drawings. Students will be provided with instruction that enables them to understand the various types of blueprints, shop prints, and schematics used in an industrial environment. Students will interpret the different types of standard symbols and abbreviations found on electrical construction drawings, schematics and wiring diagrams. This course will benefit students entering any industrial trade.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificate where applicable.

General Education – Not Applicable

**MFG.130 Industrial Safety** 1.5 .5 2

This course provides the student with specific instruction to facilitate safe work practices in industrial environments. Students will be introduced to different safety philosophies and terminology. Students will also become acquainted with OSHA policy and with the Right-to-Know laws. Also covered are units specific to fire safety, pressurized gases and welding, electrical hazards, and safe machine usage. Students will have the opportunity to earn the OSHA ten-hour safety certification.

Offered: Fall or Spring or Summer

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

Hr/Wk Lect/ Disc	Hr/Wk Clin Lab	Sem Cr Hr
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### Courses

**MFG.100 Introduction to Welding** 2.5 1 3

This class provides an introduction to welding technology with an emphasis on basic welding laboratory principles and operating procedures. Topics include: safety and health practices, hand tool and power machine use, measurement, laboratory operating procedures, welding power sources, weld simulator practice, investigate welding career potentials, and introduction to welding codes and standards.

Offered: Fall or Spring

Prerequisites: Appropriate placement exam scores.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**MFG.125 Industrial Blueprints** 2 2 3

The student will learn how to read and interpret the different types of standard symbols and abbreviations found on industrial drawings. Students will be provided with instruction that enables them to understand the various types of blueprints, shop prints, and schematics used in an industrial environment. Students will interpret the different types of standard symbols and abbreviations found on electrical construction drawings, schematics and wiring diagrams. This course will benefit students entering any industrial trade.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificate where applicable.

General Education – Not Applicable



**MFG.130 Industrial Safety** 1.5 .5 2

This course provides the student with specific instruction to facilitate safe work practices in industrial environments. Students will be introduced to different safety philosophies and terminology. Students will also become acquainted with OSHA policy and with the Right-to-Know laws. Also covered are units specific to fire safety, pressurized gases and welding, electrical hazards, and safe machine usage. Students will have the opportunity to earn the OSHA ten-hour safety certification.  
 Offered: Fall or Spring or Summer  
 Applicable toward graduation at Sandburg where program structure permits:  
 Degree or Certificate: AAS, AGS and Certificates where applicable.  
 General Education – Not Applicable

## MIS Military Science

### Courses

**MIS.111 Leadership & Personal Development** .5 1 1

In this course, designed to introduce students to ARMY ROTC and the organization of the US. army and its role in American society, students will A) explore fundamental concepts in leadership, in both classroom and outdoor activities; (B) increase self-confidence through optional activities in rappelling, leadership reaction course, and basic marksmanship. This course is offered on the campus of Western Illinois University by the Western Illinois University Department of Military Science.  
 Offered: Fall  
 Applicable toward graduation at Sandburg where program structure permits:  
 Degree or Certificate: AA, AS, AGS and Certificates where applicable.  
 General Education – Not Applicable Elective Only

**MIS.112 Introduction to Tactical Leadership** .5 1 1

This course is a continuation of MIS 111. Students will continue to build a knowledge base of soldier skills such as first aid, marksmanship, and writing. In addition, students will have an opportunity to develop leadership skills through basic drill, rappelling exercises, and have the opportunity to complete the leadership reaction course. Students are taught skills required by the individual soldier in the field. The student is also taught to write in the Army style. This course is offered on the campus of Western Illinois University by the Western Illinois University Department of Military Science.  
 Offered: Spring  
 Prerequisites: MIS.111  
 Applicable toward graduation at Sandburg where program structure permits:  
 Degree or Certificate: AA, AS, AGS and Certificates where applicable.  
 General Education – Not Applicable Elective Only

**MIS.113 Introduction to Military Science** 2 2

In this course students are offered an overview of such leadership fundamentals as setting direction, problem-solving, listening, presenting briefs, providing feedback, and using effective writing skills. Cadets explore dimensions of leadership values, attributes, skills, and actions in the context of practical, hands-on, and interactive exercises. This is a combination version of MIS 111 and MIS 112 for students entering ROTC in midyear. Students who received credit for MIS 112 will not receive credit for MIS 113. This course is offered on the campus of Western Illinois University by the Western Illinois University Department of Military Science.  
 Offered: Spring  
 Applicable toward graduation at Sandburg where program structure permits:  
 Degree or Certificate: AA, AS, AGS and Certificates where applicable.  
 General Education – Not Applicable Elective Only

### Courses

**MIS.111 Leadership & Personal Development** .5 1 1

In this course, designed to introduce students to ARMY ROTC and the organization of the US. army and its role in American society, students will A) explore fundamental concepts in leadership, in both classroom and outdoor activities; (B) increase self-confidence through optional activities in rappelling, leadership reaction course, and basic marksmanship. This course is offered on the campus of Western Illinois University by the Western Illinois University Department of Military Science.  
 Offered: Fall  
 Applicable toward graduation at Sandburg where program structure permits:  
 Degree or Certificate: AA, AS, AGS and Certificates where applicable.  
 General Education – Not Applicable Elective Only

**MIS.112 Introduction to Tactical Leadership** .5 1 1

This course is a continuation of MIS 111. Students will continue to build a knowledge base of soldier skills such as first aid, marksmanship, and writing. In addition, students will have an opportunity to develop leadership skills through basic drill, rappelling exercises, and have the opportunity to complete the leadership reaction course. Students are taught skills required by the individual soldier in the field. The student is also taught to write in the Army style. This course is offered on the campus of Western Illinois University by the Western Illinois University Department of Military Science.  
 Offered: Spring  
 Prerequisites: MIS.111  
 Applicable toward graduation at Sandburg where program structure permits:  
 Degree or Certificate: AA, AS, AGS and Certificates where applicable.  
 General Education – Not Applicable Elective Only

**MIS.113 Introduction to Military Science** 2 2

In this course students are offered an overview of such leadership fundamentals as setting direction, problem-solving, listening, presenting briefs, providing feedback, and using effective writing skills. Cadets explore dimensions of leadership values, attributes, skills, and actions in the context of practical, hands-on, and interactive exercises. This is a combination version of MIS 111 and MIS 112 for students entering ROTC in midyear. Students who received credit for MIS 112 will not receive credit for MIS 113. This course is offered on the campus of Western Illinois University by the Western Illinois University Department of Military Science.

Offered: Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AGS and Certificates where applicable.  
General Education – Not Applicable Elective Only

## MLT Medical Lab Technician

	Hr/Wk	Hr/Wk	Sem
	Lect/	Clin	Cr
	Disc	Lab	Hr

### Courses

**MLT.100 Phlebotomy** 2 2 3

Successful completion of this course will provide students with the skills required to competently perform venipuncture and capillary puncture for blood collection purposes. Lecture and laboratory practice will focus on safe practice in performing basic blood drawing procedures. Instruction will also include infection control, legal and ethical responsibilities, professionalism and interpersonal communication skills. Additional specimen collection procedures will be discussed as needed.

Offered: Fall or Spring or Summer

Prerequisites: The appropriate placement exam score or ENG.097 with a grade of C or better, or ACT Reading score of 20 or higher.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

	Hr/Wk	Hr/Wk	Sem
	Lect/	Clin	Cr
	Disc	Lab	Hr

## Courses

**MLT.100 Phlebotomy** 2 2 3

Successful completion of this course will provide students with the skills required to competently perform venipuncture and capillary puncture for blood collection purposes. Lecture and laboratory practice will focus on safe practice in performing basic blood drawing procedures. Instruction will also include infection control, legal and ethical responsibilities, professionalism and interpersonal communication skills. Additional specimen collection procedures will be discussed as needed.

Offered: Fall or Spring or Summer

Prerequisites: The appropriate placement exam score or ENG.097 with a grade of C or better, or ACT Reading score of 20 or higher.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

## MRI Magnetic Resonance Imaging

	Hr/Wk	Hr/Wk	Sem
	Lect/	Clin	Cr
	Disc	Lab	Hr

### Courses

**MRI.250 MRI Physics & Instrumentation** 4 4

This course introduces the student to the principles of nuclear magnetic resonance and the equipment used to produce the MR image. Emphasis is placed on understanding the relationships between the various imaging sequences/parameters and how their selection affects diagnostic quality. MR safety considerations and quality assurance techniques are also presented. Admission to the Magnetic Resonance Imaging program is required to enroll in this course.

Offered: Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**MRI.252 MR Imaging Procedures** 3 3

This course introduces the student to magnetic resonance imaging procedures. Patient screening and scanning protocols for examination of the head, neck, spine, thorax, abdomen, pelvis, musculoskeletal, and vascular systems will be addressed. The MRI technologist's role in identifying disease processes and trauma conditions will also be emphasized as it relates to the selection of MR imaging planes, sequences, and parameters. Admission to the Magnetic Resonance Imaging program is required to enroll in this course.

Offered: Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**MRI.255 MRI Practicum** 1 25 6

This practicum course involves three days per week of clinical experience in affiliate hospitals and/or imaging centers. Assignments are made to enable students to achieve competency in performing magnetic resonance imaging procedures and in evaluating equipment operation. Course includes clinical seminars. Admission to the Magnetic Resonance Imaging program is required to enroll in this course.

Offered: Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

Hr/Wk	Hr/Wk	Sem
Lect/	Clin	Cr
Disc	Lab	Hr

**Courses**

**MRI.250 MRI Physics & Instrumentaton** 4 4

This course introduces the student to the principles of nuclear magnetic resonance and the equipment used to produce the MR image. Emphasis is placed on understanding the relationships between the various imaging sequences/parameters and how their selection affects diagnostic quality. MR safety considerations and quality assurance techniques are also presented. Admission to the Magnetic Resonance Imaging program is required to enroll in this course.

Offered: Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**MRI.252 MR Imaging Procedures** 3 3

This course introduces the student to magnetic resonance imaging procedures. Patient screening and scanning protocols for examination of the head, neck, spine, thorax, abdomen, pelvis, musculoskeletal, and vascular systems will be addressed. The MRI technologist’s role in identifying disease processes and trauma conditions will also be emphasized as it relates to the selection of MR imaging planes, sequences, and parameters. Admission to the Magnetic Resonance Imaging program is required to enroll in this course.

Offered: Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**MRI.255 MRI Practicum** 1 25 6

This practicum course involves three days per week of clinical experience in affiliate hospitals and/or imaging centers. Assignments are made to enable students to achieve competency in performing magnetic resonance imaging procedures and in evaluating equipment operation. Course includes clinical seminars. Admission to the Magnetic Resonance Imaging program is required to enroll in this course.

Offered: Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**MTL Machine Tool**

Hr/Wk	Hr/Wk	Sem
Lect/	Clin	Cr
Disc	Lab	Hr

**Courses**

**MTL.101 Machine Tool Fundamentals 1** 2 2 3

This course provides a basic introduction to machine tools with the primary emphasis on the engine lathe, drill press and hand tools common to the machinist trade.

Offered: Fall

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**MTL.103 Manufacturing Processes** 2 2

This course is designed to familiarize the student with the basic processes that are common to industry and the techniques used in the manufacturing of a product.

Offered: Fall

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**MTL.130 CNC Machining Technology** 2 4 4

This course provides an introduction to Computer Numerical Control (CNC) machining processes and the technology that supports them. Some of the processes covered are gauging, quality control, spot drilling, drilling, reaming, tapping, counter-boring, countersinking, defining and calculating speed and feed rates, screw thread identification, and drill sharpening. Students will perform these processes on manual equipment prior to observing them on CNC equipment. Occupational computer skills are also covered in this course.

Offered: Spring

Prerequisites: Take MFG.125

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable General Education: Not Applicable.

General Education – Not Applicable

**MTL.135 Fund. of CNC Machine Applications** 2 4 4

This course is designed to give students a familiarization with the necessary practices and techniques used to operate Computer Numerical Control (CNC) machines. Some of the topics covered include CNC machine introduction, safe practices and techniques used to remove burrs, basic CNC machine operator maintenance, and production support equipment use and operation. Topics such as machine homing, tooling used, an understanding of offsets, setting offsets, and the application of offsets in the CNC machine will also be covered. Actual run time in the lab will be provided for hands-on machine operation. Students will work in groups and as individuals to gain experience in machine operation during a production run, applying theories learned to the production process.

Offered: Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**MTL.150 Fund. of CNC Turning Applications** 2 2 3

This course provides an introduction to Computer Numerical Control (CNC) turning processes and their proper application. Some of the topics covered include lathe set-up and operation, lathe safety, types of lathes, lathe work-holding devices, lathe cutting tools, grinding and sharpening of lathe cutters, and a review of lathe machining speeds and feeds. In this course, you will perform O.D. and I.D. turning operations on engine lathes as well as facing, drilling, reaming, tapping, grooving, chamfering, boring, knurling, tapering, and thread cutting operations.

Offered: Fall

Prerequisites: Take MTL.130 or Proficiency-based Exam

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**MTL.155 Fund. of CNC Milling Applications** 2 2 3

This course provides an introduction to Computer Numerical Control (CNC) milling processes and their proper application. Some of the topics covered include machine set-up and operation, machine safety, types of milling machines, use and care of various cutting tools, and a review of milling speeds and feeds. The student will perform face and end milling operations as well as drilling, reaming, tapping, and slotting operations on manual milling machines. The proper use and care of accessories, such as edge finders, digital readouts, dial indicators, and boring heads, and an introduction to a CNC milling machine are also covered.

Offered: Fall

Prerequisites: Take MTL.130 or Proficiency-based Exam

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**MTL.160 CNC Lathe Set-up**

Students will produce and troubleshoot Computer Numerical Control (CNC) lathe set-ups from job packets and machine parts to blueprint specifications. Students will learn simple G and M codes, download programs to machines, graphically verify programs, and prove out parts on 2-axis turning center utilizing various CNC controllers. Set-ups will include faceting, turning, drilling, grooving, and thread operations. Students will also learn to produce some simple tooling necessary to complete various set-ups.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**MTL.165 CNC Mill Set-up** 2 2 3

Students will produce and troubleshoot Computer Numerical Control (CNC) mill set-ups from job packets and machine parts to blueprint specifications. Students will learn simple G and M codes, download programs to machines, graphically verify programs, and prove out parts on 3-axis machining centers using various CNC controllers. Set-ups will include face, end, and profile milling and drilling, slotting, boring, and tapping operations. Students will also learn to produce some simple tooling necessary to complete various set-ups.

Offered: Fall

Prerequisites: Take MTL.155

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where Applicable.

General Education – Not Applicable

**MTL.200 Fundamentals of Live Tooling** 2 2 3

The course provides the specific skills required to efficiently and effectively operate machines employing multi-axis part processing to maximize machine productivity. This course covers concepts of Computer Numerical Control (CNC) machining, setup and operations, tooling and work-holding systems, and basics of manual part programming for drilling, milling, and tapping, as well as boring operations by utilizing G codes. Hands-on practice is an integral part of the class.

Offered: Spring

Prerequisites: Take MTL.160 and MTL.165

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**MTL.205 Live Tooling & Set-Up & Orientation** 2 2 3

The course provides the knowledge and skills required to translate the part drawing into a finished product. Part programs will be created with a consistent focus on identifying those specific part features that readily lend themselves to 4-axis structured programming, and simultaneous machining. The individual will be capable of defining the list of required processes and their optimum sequential order, create the complete CNC part program, install the appropriate tools correctly, establish the program zero points, and perform corresponding tool offsets and related machine safety procedures.

Offered: Spring

Prerequisites: Take MTL.160 and MTL.165

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**MTL.210 CNC Lathe Process** 2 2 3

This course is designed to provide the knowledge and skills required to create a Computer Numerical Control (CNC) program that will convert stock material into a finished product. The student will be capable of defining the list of required processes, their optimum sequence, create the complete CNC part program, install the appropriate tools correctly, establish the program zero point, and perform corresponding tool offsets. This course is also an advanced, hands-on study of Computer Aided Design/Computer Aided Manufacturing (CAD/CAM) theory and applications using CAD/CAM software. Emphasis is placed on generating programs using advanced modeling techniques for the CNC lathe at an intermediate level under moderate instructor supervision. The course is structured to include classroom instructional theory and hands-on operation of a CNC turning center.

Offered: Spring

Prerequisites: Take MTL.160 and MTL.165

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**MTL.215 CNC Mill Process** 2 2 3

This course is designed to provide the knowledge and skills required to create a Computer Numerical Control (CNC) program that will convert stock material into a finished product on a vertical machining center. The students will be capable of defining the list of required processes, their logical / optimum sequence, create the complete CNC part program, install the appropriate tools correctly, establish the program zero point, and perform corresponding tool offsets. This course is also an advanced hands-on study of Computer Aided Design/Computer Aided Manufacturing (CAD/CAM) theory and applications using CAD/CAM software. Emphasis is placed on generating programs using advanced modeling techniques for the CNC mill at an intermediate level under moderate instructor supervision. The course is structured to include classroom instructional theory and hands on operation of a CNC vertical machining center.

Offered: Spring

Prerequisites: Take MTL.160 and MTL.165

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**MTL.295 Operator Internship I** 10 2

The objective of this course is to integrate classroom theory with industry practice. All students will receive on-the-job training with selected area industry in the public and private sectors. All internship positions will be supervised by the supervising instructor and a job site supervisor. The positions associated with this internship will be non-paying positions. 160 hours required for course completion.

Offered: Fall or Spring or Summer

Prerequisites: Take MFG.125, MFG.130, MTL.103, MTL.130, and MTL.135.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**MTL.296 Operator Internship II** 10 2

Students who are currently employed in the industry will perform a special project on a topic of interest to the student and his/her firm. The project will be supervised by the supervising instructor and a job site supervisor..

General Education – Not Applicable

**MTL.297 Programmer Internship I** 10 2

The objective of this course is to integrate classroom theory with industry practice. All students will receive on-the-job training with selected area industry in the public and private sectors. All internship positions will be supervised by the supervising instructor and a job site supervisor. The positions associated with this internship will be non-paying positions.

Offered: Fall or Spring or Summer

Prerequisites: Take MAT.101, MTL.150, MTL.155, MTL.160, MAT.102, MTL.200, MTL.205, MTL.210, and MTL.215

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**MTL.298 Programmer Internship II** 10 2

Students who are currently employed will perform a research project on a topic of interest to the student and his/her firm. The project will be supervised by the supervising instructor and a job site supervisor.

Offered: Fall or Spring or Summer

Prerequisites: Take MAT.101, MTL.150, MTL.155, MTL.160, MTL.165, MAT.102, MTL.200, MTL.205, MTL.210, and MTL.215.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

Hr/Wk Hr/Wk Sem  
Lect/ Clin Cr  
Disc Lab Hr



**Courses**

**MTL.101 Machine Tool Fundamentals 1** 2 2 3

This course provides a basic introduction to machine tools with the primary emphasis on the engine lathe, drill press and hand tools common to the machinist trade.

Offered: Fall

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**MTL.103 Manufacturing Processes** 2 2

This course is designed to familiarize the student with the basic processes that are common to industry and the techniques used in the manufacturing of a product.

Offered: Fall

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**MTL.130 CNC Machining Technology** 2 4 4

This course provides an introduction to Computer Numerical Control (CNC) machining processes and the technology that supports them. Some of the processes covered are gauging, quality control, spot drilling, drilling, reaming, tapping, counter-boring, countersinking, defining and calculating speed and feed rates, screw thread identification, and drill sharpening. Students will perform these processes on manual equipment prior to observing them on CNC equipment. Occupational computer skills are also covered in this course.

Offered: Spring

Prerequisites: Take MFG.125

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable General Education: Not Applicable.

General Education – Not Applicable

**MTL.135 Fund. of CNC Machine Applications** 2 4 4

This course is designed to give students a familiarization with the necessary practices and techniques used to operate Computer Numerical Controlled (CNC) machines. Some of the topics covered include CNC machine introduction, safe practices and techniques used to remove burrs, basic CNC machine operator maintenance, and production support equipment use and operation. Topics such as machine homing, tooling used, an understanding of offsets, setting offsets, and the application of offsets in the CNC machine will also be covered. Actual run time in the lab will be provided for hands-on machine operation. Students will work in groups and as individuals to gain experience in machine operation during a production run, applying theories learned to the production process.

Offered: Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**MTL.150 Fund. of CNC Turning Applications** 2 2 3

This course provides an introduction to Computer Numerical Control (CNC) turning processes and their proper application. Some of the topics covered include lathe set-up and operation, lathe safety, types of lathes, lathe work-holding devices, lathe cutting tools, grinding and sharpening of lathe cutters, and a review of lathe machining speeds and feeds. In this course, you will perform O.D. and I.D. turning operations on engine lathes as well as facing, drilling, reaming, tapping, grooving, chamfering, boring, knurling, tapering, and thread cutting operations.

Offered: Fall

Prerequisites: Take MTL.130 or Proficiency-based Exam

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**MTL.155 Fund. of CNC Milling Applications** 2 2 3

This course provides an introduction to Computer Numerical Control (CNC) milling processes and their proper application. Some of the topics covered include machine set-up and operation, machine safety, types of milling machines, use and care of various cutting tools, and a review of milling speeds and feeds. The student will perform face and end milling operations as well as drilling, reaming, tapping, and slotting operations on manual milling machines. The proper use and care of accessories, such as edge finders, digital readouts, dial indicators, and boring heads, and an introduction to a CNC milling machine are also covered.

Offered: Fall

Prerequisites: Take MTL.130 or Proficiency-based Exam

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**MTL.160 CNC Lathe Set-up**

Students will produce and troubleshoot Computer Numerical Control (CNC) lathe set-ups from job packets and machine parts to blueprint specifications. Students will learn simple G and M codes, download programs to machines, graphically verify programs, and prove out parts on 2-axis turning center utilizing various CNC controllers. Set-ups will include faceting, turning, drilling, grooving, and thread operations. Students will also learn to produce some simple tooling necessary to complete various set-ups.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**MTL.165 CNC Mill Set-up** 2 2 3

Students will produce and troubleshoot Computer Numerical Control (CNC) mill set-ups from job packets and machine parts to blueprint specifications. Students will learn simple G and M codes, download programs to machines, graphically verify programs, and prove out parts on 3-axis machining centers using various CNC controllers. Set-ups will include face, end, and profile milling and drilling, slotting, boring, and tapping operations. Students will also learn to produce some simple tooling necessary to complete various set-ups.

Offered: Fall

Prerequisites: Take MTL.155

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where Applicable.

General Education – Not Applicable

**MTL.200 Fundamentals of Live Tooling** 2 2 3

The course provides the specific skills required to efficiently and effectively operate machines employing multi-axis part processing to maximize machine productivity. This course covers concepts of Computer Numerical Control (CNC) machining, setup and operations, tooling and work-holding systems, and basics of manual part programming for drilling, milling, and tapping, as well as boring operations by utilizing G codes. Hands-on practice is an integral part of the class.

Offered: Spring

Prerequisites: Take MTL.160 and MTL.165

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**MTL.205 Live Tooling & Set-Up & Orientation** 2 2 3

The course provides the knowledge and skills required to translate the part drawing into a finished product. Part programs will be created with a consistent focus on identifying those specific part features that readily lend themselves to 4-axis structured programming, and simultaneous machining. The individual will be capable of defining the list of required processes and their optimum sequential order, create the complete CNC part program, install the appropriate tools correctly, establish the program zero points, and perform corresponding tool offsets and related machine safety procedures.

Offered: Spring

Prerequisites: Take MTL.160 and MTL.165

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**MTL.210 CNC Lathe Process** 2 2 3

This course is designed to provide the knowledge and skills required to create a Computer Numerical Control (CNC) program that will convert stock material into a finished product. The student will be capable of defining the list of required processes, their optimum sequence, create the complete CNC part program, install the appropriate tools correctly, establish the program zero point, and perform corresponding tool offsets. This course is also an advanced, hands-on study of Computer Aided Design/Computer Aided Manufacturing (CAD/CAM) theory and applications using CAD/CAM software. Emphasis is placed on generating programs using advanced modeling techniques for the CNC lathe at an intermediate level under moderate instructor supervision. The course is structured to include classroom instructional theory and hands-on operation of a CNC turning center.

Offered: Spring

Prerequisites: Take MTL.160 and MTL.165

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**MTL.215 CNC Mill Process** 2 2 3

This course is designed to provide the knowledge and skills required to create a Computer Numerical Control (CNC) program that will convert stock material into a finished product on a vertical machining center. The students will be capable of defining the list of required processes, their logical / optimum sequence, create the complete CNC part program, install the appropriate tools correctly, establish the program zero point, and perform corresponding tool offsets. This course is also an advanced hands-on study of Computer Aided Design/Computer Aided Manufacturing (CAD/CAM) theory and applications using CAD/CAM software. Emphasis is placed on generating programs using advanced modeling techniques for the CNC mill at an intermediate level under moderate instructor supervision. The course is structured to include classroom instructional theory and hands on operation of a CNC vertical machining center.

Offered: Spring

Prerequisites: Take MTL.160 and MTL.165

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**MTL.295 Operator Internship I** 10 2

The objective of this course is to integrate classroom theory with industry practice. All students will receive on-the-job training with selected area industry in the public and private sectors. All internship positions will be supervised by the supervising instructor and a job site supervisor. The positions associated with this internship will be non-paying positions. 160 hours required for course completion.

Offered: Fall or Spring or Summer

Prerequisites: Take MFG.125, MFG.130, MTL.103, MTL.130, and MTL.135.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**MTL.296 Operator Internship II** 10 2

Students who are currently employed in the industry will perform a special project on a topic of interest to the student and his/her firm. The project will be supervised by the supervising instructor and a job site supervisor..

General Education – Not Applicable

**MTL.297 Programmer Internship I** 10 2

The objective of this course is to integrate classroom theory with industry practice. All students will receive on-the-job training with selected area industry in the public and private sectors. All internship positions will be supervised by the supervising instructor and a job site supervisor. The positions associated with this internship will be non-paying positions.

Offered: Fall or Spring or Summer

Prerequisites: Take MAT.101, MTL.150, MTL.155, MTL.160, MAT.102, MTL.200, MTL.205, MTL.210, and MTL.215

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**MTL.298 Programmer Internship II** 10 2

Students who are currently employed will perform a research project on a topic of interest to the student and his/her firm. The project will be supervised by the supervising instructor and a job site supervisor.

Offered: Fall or Spring or Summer

Prerequisites: Take MAT.101, MTL.150, MTL.155, MTL.160, MTL.165, MAT.102, MTL.200, MTL.205, MTL.210, and MTL.215.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

## MTS Mortuary Science

	Hr/Wk Lect/ Disc	Hr/Wk Clin Lab	Sem Cr Hr
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### Courses

**MTS.110 History of Mortuary Science** 3 3

Funeral practices and beliefs of all major Western cultures from pre-Egyptian times to the present are reviewed with special emphasis on Judeo Christian tradition as the primary basis of modern belief. The origin and development of present day practices including embalming and disposition are discussed. Special emphasis is placed on modern development in funeral service education and professional organizations. (This course must be completed with a grade of C or above to continue in the Mortuary Science Program.) Admission to the Mortuary Science program is required to enroll in this course.

Offered: Fall

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**MTS.120 Mortuary Law** 3 3

Instructional material will include the study of the laws as they pertain to the everyday operation of a licensed funeral home within each of the various states. This information will include such issues as trust funds, pre arrangement laws, employment laws and rules, laws regarding cremation, and disinterment. Licensing rules will also be addressed in this course as well. This course must be completed with a grade of C or above to continue in the Mortuary Science Program. Admission to the Mortuary Science program is required to enroll in this course.

Offered: Fall

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS,AGS and Certificates where applicable.

General Education – Not Applicable

**MTS.130 Introduction to Microbiology - Mort Sci** 2 2

This eight week course is designed to introduce the student to the principles of microbiology as they relate to the mortuary science profession. Areas of study will include the role of diseases and types of pathogens and microbes which will infect and attack the human body. Study will include issues pertaining to both the spread of infectious agents, as well as their control. (This course must be completed with a grade of C or above to continue in the Mortuary Science Program.)

Offered: Spring

Prerequisites: BIO.111 and CHM.100 with grades of C or better

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**MTS.131 Introduction to Pathology-Mortuary Sci** 2 2

This eight-week course is designed to meet the needs of students in the Mortuary Science Program. It will include a general discussion of disease and a brief introduction to surgical, clinical, physiological, and forensic pathology. (This course must be completed with a grade of C or above to continue in the Mortuary Science program.)

Offered: Spring

Prerequisites: BIO.111 and CHM.100 with grades of C or better

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**MTS.140 Embalming 1** 3.5 1 4

The student will be introduced to the techniques of embalming and preparation of the deceased for public viewing. Instruction covers knowledge of the skills necessary to embalm a normal case. Theory, practices and techniques of sanitation, restoration, and preservation of the deceased human remains are included. Laboratory experience will consist of a dissection laboratory and other related activities. Pre-embalming, embalming and post-embalming treatments will be covered in depth. (This course must be completed with a grade of C or above to continue in the Mortuary Science Program.)

Offered: Fall

Prerequisites: BIO.111 and CHM.100 with grades of C or better

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**MTS.150 Psychology of Grief & Death** 3 3

This course has been designed to look at many perspectives of death, dying, grief, bereavement, and the human experiences and difficulties that each of us face. This course is a comprehensive study of the patterns of death and dying that the funeral profession will face. Some of the course will include past history of the mourning process, last rites, death in children's lives, and special cases. (This course must be completed with a grade of C or above to continue in the Mortuary Science Program.)

Offered: Fall

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**MTS.160 Funeral Service Administration** 5 5

This course is designed to teach effective funeral home management skills. Instruction includes recognizing, analyzing, and solving funeral service management problems and establishing and implementing policies regarding funeral home management. Funeral home operation and records, ethics, and professional regulations are examined. Laws that govern the practice of funeral services, the Illinois License Law, Vital Statistics Act, transportation rules and Social Security are studied. Responsibilities and relationships to local boards of health and the State Department of Public Health are emphasized. The student also develops product knowledge which includes caskets, vaults, monuments, and urns. This course must be completed with a grade of C or above to continue in the Mortuary Science Program.)

Offered: Fall

Prerequisites: MTS.120 and BUS.201 with a grade of C or better

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**MTS.170 Restorative Art** 3 2 4

Instruction covers the restoration of the deceased for public viewing. Every aspect of performing a partial or total restoration is covered. Students will study the structure of the cranial and facial areas of the human skull and gain an appreciation of each facial feature's physiognomy, as well as its parts in the overall composite. Laboratory experience will consist of doing partial or total restorations for normal cases. (This course must be completed with a grade of C or above to continue in the Mortuary Science Program.)

Offered: Fall

Prerequisites: BIO.111 with a grade of C or better

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**MTS.210 Funeral Service Counseling** 4 4

Current theories in personal counseling with an emphasis on bereavement are covered. The student is taught counseling skills and is introduced to disaster management and crisis intervention skills. Counseling in grief resolution is examined. Funeral service counseling needs are examined in relation to a variety of cultural, religious, and ethnic groups and their individual needs. (This course must be completed with a grade of C or above to continue in the Mortuary Science Program.)

Offered: Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**MTS.215 Introduction-Mass Fatalities Incidents** 2 2

This course is designed to introduce the student to the effective management of a mass fatalities incident. This course will include formal lecture and training involving all aspects of handling a mass fatality. This includes various types of incidents as well as information regarding the cooperative agencies that will be involved with the operation. (This course must be completed with a grade of C or above to continue in the Mortuary Science Program.) Must have second year student status in the Mortuary Science program to enroll in this course.

Offered: Fall

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**MTS.220 Funeral Directing** 4 4

This course is designed to introduce the student to the various types and styles of service that the funeral director must provide to the families that are served by the funeral home. These will include the various religions, as well as ethnic, social, and fraternal influences. The students will also have an opportunity to participate in making mock funeral arrangements, as well as directing those mock funerals. (This course must be completed with a grade of C or above to continue in the Mortuary Science Program.)

Offered: Spring

Prerequisites: MTS.150 and MTS.160 with grades of C or better

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**MTS.225 Thanatochemistry** 3 3

This course will offer an in-depth study of the basic principles of chemistry as they specifically relate to funeral service. Especially stressed are the chemical principles and precautions involved in sanitation, disinfection, public health, and embalming practice. Emphasis is placed on selected aspects of general chemistry, organic chemistry, and biochemistry as they relate to decomposition, disinfection, and the process of embalming. (This course must be completed with a grade of C or above to continue in the Mortuary Science Program.)

Offered: Fall

Prerequisites: CHM.100 with a grade of C or better Take MTS.140;

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**MTS.230 Embalming 2** 3.5 1 4

This course offers an in-depth study of the various problems of embalming and proper chemicals used for each. Emphasis is placed on providing the student with the knowledge and skills necessary to care for any deviation from normal as it pertains to the preparation of the deceased for public viewing. Laboratory experience will consist of a dissection laboratory and other related activities.

Offered: Spring

Prerequisites: MTS.140 with a grade of C or better

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**MTS.240 Funeral Service Seminar** 1 1

This course is designed to allow for extensive testing of the student's knowledge, both theoretical and technical. Reviews of the material for the National Board Examination will take place at this time and examinations will be administered. These examination topics will be announced ahead of time and will be selected from the various subjects of study as listed within the curriculum outlines from the American Board of Funeral Service Education. This course will further prepare each student prior to graduation for the successful completion of the National Board Examination. (This course must be completed with a grade of C or above to continue in the Mortuary Science Program.)

Offered: Spring

Prerequisites: MTS.160 with a grade of C or better

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**MTS.250 Funeral Service Practicum** 15 3

Students will be assigned by the program coordinator to an approved funeral home for an eight week period learning from actual practice situations. Students will not be allowed to return to either a present or former employer for this eight week period. This practicum will serve as an actual practice situation involving organization and administration of procedures and policies of the establishment. Students will perform duties as assigned by the preceptor and coordinator to include the participation in the execution of not less than 10 total funeral services rendered to a family. Service reports and other assignments are also required to be completed by the student. (This course must be completed with a grade of C or above to continue in the Mortuary Science Program.) Student must have permission of program coordinator to enroll in this course.

Offered: Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**MTS.260 Restorative Arts/Embalming Practicum** 15 3

Students will be assigned by the program coordinator to an approved funeral home for an eight-week period learning from actual practice situations. Students will not be allowed to return to either a present or former employer for this eight week period. The students will learn embalming and restorative art techniques by active participation in these experiences under the supervision of an approved clinical instructor or preceptor. Service reports and other assignments are also required to be completed by the student. (This course must be completed with a grade of C or above to continue in the Mortuary Science Program.) Requirement: The student must pass a practical examination on embalming techniques at the conclusion of their practicum in order to successfully pass this course. Student must have permission of program coordinator to enroll in this course.

Offered: Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**MTS.270 Exam Review Seminar** 1 1

This seminar course is designed to assist each student in identifying weak areas of study as well as allow for a comprehensive review of educational materials that will be contained within the National Board Examination that each student must take. This will aid each participant in the study of material as a review. Student must have permission of program coordinator to enroll in this course.

Offered: Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

Hr/Wk	Hr/Wk	Sem
Lect/	Clin	Cr
Disc	Lab	Hr

**Courses**

**MTS.110 History of Mortuary Science** 3 3

Funeral practices and beliefs of all major Western cultures from pre-Egyptian times to the present are reviewed with special emphasis on Judeo Christian tradition as the primary basis of modern belief. The origin and development of present day practices including embalming and disposition are discussed. Special emphasis is placed on modern development in funeral service education and professional organizations. (This course must be completed with a grade of C or above to continue in the Mortuary Science Program.) Admission to the Mortuary Science program is required to enroll in this course.

Offered: Fall

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable



**MTS.120 Mortuary Law** 3 3

Instructional material will include the study of the laws as they pertain to the everyday operation of a licensed funeral home within each of the various states. This information will include such issues as trust funds, pre arrangement laws, employment laws and rules, laws regarding cremation, and disinterment. Licensing rules will also be addressed in this course as well. This course must be completed with a grade of C or above to continue in the Mortuary Science Program. Admission to the Mortuary Science program is required to enroll in this course.

Offered: Fall

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS,AGS and Certificates where applicable.

General Education – Not Applicable

**MTS.130 Introduction to Microbiology - Mort Sci** 2 2

This eight week course is designed to introduce the student to the principles of microbiology as they relate to the mortuary science profession. Areas of study will include the role of diseases and types of pathogens and microbes which will infect and attack the human body. Study will include issues pertaining to both the spread of infectious agents, as well as their control. (This course must be completed with a grade of C or above to continue in the Mortuary Science Program.)

Offered: Spring

Prerequisites: BIO.111 and CHM.100 with grades of C or better

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**MTS.131 Introduction to Pathology-Mortuary Sci** 2 2

This eight-week course is designed to meet the needs of students in the Mortuary Science Program. It will include a general discussion of disease and a brief introduction to surgical, clinical, physiological, and forensic pathology. (This course must be completed with a grade of C or above to continue in the Mortuary Science program.)

Offered: Spring

Prerequisites: BIO.111 and CHM.100 with grades of C or better

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**MTS.140 Embalming 1** 3.5 1 4

The student will be introduced to the techniques of embalming and preparation of the deceased for public viewing. Instruction covers knowledge of the skills necessary to embalm a normal case. Theory, practices and techniques of sanitation, restoration, and preservation of the deceased human remains are included. Laboratory experience will consist of a dissection laboratory and other related activities. Pre-embalming, embalming and post-embalming treatments will be covered in depth. (This course must be completed with a grade of C or above to continue in the Mortuary Science Program.)

Offered: Fall

Prerequisites: BIO.111 and CHM.100 with grades of C or better

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**MTS.150 Psychology of Grief & Death** 3 3

This course has been designed to look at many perspectives of death, dying, grief, bereavement, and the human experiences and difficulties that each of us face. This course is a comprehensive study of the patterns of death and dying that the funeral profession will face. Some of the course will include past history of the mourning process, last rites, death in children's lives, and special cases. (This course must be completed with a grade of C or above to continue in the Mortuary Science Program.)

Offered: Fall

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**MTS.160 Funeral Service Administration** 5 5

This course is designed to teach effective funeral home management skills. Instruction includes recognizing, analyzing, and solving funeral service management problems and establishing and implementing policies regarding funeral home management. Funeral home operation and records, ethics, and professional regulations are examined. Laws that govern the practice of funeral services, the Illinois License Law, Vital Statistics Act, transportation rules and Social Security are studied.

Responsibilities and relationships to local boards of health and the State Department of Public Health are emphasized. The student also develops product knowledge which includes caskets, vaults, monuments, and urns. This course must be completed with a grade of C or above to continue in the Mortuary Science Program.)

Offered: Fall

Prerequisites: MTS.120 and BUS.201 with a grade of C or better

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**MTS.170 Restorative Art** 3 2 4

Instruction covers the restoration of the deceased for public viewing. Every aspect of performing a partial or total restoration is covered. Students will study the structure of the cranial and facial areas of the human skull and gain an appreciation of each facial feature's physiognomy, as well as its parts in the overall composite. Laboratory experience will consist of doing partial or total restorations for normal cases. (This course must be completed with a grade of C or above to continue in the Mortuary Science Program.)

Offered: Fall

Prerequisites: BIO.111 with a grade of C or better

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**MTS.210 Funeral Service Counseling** 4 4

Current theories in personal counseling with an emphasis on bereavement are covered. The student is taught counseling skills and is introduced to disaster management and crisis intervention skills. Counseling in grief resolution is examined. Funeral service counseling needs are examined in relation to a variety of cultural, religious, and ethnic groups and their individual needs. (This course must be completed with a grade of C or above to continue in the Mortuary Science Program).  
Offered: Spring  
Applicable toward graduation at Sandburg where program structure permits:  
Degree or Certificate: AAS, AGS and Certificates where applicable.  
General Education – Not Applicable

**MTS.215 Introduction-Mass Fatalities Incidents** 2 2

This course is designed to introduce the student to the effective management of a mass fatalities incident. This course will include formal lecture and training involving all aspects of handling a mass fatality. This includes various types of incidents as well as information regarding the cooperative agencies that will be involved with the operation. (This course must be completed with a grade of C or above to continue in the Mortuary Science Program.) Must have second year student status in the Mortuary Science program to enroll in this course.  
Offered: Fall  
Applicable toward graduation at Sandburg where program structure permits:  
Degree or Certificate: AAS, AGS and Certificates where applicable.  
General Education – Not Applicable

**MTS.220 Funeral Directing** 4 4

This course is designed to introduce the student to the various types and styles of service that the funeral director must provide to the families that are served by the funeral home. These will include the various religions, as well as ethnic, social, and fraternal influences. The students will also have an opportunity to participate in making mock funeral arrangements, as well as directing those mock funerals. (This course must be completed with a grade of C or above to continue in the Mortuary Science Program.)  
Offered: Spring  
Prerequisites: MTS.150 and MTS.160 with grades of C or better  
Applicable toward graduation at Sandburg where program structure permits:  
Degree or Certificate: AAS, AGS and Certificates where applicable.  
General Education – Not Applicable

**MTS.225 Thanatochemistry** 3 3

This course will offer an in-depth study of the basic principles of chemistry as they specifically relate to funeral service. Especially stressed are the chemical principles and precautions involved in sanitation, disinfection, public health, and embalming practice. Emphasis is placed on selected aspects of general chemistry, organic chemistry, and biochemistry as they relate to decomposition, disinfection, and the process of embalming. (This course must be completed with a grade of C or above to continue in the Mortuary Science Program.)  
Offered: Fall  
Prerequisites: CHM.100 with a grade of C or better Take MTS.140;  
Applicable toward graduation at Sandburg where program structure permits:  
Degree or Certificate: AAS, AGS and Certificates where applicable.  
General Education – Not Applicable

**MTS.230 Embalming 2** 3.5 1 4

This course offers an in-depth study of the various problems of embalming and proper chemicals used for each. Emphasis is placed on providing the student with the knowledge and skills necessary to care for any deviation from normal as it pertains to the preparation of the deceased for public viewing. Laboratory experience will consist of a dissection laboratory and other related activities.  
Offered: Spring  
Prerequisites: MTS.140 with a grade of C or better  
Applicable toward graduation at Sandburg where program structure permits:  
Degree or Certificate: AAS, AGS and Certificates where applicable.  
General Education – Not Applicable

**MTS.240 Funeral Service Seminar** 1 1

This course is designed to allow for extensive testing of the student's knowledge, both theoretical and technical. Reviews of the material for the National Board Examination will take place at this time and examinations will be administered. These examination topics will be announced ahead of time and will be selected from the various subjects of study as listed within the curriculum outlines from the American Board of Funeral Service Education. This course will further prepare each student prior to graduation for the successful completion of the National Board Examination. (This course must be completed with a grade of C or above to continue in the Mortuary Science Program.)  
Offered: Spring  
Prerequisites: MTS.160 with a grade of C or better  
Applicable toward graduation at Sandburg where program structure permits:  
Degree or Certificate: AAS, AGS and Certificates where applicable.  
General Education – Not Applicable

**MTS.250 Funeral Service Practicum** 15 3

Students will be assigned by the program coordinator to an approved funeral home for an eight week period learning from actual practice situations. Students will not be allowed to return to either a present or former employer for this eight week period. This practicum will serve as an actual practice situation involving organization and administration of procedures and policies of the establishment. Students will perform duties as assigned by the preceptor and coordinator to include the participation in the execution of not less than 10 total funeral services rendered to a family. Service reports and other assignments are also required to be completed by the student. (This course must be completed with a grade of C or above to continue in the Mortuary Science Program.) Student must have permission of program coordinator to enroll in this course.  
Offered: Spring  
Applicable toward graduation at Sandburg where program structure permits:  
Degree or Certificate: AAS, AGS and Certificates where applicable.  
General Education – Not Applicable

**MTS.260 Restorative Arts/Embalming Practicum** 15 3

Students will be assigned by the program coordinator to an approved funeral home for an eight-week period learning from actual practice situations. Students will not be allowed to return to either a present or former employer for this eight week period. The students will learn embalming and restorative art techniques by active participation in these experiences under the supervision of an approved clinical instructor or preceptor. Service reports and other assignments are also required to be completed by the student. (This course must be completed with a grade of C or above to continue in the Mortuary Science Program.) Requirement: The student must pass a practical examination on embalming techniques at the conclusion of their practicum in order to successfully pass this course. Student must have permission of program coordinator to enroll in this course.

Offered: Spring  
 Applicable toward graduation at Sandburg where program structure permits:  
 Degree or Certificate: AAS, AGS and Certificates where applicable.  
 General Education – Not Applicable

**MTS.270 Exam Review Seminar** 1 1

This seminar course is designed to assist each student in identifying weak areas of study as well as allow for a comprehensive review of educational materials that will be contained within the National Board Examination that each student must take. This will aid each participant in the study of material as a review. Student must have permission of program coordinator to enroll in this course.

Offered: Spring  
 Applicable toward graduation at Sandburg where program structure permits:  
 Degree or Certificate: AAS, AGS and Certificates where applicable.  
 General Education – Not Applicable

## MUS Music

Hr/Wk	Hr/Wk	Sem
Lect/	Clin	Cr
Disc	Lab	Hr

### Courses

**MUS.100 Music in the Western World** 3 3

Through understanding of the common elements of music, students trace the common ingredients of music from the Middle Ages to the present day. The study is undertaken in an historical and cultural perspective that highlights the great composers and compositions of the last 1000 years. The course is open to all students.

Offered: Fall or Spring or Summer  
 Applicable toward graduation at Sandburg where program structure permits:  
 Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable. *IAI Course No. F1 900*  
 General Education – Humanities Human Relations

**MUS.101 Introduction to American Music** 3 3

This course traces the origins and changes in our folk, religious, classical and popular music. It is open to all students.

Offered: Fall or Spring  
 Applicable toward graduation at Sandburg where program structure permits:  
 Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable. *IAI Course No. F1 904*  
 General Education – Fine Arts Human Relations

**MUS.105 Non-Western Music** 3 3

This course covers the basic elements of music (melody, rhythm, harmony, and form) and perceptive listening as they relate to non-Western music. Examines the music culture of several non-Western societies.

Offered: As Needed  
 Applicable toward graduation at Sandburg where program structure permits:  
 Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable. *IAI Course No. F1 903N*  
 General Education – Fine Arts Human Relations

**MUS.122 Jazz Combo** 2 1

The Jazz Combo is composed of four to eight musicians who perform and study jazz in a small group setting. The literature for the ensemble ranges from Dixieland to be-bop and modern jazz. Students explore the language, skills, and materials of jazz music through performing a variety of jazz combo repertoire. Improvisation is required of all jazz combo performers. It may be taken twice for credit. An audition is required. Instructor permission is required to enroll in this course.

Offered: Fall or Spring  
 Applicable toward graduation at Sandburg where program structure permits:  
 Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable.  
 General Education – Not Applicable Elective Only

**MUS.123 Sandburg Choir** 2 1

The Sandburg Choir is a mixed-voice ensemble which performs a wide variety of music, including classical, jazz, folk, spiritual, and contemporary. The group performs frequently, both off and on campus, and tours annually. It may be taken twice for credit. An audition is required.

Offered: Fall or Spring  
 Applicable toward graduation at Sandburg where program structure permits:  
 Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable.  
 General Education – Not Applicable Elective Only

**MUS.125 Small Vocal Ensemble** 2 1

The Small Vocal Ensemble is a select group of singers whose members are chosen from the Sandburg Choir. This group specializes in performing music specifically appropriate for small vocal ensembles, from madrigals and motets to vocal jazz. There are frequent public performances, both on and off campus. The group tours each year with the Sandburg Choir. This course may be taken twice for credit. An audition is required. Instructor permission is required to enroll in this course.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**MUS.150 Applied Music I** .5 1 1

This course provides a one half-hour private lesson each week and is open to all students. Students will learn the basics of the instrument and/or method. This course is intended for non-music majors and music majors studying an instrument other than their primary one. It may be repeated once for up to a maximum of two semester hours of credit..

General Education – Not Applicable

**MUS.151 Applied Music I** 1 2 2

This course provides a one-hour private lesson each week and is open to all students. Students will learn the basics of the instrument and/or method. This course is intended for music majors on their primary instrument and non-music majors desiring more in-depth musical study. It may be repeated once for up to a maximum of four semester hours of credit..

General Education – Not Applicable

**MUS.205 Music and Society** 3 3

An examination of societal issues as they are manifested, through time, in music. Topics include musical expression and connection in gender, ethnicity, spirituality, war, politics, performance, film, dance, and narrative expression.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS and Certificates where applicable.

General Education – Humanities Human Relations

**MUS.222 Jazz Combo** 2 1

The Jazz Combo is composed of 4-8 musicians who perform and study jazz in a small group setting. The literature for the ensemble ranges from Dixieland to be-bop and modern jazz. Students explore the language, skills, and materials of jazz music through performing a variety of jazz combo repertoire. Improvisation is required of all jazz combo performers. It may be taken twice for credit. An audition is required.

Offered: Fall or Spring

Prerequisites: Take 2 semester of MUS.122;

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS and Certificates where applicable.

General Education – Not Applicable Elective Only

**MUS.223 Sandburg Choir** 2 1

Sandburg Choir is a mixed-voice ensemble that performs a wide variety of music, including classical, jazz, folk, spiritual, and contemporary. The group performs frequently, both off and on campus, and tours annually. It may be taken twice for credit. An audition is required.

Offered: Fall or Spring

Prerequisites: Take 2 semesters of MUS.123;

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**MUS.224 Galesburg Community Chorus** 2 1

Sandburg Choir is a mixed-voice ensemble that performs a wide variety of music, including classical, jazz, folk, spiritual, and contemporary. The group performs frequently, both off and on campus, and tours annually. It may be taken twice for credit. An audition is required.

Offered: Fall or Spring

Prerequisites: Take 2 semester of MUS.124

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**MUS.225 Small Vocal Ensemble** 2 1

The Sandburg Chamber Choir is a select group of singers whose members are chosen from the Sandburg Choir. This group specializes in performing music specifically appropriate for small vocal ensembles, from madrigals and motets to vocal jazz. There are frequent public performances, both on and off campus. The group tours each year with the Sandburg Choir. It may be taken twice for credit. An audition is required.

Offered: Fall or Spring

Prerequisites: Take 2 semesters of MUS.125 or instructor permission

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AFA, AS, AAS, AGS and Certificates where applicable.

General Education – Not Applicable Elective Only

**MUS.250 Applied Music 2** .5 1 1

This course provides a one half-hour private lesson each week and is open to all students. Students will learn intermediate techniques of the instrument and/or method. This course is intended for non-music majors and music majors studying an instrument other than their primary one. It may be repeated once for up to a maximum of two semester hours of credit..

General Education – Not Applicable

**MUS.251 Applied Music 2** 2 2 2

This course provides a one-hour private lesson each week and is open to all students. Students will learn the intermediate techniques of the instrument and/or method. This course is intended for music majors on their primary instrument and non-music majors desiring more in-depth musical study. It maybe repeated once for up to a maximum of four semester hours of credit..

General Education – Not Applicable

	Hr/Wk Lect/ Disc	Hr/Wk Clin Lab	Sem Cr Hr
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## Courses

<b>MUS.100 Music in the Western World</b>	3		3
Through understanding of the common elements of music, students trace the common ingredients of music from the Middle Ages to the present day. The study is undertaken in an historical and cultural perspective that highlights the great composers and compositions of the last 1000 years. The course is open to all students. Offered: Fall or Spring or Summer Applicable toward graduation at Sandburg where program structure permits: Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable. <i>IAI Course No. F1 900</i> General Education – Humanities Human Relations			
<b>MUS.101 Introduction to American Music</b>	3		3
This course traces the origins and changes in our folk, religious, classical and popular music. It is open to all students. Offered: Fall or Spring Applicable toward graduation at Sandburg where program structure permits: Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable. <i>IAI Course No. F1 904</i> General Education – Fine Arts Human Relations			
<b>MUS.105 Non-Western Music</b>	3		3
This course covers the basic elements of music (melody, rhythm, harmony, and form) and perceptive listening as they relate to non-Western music. Examines the music culture of several non-Western societies. Offered: As Needed Applicable toward graduation at Sandburg where program structure permits: Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable. <i>IAI Course No. F1 903N</i> General Education – Fine Arts Human Relations			
<b>MUS.122 Jazz Combo</b>		2	1
The Jazz Combo is composed of four to eight musicians who perform and study jazz in a small group setting. The literature for the ensemble ranges from Dixieland to be-bop and modern jazz. Students explore the language, skills, and materials of jazz music through performing a variety of jazz combo repertoire. Improvisation is required of all jazz combo performers. It may be taken twice for credit. An audition is required. Instructor permission is required to enroll in this course. Offered: Fall or Spring Applicable toward graduation at Sandburg where program structure permits: Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. General Education – Not Applicable Elective Only			

**MUS.123 Sandburg Choir** 2 1

The Sandburg Choir is a mixed-voice ensemble which performs a wide variety of music, including classical, jazz, folk, spiritual, and contemporary. The group performs frequently, both off and on campus, and tours annually. It may be taken twice for credit. An audition is required.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**MUS.125 Small Vocal Ensemble** 2 1

The Small Vocal Ensemble is a select group of singers whose members are chosen from the Sandburg Choir. This group specializes in performing music specifically appropriate for small vocal ensembles, from madrigals and motets to vocal jazz. There are frequent public performances, both on and off campus. The group tours each year with the Sandburg Choir. This course may be taken twice for credit. An audition is required. Instructor permission is required to enroll in this course.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**MUS.150 Applied Music I** .5 1 1

This course provides a one half-hour private lesson each week and is open to all students. Students will learn the basics of the instrument and/or method. This course is intended for non-music majors and music majors studying an instrument other than their primary one. It may be repeated once for up to a maximum of two semester hours of credit.  
General Education – Not Applicable

**MUS.151 Applied Music I** 1 2 2

This course provides a one-hour private lesson each week and is open to all students. Students will learn the basics of the instrument and/or method. This course is intended for music majors on their primary instrument and non-music majors desiring more in-depth musical study. It may be repeated once for up to a maximum of four semester hours of credit.

General Education – Not Applicable

**MUS.205 Music and Society** 3 3

An examination of societal issues as they are manifested, through time, in music. Topics include musical expression and connection in gender, ethnicity, spirituality, war, politics, performance, film, dance, and narrative expression.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS and Certificates where applicable.

General Education – Humanities Human Relations



**MUS.222 Jazz Combo** 2 1

The Jazz Combo is composed of 4-8 musicians who perform and study jazz in a small group setting. The literature for the ensemble ranges from Dixieland to be-bop and modern jazz. Students explore the language, skills, and materials of jazz music through performing a variety of jazz combo repertoire. Improvisation is required of all jazz combo performers. It may be taken twice for credit. An audition is required.

Offered: Fall or Spring

Prerequisites: Take 2 semester of MUS.122;

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS and Certificates where applicable.

General Education -- Not Applicable Elective Only

**MUS.223 Sandburg Choir** 2 1

Sandburg Choir is a mixed-voice ensemble that performs a wide variety of music, including classical, jazz, folk, spiritual, and contemporary. The group performs frequently, both off and on campus, and tours annually. It may be taken twice for credit. An audition is required.

Offered: Fall or Spring

Prerequisites: Take 2 semesters of MUS.123;

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable.

General Education -- Not Applicable Elective Only

**MUS.224 Galesburg Community Chorus** 2 1

Sandburg Choir is a mixed-voice ensemble that performs a wide variety of music, including classical, jazz, folk, spiritual, and contemporary. The group performs frequently, both off and on campus, and tours annually. It may be taken twice for credit. An audition is required.

Offered: Fall or Spring

Prerequisites: Take 2 semester of MUS.124

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable.

General Education -- Not Applicable Elective Only

**MUS.225 Small Vocal Ensemble** 2 1

The Sandburg Chamber Choir is a select group of singers whose members are chosen from the Sandburg Choir. This group specializes in performing music specifically appropriate for small vocal ensembles, from madrigals and motets to vocal jazz. There are frequent public performances, both on and off campus. The group tours each year with the Sandburg Choir. It may be taken twice for credit. An audition is required.

Offered: Fall or Spring

Prerequisites: Take 2 semesters of MUS.125 or instructor permission

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AFA, AS, AAS, AGS and Certificates where applicable.

General Education -- Not Applicable Elective Only

**MUS.250 Applied Music 2** .5 1 1

This course provides a one half-hour private lesson each week and is open to all students. Students will learn intermediate techniques of the instrument and/or method. This course is intended for non-music majors and music majors studying an instrument other than their primary one. It may be repeated once for up to a maximum of two semester hours of credit..

General Education -- Not Applicable

**MUS.251 Applied Music 2** 2 2 2

This course provides a one-hour private lesson each week and is open to all students. Students will learn the intermediate techniques of the instrument and/or method. This course is intended for music majors on their primary instrument and non-music majors desiring more in-depth musical study. It maybe repeated once for up to a maximum of four semester hours of credit..

General Education -- Not Applicable

## NAD Nursing Associate Degree

Hr/Wk Lect/ Disc	Hr/Wk Clin Lab	Sem Cr Hr
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### Courses

**NAD.105 Nursing 1** 5 6 7

This course provides an introduction to nursing, roles of the nurse, and focuses on patient care concepts. Emphasis is placed on the knowledge and skills need to provide safe, quality care. The theoretical foundation for basic assessment and nursing skills is presented, and the student is given an opportunity to demonstrate these skills in a laboratory and clinical setting. An introduction to the nursing process provides a decision-making framework to assist students in developing effective clinical judgement skills. A unit entitled Nursing Care in a Diverse Society will focus on the issues and implications associated with caring for clients with diverse and complex cultural backgrounds. Learning experiences are provided in the classroom, audio-visual tutorials, skills lab, simulation and clinical settings. Students will provide care for individual adults with acute and/or chronic health care needs in the acute care, outpatient, community and/or long-term care and rehabilitation settings. Satisfactory (S) performance in clinical and skills lab and a minimum grade of C in theory are required in order to pass the course.

Offered: Fall

Prerequisites: Admission to the Associate Degree Nursing Program. Corequisites: NAD.106, NAD.108, and BIO.211 with a grade of C or better. All corequisites must be passed with a C or better to progress in the program.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education: Not Applicable..

General Education -- Not Applicable

**NAD.106 Medication Principles for Nurses** 2 2

This course introduces general principles of medication administration including determination of dosage, preparation, safe administration, and documentation of multiple forms of drugs for patients across the lifespan. This course also focuses on the knowledge needed for the development of basic dosage and calculation skills necessary for safe administration of medications. This course also includes terminology and abbreviations required to interpret physician's orders and to read medication labels. Instruction includes various systems of measurement. The student will demonstrate accurate dosage calculation; discuss the principles of safe medication administration; and identify the elements of accurate documentation of medication administration. Math proficiency is determined by examination. Laboratory experiences include the application of medication administration skills. Minimum grade of C is required in order to pass the course.

Offered: Fall

Prerequisites: Prerequisite: Admission to the Associate Degree Nursing Program or Practical Nursing Program. Take NAD.105 or NUP.105, NAD.108, BIO.211 or BIO.111; Minimum grade C or better. All corequisites must be completed with a grade of C or better to progress in the program. Applicable toward graduation at Sandburg where program structure permits: Degree or Certificate: AAS, AGS and Certificates where applicable. General Education: Not applicable..  
General Education – Not Applicable

**NAD.108 Health Assessment & Clinical Reasoning** 2 2

This course provides the framework for preparing students to perform comprehensive health assessments on patients across the lifespan utilizing the nursing process and focusing on the development of clinical reasoning. Emphasis is placed on taking a thorough nursing history, performing physiological, psychological, sociological, developmental, cultural, and spiritual assessments, as well as identification of patient safety, health risks, and stressors. Using the techniques of inspection, palpation, percussion, and auscultation, the student will be able to complete a systematic head to toe physical assessment of the adult patient. Emphasis is also placed on analyzing the data collected, including laboratory and diagnostic testing results and proper recording and documentation of assessed findings. Laboratory experiences provide an opportunity to practice assessment skills. Minimum grade of C is required in order to pass the course.

Offered: Fall

Prerequisites: Prerequisite: Admission to the Associate Degree Nursing Program or Practical Nursing Program. Take NAD.105 or NUP.105; NAD.106; BIO.111 or BIO.211. All corequisites must be completed with a grade of C or better to progress in the program.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education: Not applicable..

General Education – Not Applicable

**NAD.125 Nursing II** 5 9 8

This course builds on concepts, skills, and theories learned in NAD 105 and focuses on the care of individual adult patients and families with common and complex health problems that require medical and/or surgical intervention. Emphasis is placed on the care of patients with alterations in hematologic, immunologic, endocrine, respiratory, gastrointestinal and genitourinary problems. Concepts of patient-centered care, quality improvement, informatics, evidence-based practice, safety, teamwork and collaboration, leadership and professionalism are integrated throughout the course. Learning experiences are provided in the classroom, audio-visual tutorials, skills lab, simulation and clinical settings. Students will provide care for individual adult patients and families with common and complex health problems that require medical and/or surgical health care needs in the acute care, outpatient, community and/or long term care and rehabilitation settings. Satisfactory (S) performance in clinical and skills lab and a minimum grade of C in theory are required in order to pass the course.

Offered: Spring

Prerequisites: Take NAD.105, NAD.106, NAD.108, and BIO 211 with a grade of C or better. All prerequisites must be passed with a C or better to progress in the program. Corequisite: NAD.130 and BIO 212. All corequisites must be passed with C or better to progress in the program. Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education: Not Applicable..

General Education – Not Applicable

**NAD.130 Pharmacology for Nurses** 2 2

This course is designed to establish a solid base of knowledge in nursing pharmacology. The nursing process will be utilized in discussing the basic pharmacological principles and drug classifications and their effects on the body. This course will explore pharmacokinetics, pharmacodynamics, contraindications and interactions of selected drugs, emphasizing nursing implications, roles and responsibilities in patient care and safe drug administration. The focus is to examine selected prototype drugs used in the treatment of illness and the promotion, maintenance and restoration of wellness in diverse individuals across the lifespan with special consideration given to the physiological, psychosocial, developmental, cultural, and spiritual needs of patients. Minimum grade of C is required in order to pass the course.

Offered: Spring

Prerequisites: NAD 105 or NUP 105 NAD 106 or NAD 108 BIO 211 or BIO 111. All prerequisites must be completed with a grade of C or better.

Take NAD.125 or NUP.125 and BIO.212. All corequisites must be completed with a grade of C or better to progress in the program.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education: Not applicable..

General Education – Not Applicable

**NAD.180 LPN to RN Transition**

3 3 4

The LPN-RN Transition course is an intensive eight-week summer course designed to enhance the knowledge learned in the Practical Nursing Program and make the transition into the second year of the Associate Degree Nursing Program. The course content is intended to augment knowledge learned in a practical nursing program and includes an overview of fundamental nursing concepts and essential nursing skills. The nursing role is differentiated with emphasis on health maintenance, health promotion and disease prevention. Emphasis will be placed on the following concepts: provisions of safety, quality care, evidenced base practice, APA format, critical thinking, communication, documentation, dosage calculation, legal and ethical issues, delegation and prioritization of nursing care, nursing process, nursing assessment and patient-centered care that is culturally, developmentally, psychosocially, and spiritually based. Selected content from the first year of the associate degree program in physiological integrity will be reviewed. Combined classroom and nursing laboratory experience, learning is by the application of concepts. Supervised clinical practice in selected acute care, rehabilitation, long-term care, and community settings will be provided. This course includes theory, lab, and clinical hours. After successful completion of this course, the student will be eligible to enter the second year of the Associate Degree Nursing (ADN) program and will complete the last two(2) semesters with the traditional ADN students. Offered: As Needed

Prerequisites: Licensed Practice Nurse or successful completion of an,accredited Practical Nursing program and admission into the,Associate Degree Nursing Program, NAD 106, NAD 108, NAD,130, BIO.211, and BIO 212 Take BIO.200 with a grade of C or better. All corequisites,must be passed with a C or better to progress in the,program.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education: Not applicable..

General Education – Not Applicable

**NAD.190 Nursing Student Internship**

1 12 4

This nursing student internship is a collaborative education experience that will enhance the development of their professional nursing role, critical thinking skills, and technical skills to help student nurses to begin to think like a nurse. Students have the opportunity to use previously learned nursing knowledge and skills in cooperating acute care facilities. The course will have a weekly online component that will discuss thinking in action topics related to safe patient care, patient outcomes, delivery of nursing care, assessment, documentation, inter-professional collaboration, communication, and evidenced based practice. The internship is designed to provide students with additional socialization into nursing opportunities and clinical practice in either medical-surgical nursing, psychiatric care, critical care, obstetrics, emergency care, perioperative care or pediatrics. The student will work along with a RN preceptor for approximately 24 hours a week for an eight-week commitment, during the summer between the first year and second year of the Associate Degree Nursing Program. The nursing student internship is an elective nursing course that will be either paid or unpaid based on the nurse intern program of cooperating acute care facilities. In addition to completion of the prerequisites, students must have a minimum 2.5 GPA, complete the nursing internship application, submit the application with two nursing faculty references, and complete selection interviews. The nursing internship has limited enrollment based on cooperating acute care facilities and how many nursing student interns they can accommodate. The selection process is 100% ownership of each facility. Those students selected will have additional requirements to complete, including facility orientations and preparation for the internship. Offered: Summer

Prerequisites: Take NAD.105, NAD.106, NAD.108, NAD.125, NAD.130, BIO.211, and BIO.212.

Applicable toward graduation at Sandburg where program structure permits:.

General Education -- Not Applicable

**NAD.200 Nursing 3**

5 9 8

This course will focus on the care of individual adult patients and families with selected complex medical/surgical health alterations and childbearing women and newborns. Students will continue to expand their theoretical knowledge, use of the nursing process, and nursing skills as well as critical thinking and decision-making ability to delegate and prioritize nursing care. Emphasis is placed on reproduction and prenatal period, normal and high-risk pregnancies during the intra-partum and postpartum periods, high risk conditions of infant and newborn assessment, family dynamics and the promotion of healthy behaviors in patients. Emphasis will also be placed on the care of patients and families with health alterations in neurosensory and cardiac and vascular problems. Concepts of patient-centered care, quality improvement, informatics, evidence-based practice, safety, teamwork and collaboration, leadership and professionalism are integrated throughout the course. Learning experiences are provided in the classroom, audio-visual tutorials, skills lab, simulation and clinical settings. Students will provide care for individual adult patients and families with complex medical/surgical health alterations and childbearing families in acute care, outpatient, community and/or long term care and rehabilitation settings. Satisfactory (S) performance in clinical and skills lab and a minimum grade of C in theory are required in order to pass the course.

Offered: Fall

Prerequisites: NAD.125, NAD.130, BIO.212, BIO.200, and if applicable, NAD.180. All prerequisites must be passed with a C or better in order to progress in the program. Take NAD.205 with a minimum grade of C. All corequisites must be passed with a C or better in order to progress in the program.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education: Not applicable..

General Education – Not Applicable

**NAD.205 Community & Mental Health Nursing**

2 3 3

The purpose of this course is to introduce students to community health nursing and mental health nursing. This course will focus on the promotion, maintenance, and restoration of mental health needs of the individual across the lifespan and the community health needs of the family and selected groups within communities. A major focus of this course is for students to critically think about and discuss the role of the community health nurse; understand basic epidemiological concepts; and perform a community health assessment exploring the impact of culture, socioeconomic status, lifestyle, environment, and violence on the health of the community. In addition, students will focus on the role of the mental health nurse; understand the etiology, pathophysiology and psychopathology, signs and symptoms, complications, medications, and treatment modalities; and perform mental health assessments on patients experiencing cognitive, mental and behavioral disorders. Emphasis is placed on management of patients facing emotional and psychological stressors as well as promoting and maintaining the mental health of individuals and families, health promotion and disease prevention of vulnerable groups within our communities, and health disparities that exist within a global environment. The community as a site for care and support services is addressed. Clinical experiences will be provided in selected mental health settings and students will plan and implement a service-learning project in the community setting. Satisfactory (S) performance in clinical and a minimum grade of C in theory are required in order to pass the course.

Offered: Fall

Prerequisites: Take NAD.125, NAD.130, BIO.212, and BIO.200 with a grade of C or better to progress in the program. Take NAD.200 with a grade of C or better to progress in the program.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable .

General Education: Not applicable..

General Education – Not Applicable

**NAD.210 Nursing IV** 5 9 8

This course will focus on the care of the individual adult patients and families with selected complex, multisystem alterations in health and childrearing family. Students will continue to expand their theoretical knowledge, use of the nursing process, and nursing skills as well as critical thinking and decision-making ability to delegate and prioritize nursing care while functioning in a leadership role. Emphasis placed on normal growth and development of children, family dynamics, common pediatric disorders and the promotion of healthy behaviors in patients. Emphasis will also be placed on the care of patients and families with multisystem alterations and complex health problems in respiratory, renal, and burns in the emergency care and intensive care settings, as well as, oncology, and musculoskeletal trauma. This course will also focus on disaster preparedness, triage, and interdisciplinary collaboration. Concepts of patient centered care, quality improvement, informatics, evidence-based practice, safety, teamwork and collaboration, leadership and professionalism are integrated throughout the course. Learning experiences are provided in the classroom, audio-visual tutorials, skills lab, simulation and clinical settings. Students will provide care for individual adult patients and families with complex, multisystem alterations in health and childrearing families in acute care, outpatient, community and/or long term care and rehabilitation settings. Satisfactory (S) performance in clinical assignments and a minimum grade of C in theory are required in order to pass the course.

Offered: Spring

Prerequisites: Take NAD.200 and NAD.205 with a grade of C or better. All prerequisites must be passed with a C or better in order to progress in the program. Take NAD.220 with a minimum grade of C. All corequisites, must be passed with a C or better in order to progress in the program.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education: Not applicable..

General Education – Not Applicable

**NAD.220 Professional Issues** 2 2

This course facilitates the transition of the student to the role of a professional nurse at the entry level and will prepare the students to take the NCLEX-RN licensing examination. Emphasis is placed on contemporary issues and management concepts, as well as developing the skills of delegation, conflict management, and leadership. Legal and ethical issues are discussed with a focus on personal accountability and responsibility. Standards of practice and the significance of functioning according to state regulations and statutes are analyzed. Strategies for planning a career and advancing the profession of nursing will be emphasized. Students will develop a professional portfolio demonstrating professional growth and assisting in their career development. Minimum grade of C is required in order to pass this course.

Offered: Spring

Prerequisites: Take NAD.200 and NAD.205 with a grade of C or better in, order to progress in the program. Take NAD.210 with a minimum grade of C in order to progress, in the program.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education: Not applicable..

General Education – Not Applicable

Hr/Wk	Hr/Wk	Sem
Lect/	Clin	Cr
Disc	Lab	Hr

**Courses**

**NAD.105 Nursing 1** 5 6 7

This course provides an introduction to nursing, roles of the nurse, and focuses on patient care concepts. Emphasis is placed on the knowledge and skills need to provide safe, quality care. The theoretical foundation for basic assessment and nursing skills is presented, and the student is given an opportunity to demonstrate these skills in a laboratory and clinical setting. An introduction to the nursing process provides a decision-making framework to assist students in developing effective clinical judgement skills. A unit entitled Nursing Care in a Diverse Society will focus on the issues and implications associated with caring for clients with diverse and complex cultural backgrounds. Learning experiences are provided in the classroom, audio-visual tutorials, skills lab, simulation and clinical settings. Students will provide care for individual adults with acute and/or chronic health care needs in the acute care, outpatient, community and/or long-term care and rehabilitation settings. Satisfactory (S) performance in clinical and skills lab and a minimum grade of C in theory are required in order to pass the course.

Offered: Fall

Prerequisites: Prerequisites: Admission to the Associate Degree Nursing Program. Corequisites: NAD.106, NAD.108, and BIO.211 with a grade of C or better. All corequisites must be passed with a C or better to progress in the program.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education: Not Applicable..

General Education – Not Applicable

**NAD.106 Medication Principles for Nurses** 2 2

This course introduces general principles of medication administration including determination of dosage, preparation, safe administration, and documentation of multiple forms of drugs for patients across the lifespan. This course also focuses on the knowledge needed for the development of basic dosage and calculation skills necessary for safe administration of medications. This course also includes terminology and abbreviations required to interpret physician's orders and to read medication labels. Instruction includes various systems of measurement. The student will demonstrate accurate dosage calculation; discuss the principles of safe medication administration; and identify the elements of accurate documentation of medication administration. Math proficiency is determined by examination. Laboratory experiences include the application of medication administration skills. Minimum grade of C is required in order to pass the course.

Offered: Fall

Prerequisites: Prerequisite: Admission to the Associate Degree Nursing Program or Practical Nursing Program. Take NAD.105 or NUP.105, NAD.108, BIO.211 or BIO.111; Minimum grade C or better. All corequisites must be completed with a grade of C or better to progress in the program.

Applicable toward graduation at Sandburg where program structure permits: Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education: Not applicable..

General Education – Not Applicable



**NAD.108 Health Assessment & Clinical Reasoning** 2 2

This course provides the framework for preparing students to perform comprehensive health assessments on patients across the lifespan utilizing the nursing process and focusing on the development of clinical reasoning. Emphasis is placed on taking a thorough nursing history, performing physiological, psychological, sociological, developmental, cultural, and spiritual assessments, as well as identification of patient safety, health risks, and stressors. Using the techniques of inspection, palpation, percussion, and auscultation, the student will be able to complete a systematic head to toe physical assessment of the adult patient. Emphasis is also placed on analyzing the data collected, including laboratory and diagnostic testing results and proper recording and documentation of assessed findings. Laboratory experiences provide an opportunity to practice assessment skills. Minimum grade of C is required in order to pass the course.

Offered: Fall

Prerequisites: Prerequisite: Admission to the Associate Degree Nursing Program or Practical Nursing Program. Take NAD.105 or NUP.105; NAD.106; BIO.111 or BIO.211. All corequisites must be completed with a grade of C or better to progress in the program.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education: Not applicable..

General Education – Not Applicable

**NAD.125 Nursing II** 5 9 8

This course builds on concepts, skills, and theories learned in NAD 105 and focuses on the care of individual adult patients and families with common and complex health problems that require medical and/or surgical intervention. Emphasis is placed on the care of patients with alterations in hematologic, immunologic, endocrine, respiratory, gastrointestinal and genitourinary problems. Concepts of patient-centered care, quality improvement, informatics, evidence-based practice, safety, teamwork and collaboration, leadership and professionalism are integrated throughout the course. Learning experiences are provided in the classroom, audio-visual tutorials, skills lab, simulation and clinical settings. Students will provide care for individual adult patients and families with common and complex health problems that require medical and/or surgical health care needs in the acute care, outpatient, community and/or long term care and rehabilitation settings. Satisfactory (S) performance in clinical and skills lab and a minimum grade of C in theory are required in order to pass the course.

Offered: Spring

Prerequisites: Take NAD.105, NAD.106, NAD.108, and BIO 211 with a grade of C or better. All prerequisites must be passed with a C or better to progress in the program. Corequisite: NAD.130 and BIO 212. All corequisites must be passed with C or better to progress in the program.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education: Not Applicable..

General Education – Not Applicable

**NAD.130 Pharmacology for Nurses** 2 2

This course is designed to establish a solid base of knowledge in nursing pharmacology. The nursing process will be utilized in discussing the basic pharmacological principles and drug classifications and their effects on the body. This course will explore pharmacokinetics, pharmacodynamics, contraindications and interactions of selected drugs, emphasizing nursing implications, roles and responsibilities in patient care and safe drug administration. The focus is to examine selected prototype drugs used in the treatment of illness and the promotion, maintenance and restoration of wellness in diverse individuals across the lifespan with special consideration given to the physiological, psychosocial, developmental, cultural, and spiritual needs of patients. Minimum grade of C is required in order to pass the course.

Offered: Spring

Prerequisites: NAD 105 or NUP 105 NAD 106 or NAD 108 BIO 211 or BIO 111. All prerequisites must be completed with a grade of C or better.

Take NAD.125 or NUP.125 and BIO.212. All corequisites must be completed with a grade of C or better to progress in the program.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education: Not applicable..

General Education – Not Applicable

**NAD.180 LPN to RN Transition** 3 3 4

The LPN-RN Transition course is an intensive eight-week summer course designed to enhance the knowledge learned in the Practical Nursing Program and make the transition into the second year of the Associate Degree Nursing Program. The course content is intended to augment knowledge learned in a practical nursing program and includes an overview of fundamental nursing concepts and essential nursing skills. The nursing role is differentiated with emphasis on health maintenance, health promotion and disease prevention. Emphasis will be placed on the following concepts: provisions of safety, quality care, evidenced base practice, APA format, critical thinking, communication, documentation, dosage calculation, legal and ethical issues, delegation and prioritization of nursing care, nursing process, nursing assessment and patient-centered care that is culturally, developmentally, psychosocially, and spiritually based. Selected content from the first year of the associate degree program in physiological integrity will be reviewed. Combined classroom and nursing laboratory experience, learning is by the application of concepts. Supervised clinical practice in selected acute care, rehabilitation, long-term care, and community settings will be provided. This course includes theory, lab, and clinical hours. After successful completion of this course, the student will be eligible to enter the second year of the Associate Degree Nursing (ADN) program and will complete the last two(2) semesters with the traditional ADN students.

Offered: As Needed

Prerequisites: Licensed Practice Nurse or successful completion of an accredited Practical Nursing program and admission into the Associate Degree Nursing Program, NAD 106, NAD 108, NAD,130, BIO.211, and BIO 212 Take BIO.200 with a grade of C or better.

All corequisites, must be passed with a C or better to progress in the program.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education: Not applicable..

General Education – Not Applicable

**NAD.190 Nursing Student Internship**

1 12 4

This nursing student internship is a collaborative education experience that will enhance the development of their professional nursing role, critical thinking skills, and technical skills to help student nurses to begin to think like a nurse. Students have the opportunity to use previously learned nursing knowledge and skills in cooperating acute care facilities. The course will have a weekly online component that will discuss thinking in action topics related to safe patient care, patient outcomes, delivery of nursing care, assessment, documentation, inter-professional collaboration, communication, and evidenced based practice. The internship is designed to provide students with additional socialization into nursing opportunities and clinical practice in either medical-surgical nursing, psychiatric care, critical care, obstetrics, emergency care, perioperative care or pediatrics. The student will work along with a RN preceptor for approximately 24 hours a week for an eight-week commitment, during the summer between the first year and second year of the Associate Degree Nursing Program. The nursing student internship is an elective nursing course that will be either paid or unpaid based on the nurse intern program of cooperating acute care facilities. In addition to completion of the prerequisites, students must have a minimum 2.5 GPA, complete the nursing internship application, submit the application with two nursing faculty references, and complete selection interviews. The nursing internship has limited enrollment based on cooperating acute care facilities and how many nursing student interns they can accommodate. The selection process is 100% ownership of each facility. Those students selected will have additional requirements to complete, including facility orientations and preparation for the internship.

Offered: Summer

Prerequisites: Take NAD.105, NAD.106, NAD.108, NAD.125, NAD.130, BIO.211, and BIO.212.

Applicable toward graduation at Sandburg where program structure permits:.

General Education – Not Applicable

**NAD.200 Nursing 3**

5 9 8

This course will focus on the care of individual adult patients and families with selected complex medical/surgical health alterations and childbearing women and newborns. Students will continue to expand their theoretical knowledge, use of the nursing process, and nursing skills as well as critical thinking and decision-making ability to delegate and prioritize nursing care. Emphasis is placed on reproduction and prenatal period, normal and high-risk pregnancies during the intra-partum and postpartum periods, high risk conditions of infant and newborn assessment, family dynamics and the promotion of healthy behaviors in patients. Emphasis will also be placed on the care of patients and families with health alterations in neurosensory and cardiac and vascular problems. Concepts of patient-centered care, quality improvement, informatics, evidence-based practice, safety, teamwork and collaboration, leadership and professionalism are integrated throughout the course. Learning experiences are provided in the classroom, audio-visual tutorials, skills lab, simulation and clinical settings. Students will provide care for individual adult patients and families with complex medical/surgical health alterations and childbearing families in acute care, outpatient, community and/or long term care and rehabilitation settings. Satisfactory (S) performance in clinical and skills lab and a minimum grade of C in theory are required in order to pass the course.

Offered: Fall

Prerequisites: NAD.125, NAD.130, BIO.212, BIO.200, and if applicable, NAD.180. All prerequisites must be passed with a C or better in order to progress in the program. Take NAD.205 with a minimum grade of C. All corequisites must be passed with a C or better in order to progress in the program.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education: Not applicable..

General Education – Not Applicable

**NAD.205 Community & Mental Health Nursing** 2 3 3

The purpose of this course is to introduce students to community health nursing and mental health nursing. This course will focus on the promotion, maintenance, and restoration of mental health needs of the individual across the lifespan and the community health needs of the family and selected groups within communities. A major focus of this course is for students to critically think about and discuss the role of the community health nurse; understand basic epidemiological concepts; and perform a community health assessment exploring the impact of culture, socioeconomic status, lifestyle, environment, and violence on the health of the community. In addition, students will focus on the role of the mental health nurse; understand the etiology, pathophysiology and psychopathology, signs and symptoms, complications, medications, and treatment modalities; and perform mental health assessments on patients experiencing cognitive, mental and behavioral disorders. Emphasis is placed on management of patients facing emotional and psychological stressors as well as promoting and maintaining the mental health of individuals and families, health promotion and disease prevention of vulnerable groups within our communities, and health disparities that exist within a global environment. The community as a site for care and support services is addressed. Clinical experiences will be provided in selected mental health settings and students will plan and implement a service-learning project in the community setting. Satisfactory (S) performance in clinical and a minimum grade of C in theory are required in order to pass the course.

Offered: Fall

Prerequisites: Take NAD.125, NAD.130, BIO.212, and BIO.200 with a grade of C or better to progress in the program. Take NAD.200 with a grade of C or better to progress in the program.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable .

General Education: Not applicable..

General Education – Not Applicable

**NAD.210 Nursing IV** 5 9 8

This course will focus on the care of the individual adult patients and families with selected complex, multisystem alterations in health and childrearing family. Students will continue to expand their theoretical knowledge, use of the nursing process, and nursing skills as well as critical thinking and decision-making ability to delegate and prioritize nursing care while functioning in a leadership role. Emphasis placed on normal growth and development of children, family dynamics, common pediatric disorders and the promotion of healthy behaviors in patients. Emphasis will also be placed on the care of patients and families with multisystem alterations and complex health problems in respiratory, renal, and burns in the emergency care and intensive care settings, as well as, oncology, and musculoskeletal trauma. This course will also focus on disaster preparedness, triage, and interdisciplinary collaboration. Concepts of patient centered care, quality improvement, informatics, evidence-based practice, safety, teamwork and collaboration, leadership and professionalism are integrated throughout the course. Learning experiences are provided in the classroom, audio-visual tutorials, skills lab, simulation and clinical settings. Students will provide care for individual adult patients and families with complex, multisystem alterations in health and childrearing families in acute care, outpatient, community and/or long term care and rehabilitation settings. Satisfactory (S) performance in clinical assignments and a minimum grade of C in theory are required in order to pass the course.

Offered: Spring

Prerequisites: Take NAD.200 and NAD.205 with a grade of C or better. All prerequisites must be passed with a C or better in order to progress in the program. Take NAD.220 with a minimum grade of C. All corequisites, must be passed with a C or better in order to progress in the program.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education: Not applicable..

General Education – Not Applicable

**NAD.220 Professional Issues** 2 2

This course facilitates the transition of the student to the role of a professional nurse at the entry level and will prepare the students to take the NCLEX-RN licensing examination. Emphasis is placed on contemporary issues and management concepts, as well as developing the skills of delegation, conflict management, and leadership. Legal and ethical issues are discussed with a focus on personal accountability and responsibility. Standards of practice and the significance of functioning according to state regulations and statutes are analyzed. Strategies for planning a career and advancing the profession of nursing will be emphasized. Students will develop a professional portfolio demonstrating professional growth and assisting in their career development. Minimum grade of C is required in order to pass this course.

Offered: Spring

Prerequisites: Take NAD.200 and NAD.205 with a grade of C or better in, order to progress in the program. Take NAD.210 with a minimum grade of C in order to progress, in the program.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education: Not applicable..

General Education – Not Applicable

## NUA Nursing Assistant

Hr/Wk Lect/ Disc	Hr/Wk Clin Lab	Sem Cr Hr
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### Courses

<b>NUA.100 Basic Nursing Assistant Training</b>	6	3	7.5
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This course is approved by the Illinois Department of Public Health (IDPH) to prepare the student to assist the registered professional nurse and licensed practical nurse as an integral member of the health care team in a variety of health care settings. Instruction includes basic nursing skills through lecture, clinical simulation and supervised clinical experiences at a long-term health care facility. All individuals applying for certification must complete a fingerprint criminal background check. Criminal background check applications will be provided to students during class. Upon successful completion of the program the individual is eligible to take the State of Illinois Nursing Assistant Competency Examination.

Offered: As Needed

Prerequisites: The appropriate placement exam score, or ENG.097 with a grade of C or better, or ACT Reading score of 20 or higher.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

Hr/Wk Lect/ Disc	Hr/Wk Clin Lab	Sem Cr Hr
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### Courses

<b>NUA.100 Basic Nursing Assistant Training</b>	6	3	7.5
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This course is approved by the Illinois Department of Public Health (IDPH) to prepare the student to assist the registered professional nurse and licensed practical nurse as an integral member of the health care team in a variety of health care settings. Instruction includes basic nursing skills through lecture, clinical simulation and supervised clinical experiences at a long-term health care facility. All individuals applying for certification must complete a fingerprint criminal background check. Criminal background check applications will be provided to students during class. Upon successful completion of the program the individual is eligible to take the State of Illinois Nursing Assistant Competency Examination.

Offered: As Needed

Prerequisites: The appropriate placement exam score, or ENG.097 with a grade of C or better, or ACT Reading score of 20 or higher.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

## NUP Nursing - Practical

Hr/Wk Lect/ Disc	Hr/Wk Clin Lab	Sem Cr Hr
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### Courses

<b>NUP.104 LPN IV Certification</b>	2	3	3
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This class prepares students for initiating and/or maintaining common intravenous therapies. LPN IV Certification is a way for licensed nurses to gain additional experience. Students will learn about the principles and practices, insertion techniques, equipment, infusion calculation rates, management guidelines, principles of antibiotic administration and preventative measures for IV therapy in stabilized clients under the supervision of a registered nurse, physician, or dentist, or as approved by the Illinois Nurse Practice Act guidelines. Licensed as an LPN in good standing with IDFPR (Illinois Department of Professional Regulation) is required to enroll in this course.

Offered: As Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

<b>NUP.105 Practical Nursing I</b>	6	9	9
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This course is an introduction to nursing and the roles of the practical nurse, and focuses on patient care concepts. Emphasis is placed on the knowledge and skills needed to provide safe, quality care. The theoretical foundation for basic assessment and nursing skills is presented, and the student is given an opportunity to demonstrate these skills in a laboratory and clinical setting. The nursing process is introduced and serves as the foundation for the development of critical thinking skills. Other topics covered include professionalism, patient-centered care, legal and ethical responsibilities, and evidence-based practice. A unit entitled Nursing Care in a Diverse Society will focus on the issues and implications associated with caring for patients with diverse and complex cultural backgrounds. Students will provide care for individual adults with acute and/or chronic health care needs in the acute care, outpatient, community and/or long term care and rehabilitation settings. Satisfactory (S) performance in clinical and skills lab and a minimum grade of C in theory are required in order to pass the course. Admission to the Practical Nursing program is required. All classes must be passed with a C or better to progress in the program.

Offered: Fall

Prerequisites: Admission into the Practical Nursing program; Corequisites: NAD.106, NAD.108, BIO.111 or BIO.211; Minimum grade C or better in order to progress in the program;

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education: Not applicable..

General Education – Not Applicable

**NUP.125 Practical Nursing II**

6 9 9

This course builds on concepts, skills, and theories learned in NUP 105 and focuses on the care of the individual patient and families with common health care problems. Building on concepts from previous courses, this course focuses on patient-centered care, quality improvement, informatics, evidence-based practice, safety, teamwork and collaboration, and professionalism are integrated throughout the course. The administration of patient care includes using the nursing process, performing basic assessments, using critical thinking, and assisting with patient education. Emphasis is placed on the care of patients with alterations of the integumentary, musculoskeletal, genitourinary, and neurosensory systems. The concepts of patient care, nursing management, pharmacology, and nutrition are included within each system. Content is presented from a patient-centered approach based on Maslow's Hierarchy of Needs. Patient care includes consideration of physiological, developmental, psychosocial, and spiritual needs. Consideration is also given to the impact of health issues, the potential physical and mental adjustments as well as restorative care. Learning experiences are provided in the classroom, audio-visuals tutorials, skills lab, simulation and clinical settings. Students will provide care for individual adult patients and their families with common health care problems that require medical and/or surgical health care needs in the acute care, outpatient, community and/or long-term care and rehabilitation settings. Satisfactory (S) performance in clinical and skills lab and a minimum of C in theory is required in order to pass the course. Application toward graduation at Sandburg where program structure permits: Degree or Certificate: AAS, AGE, All Certificates where applicable. General Education: Not applicable.. General Education – Not Applicable

**NUP.130 Practical Nursing III**

3 6 5

Practical Nursing III is an intensive five week summer course designed to familiarize the student with the holistic approach to care for the childbearing and childrearing families. The childbearing section will cover the antepartum, intrapartum, and postpartum periods of the normal patient and the neonate as well as those with complications. The normal processes of conception, fetal development, labor and delivery, postpartum period, and family involvement will be included. The childrearing section will cover the growth and development of the pediatric patient, as well as the physical, psychosocial, cultural, and spiritual needs of the pediatric patient and their families with common pediatric disorders. The final section of this course will address transitional issues to prepare the student to transition into the role of the Licensed Practical Nurse at the entry level and will prepare the student to take the NCLEX-PN licensing examination. Emphasis will be placed on time management, supervision, quality improvement, and ethical and legal considerations in nursing practice. The student will participate in job readiness skills. Employment considerations will be examined in relation to a rapidly changing health care system. The Illinois Nurse Practice Act will be studied as it relates to the practical nurse. The clinical component of this course allows the student to practice clinical skills while caring for the childbearing and childrearing families in a variety of healthcare settings. Satisfactorily (S) performance in clinical and a minimum grade of C in theory are required in order to pass the course. Offered: Summer  
Prerequisites: NUP.125 and NAD.130 with a grade of C or better  
Applicable toward graduation at Sandburg where program structure permits:  
Degree or Certificate: AAS, AGS, and Certificates where applicable.  
General Education: Not applicable..  
General Education – Not Applicable

Hr/Wk	Hr/Wk	Sem
Lect/	Clin	Cr
Disc	Lab	Hr

**Courses****NUP.104 LPN IV Certification**

2 3 3

This class prepares students for initiating and/or maintaining common intravenous therapies. LPN IV Certification is a way for licensed nurses to gain additional experience. Students will learn about the principles and practices, insertion techniques, equipment, infusion calculation rates, management guidelines, principles of antibiotic administration and preventative measures for IV therapy in stabilized clients under the supervision of a registered nurse, physician, or dentist, or as approved by the Illinois Nurse Practice Act guidelines. Licensed as an LPN in good standing with IDFPR (Illinois Department of Professional Regulation) is required to enroll in this course. Offered: As Needed  
Applicable toward graduation at Sandburg where program structure permits:  
Degree or Certificate: AAS, AGS, and Certificates where applicable.  
General Education – Not Applicable



**NUP.105 Practical Nursing I** 6 9 9

This course is an introduction to nursing and the roles of the practical nurse, and focuses on patient care concepts. Emphasis is placed on the knowledge and skills needed to provide safe, quality care. The theoretical foundation for basic assessment and nursing skills is presented, and the student is given an opportunity to demonstrate these skills in a laboratory and clinical setting. The nursing process is introduced and serves as the foundation for the development of critical thinking skills. Other topics covered include professionalism, patient-centered care, legal and ethical responsibilities, and evidence-based practice. A unit entitled Nursing Care in a Diverse Society will focus on the issues and implications associated with caring for patients with diverse and complex cultural backgrounds. Students will provide care for individual adults with acute and/or chronic health care needs in the acute care, outpatient, community and/or long term care and rehabilitation settings. Satisfactory (S) performance in clinical and skills lab and a minimum grade of C in theory are required in order to pass the course. Admission to the Practical Nursing program is required. All classes must be passed with a C or better to progress in the program.

Offered: Fall

Prerequisites: Prerequisites: Admission into the Practical Nursing program; Corequisites: NAD.106, NAD.108, BIO.111 or BIO.211; Minimum grade C or better in order to progress in the program;

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education: Not applicable..

General Education – Not Applicable

**NUP.125 Practical Nursing II** 6 9 9

This course builds on concepts, skills, and theories learned in NUP 105 and focuses on the care of the individual patient and families with common health care problems. Building on concepts from previous courses, this course focuses on patient-centered care, quality improvement, informatics, evidence-based practice, safety, teamwork and collaboration, and professionalism are integrated throughout the course.

The administration of patient care includes using the nursing process, performing basic assessments, using critical thinking, and assisting with patient education. Emphasis is placed on the care of patients with alterations of the integumentary, musculoskeletal, genitourinary, and neurosensory systems. The concepts of patient care, nursing management, pharmacology, and nutrition are included within each system. Content is presented from a patient-centered approach based on Maslow's Hierarchy of Needs. Patient care includes consideration of physiological, developmental, psychosocial, and spiritual needs. Consideration is also given to the impact of health issues, the potential physical and mental adjustments as well as restorative care. Learning experiences are provided in the classroom, audio-visuals tutorials, skills lab, simulation and clinical settings. Students will provide care for individual adult patients and their families with common health care problems that require medical and/or surgical health care needs in the acute care, outpatient, community and/or long-term care and rehabilitation settings. Satisfactory (S) performance in clinical and skills lab and a minimum of C in theory is required in order to pass the course.

Application toward graduation at Sandburg where program structure permits: Degree or Certificate: AAS, AGE, All Certificates where applicable.

General Education: Not applicable..

General Education – Not Applicable

**NUP.130 Practical Nursing III** 3 6 5

Practical Nursing III is an intensive five week summer course designed to familiarize the student with the holistic approach to care for the childbearing and childrearing families. The childbearing section will cover the antepartum, intrapartum, and postpartum periods of the normal patient and the neonate as well as those with complications. The normal processes of conception, fetal development, labor and delivery, postpartum period, and family involvement will be included. The childrearing section will cover the growth and development of the pediatric patient, as well as the physical, psychosocial, cultural, and spiritual needs of the pediatric patient and their families with common pediatric disorders. The final section of this course will address transitional issues to prepare the student to transition into the role of the Licensed Practical Nurse at the entry level and will prepare the student to take the NCLEX-PN licensing examination. Emphasis will be placed on time management, supervision, quality improvement, and ethical and legal considerations in nursing practice. The student will participate in job readiness skills. Employment considerations will be examined in relation to a rapidly changing health care system. The Illinois Nurse Practice Act will be studied as it relates to the practical nurse. The clinical component of this course allows the student to practice clinical skills while caring for the childbearing and childrearing families in a variety of healthcare settings. Satisfactorily (S) performance in clinical and a minimum grade of C in theory are required in order to pass the course.

Offered: Summer

Prerequisites: NUP.125 and NAD.130 with a grade of C or better  
Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education: Not applicable..

General Education – Not Applicable

## NUT Nutrition

Hr/Wk	Hr/Wk	Sem
Lect/	Clin	Cr
Disc	Lab	Hr

### Courses

**NUT.100 Introduction to Nutrition** 2 2

This course is intended to introduce students to basic knowledge of nutritional information. Included are the basic principles of nutrients, human body requirements, healthy food sources, cultural and social effects of food choices, and the basics of metabolism.

Offered: Fall or Spring or Summer

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**NUT.110 Nutrition** 3 3

This course is designed to introduce the student to the concepts and principles of nutrition emphasizing the role of nutrition in health while being able to identify food nutrients and their functions. Cultural, religious and geographical influences are discussed. Emphasis on current dietary recommendations for maximizing well-being and minimizing risk of chronic disease, focus on use of tables, food guides, and guidelines for making healthy food choices is integrated. Discussion also includes nutrition needs for stages of the lifecycle, methods for evaluating credibility of nutrition claims, safe and economic use of supplements, principles of energy balance, basic elements of food safety, diet for exercise and sports. One year of high school chemistry or biology or equivalent is required.

Offered: Fall or Spring or Summer

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

Hr/Wk	Hr/Wk	Sem
Lect/	Clin	Cr
Disc	Lab	Hr

**Courses**

**NUT.100 Introduction to Nutrition** 2 2

This course is intended to introduce students to basic knowledge of nutritional information. Included are the basic principles of nutrients, human body requirements, healthy food sources, cultural and social effects of food choices, and the basics of metabolism.

Offered: Fall or Spring or Summer

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**NUT.110 Nutrition** 3 3

This course is designed to introduce the student to the concepts and principles of nutrition emphasizing the role of nutrition in health while being able to identify food nutrients and their functions. Cultural, religious and geographical influences are discussed. Emphasis on current dietary recommendations for maximizing well-being and minimizing risk of chronic disease, focus on use of tables, food guides, and guidelines for making healthy food choices is integrated. Discussion also includes nutrition needs for stages of the lifecycle, methods for evaluating credibility of nutrition claims, safe and economic use of supplements, principles of energy balance, basic elements of food safety, diet for exercise and sports. One year of high school chemistry or biology or equivalent is required.

Offered: Fall or Spring or Summer

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**OMS Organizational Management**

Hr/Wk	Hr/Wk	Sem
Lect/	Clin	Cr
Disc	Lab	Hr

**Courses**

**OMS.101 Labor-Management Relations** 3 3

This course provides a basic examination of the roles of labor and management in the United States and their relationship to each other. The objectives, issues and problems of labor and management are studied through an analysis of collective bargaining clauses and the bargaining processes. Union growth, structure, management organization, labor-management legislation, wage structure and wage incentives are considered. Also covered are aspects of contract administration, as well as labor-management relations in a non-union environment. Community resource speakers are utilized.

Offered: Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

Hr/Wk	Hr/Wk	Sem
Lect/	Clin	Cr
Disc	Lab	Hr

**Courses**

**OMS.101 Labor-Management Relations** 3 3

This course provides a basic examination of the roles of labor and management in the United States and their relationship to each other. The objectives, issues and problems of labor and management are studied through an analysis of collective bargaining clauses and the bargaining processes. Union growth, structure, management organization, labor-management legislation, wage structure and wage incentives are considered. Also covered are aspects of contract administration, as well as labor-management relations in a non-union environment. Community resource speakers are utilized.

Offered: Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**OSP Occupational Special Problems**

Hr/Wk	Hr/Wk	Sem
Lect/	Clin	Cr
Disc	Lab	Hr

## Courses

**OSP.199 Occupational Special Prob** 1-4

This course is intended for the student who has satisfactorily completed all, or most of, the specialized course work in a particular CSC occupational program and desires to investigate a special problem for further learning in that area of study. The identification of the problem, determination of nature of result(s) to be achieved, design of problem solving approach, nature of report or finished product and commitment for supervision must be worked out between the student and a particular faculty member. The project proposal is then subject to approval by the Dean of Occupational Programs and Vice President of Instructional Services. If the proposal is approved, the student then must register for the course in the Admissions and Records Office. The course description title entered on the registration and transcript will reflect the topic of that specific special problem. A student may earn a maximum of four semester hours of credit in OSP 199.

Offered: As Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

Hr/Wk	Hr/Wk	Sem
Lect/	Clin	Cr
Disc	Lab	Hr

## Courses

**OSP.199 Occupational Special Prob** 1-4

This course is intended for the student who has satisfactorily completed all, or most of, the specialized course work in a particular CSC occupational program and desires to investigate a special problem for further learning in that area of study. The identification of the problem, determination of nature of result(s) to be achieved, design of problem solving approach, nature of report or finished product and commitment for supervision must be worked out between the student and a particular faculty member. The project proposal is then subject to approval by the Dean of Occupational Programs and Vice President of Instructional Services. If the proposal is approved, the student then must register for the course in the Admissions and Records Office. The course description title entered on the registration and transcript will reflect the topic of that specific special problem. A student may earn a maximum of four semester hours of credit in OSP 199.

Offered: As Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

## PHL Philosophy

Hr/Wk	Hr/Wk	Sem
Lect/	Clin	Cr
Disc	Lab	Hr

## Courses

**PHL.100 Logic** 3 3

This course provides an introduction to the techniques of analyzing and clarifying arguments, and distinguishing good reasoning from bad. The emphasis is on informal fallacy logic as applied to social issues. This course is recommended for anyone desiring a course in practical logic and critical thinking. It is particularly useful for the student of English, Speech or Pre-Law.

Offered: Fall or as Needed

Prerequisites: ENG.101

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS and Certificates where applicable. *IAI Course No. H4 906*

General Education – Humanities

**PHL.101 Introduction to Philosophy** 3 3

This course is for the student who questions or has an interest in the assumptions on which many decisions, values and purposes of institutions and society rest. The course deals with major philosophical problems, such as reality, and does one's view of reality make any difference. Knowledge and various ways of knowing will be studied as well as the conflict between those who believe in free will and those who believe in determinism.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AGS and Certificates where applicable.

*IAI Course No. H4 900*

General Education – Humanities

**PHL.102 Ethics** 3 3

This course is for students who want to become more aware of the standards of principles which are appealed to when they judge themselves or others are judged. Different moral positions that have been adopted by serious philosophers are discussed and applied to such topics as repression control, art, religion, political obligations and the role of government. Morality and different views of the nature of man as well as other interests and problems of man are studied.

Offered: Fall or Spring

Prerequisites: PHL.100 or PHL.101

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS and Certificates where applicable v. *IAI Course No. H4 904*

General Education – Humanities Human Relations

**PHL.103 Biomedical Ethics** 3 3

This course introduces the student to biomedical ethics. Students will gain a beginning foundation for analysis as related to biomedical ethical dilemmas. Apply classical ethical theories to related topics and issues, utilize basic principles of health care ethics to discuss bio-medical ethical topics and current issues and examination of bio-medical ethical issues using a problem-solving approach.

Offered: Fall or Spring or Summer

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AA, AS, AAS, AGS and Certificates where applicable..

General Education – Not Applicable Elective Only

**PHL.104 Philosophy of Religion** 3 3

This course will explore the big philosophical ideas that undergird western religious traditions. We will use contemporary and historical texts to explore key religious thoughts and suppositions. These ideas will be explored by employing the best techniques of critical inquiry and logical argumentation. Religious concepts to be explored will include but not be limited to; Arguments for the existence of God, the connection between reason and faith, religion and science, religion and ethics, and the problem of evil.

Offered: As Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS and Certificates where applicable General Education: Not Applicable-elective only.

General Education – Not Applicable Elective Only

**PHL.105 Comparative Religions** 3 3

This course will compare and contrast both eastern and western religions. These religions will be explored in light of their history, key internal workings, sacred writings, as well as issues of doctrine and practice.

Offered: As Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS and Certificates where applicable General Education: Not applicable-elective only.

General Education – Not Applicable Elective Only

**PHL.110 Introduction Critical Thinking** 3 3

This course provides practice in critical thinking, including value assessment and moral reasoning. Passages used in the course include social issues drawn from multi-cultural backgrounds. Students learn to discern the structure of an argument, definitional and descriptive assumptions, value conflicts, and assumptions, and to question and discuss those intelligently. The course is useful for entry-level thinking skills and in performing well in courses in the social sciences, humanities, and other disciplines.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS and Certificates where applicable General Education: Not Applicable-elective only.

General Education – Not Applicable Elective Only

Hr/Wk Lect/ Disc	Hr/Wk Clin Lab	Sem Cr Hr
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**Courses****PHL.100 Logic** 3 3

This course provides an introduction to the techniques of analyzing and clarifying arguments, and distinguishing good reasoning from bad. The emphasis is on informal fallacy logic as applied to social issues. This course is recommended for anyone desiring a course in practical logic and critical thinking. It is particularly useful for the student of English, Speech or Pre-Law.

Offered: Fall or as Needed

Prerequisites: ENG.101

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS and Certificates where applicable. *IAI Course No. H4 906*

General Education – Humanities

**PHL.101 Introduction to Philosophy** 3 3

This course is for the student who questions or has an interest in the assumptions on which many decisions, values and purposes of institutions and society rest. The course deals with major philosophical problems, such as reality, and does one's view of reality make any difference. Knowledge and various ways of knowing will be studied as well as the conflict between those who believe in free will and those who believe in determinism.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AGS and Certificates where applicable. *IAI Course No. H4 900*

General Education – Humanities

**PHL.102 Ethics** 3 3

This course is for students who want to become more aware of the standards of principles which are appealed to when they judge themselves or others are judged. Different moral positions that have been adopted by serious philosophers are discussed and applied to such topics as repression control, art, religion, political obligations and the role of government. Morality and different views of the nature of man as well as other interests and problems of man are studied.

Offered: Fall or Spring

Prerequisites: PHL.100 or PHL.101

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS and Certificates where applicable v. *IAI Course No. H4 904*

General Education – Humanities Human Relations

**PHL.103 Biomedical Ethics** 3 3

This course introduces the student to biomedical ethics. Students will gain a beginning foundation for analysis as related to biomedical ethical dilemmas. Apply classical ethical theories to related topics and issues, utilize basic principles of health care ethics to discuss bio-medical ethical topics and current issues and examination of bio-medical ethical issues using a problem-solving approach.

Offered: Fall or Spring or Summer

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AA, AS, AAS, AGS and Certificates where applicable..

General Education – Not Applicable Elective Only

**PHL.104 Philosophy of Religion** 3 3

This course will explore the big philosophical ideas that undergird western religious traditions. We will use contemporary and historical texts to explore key religious thoughts and suppositions. These ideas will be explored by employing the best techniques of critical inquiry and logical argumentation. Religious concepts to be explored will include but not be limited to; Arguments for the existence of God, the connection between reason and faith, religion and science, religion and ethics, and the problem of evil.

Offered: As Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS and Certificates where applicable General Education: Not Applicable-elective only.

General Education – Not Applicable Elective Only

**PHL.105 Comparative Religions** 3 3

This course will compare and contrast both eastern and western religions. These religions will be explored in light of their history, key internal workings, sacred writings, as well as issues of doctrine and practice.

Offered: As Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS and Certificates where applicable General Education: Not applicable-elective only.

General Education – Not Applicable Elective Only

**PHL.110 Introduction Critical Thinking** 3 3

This course provides practice in critical thinking, including value assessment and moral reasoning. Passages used in the course include social issues drawn from multi-cultural backgrounds. Students learn to discern the structure of an argument, definitional and descriptive assumptions, value conflicts, and assumptions, and to question and discuss those intelligently. The course is useful for entry-level thinking skills and in performing well in courses in the social sciences, humanities, and other disciplines.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS and Certificates where applicable General Education: Not Applicable-elective only.

General Education – Not Applicable Elective Only

Hr/Wk	Hr/Wk	Sem
Lect/	Clin	Cr
Disc	Lab	Hr

**Courses****PHY.110 Applied Physics** 3 3

This course surveys various ideas in physics with an emphasis on problem solving and applications from many technical areas. Concepts studied include measurement, laws of motion, the resolution of forces, work and energy, simple machines, and properties of matter. Students must provide a hand-held scientific calculator.

Offered: Spring

Prerequisites: MAT.101

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – AGS Only

**PHY.130 The Physical Universe** 3 3

This course is a study of the universe and the attempts of persons to understand it. Topics covered include techniques of investigation; instrumentation; organization and history of the solar system; birth, life, and death of a star; origin, history, and future of the universe; prospects for extraterrestrial life forms.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. P1 906*

General Education – Science

**PHY.151 General Physics 1** 4 2 5

This course is the first semester of a two-semester sequence in pre-calculus based physics. It is appropriate for students in pre-dental, pre-medical, nursing, education, and other programs which require a beginning course in physics. The course includes the study of mechanics, vibratory motion and waves, fundamentals of heat and thermodynamics.

Offered: Fall

Prerequisites: MAT.140 or concurrent enrollment

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. P1 900L*

General Education – Science Lab Science

**PHY.152 General Physics 2** 4 2 5

This course is a continuation of PHY 151. Topics covered include electricity and magnetism, electromagnetic waves, optics and an introduction to modern physics.

Offered: Spring

Prerequisites: PHY.151

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable. *IAI Course No. P1 900L*

General Education – Not Applicable Elective Only

**PHY Physics**



**PHY.161 Engineering Physics 1** 4 2 5

This course is the first of a two-semester sequence in calculus-based physics. Topics covered include classic mechanics, vibratory motion and mechanical waves, and fundamentals of heat and thermodynamics.

This course is appropriate for those students who want to transfer into engineering or other university programs that demand one year of calculus-based physics.

Offered: Fall

Prerequisites: MAT.240 or concurrent enrollment

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**PHY.162 Engineering Physics 2** 4 2 5

This course is a continuation of PHY 161. Topics covered include electricity and magnetism, electromagnetic waves, optics, and an introduction to modern physics. Students will use calculus principles and techniques in developing concepts, analyzing situations, and in further development of problem-solving techniques.

Offered: Spring

Prerequisites: PHY.161, MAT.241 or the equivalent as evaluated by the physics department

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

Hr/Wk Lect/ Disc	Hr/Wk Clin Lab	Sem Cr Hr
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**Courses****PHY.110 Applied Physics** 3 3

This course surveys various ideas in physics with an emphasis on problem solving and applications from many technical areas. Concepts studied include measurement, laws of motion, the resolution of forces, work and energy, simple machines, and properties of matter. Students must provide a hand-held scientific calculator.

Offered: Spring

Prerequisites: MAT.101

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – AGS Only

**PHY.130 The Physical Universe** 3 3

This course is a study of the universe and the attempts of persons to understand it. Topics covered include techniques of investigation; instrumentation; organization and history of the solar system; birth, life, and death of a star; origin, history, and future of the universe; prospects for extraterrestrial life forms.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. P1 906*

General Education – Science

**PHY.151 General Physics 1** 4 2 5

This course is the first semester of a two-semester sequence in pre-calculus based physics. It is appropriate for students in pre-dental, pre-medical, nursing, education, and other programs which require a beginning course in physics. The course includes the study of mechanics, vibratory motion and waves, fundamentals of heat and thermodynamics.

Offered: Fall

Prerequisites: MAT.140 or concurrent enrollment

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. P1 900L*

General Education – Science Lab Science

**PHY.152 General Physics 2** 4 2 5

This course is a continuation of PHY 151. Topics covered include electricity and magnetism, electromagnetic waves, optics and an introduction to modern physics.

Offered: Spring

Prerequisites: PHY.151

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable. *IAI Course No. P1 900L*

General Education – Not Applicable Elective Only

**PHY.161 Engineering Physics 1** 4 2 5

This course is the first of a two-semester sequence in calculus-based physics. Topics covered include classic mechanics, vibratory motion and mechanical waves, and fundamentals of heat and thermodynamics.

This course is appropriate for those students who want to transfer into engineering or other university programs that demand one year of calculus-based physics.

Offered: Fall

Prerequisites: MAT.240 or concurrent enrollment

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**PHY.162 Engineering Physics 2** 4 2 5

This course is a continuation of PHY 161. Topics covered include electricity and magnetism, electromagnetic waves, optics, and an introduction to modern physics. Students will use calculus principles and techniques in developing concepts, analyzing situations, and in further development of problem-solving techniques.

Offered: Spring

Prerequisites: PHY.161, MAT.241 or the equivalent as evaluated by the physics department

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education -- Not Applicable Elective Only

## POR Portuguese

Hr/Wk	Hr/Wk	Sem
Lect/	Clin	Cr
Disc	Lab	Hr

### Courses

**POR.110 Portuguese I** 3 3

This is the first of a two-course sequence of elementary Portuguese. The emphasis of the course is on acquiring conversational skills through practical use of the language.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AGS, AAS and Certificates where applicable.

General Education -- Not Applicable Elective Only

**POR.111 Portuguese II** 3 3

This is the second of a two-course sequence of elementary Portuguese. The emphasis of the course is on acquiring conversational skills through practical use of the language.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AGS, AAS and Certificates where applicable.

General Education -- Not Applicable Elective Only

Hr/Wk	Hr/Wk	Sem
Lect/	Clin	Cr
Disc	Lab	Hr

### Courses

**POR.110 Portuguese I** 3 3

This is the first of a two-course sequence of elementary Portuguese. The emphasis of the course is on acquiring conversational skills through practical use of the language.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AGS, AAS and Certificates where applicable.

General Education -- Not Applicable Elective Only

**POR.111 Portuguese II** 3 3

This is the second of a two-course sequence of elementary Portuguese. The emphasis of the course is on acquiring conversational skills through practical use of the language.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AGS, AAS and Certificates where applicable.

General Education -- Not Applicable Elective Only

## POS Political Science

Hr/Wk	Hr/Wk	Sem
Lect/	Clin	Cr
Disc	Lab	Hr

### Courses

**POS.122 American Government & Politics** 3 3

This course covers the origin, principles, organization and functions of the American political system. It examines the legislative, executive and judicial branches in the United States as well as the nature and purposes of the nation-state in a democratically oriented society. Topics covered include the Constitution, civil liberties and civil rights, the three branches of government, political parties, elections, and appropriate comparisons to Illinois Government. This course is of interest both to persons planning to pursue a baccalaureate degree and other persons interested in increasing their understanding of the American system of government.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. S5 900*

General Education -- Social Science

**POS.223 State & Local Government** 3 3

This course presents a study of the institutions, functions, problems, and politics at the state and local levels of government in the United States. It meets the Illinois state law requirement concerning constitutional proficiency. The course is of interest to the student of political science and the social sciences. This course would also benefit those serving at various levels of state and local government.

Offered: Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. S5 902*

General Education -- Social Science

**POS.228 International Relations** 3 3

This course surveys the factors determining the relations between nations including the history of international relations, the concepts of national power and national interests, and the processes of implementing foreign policy. This course is of relevance to the student of political science or the social sciences or anyone interested in the study of world politics.

Offered: Spring

Prerequisites: POS.122

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. S5 904N*

General Education – Social Science

**POS.267 Comparative Government** 3 3

This is a comparative study of the governmental organizations, political behavior and decision-making processes of Great Britain, France, Germany, Russia, China and Japan. Selected developing nations are surveyed less intensively for purposes of contrast. This course is appropriate for a student planning to pursue a bachelor's degree with a major or minor in political science. Also, it is a course of interest to the individual who desires to develop a better understanding of various forms of government.

Offered: As Needed

Prerequisites: POS.122

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. S5 905*

General Education – Social Science

	Hr/Wk Lect/ Disc	Hr/Wk Clin Lab	Sem Cr Hr
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**Courses**

**POS.122 American Government & Politics** 3 3

This course covers the origin, principles, organization and functions of the American political system. It examines the legislative, executive and judicial branches in the United States as well as the nature and purposes of the nation-state in a democratically oriented society. Topics covered include the Constitution, civil liberties and civil rights, the three branches of government, political parties, elections, and appropriate comparisons to Illinois Government. This course is of interest both to persons planning to pursue a baccalaureate degree and other persons interested in increasing their understanding of the American system of government.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. S5 900*

General Education – Social Science

**POS.223 State & Local Government** 3 3

This course presents a study of the institutions, functions, problems, and politics at the state and local levels of government in the United States. It meets the Illinois state law requirement concerning constitutional proficiency. The course is of interest to the student of political science and the social sciences. This course would also benefit those serving at various levels of state and local government.

Offered: Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. S5 902*

General Education – Social Science

**POS.228 International Relations** 3 3

This course surveys the factors determining the relations between nations including the history of international relations, the concepts of national power and national interests, and the processes of implementing foreign policy. This course is of relevance to the student of political science or the social sciences or anyone interested in the study of world politics.

Offered: Spring

Prerequisites: POS.122

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. S5 904N*

General Education – Social Science

**POS.267 Comparative Government** 3 3

This is a comparative study of the governmental organizations, political behavior and decision-making processes of Great Britain, France, Germany, Russia, China and Japan. Selected developing nations are surveyed less intensively for purposes of contrast. This course is appropriate for a student planning to pursue a bachelor's degree with a major or minor in political science. Also, it is a course of interest to the individual who desires to develop a better understanding of various forms of government.

Offered: As Needed

Prerequisites: POS.122

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. S5 905*

General Education – Social Science

**PSY Psychology**

	Hr/Wk Lect/ Disc	Hr/Wk Clin Lab	Sem Cr Hr
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## Courses

**PSY.100 Freshman Orientation** 1 1

This course is designed to aid the new student in adapting to the college environment by explaining policies and procedures regarding registration, dropping and adding of classes, and counseling services.

Offered: As Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**PSY.101 Introduction to Psychology** 3 3

This course is designed to provide an understanding of a variety of topics within the field of psychology. It is not only designed for students planning on majoring in psychology, but for those who have an interest in the scientific basis of behavior, thought, and the physiological processes that underlie each.

Offered: Fall or Spring or Summer

Prerequisites: The appropriate placement exam score, or ENG.097 with a grade of C or better or an ACT Reading score of 20 or higher.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. S6 900*

General Education – Social Science

**PSY.107 Positive Psychology** 3 3

Positive Psychology will encourage students to develop their potentials through research-based applications found in the areas of resiliency, adjustment, and positive emotions. This course will provide insights into strength-based behaviors by examining biological, psychological and sociocultural origins.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits: AA, AS, AAS AGS and Certificates where applicable.

General Education – Not Applicable Elective Only

**PSY.151 Occupational Search & Development** 3 3

This course is designed to heighten the student's level of self-awareness through the completion of a variety of psychological instruments and self-awareness exercises intended to clarify the student's values, interests, and personality characteristics. The insight gleaned from these experiences will be applied toward the process of making a well-informed career decision and toward the process of marketing one's self in a competitive job market. Students will become acquainted with a variety of sources and techniques for occupational research and decision making, in addition to learning how to prepare a professional resume and cover letter. Interviewing techniques, job networking skills, and the process of life-long career development will be explored as well.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**PSY.152 Career and Life Planning** 1 1

This course is designed to assist the undecided student with the process of making a well-informed and insightful career decision. Personality assessments, interest inventories and values assessments will be administered to generate insightful career options and to assist students as they clarify and coordinate their career and personal goals. Common decision making obstacles will also be explored. In addition, guided occupational research, individualized career counseling sessions and academic-planning activities will be utilized to enable students to produce tangible career and academic plans upon completion of the course..

General Education – Not Applicable

**PSY.202 Psychology of Personality** 3 3

This course offers a study of the major problems, concepts and formulations of personality. It will include development and structure of personality, including such topics as adjustment, social adequacy, work environments, aggression, prejudice and other behaviors.

Offered: As Needed

Prerequisites: The appropriate placement exam score, or take ENG.097 with a grade of C or better or consent of instructor.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**PSY.204 Social Psychology** 3 3

Social Psychology is the scientific study of the way in which people's thoughts, feelings, and behaviors are influenced by the real or imagined presence of other people. This course will be composed of four sections: (1) Introduction to Social Psychology and Social Psychological Methods, (2) Understanding Ourselves, (3) Social Influence, and (4) Social Interaction. This course is of value to students who have an interest in the mutual influence of groups on the individual and of the individual on groups.

Offered: Fall or Spring

Prerequisites: The appropriate placement exam score, or ENG.097 with a grade of C or better, or an ACT Reading score of 20 or higher.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. S8 900*

General Education – Social Science Human Relations

**PSY.205 Human Sexuality** 3 3

This course is designed to provide the student with knowledge about the psychological, sociological and biological aspects of human sexuality; understand varieties of sexual expression and provide a cognitive base on which to make sexual decisions.

Offered: As Needed

Prerequisites: The appropriate placement exam score, or ENG.097 with a grade of C or better, or an ACT Reading score of 20 or higher.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**PSY.206 The Social Psychology of Aging** 3 3

This course provides an introduction to the field of social gerontology. The course deals with the adult life cycle from the sociological and psychological perspective with special emphasis on the later stages of adulthood. Special topics on aging include theoretical approaches to social aging, the biological and psychological aspects of aging, work, retirement and leisure, institutionalization, and death and dying.

Offered: As Needed

Prerequisites: The appropriate placement exam score, or ENG.097 with a minimum grade of C, or an ACT Reading score of 20 or higher.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. S6 905*

General Education – Social Science

**PSY.207 Crisis Intervention** 3 3

This course is an overall introduction to crisis intervention and is designed to provide an understanding of theory and practice of short term models of treatment. A wide variety of crises will be examined and role played so students can become comfortable with different intervention techniques. Example crises will include suicide, developmental life stage, loss, medical, and post traumatic stress victims. Students will understand the professional and ethical side of crisis intervention along with developing an appreciation for the importance of cultural sensitivity in crisis intervention. Crisis intervention is designed as a university studies course, but is also applicable to those pursuing careers in allied health, criminal justice, education, fire science, etc.

Offered: Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**PSY.221 Child Psychology** 3 3

This course is a study of human development from conception through adolescence. It consists of research methods, data, and developmental theories in and between all major areas of development including biological, social, emotional, and cognitive. This course is useful to students who will interact with children and/or adolescents in professional and personal settings. It is appropriate for parents as well as persons in educational, behavioral, and social sciences.

Offered: As Needed

Prerequisites: The appropriate placement exam score, or ENG.097 with a grade of C or better, or an ACT Reading score of 20 or higher.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AA, AS, AFA, AAS, AGS, and Certificates where applicable.

General Education – Social Science

**PSY.265 Developmental Psychology** 3 3

This course is a study of the development of human beings over the entire lifespan. It begins with an overview of developmental theories and then traces the individual from conception through infancy, childhood, adolescence, adulthood, aging, and death.

Offered: As Needed

Prerequisites: The appropriate placement exam score, or ENG.097 with a grade of C or better, or an ACT Reading score of 20 or higher.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. S6 902*

General Education – Social Science

**PSY.294 Abnormal Psychology** 3 3

Abnormal Psychology will introduce students to behavioral disorders and research methods used in the field. This course will provide insight into abnormal behavior by examining biological, psychosocial, and sociocultural origins. Students will also learn about assessment, categorization, and treatment options for disorders, in addition to preventative measures.

Offered: Fall or Spring or Summer

Prerequisites: Take PSY.101

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS and Certificates where applicable.

General Education – Not Applicable Elective Only

Hr/Wk	Hr/Wk	Sem
Lect/	Clin	Cr
Disc	Lab	Hr

**Courses**

**PSY.100 Freshman Orientation** 1 1

This course is designed to aid the new student in adapting to the college environment by explaining policies and procedures regarding registration, dropping and adding of classes, and counseling services.

Offered: As Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**PSY.101 Introduction to Psychology** 3 3

This course is designed to provide an understanding of a variety of topics within the field of psychology. It is not only designed for students planning on majoring in psychology, but for those who have an interest in the scientific basis of behavior, thought, and the physiological processes that underlie each.

Offered: Fall or Spring or Summer

Prerequisites: The appropriate placement exam score, or ENG.097 with a grade of C or better or an ACT Reading score of 20 or higher.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. S6 900*

General Education – Social Science



**PSY.107 Positive Psychology** 3 3

Positive Psychology will encourage students to develop their potentials through research-based applications found in the areas of resiliency, adjustment, and positive emotions. This course will provide insights into strength-based behaviors by examining biological, psychological and sociocultural origins.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits: AA, AS, AAS AGS and Certificates where applicable.

General Education – Not Applicable Elective Only

**PSY.151 Occupational Search & Development** 3 3

This course is designed to heighten the student's level of self-awareness through the completion of a variety of psychological instruments and self-awareness exercises intended to clarify the student's values, interests, and personality characteristics. The insight gleaned from these experiences will be applied toward the process of making a well-informed career decision and toward the process of marketing one's self in a competitive job market. Students will become acquainted with a variety of sources and techniques for occupational research and decision making, in addition to learning how to prepare a professional resume and cover letter. Interviewing techniques, job networking skills, and the process of life-long career development will be explored as well.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**PSY.152 Career and Life Planning** 1 1

This course is designed to assist the undecided student with the process of making a well-informed and insightful career decision. Personality assessments, interest inventories and values assessments will be administered to generate insightful career options and to assist students as they clarify and coordinate their career and personal goals. Common decision making obstacles will also be explored. In addition, guided occupational research, individualized career counseling sessions and academic-planning activities will be utilized to enable students to produce tangible career and academic plans upon completion of the course..

General Education – Not Applicable

**PSY.202 Psychology of Personality** 3 3

This course offers a study of the major problems, concepts and formulations of personality. It will include development and structure of personality, including such topics as adjustment, social adequacy, work environments, aggression, prejudice and other behaviors.

Offered: As Needed

Prerequisites: The appropriate placement exam score, or take ENG.097 with a grade of C or better or consent of instructor.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**PSY.204 Social Psychology** 3 3

Social Psychology is the scientific study of the way in which people's thoughts, feelings, and behaviors are influenced by the real or imagined presence of other people. This course will be composed of four sections: (1) Introduction to Social Psychology and Social Psychological Methods, (2) Understanding Ourselves, (3) Social Influence, and (4) Social Interaction. This course is of value to students who have an interest in the mutual influence of groups on the individual and of the individual on groups.

Offered: Fall or Spring

Prerequisites: The appropriate placement exam score, or ENG.097 with a grade of C or better, or an ACT Reading score of 20 or higher.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. S8 900*

General Education – Social Science Human Relations

**PSY.205 Human Sexuality** 3 3

This course is designed to provide the student with knowledge about the psychological, sociological and biological aspects of human sexuality; understand varieties of sexual expression and provide a cognitive base on which to make sexual decisions.

Offered: As Needed

Prerequisites: The appropriate placement exam score, or ENG.097 with a grade of C or better, or an ACT Reading score of 20 or higher.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**PSY.206 The Social Psychology of Aging** 3 3

This course provides an introduction to the field of social gerontology. The course deals with the adult life cycle from the sociological and psychological perspective with special emphasis on the later stages of adulthood. Special topics on aging include theoretical approaches to social aging, the biological and psychological aspects of aging, work, retirement and leisure, institutionalization, and death and dying.

Offered: As Needed

Prerequisites: The appropriate placement exam score, or ENG.097 with a minimum grade of C, or an ACT Reading score of 20 or higher.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. S6 905*

General Education – Social Science

**PSY.207 Crisis Intervention** 3 3

This course is an overall introduction to crisis intervention and is designed to provide an understanding of theory and practice of short term models of treatment. A wide variety of crises will be examined and role played so students can become comfortable with different intervention techniques. Example crises will include suicide, developmental life stage, loss, medical, and post traumatic stress victims. Students will understand the professional and ethical side of crisis intervention along with developing an appreciation for the importance of cultural sensitivity in crisis intervention. Crisis intervention is designed as a university studies course, but is also applicable to those pursuing careers in allied health, criminal justice, education, fire science, etc.

Offered: Spring  
 Applicable toward graduation at Sandburg where program structure permits:  
 Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.  
 General Education -- Not Applicable Elective Only

**PSY.221 Child Psychology** 3 3

This course is a study of human development from conception through adolescence. It consists of research methods, data, and developmental theories in and between all major areas of development including biological, social, emotional, and cognitive. This course is useful to students who will interact with children and/or adolescents in professional and personal settings. It is appropriate for parents as well as persons in educational, behavioral, and social sciences.

Offered: As Needed  
 Prerequisites: The appropriate placement exam score, or ENG.097 with a grade of C or better, or an ACT Reading score of 20 or higher.  
 Applicable toward graduation at Sandburg where program structure permits:  
 Degree or Certificate - AA, AS, AFA, AAS, AGS, and Certificates where applicable.  
 General Education -- Social Science

**PSY.265 Developmental Psychology** 3 3

This course is a study of the development of human beings over the entire lifespan. It begins with an overview of developmental theories and then traces the individual from conception through infancy, childhood, adolescence, adulthood, aging, and death.

Offered: As Needed  
 Prerequisites: The appropriate placement exam score, or ENG.097 with a grade of C or better, or an ACT Reading score of 20 or higher.  
 Applicable toward graduation at Sandburg where program structure permits:  
 Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. S6 902*  
 General Education -- Social Science

**PSY.294 Abnormal Psychology** 3 3

Abnormal Psychology will introduce students to behavioral disorders and research methods used in the field. This course will provide insight into abnormal behavior by examining biological, psychosocial, and sociocultural origins. Students will also learn about assessment, categorization, and treatment options for disorders, in addition to preventative measures.

Offered: Fall or Spring or Summer  
 Prerequisites: Take PSY.101  
 Applicable toward graduation at Sandburg where program structure permits:  
 Degree or Certificate: AA, AS, AAS, AGS and Certificates where applicable.  
 General Education -- Not Applicable Elective Only

## RDG Reading

Hr/Wk	Hr/Wk	Sem
Lect/	Clin	Cr
Disc	Lab	Hr

### Courses

**RDG.120 Strategies for Success in College** 3 3

This course will introduce students to strategies that promote success in college. Students will explore internal factors that influence success in college, including learning styles, educational objectives and personal expectations. External factors, including locus of control and generational influences will also be explored. Students will also be introduced to the specific skill sets necessary for success in college, including time-management skills, critical thinking and reading skills, test-taking skills, goal-setting skills and problem solving skills. Students will also be introduced to college resources when appropriate.

Offered: Fall or Spring  
 Prerequisites: The appropriate placement exam score, or ENG.097 with a grade of C or better, or an ACT Reading score of 20 or higher.  
 Applicable toward graduation at Sandburg where program structure permits:  
 Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable.  
 General Education -- Not Applicable Elective Only

Hr/Wk	Hr/Wk	Sem
Lect/	Clin	Cr
Disc	Lab	Hr

## Courses

**RDG.120 Strategies for Success in College** 3 3

This course will introduce students to strategies that promote success in college. Students will explore internal factors that influence success in college, including learning styles, educational objectives and personal expectations. External factors, including locus of control and generational influences will also be explored. Students will also be introduced to the specific skill sets necessary for success in college, including time-management skills, critical thinking and reading skills, test-taking skills, goal-setting skills and problem solving skills. Students will also be introduced to college resources when appropriate.

Offered: Fall or Spring

Prerequisites: The appropriate placement exam score, or ENG.097 with a grade of C or better, or an ACT Reading score of 20 or higher.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

## RDT Radiologic Technology

Hr/Wk	Hr/Wk	Sem
Lect/	Clin	Cr
Disc	Lab	Hr

### Courses

**RDT.100 Introduction to Radiologic Technology** 3 3

This introductory course provides the student with general information about the profession of Radiologic Technology and introduces basic radiographic imaging principles and radiation protection. Special emphasis is also placed on medical ethics and professional conduct. Admission to the Radiologic Technology program is required to enroll in this course.

Offered: Spring

Prerequisites: Admission to Radiologic Technology program Take 1 group; Take BIO.205 Minimum grade C or BIO.211, BIO.212 Minimum, grade C;

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**RDT.101 Radiologic Technology Procedures 1** 2 2 3

This course is designed to provide a knowledge base necessary to perform standard radiographic procedures. Content includes basic anatomy and positioning for examinations of the chest and abdomen, safe and proper use of x-ray equipment, and correct methods of handling and processing radiographic images. Consideration will be given to the production of radiographs of optimal diagnostic quality. Laboratory experience will be used to complement the didactic portion of the course. Admission to the Radiologic Technology program is required to enroll in this course.

Offered: Summer

Prerequisites: Admission to the Radiologic Technology program Take 1 group; Take BIO.205 Minimum grade C or BIO.211, BIO.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**RDT.110 Rad Tech Physics & Instrumentation 1** 3 3

This course gives the student an understanding of physics concepts which are fundamental to the profession. Subjects covered include: atomic structure; matter vs. energy; principles of electricity; x-ray production, control and management; and interactions of radiation with matter. Admission to the Radiologic Technology program is required to enroll in this course.

Offered: Fall

Prerequisites: Admission to Radiologic Technology program and ,RDT.100, RDT.101 and ALH.105, Take 1 group; Take BIO.205 Minimum grade C or BIO.211, BIO.212 Minimum, grade C;

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**RDT.111 Radiologic Technology Procedures 2** 3 3 4.5

Content is designed to provide a knowledge base necessary to perform standard radiographic procedures. This course includes basic anatomy and positioning for examinations of the abdomen, shoulder girdle, upper and lower extremity, pelvic girdle and lumbar spine. Consideration will be given to the production of radiographs of optimal diagnostic quality. Laboratory experience will be used to complement the didactic portion of the course.

Offered: Fall

Prerequisites: RDT.100, RDT.101 and ALH.105

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable..

General Education – Not Applicable

**RDT.115 Radiologic Technology Practicum 1** 17.5 3.5

This first course in clinical practice involves an average of 17.5 hours/week in the Radiology department of one of the affiliate hospitals. Emphasis is placed on patient contact as students are instructed and supervised in the performance of actual x-ray examinations of the extremities, chest, and pelvis. Attention is also directed toward the organization of the radiology department-examination priorities, patient preparation, processing of x-ray orders, etc. Admission to the Radiologic Technology program is required to enroll in this course.

Offered: Fall

Prerequisites: Admission to Radiologic Technology program Take 1 group;;Take BIO.205 Minimum grade C or BIO.211, BIO.212 Minimum,grade C;

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AAS, AGS, and Certificates where applicable.  
General Education – Not Applicable

**RDT.120 Rad Tech Physics and Instrumentation 2** 3 3

This course presents a detailed study of the technology used in acquiring, displaying and managing diagnostic images. Content is designed to establish a knowledge base in digital and analog image processing.

Also discussed are image- intensified fluoroscopic, automatic exposure control and tomographic equipment requirements and design, as well as quality control and quality assurance.

Offered: Spring

Prerequisites: Admission to the Radiologic Technology program and,ALH.105, RDT.100, RDT.101, RDT.110, RDT.111, and RDT.115 Take 1 group;;Take BIO.205 Minimum grade C or BIO.211, BIO.212 Minimum,grade C;

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AAS, AGS and Certificates where applicable.  
General Education – Not Applicable

**RDT.121 Radiologic Technology Procedures 3** 3 3 4.5

Content is designed to provide a knowledge base necessary to perform radiographic procedures. This course includes basic anatomy and positioning for examinations of the cervical and thoracic spine, bony thorax, the gastrointestinal tract, the biliary system and the genitourinary system with emphasis on related pharmacology, equipment, and image analysis. Consideration will be given to the production of radiographs of optimal diagnostic quality. Laboratory experience will be used to complement the didactic portion of the course.

Offered: Spring

Prerequisites: Admission to the Radiologic Technology program and ,ALH.105, RDT.100, RDT.101, RDT.110, RDT.111, and RDT.115 Take 1 group;;Take BIO.205 Minimum grade C or BIO.211, BIO.212 Minimum,grade C;

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AAS, AGS and Certificates where applicable.  
General Education – Not Applicable

**RDT.123 Principles of Radiologic Technology** 3 3

This course is designed to provide a knowledge base in factors that govern the production and recording of radiographic images. The properties of density, contrast, detail and distortion are analyzed extensively with emphasis on the factors that control and influence them. Other topics include: collimation, filtration, grid usage, and exposure factor formulation.

Offered: Spring

Prerequisites: ALH.105, RDT.100, RDT.101, RDT.110, RDT.111, and RDT.115

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AAS, AGS and Certificates where applicable.  
General Education – Not Applicable

**RDT.125 Radiologic Technology Practicum 2** 17.5 3.5

This second clinical practicum involves an average of 17.5 hours/week in the Radiology department of one of the affiliate hospitals. This course stresses the development of competency in performing general examinations and basic fluoroscopic procedures. Students will also begin to develop a better understanding of the factors that influence radiographic quality as they apply the exposure principles learned in their theory courses. Admission to the Radiologic Technology program is required to enroll in this course.

Offered: Spring

Prerequisites: ALH.105 RDT.100 RDT.101 RDT.110 RDT.111 and RDT.115

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - - AAS, AGS and Certificates where applicable.  
General Education – Not Applicable

**RDT.201 Radiologic Technology Procedures 4** 1 2 2.5

This course is designed to provide a knowledge base necessary to perform standard radiographic procedures. Content includes basic anatomy and positioning for examinations of the skull and facial bones. Consideration will be given to the production of radiographs of optimal diagnostic quality. Laboratory experience will be used to complement the didactic portion of the course. Radiation therapy will be explored with an emphasis on basic principles of operation and general procedural considerations.

Offered: Summer

Prerequisites: RDT.100 RDT.101 RDT.110 RDT.111 RDT.115 RDT.120 RDT.121 RDT.123 RDT.125 ALH.105

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AAS, AGS and Certificates where applicable.  
General Education – Not Applicable

**RDT.205 Radiologic Technology Practicum 3** 20 4

This third course in clinical practice involves an average of 32 hour week in the Radiology department of one of the affiliate hospitals for 10 weeks. Students will rotate through all areas of the Radiology Department this semester. A brief affiliation with the InterCommunity Cancer Center is incorporated into this course to enable students to observe patients receiving radiation therapy.

Offered: Summer

Prerequisites: RDT.100, RDT.101, RDT.110, RDT.111, RDT.115, RDT.120, RDT.121, RDT.123, RDT.125, ALH.105

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AAS, AGS and Certificates where applicable.

General Education -- Not Applicable

**RDT.211 Advanced Radiologic Technology Procedure** 3 3

This course presents basic concepts of pharmacology, venipuncture and administration of diagnostic contrast agents and intravenous medications with appropriate delivery of patient care. Content is also designed to provide an introduction to the basic principles and operation of computed tomography equipment. Cross-sectional anatomy will be introduced along with an exploration of other medical imaging modalities.

Offered: Fall

Prerequisites: ALH.105 RDT.100 RDT.101 RDT.110 RDT.111 RDT.115 RDT.120 RDT.121 RDT.123 RDT.125 RDT.201 RDT.205

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AAS, AGS and Certificates where applicable.

General Education -- Not Applicable

**RDT.212 Radiologic Technology Image Critique** 3 3

This course provides a basis for analyzing radiographic images. Included are the importance of optimal imaging standards, discussion of problem-solving techniques for image evaluation, and the factors that can affect image quality. Concepts related to disease and etiological considerations with emphasis on radiographic appearance of disease and impact on exposure factor selection will also be introduced. Actual images will be included for analysis.

Offered: Fall

Prerequisites: ALH.105 RDT.100 RDT.101 RDT.110 RDT.111 RDT.115 RDT.120 RDT.121 RDT.123 RDT.125 RDT.201 RDT.205

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AAS, AGS and Certificates where applicable.

General Education -- Not Applicable

**RDT.215 Radiologic Technology Practicum 4** 25 5

This fourth Practicum involves an average of 25 hours per week of clinical experience. Emphasis is placed on developing competency in the performance of both general and special radiographic procedures.

Offered: Fall

Prerequisites: ALH.105 RDT.100 RDT.101 RDT.110 RDT.111 RDT.115 RDT.120 RDT.121 RDT.123 RDT.125 RDT.201 RDT.205

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AAS, AGS and Certificates where applicable.

General Education -- Not Applicable

**RDT.220 Radiologic Technology Capstone** 3 3

Course designed to re-examine knowledge, skills and attitudes required of the radiographer. Students will create learning portfolios and practice resume writing and interviewing skills. Students will also prepare for AART Registry Examination through use of review modules and practice examinations.

Offered: Spring

Prerequisites: ALH.105 RDT.100 RDT.101 RDT.110 RDT.111 RDT.115 RDT.120 RDT.121 RDT.123 RDT.125 RDT.201 RDT.205 RDT.211

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AAS, AGS and Certificates where applicable.

General Education -- Not Applicable

**RDT.222 Radiation Biology** 2 2

This course focuses on the biological effects of radiation including radiosensitivity and the factors influencing it. Risks vs. benefits of the use of radiation will be analyzed from the patient and operator standpoint. Additional topics discussed will include the various methods employed to minimize exposure to both radiation quantities & units and computer & digital imaging considerations along with understanding regulatory standards and recommendations. Admission to the Radiologic Technology program is required to enroll in this course.

Offered: Spring

Prerequisites: RDT.210 & RDT.215 with a grade of C or better

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AAS, AGS and Certificates where applicable.

General Education -- Not Applicable

**RDT.225 Radiologic Technology Practicum 5** 25 5

This final practicum course stresses the refinement of the students' clinical skills. All competency requirements must be fulfilled by the end of the semester. The clinical instructor at each hospital will be working closely with students in order to correlate their assignments with their competency requirement needs. A weekly seminar is conducted in addition to the assigned clinical hours during the second eight weeks of the course. Admission to the Radiologic Technology program is required to enroll in this course.

Offered: Spring

Prerequisites: Take ALH.105 RDT.100 RDT.101 RDT.111 RDT.115 RDT.120 RDT.121 RDT.123 RDT.125 RDT.201 RDT.205 RDT.211

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AAS, AGS and Certificates where applicable.

General Education -- Not Applicable

**RDT.250 CT Principles & Instrumentation** 3 3

This course presents the foundations of CT image formation including data acquisition and subsequent image processing, recording, and archiving methods. The diagnostic quality of images obtained using various types of CT equipment will be emphasized along with considerations related to patient exposure dose. Admission to the Computed Tomography program is required to enroll in this course.

Offered: Fall

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AAS, AGS and Certificates where applicable.

General Education -- Not Applicable



**RDT.252 Computed Tomography Procedures** 4 4

This course introduces the radiographer to computed tomography imaging procedures. Patient care and scanning protocols for examination of the abdomen and pelvis, chest, head, neck, spine, and musculoskeletal system will be covered. Common abnormalities demonstrated by CT will also be discussed. Admission to the Computed Tomography program is required to enroll in this course.

Offered: Fall

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**RDT.255 CT Practicum** 1 25 6

This practicum course involves three days per week of clinical experience in affiliate hospitals and/ or imaging centers. Assignments are made to enable students to achieve competency in performing computed tomography procedures and in evaluating equipment operation. Course includes clinical seminars. Admission to the Computed Tomography program is required to enroll in this course.

Offered: Fall

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**RDT.262 Sectional Anatomy for Diagnostic Imaging** 3 3

This course is a study of sectional anatomy as demonstrated in the transverse, sagittal, and coronal planes. The use of both abstract diagrams and actual photographs of cadaver sections provide students with an understanding of the spatial relationships within the human body. CT, MRI, and/ or ultrasound images are also used to supplement instruction.

Offered: Fall or Spring or Summer

Prerequisites: BIO.205 or equivalent

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AAS, AGS and Certificates where applicable.

General Education – Not Applicable

Hr/Wk Lect/ Disc	Hr/Wk Clin Lab	Sem Cr Hr

**Courses**

**RDT.100 Introduction to Radiologic Technology** 3 3

This introductory course provides the student with general information about the profession of Radiologic Technology and introduces basic radiographic imaging principles and radiation protection. Special emphasis is also placed on medical ethics and professional conduct. Admission to the Radiologic Technology program is required to enroll in this course.

Offered: Spring

Prerequisites: Admission to Radiologic Technology program Take 1 group;;Take BIO.205 Minimum grade C or BIO.211, BIO.212

Minimum,grade C;

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**RDT.101 Radiologic Technology Procedures 1** 2 2 3

This course is designed to provide a knowledge base necessary to perform standard radiographic procedures. Content includes basic anatomy and positioning for examinations of the chest and abdomen, safe and proper use of x-ray equipment, and correct methods of handling and processing radiographic images. Consideration will be given to the production of radiographs of optimal diagnostic quality. Laboratory experience will be used to complement the didactic portion of the course. Admission to the Radiologic Technology program is required to enroll in this course.

Offered: Summer

Prerequisites: Admission to the Radiologic Technology program Take 1 group;;Take BIO.205 Minimum grade C or BIO.211, BIO.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**RDT.110 Rad Tech Physics & Instrumentation 1** 3 3

This course gives the student an understanding of physics concepts which are fundamental to the profession. Subjects covered include: atomic structure; matter vs. energy; principles of electricity; x-ray production, control and management; and interactions of radiation with matter. Admission to the Radiologic Technology program is required to enroll in this course.

Offered: Fall

Prerequisites: Admission to Radiologic Technology program and ,RDT.100, RDT.101 and ALH.105, Take 1 group;;Take BIO.205

Minimum grade C or BIO.211, BIO.212 Minimum,grade C;

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**RDT.111 Radiologic Technology Procedures 2** 3 3 4.5

Content is designed to provide a knowledge base necessary to perform standard radiographic procedures. This course includes basic anatomy and positioning for examinations of the abdomen, shoulder girdle, upper and lower extremity, pelvic girdle and lumbar spine. Consideration will be given to the production of radiographs of optimal diagnostic quality. Laboratory experience will be used to complement the didactic portion of the course.

Offered: Fall

Prerequisites: RDT.100, RDT.101 and ALH.105

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable..

General Education – Not Applicable

**RDT.115 Radiologic Technology Practicum 1** 17.5 3.5

This first course in clinical practice involves an average of 17.5 hours/ week in the Radiology department of one of the affiliate hospitals. Emphasis is placed on patient contact as students are instructed and supervised in the performance of actual x-ray examinations of the extremities, chest, and pelvis. Attention is also directed toward the organization of the radiology department-examination priorities, patient preparation, processing of x-ray orders, etc. Admission to the Radiologic Technology program is required to enroll in this course.

Offered: Fall

Prerequisites: Admission to Radiologic Technology program Take 1 group;;Take BIO.205 Minimum grade C or BIO.211, BIO.212 Minimum,grade C;

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**RDT.120 Rad Tech Physics and Instrumentation 2** 3 3

This course presents a detailed study of the technology used in acquiring, displaying and managing diagnostic images. Content is designed to establish a knowledge base in digital and analog image processing. Also discussed are image- intensified fluoroscopic, automatic exposure control and tomographic equipment requirements and design, as well as quality control and quality assurance.

Offered: Spring

Prerequisites: Admission to the Radiologic Technology program and,ALH.105, RDT.100, RDT.101, RDT.110, RDT.111, and RDT.115 Take 1 group;;Take BIO.205 Minimum grade C or BIO.211, BIO.212 Minimum,grade C;

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**RDT.121 Radiologic Technology Procedures 3** 3 3 4.5

Content is designed to provide a knowledge base necessary to perform radiographic procedures. This course includes basic anatomy and positioning for examinations of the cervical and thoracic spine, bony thorax, the gastrointestinal tract, the biliary system and the genitourinary system with emphasis on related pharmacology, equipment, and image analysis. Consideration will be given to the production of radiographs of optimal diagnostic quality. Laboratory experience will be used to complement the didactic portion of the course.

Offered: Spring

Prerequisites: Admission to the Radiologic Technology program and ,ALH.105, RDT.100, RDT.101, RDT.110, RDT.111, and RDT.115 Take 1 group;;Take BIO.205 Minimum grade C or BIO.211, BIO.212 Minimum,grade C;

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**RDT.123 Principles of Radiologic Technology** 3 3

This course is designed to provide a knowledge base in factors that govern the production and recording of radiographic images. The properties of density, contrast, detail and distortion are analyzed extensively with emphasis on the factors that control and influence them. Other topics include: collimation, filtration, grid usage, and exposure factor formulation.

Offered: Spring

Prerequisites: ALH.105, RDT.100, RDT.101, RDT.110, RDT.111, and RDT.115

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**RDT.125 Radiologic Technology Practicum 2** 17.5 3.5

This second clinical practicum involves an average of 17.5 hours/ week in the Radiology department of one of the affiliate hospitals. This course stresses the development of competency in performing general examinations and basic fluoroscopic procedures. Students will also begin to develop a better understanding of the factors that influence radiographic quality as they apply the exposure principles learned in their theory courses. Admission to the Radiologic Technology program is required to enroll in this course.

Offered: Spring

Prerequisites: ALH.105 RDT.100 RDT.101 RDT.110 RDT.111 and RDT.115

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - - AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**RDT.201 Radiologic Technology Procedures 4** 1 2 2.5

This course is designed to provide a knowledge base necessary to perform standard radiographic procedures. Content includes basic anatomy and positioning for examinations of the skull and facial bones. Consideration will be given to the production of radiographs of optimal diagnostic quality. Laboratory experience will be used to complement the didactic portion of the course. Radiation therapy will be explored with an emphasis on basic principles of operation and general procedural considerations.

Offered: Summer

Prerequisites: RDT.100 RDT.101 RDT.110 RDT.111 RDT.115 RDT.120 RDT.121 RDT.123 RDT.125 ALH.105

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**RDT.205 Radiologic Technology Practicum 3** 20 4

This third course in clinical practice involves an average of 32 hour week in the Radiology department of one of the affiliate hospitals for 10 weeks. Students will rotate through all areas of the Radiology Department this semester. A brief affiliation with the InterCommunity Cancer Center is incorporated into this course to enable students to observe patients receiving radiation therapy.

Offered: Summer

Prerequisites: RDT.100, RDT.101, RDT.110, RDT.111, RDT.115, RDT.120, RDT.121, RDT.123, RDT.125, ALH.105

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**RDT.211 Advanced Radiologic Technology Procedure 3** 3

This course presents basic concepts of pharmacology, venipuncture and administration of diagnostic contrast agents and intravenous medications with appropriate delivery of patient care. Content is also designed to provide an introduction to the basic principles and operation of computed tomography equipment. Cross-sectional anatomy will be introduced along with an exploration of other medical imaging modalities.

Offered: Fall

Prerequisites: ALH.105 RDT.100 RDT.101 RDT.110 RDT.111 RDT.115 RDT.120 RDT.121 RDT.123 RDT.125 RDT.201 RDT.205

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**RDT.212 Radiologic Technology Image Critique** 3 3

This course provides a basis for analyzing radiographic images. Included are the importance of optimal imaging standards, discussion of problem-solving techniques for image evaluation, and the factors that can affect image quality. Concepts related to disease and etiological considerations with emphasis on radiographic appearance of disease and impact on exposure factor selection will also be introduced. Actual images will be included for analysis.

Offered: Fall

Prerequisites: ALH.105 RDT.100 RDT.101 RDT.110 RDT.111 RDT.115 RDT.120 RDT.121 RDT.123 RDT.125 RDT.201 RDT.205

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**RDT.215 Radiologic Technology Practicum 4** 25 5

This fourth Practicum involves an average of 25 hours per week of clinical experience. Emphasis is placed on developing competency in the performance of both general and special radiographic procedures.

Offered: Fall

Prerequisites: ALH.105 RDT.100 RDT.101 RDT.110 RDT.111 RDT.115 RDT.120 RDT.121 RDT.123 RDT.125 RDT.201 RDT.205

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**RDT.220 Radiologic Technology Capstone** 3 3

Course designed to re-examine knowledge, skills and attitudes required of the radiographer. Students will create learning portfolios and practice resume writing and interviewing skills. Students will also prepare for AART Registry Examination through use of review modules and practice examinations.

Offered: Spring

Prerequisites: ALH.105 RDT.100 RDT.101 RDT.110 RDT.111 RDT.115 RDT.120 RDT.121 RDT.123 RDT.125 RDT.201 RDT.205 RDT.211

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**RDT.222 Radiation Biology** 2 2

This course focuses on the biological effects of radiation including radiosensitivity and the factors influencing it. Risks vs. benefits of the use of radiation will be analyzed from the patient and operator standpoint. Additional topics discussed will include the various methods employed to minimize exposure to both radiation quantities & units and computer & digital imaging considerations along with understanding regulatory standards and recommendations. Admission to the Radiologic Technology program is required to enroll in this course.

Offered: Spring

Prerequisites: RDT.210 & RDT.215 with a grade of C or better

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**RDT.225 Radiologic Technology Practicum 5** 25 5

This final practicum course stresses the refinement of the students' clinical skills. All competency requirements must be fulfilled by the end of the semester. The clinical instructor at each hospital will be working closely with students in order to correlate their assignments with their competency requirement needs. A weekly seminar is conducted in addition to the assigned clinical hours during the second eight weeks of the course. Admission to the Radiologic Technology program is required to enroll in this course.

Offered: Spring

Prerequisites: Take ALH.105 RDT.100 RDT.101 RDT.111 RDT.115 RDT.120 RDT.121 RDT.123 RDT.125 RDT.201 RDT 205 RDT 211

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**RDT.250 CT Principles & Instrumentation** 3 3

This course presents the foundations of CT image formation including data acquisition and subsequent image processing, recording, and archiving methods. The diagnostic quality of images obtained using various types of CT equipment will be emphasized along with considerations related to patient exposure dose. Admission to the Computed Tomography program is required to enroll in this course.

Offered: Fall

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate -AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**RDT.252 Computed Tomography Procedures** 4 4

This course introduces the radiographer to computed tomography imaging procedures. Patient care and scanning protocols for examination of the abdomen and pelvis, chest, head, neck, spine, and musculoskeletal system will be covered. Common abnormalities demonstrated by CT will also be discussed. Admission to the Computed Tomography program is required to enroll in this course.

Offered: Fall

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**RDT.255 CT Practicum** 1 25 6

This practicum course involves three days per week of clinical experience in affiliate hospitals and/ or imaging centers. Assignments are made to enable students to achieve competency in performing computed tomography procedures and in evaluating equipment operation. Course includes clinical seminars. Admission to the Computed Tomography program is required to enroll in this course.

Offered: Fall

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**RDT.262 Sectional Anatomy for Diagnostic Imaging** 3 3

This course is a study of sectional anatomy as demonstrated in the transverse, sagittal, and coronal planes. The use of both abstract diagrams and actual photographs of cadaver sections provide students with an understanding of the spatial relationships within the human body. CT, MRI, and/ or ultrasound images are also used to supplement instruction.

Offered: Fall or Spring or Summer

Prerequisites: BIO.205 or equivalent

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AAS, AGS and Certificates where applicable.

General Education – Not Applicable

## RRT Rail Operations

	Hr/Wk Lect/ Disc	Hr/Wk Clin Lab	Sem Cr Hr
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### Courses

**RRT.101 History of Railroading** 3 3

This course covers the history and traditions of railroading and the industry's role in North American economic development. Upon successful completion of this course, students will be able to list and explain the significance of major events in North American railroading. Offered: Fall

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**RRT.102 Railroad Tech Careers** 3 3

The course includes information about technical careers in railroading, enabling students to choose suitable career paths. This course includes field trips that will demonstrate the relationships among technical work groups in day-to-day railroad operations. Upon successful completion of this course students should be able to describe basic technical job functions, requirements, and characteristics.

Offered: Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**RRT.120 Introduction to Railroading** 1 1 1.5

This course introduces the learner to the different classes of railroad operations, the railroad environment to include terminology and railroad language, and the overall railroad workplace environment.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**RRT.135 Basic Electro Motive Diesel (EMD)** 2 3 3

This is one in a series of courses in the Locomotive Mechanical certificate and AAS programs. This course is designed to introduce the student to the basic operation, maintenance, repair requirements, and trouble shooting for Electro Motive Diesel engines and support systems.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable..

General Education – Not Applicable

**RRT.136 Basic GE Mechanical** 2 3 3

This is one in a series of courses in the Locomotive Mechanical certificate and AAS programs. This course is designed to introduce the student to the basic operation, maintenance, repair requirements and trouble shooting for GE diesel engines and support systems.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**RRT.137 Locomotive Air Brakes** 2 3 3

This is one in a series of courses in the Locomotive Mechanical certificate and AAS programs. It is designed to provide the student an introduction to the operation, testing, maintenance, and troubleshooting for 26L and 30 ACDW locomotive air brake systems.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**RRT.138 Locomotive FRA** 2 3 3

This is one in a series of courses in the Locomotive Mechanical certificate and AAS programs. This course is designed to introduce the student to the Federal Railway Administration and Department of Transportation Code of Federal Regulations Title 49, Parts 209, 218, 229, 231, and 232.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**RRT.142 Locomotive Electricity** 2 3 3

This course is designed to introduce the student to the basic electrical theory and concepts related to locomotive electrical systems.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**RRT.143 Low Horsepower Electrical** 2 3 3

This is one in a series of courses in the Locomotive Electrical certificate and AAS programs. This course is designed to introduce the student to the operation, maintenance, and troubleshooting of EMD Low Horsepower locomotive electrical systems.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AAS,AGS and Certificates where applicable.

General Education – Not Applicable

**RRT.144 EMD Basic Electrical** 2 3 3

This course is designed to introduce the student to the basic operation, maintenance, repair requirements and trouble shooting of EMD diesel engines and support systems.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**RRT.145 GE Dash 8/9 Electrical System** 2 3 3

This course is designed to introduce the student to the basic operation, maintenance, repair requirements and trouble shooting of GE Dash 8/9 locomotive systems.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**RRT.165 Rail Safety Quality & Environment** 3 3

This course discusses safety, quality, personal health and environmental awareness as it relates to the railroad industry. Emphasis is placed on the basic tools and techniques for improving these conditions on the job. Discussion will include the management of a hazardous materials handling program.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**RRT.201 Railroad Operations** 3 3

This course includes information about the industry, its major assets, structure, and typical operations. Upon successful completion of this course, students will be able to define the current North American railroading industry characteristics, basic operations components and processes, and industry structure and administrative processes.

Offered: Fall

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable



**RRT.202 Railroad Safe-Qlty-Envirn** 3 3

This course covers the importance of safety, quality, personal health, and environmental awareness to the railroad industry and emphasizes the basic tools and techniques for improving these conditions on the job. Upon successful completion of this course, students should be able to define and explain the needs for improved safety, quality, health, and environmental awareness; describe their basic principles; explain the elements of successful programs, and apply these elements to typical tasks on the job.  
 Offered: Spring  
 Applicable toward graduation at Sandburg where program structure permits:  
 Degree or Certificate: AAS, AGS and Certificates where applicable.  
 General Education – Not Applicable

**Courses**

**RRT.101 History of Railroadng** 3 3

This course covers the history and traditions of railroading and the industry's role in North American economic development. Upon successful completion of this course, students will be able to list and explain the significance of major events in North American railroading.  
 Offered: Fall  
 Applicable toward graduation at Sandburg where program structure permits:  
 Degree or Certificate: AAS, AGS and Certificates where applicable.  
 General Education – Not Applicable

**RRT.102 Railroad Tech Careers** 3 3

The course includes information about technical careers in railroading, enabling students to choose suitable career paths. This course includes field trips that will demonstrate the relationships among technical work groups in day-to-day railroad operations. Upon successful completion of this course students should be able to describe basic technical job functions, requirements, and characteristics.  
 Offered: Spring  
 Applicable toward graduation at Sandburg where program structure permits:  
 Degree or Certificate: AAS, AGS and Certificates where applicable.  
 General Education – Not Applicable

**RRT.120 Introduction to Railroadng** 1 1 1.5

This course introduces the learner to the different classes of railroad operations, the railroad environment to include terminology and railroad language, and the overall railroad workplace environment.  
 Offered: Fall or Spring  
 Applicable toward graduation at Sandburg where program structure permits:  
 Degree or Certificate: AAS, AGS and Certificates where applicable.  
 General Education – Not Applicable

**RRT.135 Basic Electro Motive Diesel (EMD)** 2 3 3

This is one in a series of courses in the Locomotive Mechanical certificate and AAS programs. This course is designed to introduce the student to the basic operation, maintenance, repair requirements, and trouble shooting for Electro Motive Diesel engines and support systems.  
 Offered: Fall or Spring  
 Applicable toward graduation at Sandburg where program structure permits:  
 Degree or Certificate: AAS, AGS, and Certificates where applicable..  
 General Education – Not Applicable

**RRT.136 Basic GE Mechanical** 2 3 3

This is one in a series of courses in the Locomotive Mechanical certificate and AAS programs. This course is designed to introduce the student to the basic operation, maintenance, repair requirements and trouble shooting for GE diesel engines and support systems.  
 Offered: Fall or Spring  
 Applicable toward graduation at Sandburg where program structure permits:  
 Degree or Certificate: AAS, AGS and Certificates where applicable.  
 General Education – Not Applicable

**RRT.137 Locomotive Air Brakes** 2 3 3

This is one in a series of courses in the Locomotive Mechanical certificate and AAS programs. It is designed to provide the student an introduction to the operation, testing, maintenance, and troubleshooting for 26L and 30 ACDW locomotive air brake systems.  
 Offered: Fall or Spring  
 Applicable toward graduation at Sandburg where program structure permits:  
 Degree or Certificate: AAS, AGS and Certificates where applicable.  
 General Education – Not Applicable

**RRT.138 Locomotive FRA** 2 3 3

This is one in a series of courses in the Locomotive Mechanical certificate and AAS programs. This course is designed to introduce the student to the Federal Railway Administration and Department of Transportation Code of Federal Regulations Title 49, Parts 209, 218, 229, 231, and 232.  
 Offered: Fall or Spring  
 Applicable toward graduation at Sandburg where program structure permits:  
 Degree or Certificate: AAS, AGS and Certificates where applicable.  
 General Education – Not Applicable

**RRT.142 Locomotive Electricity** 2 3 3

This course is designed to introduce the student to the basic electrical theory and concepts related to locomotive electrical systems.  
 Offered: Fall or Spring  
 Applicable toward graduation at Sandburg where program structure permits:  
 Degree or Certificate - AAS, AGS and Certificates where applicable.  
 General Education – Not Applicable

Hr/Wk Lect/ Disc	Hr/Wk Clin Lab	Sem Cr Hr
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**RRT.143 Low Horsepower Electrical** 2 3 3

This is one in a series of courses in the Locomotive Electrical certificate and AAS programs. This course is designed to introduce the student to the operation, maintenance, and troubleshooting of EMD Low Horsepower locomotive electrical systems.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate - AAS,AGS and Certificates where applicable.

General Education – Not Applicable

**RRT.144 EMD Basic Electrical** 2 3 3

This course is designed to introduce the student to the basic operation, maintenance, repair requirements and trouble shooting of EMD diesel engines and support systems.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**RRT.145 GE Dash 8/9 Electrical System** 2 3 3

This course is designed to introduce the student to the basic operation, maintenance, repair requirements and trouble shooting of GE Dash 8/9 locomotive systems.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**RRT.165 Rail Safety Quality & Environment** 3 3

This course discusses safety, quality, personal health and environmental awareness as it relates to the railroad industry. Emphasis is placed on the basic tools and techniques for improving these conditions on the job. Discussion will include the management of a hazardous materials handling program.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**RRT.201 Railroad Operations** 3 3

This course includes information about the industry, its major assets, structure, and typical operations. Upon successful completion of this course, students will be able to define the current North American railroading industry characteristics, basic operations components and processes, and industry structure and administrative processes.

Offered: Fall

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**RRT.202 Railroad Safe-Qlty-Envirn** 3 3

This course covers the importance of safety, quality, personal health, and environmental awareness to the railroad industry and emphasizes the basic tools and techniques for improving these conditions on the job. Upon successful completion of this course, students should be able to define and explain the needs for improved safety, quality, health, and environmental awareness; describe their basic principles; explain the elements of successful programs, and apply these elements to typical tasks on the job.

Offered: Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

## SOC Sociology

	Hr/Wk	Hr/Wk	Sem
	Lect/	Clin	Cr
	Disc	Lab	Hr

### Courses

**SOC.101 Introduction to Sociology** 3 3

The purpose of this course is to acquaint the student with the discipline of sociology as it applies to contemporary American society. This course provides an orientation to the student interested in social science or the helping professions. Among specific topics to be studied are: how the sociologist gathers information, the importance of culture and symbols, personality development, the changing structure of the family, social class and inequality, race and ethnicity, and deviant behavior.

Offered: Fall or Spring or Summer

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate; AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. S7 900*

General Education – Social Science Human Relations

**SOC.102 Contemporary Social Problems** 3 3

The goal of this course is to focus the student's attention on problems and to provide a basis for thinking sociologically about those problems. The course is designed for the social science major as well as the student who wants a greater understanding of our complex society. Among the topics to be covered are the concept of a social problem, poverty and inequality, the changing family, crime and delinquency, the abuse of alcohol and drugs, and social regulation of sexual behavior.

Offered: Spring

Prerequisites: SOC.101

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. S7 901*

General Education – Social Science Human Relations

**SOC.103 Marriage and the Family** 3 3

This course examines the family as a social institution in modern America. The course will enable the student to recognize and scrutinize his/her personal values toward marriage and family life. Topics to be considered include discussions of the concept of love, choosing a mate, marital communications, dealing with marital conflict, parenting, sexual behavior and responsibility, and divorce. Students planning to transfer this course toward a bachelor's degree can expect it to be accepted by most four-year colleges as an elective rather than as applicable toward a major in sociology.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. S7 902*

General Education – Social Science

**SOC.105 Intro to Cultural Anthropology** 3 3

This course will be an overview of the discipline of cultural anthropology, introducing the student to diverse cultural forms around the globe through a variety of media and ethnographic materials. The media and ethnographic materials used will demonstrate how and why humans in different cultures have developed different solutions to the same problems. The student will be exposed to a variety of techniques which will assist the student in learning the social organization, technology, economic structures, religious belief systems and language of both past and present diverse cultures. The students will explore major theories, and concepts used to understand why humans behave as they do and the relationships that may exist between diverse societies.

Offered: As Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. S7 901N*

General Education – Human Relations Social Science

**SOC.201 Introduction to Anthropology** 3 3

The goal of this course is to introduce the study of general anthropology to students who have little acquaintance with the subject. This course will provide the student with knowledge of anthropology and how anthropology contributes to the scientific understanding of people. This course is of interest to the social science major as well as those people who are looking for an elective course. Some of the topics to be covered include human and primate evolution, the emergence of human culture, and the rise of urban society, the evolution of language, kinship and descent, and cultural diversity within the modern world.

Offered: As Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. S7 900N*

General Education – Social Science Human Relations

**SOC.203 Introduction to Diversity** 3 3

This course helps students come to know people from various ethnic/ racial, religious, and cultural groups that make up the American population. Issues concerning racism, age, gender, and sexual orientation are examined.

Offered: Fall or Spring or Summer

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. S7 903D*

General Education – Social Science Human Relations

**SOC.205 Social Problems-Professional Ethics** 3 3

This course will provide a values-based approach to ethical professionalism and present the student with the tools to think about and deal with ethical issues in the work place. The course will examine through discussion the concepts of what a professional is and what it means to act professionally. It will include knowledge-based discussions of the features of moral reasoning and review case studies and scenarios that will facilitate the student's ability to construct methods of resolution when dealing with ethical issues of the work place. The course will cover in depth moral reasoning and ethical theories central to the moral life of any professional.

Offered: Fall or as Needed

Prerequisites: ENG.101 or concurrent enrollment

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**SOC.260 Gender & Society** 3 3

Students in the course will examine gender theory, the historical and societal changes regarding gender roles, the interaction of gender and social structures, and the relationship of gender and social institutions within the United States. Students will also be given the opportunity to consider the similarities and differences of gender from a global, multi-cultural perspective.

Offered: As Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. S7 904D*

General Education – Social Science Human Relations

Hr/Wk	Hr/Wk	Sem
Lect/	Clin	Cr
Disc	Lab	Hr

## Courses

### **SOC.101 Introduction to Sociology** 3 3

The purpose of this course is to acquaint the student with the discipline of sociology as it applies to contemporary American society. This course provides an orientation to the student interested in social science or the helping professions. Among specific topics to be studied are: how the sociologist gathers information, the importance of culture and symbols, personality development, the changing structure of the family, social class and inequality, race and ethnicity, and deviant behavior.

Offered: Fall or Spring or Summer

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. S7 900*

General Education – Social Science Human Relations

### **SOC.102 Contemporary Social Problems** 3 3

The goal of this course is to focus the student's attention on problems and to provide a basis for thinking sociologically about those problems. The course is designed for the social science major as well as the student who wants a greater understanding of our complex society. Among the topics to be covered are the concept of a social problem, poverty and inequality, the changing family, crime and delinquency, the abuse of alcohol and drugs, and social regulation of sexual behavior.

Offered: Spring

Prerequisites: SOC.101

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. S7 901*

General Education – Social Science Human Relations

### **SOC.103 Marriage and the Family** 3 3

This course examines the family as a social institution in modern America. The course will enable the student to recognize and scrutinize his/her personal values toward marriage and family life. Topics to be considered include discussions of the concept of love, choosing a mate, marital communications, dealing with marital conflict, parenting, sexual behavior and responsibility, and divorce. Students planning to transfer this course toward a bachelor's degree can expect it to be accepted by most four-year colleges as an elective rather than as applicable toward a major in sociology.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. S7 902*

General Education – Social Science

### **SOC.105 Intro to Cultural Anthropology** 3 3

This course will be an overview of the discipline of cultural anthropology, introducing the student to diverse cultural forms around the globe through a variety of media and ethnographic materials. The media and ethnographic materials used will demonstrate how and why humans in different cultures have developed different solutions to the same problems. The student will be exposed to a variety of techniques which will assist the student in learning the social organization, technology, economic structures, religious belief systems and language of both past and present diverse cultures. The students will explore major theories, and concepts used to understand why humans behave as they do and the relationships that may exist between diverse societies.

Offered: As Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. S1 901N*

General Education – Human Relations Social Science

### **SOC.201 Introduction to Anthropology** 3 3

The goal of this course is to introduce the study of general anthropology to students who have little acquaintance with the subject. This course will provide the student with knowledge of anthropology and how anthropology contributes to the scientific understanding of people. This course is of interest to the social science major as well as those people who are looking for an elective course. Some of the topics to be covered include human and primate evolution, the emergence of human culture, and the rise of urban society, the evolution of language, kinship and descent, and cultural diversity within the modern world.

Offered: As Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. S1 900N*

General Education – Social Science Human Relations

### **SOC.203 Introduction to Diversity** 3 3

This course helps students come to know people from various ethnic/racial, religious, and cultural groups that make up the American population. Issues concerning racism, age, gender, and sexual orientation are examined.

Offered: Fall or Spring or Summer

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. S7 903D*

General Education – Social Science Human Relations

**SOC.205 Social Problems-Professional Ethics** 3 3

This course will provide a values-based approach to ethical professionalism and present the student with the tools to think about and deal with ethical issues in the work place. The course will examine through discussion the concepts of what a professional is and what it means to act professionally. It will include knowledge-based discussions of the features of moral reasoning and review case studies and scenarios that will facilitate the student's ability to construct methods of resolution when dealing with ethical issues of the work place. The course will cover in depth moral reasoning and ethical theories central to the moral life of any professional.

Offered: Fall or as Needed

Prerequisites: ENG.101 or concurrent enrollment

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**SOC.260 Gender & Society** 3 3

Students in the course will examine gender theory, the historical and societal changes regarding gender roles, the interaction of gender and social structures, and the relationship of gender and social institutions within the United States. Students will also be given the opportunity to consider the similarities and differences of gender from a global, multi-cultural perspective.

Offered: As Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable.. *IAI Course No. S7 904D*

General Education – Social Science Human Relations

## SPE Speech

	Hr/Wk	Hr/Wk	Sem
	Lect/	Clin	Cr
	Disc	Lab	Hr

### Courses

**SPE.110 Interpersonal Communication** 3 3

This course attempts to develop an awareness of, and an insight into, the choices that are made by participation in face-to-face, non-public, human communication. The text and lectures are designed to create an understanding of theories and principles. Experiential exercises encourage the student to apply this understanding, and to use it in interpreting his/her own and other people's attempts at communication. Among the topics covered are the communication process, the self as a communicator, verbal and nonverbal language, cooperation and conflict, etc. This course is intended for persons planning to pursue a baccalaureate degree and those who desire to improve their verbal communication.

Offered: Fall or Spring or Summer

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only Human Relations

**SPE.120 Introduction to Public Speaking** 3 3

This is a performance course in public speaking. The principles of oral public communication will be presented through readings and lecture. The student will apply these principles in the speeches presented to the class. Emphasis will be placed on outlining and the discovery and organization of important ideas and the communication of those ideas to a specific audience. Written evaluation of speeches will be required to enhance critical communication skills. This course is intended for individuals who desire to complete a bachelor's degree and those who desire to develop competence in public speaking.

Offered: Fall or Spring or Summer

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. C2 900*

General Education – Communications

**SPE.200 Group Discussion** 3 3

This course is concerned with the processes and practices of decision-making in small groups (committees, boards, social groups, etc.). The course will consider such topics as group characteristics, role behaviors, problem-solving process, leadership, conflict and cooperation. It is intended for students who intend to transfer and those who desire to improve their group process skills.

Offered: As Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**SPE.220 Advanced Public Speaking** 3 3

The introductory study of public speaking (SPE 120) will be continued in this course. Additional theory will be presented and students will apply theory through practice as speakers and critics.

Offered: As Needed

Prerequisites: SPE.120

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**SPE.230 Parliamentary Procedures** 1.5 1.5

This course will focus on the use of parliamentary procedures by members of decision-making groups. Robert's Rules of Order will be used as the authority. Students will be given the opportunity to understand the rationale of the procedures and to participate in practice sessions. This course is intended for individuals who desire this course as part of their baccalaureate studies and those who desire to develop group leadership skills for community group situations.

Offered: As Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only



	Hr/Wk Lect/ Disc	Hr/Wk Clin Lab	Sem Cr Hr
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## Courses

**SPE.110 Interpersonal Communication** 3 3

This course attempts to develop an awareness of, and an insight into, the choices that are made by participation in face-to-face, non-public, human communication. The text and lectures are designed to create an understanding of theories and principles. Experiential exercises encourage the student to apply this understanding, and to use it in interpreting his/her own and other people's attempts at communication. Among the topics covered are the communication process, the self as a communicator, verbal and nonverbal language, cooperation and conflict, etc. This course is intended for persons planning to pursue a baccalaureate degree and those who desire to improve their verbal communication.

Offered: Fall or Spring or Summer

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only Human Relations

**SPE.120 Introduction to Public Speaking** 3 3

This is a performance course in public speaking. The principles of oral public communication will be presented through readings and lecture. The student will apply these principles in the speeches presented to the class. Emphasis will be placed on outlining and the discovery and organization of important ideas and the communication of those ideas to a specific audience. Written evaluation of speeches will be required to enhance critical communication skills. This course is intended for individuals who desire to complete a bachelor's degree and those who desire to develop competence in public speaking.

Offered: Fall or Spring or Summer

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. C2 900*

General Education – Communications

**SPE.200 Group Discussion** 3 3

This course is concerned with the processes and practices of decision-making in small groups (committees, boards, social groups, etc.). The course will consider such topics as group characteristics, role behaviors, problem-solving process, leadership, conflict and cooperation. It is intended for students who intend to transfer and those who desire to improve their group process skills.

Offered: As Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**SPE.220 Advanced Public Speaking** 3 3

The introductory study of public speaking (SPE 120) will be continued in this course. Additional theory will be presented and students will apply theory through practice as speakers and critics.

Offered: As Needed

Prerequisites: SPE.120

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**SPE.230 Parliamentary Procedures** 1.5 1.5

This course will focus on the use of parliamentary procedures by members of decision-making groups. Robert's Rules of Order will be used as the authority. Students will be given the opportunity to understand the rationale of the procedures and to participate in practice sessions. This course is intended for individuals who desire this course as part of their baccalaureate studies and those who desire to develop group leadership skills for community group situations.

Offered: As Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

## SPN Spanish

	Hr/Wk Lect/ Disc	Hr/Wk Clin Lab	Sem Cr Hr
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### Courses

**SPN.101 Elementary Spanish 1** 4 4

This is the first sequence of a complete course at the college level of elementary Spanish. It will provide the fundamentals for transfer credit or a study of basic Spanish grammar and vocabulary. This course will also introduce students to the culture and customs of Spanish-speaking people.

Offered: Fall or Spring

Prerequisites: The appropriate placement exam score or ENG.097 with a grade of C or better.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**SPN.102 Elementary Spanish 2** 4 4

This is the second sequence of a complete course at the college level of elementary Spanish. It will provide the fundamentals for transfer credit or a study of basic Spanish grammar and vocabulary. This course will also provide opportunities for students to continue their study of the culture and customs of Spanish-speaking people.

Offered: Fall or Spring

Prerequisites: SPN.101 with a grade of C or better

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**SPN.120 Spanish for Professionals 1** 2 2

This is the first sequence of a complete course at the college level of Spanish for professionals. It will provide the fundamentals of basic Spanish grammar and vocabulary with particular emphasis on the vocabulary related to the students' professions. This course will also introduce students to the culture and customs of Spanish-speaking people.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**SPN.121 Spanish for Professionals 2** 2 2

This is the second sequence of a complete course at the college level of Spanish for professionals. It will provide the fundamentals of basic Spanish grammar and vocabulary with particular emphasis on the vocabulary related to the students' professions. This course will also introduce students to the culture and customs of Spanish speaking people.

Offered: Fall or Spring

Prerequisites: SPN.120 with a grade of C or better

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**SPN.201 Intermediate Spanish 1** 3 3

This is the first sequence of a complete course at the college level of intermediate Spanish. It will provide the fundamentals for transfer credit or a continued study of Spanish grammar and vocabulary. This course will also include oral discussion, short writing exercises, selective readings and will further students' knowledge of the culture and customs of Spanish-speaking people.

Offered: Fall or Spring

Prerequisites: SPN.102 with a grade of C or better

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**SPN.202 Intermediate Spanish 2** 3 3

This is the second sequence of a complete course at the college level of intermediate Spanish. It will provide the fundamentals for transfer credit or a continued study of Spanish grammar and vocabulary. This course will also include oral discussion, short writing exercises, selective readings and will further students' knowledge of the culture and customs of Spanish-speaking people.

Offered: Spring

Prerequisites: SPN.201 with a grade of C or better

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

Hr/Wk	Hr/Wk	Sem
Lect/	Clin	Cr
Disc	Lab	Hr

**Courses****SPN.101 Elementary Spanish 1** 4 4

This is the first sequence of a complete course at the college level of elementary Spanish. It will provide the fundamentals for transfer credit or a study of basic Spanish grammar and vocabulary. This course will also introduce students to the culture and customs of Spanish-speaking people.

Offered: Fall or Spring

Prerequisites: The appropriate placement exam score or ENG.097 with a grade of C or better.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**SPN.102 Elementary Spanish 2** 4 4

This is the second sequence of a complete course at the college level of elementary Spanish. It will provide the fundamentals for transfer credit or a study of basic Spanish grammar and vocabulary. This course will also provide opportunities for students to continue their study of the culture and customs of Spanish-speaking people.

Offered: Fall or Spring

Prerequisites: SPN.101 with a grade of C or better

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**SPN.120 Spanish for Professionals 1** 2 2

This is the first sequence of a complete course at the college level of Spanish for professionals. It will provide the fundamentals of basic Spanish grammar and vocabulary with particular emphasis on the vocabulary related to the students' professions. This course will also introduce students to the culture and customs of Spanish-speaking people.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**SPN.121 Spanish for Professionals 2** 2 2

This is the second sequence of a complete course at the college level of Spanish for professionals. It will provide the fundamentals of basic Spanish grammar and vocabulary with particular emphasis on the vocabulary related to the students' professions. This course will also introduce students to the culture and customs of Spanish speaking people.

Offered: Fall or Spring

Prerequisites: SPN.120 with a grade of C or better

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**SPN.201 Intermediate Spanish 1** 3 3

This is the first sequence of a complete course at the college level of intermediate Spanish. It will provide the fundamentals for transfer credit or a continued study of Spanish grammar and vocabulary. This course will also include oral discussion, short writing exercises, selective readings and will further students' knowledge of the culture and customs of Spanish-speaking people.

Offered: Fall or Spring

Prerequisites: SPN.102 with a grade of C or better

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**SPN.202 Intermediate Spanish 2** 3 3

This is the second sequence of a complete course at the college level of intermediate Spanish. It will provide the fundamentals for transfer credit or a continued study of Spanish grammar and vocabulary. This course will also include oral discussion, short writing exercises, selective readings and will further students' knowledge of the culture and customs of Spanish-speaking people.

Offered: Spring

Prerequisites: SPN.201 with a grade of C or better

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**SSC Social Science**

Hr/Wk	Hr/Wk	Sem
Lect/	Clin	Cr
Disc	Lab	Hr

**Courses****SSC.110 Global Issues** 3 3

This course introduces students to contemporary global issues and international relations. These diverse, complex issues stem from the synergistic interaction of economic, socio-cultural, and political factors. This course examines various influences that impact global issues, such as nation-states and; governmental and non-governmental organizations as well as issues relating to gender, ethnicity; and power. The course also explores causes of conflicts and reviews potential solutions to contemporary global crises.. *IAI Course No. S9 900*

General Education – Social Science Human Relations

**SSC.120 Statistics for Social Science** 3 3

This course introduces statistical methods through real-life problems as applicable in the social sciences. Students will have the opportunity to gather and analyze data. Commonly used statistical methods will be examined with discussion of descriptive and inferential methods. Topics include, but are not limited to, probability distributions, standard deviation, statistical inference, correlation and regression. Social science research is studied to determine necessary precision, interpretation skills and statistical procedures found in publications of both academic and applied research to help students critically interpret data. Qualitative and quantitative research studies will be critically evaluated. Statistical software is used to analyze data. This course is not intended for a mathematics major or minor. Students can take either SSC 120 or MAT 110, not both.

Offered: Spring or as Needed

Prerequisites: Two years of high school algebra/one year of high school geometry or ACT Math score of 25 or MAT.086 or MAT.099 with minimum C or better.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. M1 902*

General Education – Math

**SSC.201 Ethnic Studies** 3 3

This course is a study of the cultures of various ethnic groups. The intent is to develop an understanding of the multivalued nature of our society, with insight into the rewards and problems that cultural pluralism creates. The focus in the course may change from year to year, sometimes being on one or two ethnic groups, sometimes a more general survey. However, it is not to be taken more than once. The course is of interest to students preparing for vocations where such understandings may be of value, such as, teaching or social work, or anyone interested in understanding the variety of our society.

Offered: As Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**SSC.202 Perspectives of Social Science** 3 3

This course is designed to introduce students to basic research methods and theory bases used in the Social Sciences. The instructional approach is that of a seminar. Students will be introduced to a variety of methods used to study social research. A brief introduction to methodology of any one or combination of the following will be covered: History, Political Science, Sociology, Psychology, Geography, and Economics. Although there may be different disciplines highlighted, students are only allowed to take this course once.

Offered: As Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

Hr/Wk Lect/ Disc	Hr/Wk Clin Lab	Sem Cr Hr
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**Courses**

**SSC.110 Global Issues** 3 3

This course introduces students to contemporary global issues and international relations. These diverse, complex issues stem from the synergistic interaction of economic, socio-cultural, and political factors. This course examines various influences that impact global issues, such as nation-states and; governmental and non-governmental organizations as well as issues relating to gender, ethnicity; and power. The course also explores causes of conflicts and reviews potential solutions to contemporary global crises.. *IAI Course No. S9 900*

General Education – Social Science Human Relations

**SSC.120 Statistics for Social Science** 3 3

This course introduces statistical methods through real-life problems as applicable in the social sciences. Students will have the opportunity to gather and analyze data. Commonly used statistical methods will be examined with discussion of descriptive and inferential methods. Topics include, but are not limited to, probability distributions, standard deviation, statistical inference, correlation and regression. Social science research is studied to determine necessary precision, interpretation skills and statistical procedures found in publications of both academic and applied research to help students critically interpret data. Qualitative and quantitative research studies will be critically evaluated. Statistical software is used to analyze data. This course is not intended for a mathematics major or minor. Students can take either SSC 120 or MAT 110, not both.

Offered: Spring or as Needed

Prerequisites: Two years of high school algebra/one year of high school geometry or ACT Math score of 25 or MAT.086 or MAT.099 with minimum C or better.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. M1 902*

General Education – Math

**SSC.201 Ethnic Studies** 3 3

This course is a study of the cultures of various ethnic groups. The intent is to develop an understanding of the multivalued nature of our society, with insight into the rewards and problems that cultural pluralism creates. The focus in the course may change from year to year, sometimes being on one or two ethnic groups, sometimes a more general survey. However, it is not to be taken more than once. The course is of interest to students preparing for vocations where such understandings may be of value, such as, teaching or social work, or anyone interested in understanding the variety of our society.

Offered: As Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**SSC.202 Perspectives of Social Science** 3 3

This course is designed to introduce students to basic research methods and theory bases used in the Social Sciences. The instructional approach is that of a seminar. Students will be introduced to a variety of methods used to study social research. A brief introduction to methodology of any one or combination of the following will be covered: History, Political Science, Sociology, Psychology, Geography, and Economics. Although there may be different disciplines highlighted, students are only allowed to take this course once.

Offered: As Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**THE Theatre**

Hr/Wk Lect/ Disc	Hr/Wk Clin Lab	Sem Cr Hr
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**Courses**

**THE.110 Theatre Arts Appreciation** 3 3

This course examines the arts of the theatre, particularly acting, directing and set design. Also treated are the related topics of film and the development of the theatre including an historical account of the play as an artistic and literary form. This course will appeal to those who wish to gain greater knowledge of the things which go into the making of a theatrical production.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. F1 907*

General Education – Fine Arts Human Relations

**THE.111 Theatre History** 3 3

Theatre History provides students an overview of theatre and its place in history from Ancient Greece to present. Students will examine majors texts and the social and cultural phenomena that influenced their writing. An analysis of theatre and performance practice will provide students an understanding of performance practice and its evolution.

Offered: As Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. F1 908*

General Education – Fine Arts

**THE.120 Introduction to Acting** 3 3

This course is designed to supply the student with the basics of both the theory and practice of the art of acting. In addition to lectures and discussions, the individual student's work is appraised by the tutorial method and group critiques. This course should appeal to both those seriously interested in acting and those who would like to gain a working knowledge of what an actor does.

Offered: As Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**THE.121 Acting Workshop 1** 3 1.5

This course provides the student a first opportunity for intensive practice in the methods of acting; i.e., character analysis and creation, movement and voice. The emphasis is on individual problems and approaches. The student's work is appraised by the tutorial method and group critique. This course should appeal to those with an interest in acting and planning to pursue a bachelor's degree as well as those who desire to develop acting competencies without the intent to pursue a baccalaureate degree.

Offered: As Needed

Prerequisites: THE.120

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**THE.130 Theatre Practice** 3 1.5

The primary activity of this course is the production of a play. Students will work on two aspects of the play including on and off stage roles per their interests and the needs of the production. Students are expected to participate in rehearsals and production-week activities which may include evenings, weekends, and travel. May be repeated a maximum of three times. A student may count 4.5 semester hours toward graduation for THE.130.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable. Prerequisite: Consent of Instructor!

General Education – Not Applicable Elective Only

**THE.140 Oral Interpretation** 3 3

This course is concerned with the interpretation and performance of literature. Special attention is given to the analysis and interpretation of the ideas, attitudes and persona found in literary texts. Student work will culminate in a public performance.

Offered: As Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS and Certificates where applicable.

General Education – Not Applicable Elective Only

**THE.150 Play Directing** 3 3

This course is designed to teach the inexperienced director to make choices about scripts; script analysis; casting; focus of scenes; and the mood, rhythm, pace, and main idea of production. A practical course that includes attendance at plays, exercise work, and directing scenes.

Offered: As Needed

Prerequisites: THE.120 or acting experience

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

Hr/Wk	Hr/Wk	Sem
Lect/	Clin	Cr
Disc	Lab	Hr

**Courses**

**THE.110 Theatre Arts Appreciation** 3 3

This course examines the arts of the theatre, particularly acting, directing and set design. Also treated are the related topics of film and the development of the theatre including an historical account of the play as an artistic and literary form. This course will appeal to those who wish to gain greater knowledge of the things which go into the making of a theatrical production.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. F1 907*

General Education – Fine Arts Human Relations

**THE.111 Theatre History** 3 3

Theatre History provides students an overview of theatre and its place in history from Ancient Greece to present. Students will examine majors texts and the social and cultural phenomena that influenced their writing. An analysis of theatre and performance practice will provide students an understanding of performance practice and its evolution.

Offered: As Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS, and Certificates where applicable. *IAI Course No. F1 908*

General Education – Fine Arts



**THE.120 Introduction to Acting** 3 3

This course is designed to supply the student with the basics of both the theory and practice of the art of acting. In addition to lectures and discussions, the individual student's work is appraised by the tutorial method and group critiques. This course should appeal to both those seriously interested in acting and those who would like to gain a working knowledge of what an actor does.

Offered: As Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**THE.121 Acting Workshop 1** 3 1.5

This course provides the student a first opportunity for intensive practice in the methods of acting; i.e., character analysis and creation, movement and voice. The emphasis is on individual problems and approaches. The student's work is appraised by the tutorial method and group critique. This course should appeal to those with an interest in acting and planning to pursue a bachelor's degree as well as those who desire to develop acting competencies without the intent to pursue a baccalaureate degree.

Offered: As Needed

Prerequisites: THE.120

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**THE.130 Theatre Practice** 3 1.5

The primary activity of this course is the production of a play. Students will work on two aspects of the play including on and off stage roles per their interests and the needs of the production. Students are expected to participate in rehearsals and production-week activities which may include evenings, weekends, and travel. May be repeated a maximum of three times. A student may count 4.5 semester hours toward graduation for THE.130.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable. Prerequisite: Consent of Instructor!

General Education – Not Applicable Elective Only

**THE.140 Oral Interpretation** 3 3

This course is concerned with the interpretation and performance of literature. Special attention is given to the analysis and interpretation of the ideas, attitudes and persona found in literary texts. Student work will culminate in a public performance.

Offered: As Needed

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AFA, AAS, AGS and Certificates where applicable.

General Education – Not Applicable Elective Only

**THE.150 Play Directing** 3 3

This course is designed to teach the inexperienced director to make choices about scripts; script analysis; casting; focus of scenes; and the mood, rhythm, pace, and main idea of production. A practical course that includes attendance at plays, exercise work, and directing scenes.

Offered: As Needed

Prerequisites: THE.120 or acting experience

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AA, AS, AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

## TQM Total Quality Management

Hr/Wk	Hr/Wk	Sem
Lect/	Clin	Cr
Disc	Lab	Hr

### Courses

**TQM.101 Total Quality Management** 2 2

This is an introductory course in Total Quality Management (TQM). An in-depth study of TQM principles and practices will be covered which include: leadership, customer satisfaction, employee involvement, continuous process improvement, supplier partnership and performance measures. TQM techniques, such as SPC and ISO 9000, will be briefly discussed.

Offered: Summer

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

Hr/Wk	Hr/Wk	Sem
Lect/	Clin	Cr
Disc	Lab	Hr

### Courses

**TQM.101 Total Quality Management** 2 2

This is an introductory course in Total Quality Management (TQM). An in-depth study of TQM principles and practices will be covered which include: leadership, customer satisfaction, employee involvement, continuous process improvement, supplier partnership and performance measures. TQM techniques, such as SPC and ISO 9000, will be briefly discussed.

Offered: Summer

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

## WEL Welding

Hr/Wk	Hr/Wk	Sem
Lect/	Clin	Cr
Disc	Lab	Hr

## Courses

### **WEL.100 Welding Theory OFC & OAW** 1 1

This course provides a convenient source of know- how or information that is needed by all persons going into the field of welding. Much information provides aids in selecting the correct process since this is directly related to the metal being cut and/or welded. The processes are explained in detail and the course provides quality control data and reference material that is of high interest to welding personnel. Areas of concentration will include: . OFC, PAC, CAC-A and OAW processes, . Nomenclature specific to these processes, and . Safety, weld quality control, and other related welding information.

Offered: Fall or Spring

Prerequisites: The appropriate placement exam score, or ENG.097 with a grade of C. WEL 102 and WEL 109 are corequisites.

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

### **WEL.101 Fundamentals of Welding Theory** 2 2

This course provides a convenient source of know- how or information that is needed by all persons going into the field of welding. Much information provides aids in selecting the correct process since this is directly related to the metal being welded. The processes are explained in detail. In addition, the course provides quality control data and reference material that is of high interest to welding personnel. The information is purely technical in nature and there is nothing included on actual welding technique. Areas of concentration will include welding processes and definitions, the shielded metal-arc (stick) welding process, the gas metal-arc (MIG) welding process, the gas tungsten-arc (TIG) welding process, the oxyacetylene (gas) welding process, weld quality control and other related welding information.

Offered: Fall

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

### **WEL.102 Metal Preparation** 2 1

This course is designed to develop proficiency in metal preparation and cutting techniques. Emphasis will be placed upon oxyacetylene cutting, plasma cutting, and air arc welding processes.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

### **WEL.103 Welding Survey** .5 1.5 1

This course is designed to allow those who have an interest in the welding trade (but are not sure of the skills involved, the environment, or their abilities to meet the demands of this profession) an opportunity to sample a variety of the skills a student in welding would be exposed to. Areas of study would be determined in joint agreement with the student and the instructor. Areas of study could include a variety of arc skills, gas shielded skills and/or oxyacetylene skills.

Offered: Fall or Spring or Summer

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

### **WEL.104 Welding Theory Basic SMAW** 1 1

This course provides a convenient source of know- how or information that is needed by all persons going into the field of welding. Much information provides aids in selecting the correct process since this is directly related to the metal being welded. The processes are explained in detail and the course provides quality control data and reference material that is of high interest to welding personnel. Areas of concentration will include: SMAW process, Nomenclature and definitions specific to this process, and Safety, weld quality control, and other related welding information.

Offered: Fall or Spring

Prerequisites: Take WEL.102 WEL.109; minimum grade C;

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

### **WEL.105 Welding Theory Advanced SMAW** 1 1

This course is a continuation of WEL 104 and provides a convenient source of know-how or information that is needed by all persons advancing in the field of welding. Much information provides aids in selecting the correct process since this is directly related to the metal being welded. The processes are explained in detail and the course provides quality control data and reference material that is of high interest to welding personnel. Areas of concentration will include: \* SMAW process and advanced welding techniques, \* Nomenclature and definitions specific to this process, and \* Safety, weld quality control, and other related welding information.

Offered: Fall or Spring

Prerequisites: Take WEL.111 and WEL.112 with a grade of C or better, WEL 114 and WEL 115 are corequisites Take WEL.114 WEL.115

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**WEL.106 Welding Theory GTAW** 1 1

This course provides a convenient source of know-how or information that is needed by all persons going into the field of welding. Much information provides aids in selecting the correct process since this is directly related to the metal being welded. The processes are explained in detail and the course provides quality control data and reference material that is of high interest to welding personnel. Areas of concentration will include: \* GTAW process, \* Nomenclature and definitions specific to this process, and \* Safety, weld quality control, and other related welding information.

Offered: Fall or Spring

Prerequisites: Take WEL.114 and WEL.115 with a grade of C or better  
Take WEL.116 WEL.117

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**WEL.107 Welding Theory Basic GMAW** 1 1

This course provides a convenient source of know-how or information that is needed by all persons going into the field of welding. Much information provides aids in selecting the correct process since this is directly related to the metal being welded. The processes are explained in detail and the course provides quality control data and reference material that is of high interest to welding personnel. Areas of concentration will include: GMAW process, Nomenclature and definitions specific to this process, and Safety, weld quality control, and other related welding information.

Offered: Fall or Spring

Prerequisites: Take WEL.100 WEL.102. WEL.109; minimum grade C;  
Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**WEL.108 Welding Theory GMAW & FCAW** 1 1

This course provides a convenient source of know-how or information that is needed by all persons going into the field of welding. Much information provides aids in selecting the correct process since this is directly related to the metal being welded. The processes are explained in detail and the course provides quality control data and reference material that is of high interest to welding personnel. Areas of concentration will include: \* Advanced GMAW and FCAW processes, \* Nomenclature and definitions specific to these processes, and \* Safety, weld quality control, and other related welding information.

Offered: Fall or Spring

Prerequisites: Take WEL.107 WEL.118 and WEL.119,with grade of C or better. Take WEL.120 WEL.129;

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**WEL.109 Oxyacetylene Welding** 2 1

This is a course designed to prepare the student for employment by developing basic welding skills and proficiency in the safe operation of the oxyacetylene welding process. The student will get extensive practice in gas welding and brazing on mild steels.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**WEL.110 Welding Theory/Applications** 1 1

This course provides a convenient source of know-how or information that is needed by all persons going into the field of welding. Much information provides aids in selecting the correct process since this is directly related to the projects being fabricated and welded. The processes are explained in detail and the course provides quality control data and reference material that is of high interest to welding personnel. Areas of concentration will include: \* Fabrication and layout. \* Nomenclature and definitions specific to this process. \* Safety, weld quality control and other related welding information.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**WEL.111 Arc Welding Basic 1** 2 1

This courses is designed to prepare the student for entry level employment as a production arc welding operator in the steel fabricating and machinery building industry. The student will develop proficiency in the safe operation of the manual metallic shielded arc welding processes to meet commercial quality standards and is devoted primarily to introductory skills, safety, proper techniques to use in the welding process, and blueprint reading.

Offered: Fall or Spring

Prerequisites: Take WEL.102 WEL.109 with a grade of C or better  
Take WEL.104 WEL.112

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**WEL.112 Arc Welding Basic 2** 2 1

As a continuation of WEL 111, Arc Welding Basic 1, this courses is designed to prepare the student for entry level employment as a production arc welding operator in the steel fabricating and machinery building industry. The student will develop proficiency in the safe operation of manual metallic shielded arc welding processes to meet commercial quality standards and is devoted to welding mild steel in the downhand positions.

Offered: Fall or Spring

Prerequisites: Take WEL.102 and WEL.109 with a grade of C or better  
Take WEL.104 WEL.111;

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**WEL.114 Arc Welding Advanced 1** 2 1

This is the first of two advanced courses designed to prepare the student for entry level employment as a production arc welding operator in the steel fabricating and machinery building industry. The student will develop proficiency in the safe operation of manual metallic shielded arc welding processes to meet commercial quality standards.

Offered: Fall or Spring

Prerequisites: Take WEL.111, WEL.112 and WEL.104 grade of C or better  
Take WEL.105 WEL.115

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**WEL.115 Arc Welding Advanced 2** 2 1

As a continuation of WEL 114, Arc Welding Advanced 1 is designed to prepare students for entry level employment as production arc welding operators in the steel fabrication and machinery building industries. Students will develop proficiency in the safe operation of the manual metallic shielded arc welding processes in all positions to meet commercial quality standards.

Offered: Fall or Spring

Prerequisites: Take WEL.104 WEL.111 and WEL.112 with a grade of C or better  
Take WEL.105 WEL.114;

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**WEL.116 Gas Shielded Arc-TIG 1** 2 1

This course is designed to broaden the knowledge and skill of individuals who have already developed employment skills in arc welding. It is the first of two courses which offer students an opportunity to develop proficiency in the safe operation of the tungsten inert gas (TIG) welding process.

Offered: Fall or Spring

Prerequisites: Take WEL.105 WEL.114 and WEL.115 with grade of C or better  
Take WEL.106 WEL.117;

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**WEL.117 Gas Shielded Arc-TIG 2** 2 1

As a continuation of WEL 116, Gas Shielded ARC/TIG 1, this course is designed to broaden the knowledge and skill of individuals who have already developed employment skills in arc welding. It is the second of two courses which offer students an opportunity to develop proficiency in the safe operation of the tungsten inert gas (TIG) welding process.

Offered: Fall or Spring

Prerequisites: Take WEL.105 WEL.114 and WEL.115 grade of C or better  
Take WEL.106 WEL.116;

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**WEL.118 Gas Shielded Arc-MIG 1** 2 1

This is the first of two courses designed to develop proficiency in the safe operation of the metal inert gas (MIG) welding processes to commercial quality standards.

Offered: Fall or Spring

Prerequisites: Take WEL.106 WEL.116 and WEL.117 Take WEL.107 WEL.119;

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**WEL.119 Gas Shielded Arc-MIG 2** 2 1

As a continuation of WEL 118, Gas Shielded ARC/MIG 1, this is the second of two courses designed to continue to develop proficiency in the safe operation of the metal inert gas (MIG) welding processes to commercial quality standards.

Offered: Fall or Spring

Prerequisites: Take WEL.106 WEL.116 and WEL.117 Take WEL.107 WEL.118

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**WEL.120 Gas Shielded Applications** 2 1

This course is designed to help prepare a person for employment by developing proficiency in the application of advanced skills in the gas shielded welding processes. The student will gain extensive practice in the proper techniques employed by trade and industry in the application of Gas shielded processes.

Offered: Fall or Spring

Prerequisites: Take WEL.107 WEL.118 and WEL.119 grade of C or better  
Take WEL.108 WEL.129;

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**WEL.121 Application Welding 1** 2 1

This is the first of two courses designed for students to utilize their welding abilities to demonstrate comprehension of skills and knowledge. It provides the student with experience in the four welding positions - flat, horizontal, vertical, and overhead - using various welding procedures and related equipment. Emphasis will be on welding strength, multibead welding and fabrication.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**WEL.122 Application Welding 2** 2 1

A continuation of WEL 121, Application Welding 1, this course is considered to be one of the final courses that a welding student enrolls in, as it utilizes skills gained from a number of previously completed courses in the simulation of welding processes where the students will be directed by blueprints and shop notes. The finished product will be evaluated as to size, dimension, angle of cuts, bead placement, weld size, etc. as indicated by the prints provided.

Offered: Fall or Spring  
 Applicable toward graduation at Sandburg where program structure permits:  
 Degree or Certificate: AAS, AGS and Certificates where applicable.  
 General Education – Not Applicable

**WEL.123 Work Experience** 7.5 1.5

This work experience is designed as a culminating experience for the student pursuing the Welding Certificate program. It provides a significant opportunity for the student to apply previously learned principles in the employment setting. This work experience requires 120 hours or more of on-the-job activities.

Offered: As Needed  
 Prerequisites: All courses in the Welding Certificate curriculum  
 Applicable toward graduation at Sandburg where program structure permits:  
 Degree or Certificate: AAS, AGS, and Certificates where applicable.  
 General Education – Not Applicable

**WEL.124 Auto Body Welding** 1 1 1.5

This course is a continuation of WEL 118 with concentration on auto body applications. The types of joints and welds used on thin, high strength steel automobiles will be emphasized. An additional fee is required.

Offered: Fall  
 Prerequisites: WEL.118  
 Applicable toward graduation at Sandburg where program structure permits:  
 Degree or Certificate: AAS, AGS, and Certificates where applicable.  
 General Education – Not Applicable

**WEL.125 Welding Blueprints** 1.5 1 2

This course provides an introduction to blueprint reading and related math for those individuals with limited or no background. Emphasis will be on welding prints, symbols, and mathematics pertinent to the welding field. Current welding prints from local businesses will be utilized throughout the course. This course is intended for welding majors or current welding employees seeking to improve their skills in these areas.

Offered: Fall or Spring  
 Applicable toward graduation at Sandburg where program structure permits:  
 Degree or Certificate: AAS, AGS, and Certificates where applicable.  
 General Education – Not Applicable

**WEL.126 Weld Test Evaluation** .5 1 1

This is a course designed to prepare students for employment by allowing them to practice skills already learned in preparation for completion of entry-level qualification tests given in various welding processes at local welding businesses.

Offered: Fall or Spring or Summer  
 Prerequisites: Completion of all other welding lab requirements of the certificate program  
 Applicable toward graduation at Sandburg where program structure permits:  
 Degree or Certificate: AAS, AGS, and Certificates where applicable.  
 General Education – Not Applicable

**WEL.127 Welding Theory/Welding Evaluation** 1 1

This course provides a convenient source of know-how or information that is needed by all persons going into the field of welding. Much information provides aids in selecting the correct process since this is directly related to the metal being welded. The processes are explained in detail and the course provides quality control data and reference material that is of high interest to welding personnel. Areas of concentration will include: Review of the major processes associated with surrounding industries. Nomenclature and definitions specific to this process.

Offered: Fall or Spring  
 Prerequisites: Take wel.102 wel.109 wel.111 wel.112 wel.114 wel.115 wel.116 wel.117 wel.118 wel.119 wel.120 wel.121 wel.122 and wel.129  
 Applicable toward graduation at Sandburg where program structure permits:  
 Degree or Certificate: AAS, AGS and Certificates where applicable.  
 General Education – Not Applicable

**WEL.129 Flux Cored Arc Welding** 2 1

This course is designed to enable students to produce quality fillet and groove welds in all positions using the flux cored arc welding process. Students will learn proper electrode selection, equipment set-up, and proper techniques used in industrial applications.

Offered: Fall or Spring  
 Prerequisites: Take WEL.107 WEL.118 and WEL.119 grade of C or better  
 Take WEL.108 WEL.120;  
 Applicable toward graduation at Sandburg where program structure permits:  
 Degree or Certificate: AAS, AGS, and Certificates where applicable.  
 General Education – Not Applicable

**WEL.130 Industrial Safety** 1.5 .5 2

This course provides the student with specific instruction to facilitate safe work practices in industrial environments. Students will be introduced to different safety philosophies and terminology. Students will also become acquainted with OSHA policy and with the Right to Know laws. Also covered are units specific to fire safety, pressurized gases and welding, electrical hazards, and safe machine usage. Students will have the opportunity to earn the OSHA ten hour safety certification.

Offered: Summer  
 Applicable toward graduation at Sandburg where program structure permits:  
 Degree or Certificate: AAS, AGS, and Certificates where applicable.  
 General Education – Not Applicable



**WEL.131 Electrical Principles of Welding** 1.5 1 2

This course introduces the fundamentals of electricity used in welding. Basic theory including Ohm's law, circuit characteristics, and power calculations as applied to power source selection for welding is covered. Some lab work will include testing meters and procedures used in trouble shooting power sources.

Offered: Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**WEL.149 Automated Welding Applications** 1 2 2

This course is designed to help students develop basic knowledge and skills related to automated welding and cutting processes used in commercial applications. The topics of the course will include CNC plasma cutting and robotic welding, including basic programming, system operation and maintenance. Safety procedures in automated operations will be emphasized.

Offered: Summer

Prerequisites: WEL.102, WEL.118, WEL.119 and WEL.120

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**WEL.150 Robotic Applications in Welding** 1 1.5 2

This course is designed to introduce the welder to the components of the welding robot and the application of robotics in production welding. Emphasis will be directed at the topics of robotic safety, robotic welding programming and robotic system maintenance.

Offered: As Needed

Prerequisites: WEL.118, WEL.119 and WEL.120

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**WEL.151 Introduction to Pipe Welding 1G Rolled** 1 1 1.5

This is the first of a series of courses designed to prepare the student for entry-level employment as a pipe welder in the energy and infrastructure industries. The student will develop proficiency in the safe operation of the shielded metal arc welding processes on pipe to meet commercial quality standards. Emphasis will be on introductory skills, safety, and proper techniques used on welding pipe in the 1G (Flat rolled) position. Offered: Fall or Spring or Summer

Offered: Fall or Spring or Summer

Prerequisites: WEL.101, WEL.102, WEL.111, WEL.112, WEL.114, WEL.115, WEL.116, and WEL.117 Take WEL.125;

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**WEL.152 Pipe Welding 2G Horizontal** 1 1 1.5

This is the second of a series of courses designed to prepare the student for entry-level employment as a pipe welder in the energy and infrastructure industries. The student will develop proficiency in the safe operation of the shielded metal arc and gas tungsten arc welding processes on pipe to meet commercial quality standards. Emphasis will be on welding pipe in the 2G position (Horizontal) using SMAW and GTAW with various electrodes.

Offered: Fall or Spring or Summer

Prerequisites: WEL.151

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**WEL.153 Pipe Welding 5G Vertical** 1 1 1.5

This is the third of a series of courses designed to prepare the student for entry-level employment as a pipe welder in the energy and infrastructure industries. The student will develop proficiency in the safe operation of the shielded metal arc and gas tungsten arc welding processes on pipe to meet commercial quality standards. Emphasis will be on welding pipe in the 5G (vertical up and down) position using SMAW and GTAW with various electrodes.

Offered: Fall or Spring or Summer

Prerequisites: WEL.152

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**WEL.154 Pipe Welding 6G Inclined** 1 1 1.5

This is the final pipe welding course designed to prepare the student for entry-level employment as a pipe welder in the energy and infrastructure industries. The student will develop proficiency in the safe operation of the shielded metal arc and gas tungsten arc welding processes on pipe to meet commercial quality standards. Emphasis will be on welding pipe in the 6G (inclined 45 degrees) position using SMAW and GTAW with various electrodes.

Offered: Fall or Spring or Summer

Prerequisites: WEL.153

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**WEL.160 Oxyacetylene Welding & Metal Preparation** 1 4 3

This course is designed to develop proficiency in metal preparation and cutting techniques, as well as develop basic welding skills. Information provides aid in selecting the correct process since this is directly related to the metal being cut and/or welded. Emphasis will be placed upon: .. IAI Course No. Oxy-fuel cutting (OFC), plasma arc-cutting (PAC), carbon arc-cutting (CAC-A) and oxy-acetylene welding (OAW) processes, . Nomenclature specific to these processes, and

**WEL.162 Arc Welding Basics** 1 4 3

This course is designed to prepare the student for entry level employment as a production arc welding operator in the steel fabricating and machinery building industry. The student will develop proficiency in the safe operation of the manual metallic shielded arc welding processes to meet commercial quality standards and is devoted to welding mild steel in the down hand positions. Areas of concentration will include: .. IAI Course No. SMAW process, . Nomenclature and definitions specific to this process, and

**WEL.164 Arc Welding Advanced** 1 4 3

This course is a continuation of WEL 162 and provides information that is needed by all persons advancing in the field of welding. The focus of this course is correctly matching the welding process to the metal being welded. The processes are explained in detail and the course provides quality control data and reference material that is of high interest to welding personnel. Areas of concentration will include: .. IAI Course No. Shielded Metal Arc Welding (SMAW) process and advanced welding techniques, . Nomenclature and definitions specific to this process, and

**WEL.166 Gas Shielded Arc Tig** 1 4 3

This course provides information that is needed by all persons going into the field of welding. Much information provides aids in selecting the correct process since this is directly related to the metal being welded. The processes are explained in detail and the course provides quality control data and reference material that is of high interest to welding personnel. Areas of concentration will include: .. IAI Course No. GTAW process, . Nomenclature and definitions specific to this process, and

**WEL.168 Gas Shielded Arc Mig** 1 4 3

This course provides information that is needed by all persons going into the field of welding. Much information provides aids in selecting the correct process since this is directly related to the metal being welded. The processes are explained in detail and the course provides quality control data and reference material that is of high interest to welding personnel. Areas of concentration will include: .. IAI Course No. GMAW process, . Nomenclature and definitions specific to this process, and

**WEL.170 Applications of GMAW & FCAW** 1 4 3

This course provides information that is needed by all persons going into the field of welding. The focus of this course is correctly matching the welding process to the metal being welded. The processes are explained in detail and the course provides quality control data and reference material that is of high interest to welding personnel. Areas of concentration will include: .. IAI Course No. Advanced gas metal arc welding (GMAW) and flux cored arc welding (FCAW) processes, . Nomenclature and definitions specific to this process, and

**WEL.172 Welding Applications** 1 4 3

This course provides information that is needed by all persons going into the field of welding. The focus of this course is correctly matching the welding process to the metal being welded. The processes are explained in detail and the course provides quality control data and reference material that is of high interest to welding personnel. Areas of concentration will include: .. IAI Course No. Fabrication and layout, . Nomenclature and definitions specific to this process, and

**WEL.202 Production and Inventory Control** 1 1

This course is designed for students in the welding program, and it will help them to effectively work in environments from small jobbing shops to major manufacturing plants. They will receive a broad overview of planning and control factors involved in controlling inventory as well as managing production. Students will learn the essentials of forecasting and the variety of ways forecasters attempt to minimize error, including the use of software programs. They will learn about Master Production Schedules (MPS) and Material Requirements Planning (MRP) as well as Capacity Management and required planning for input and output. Kanban, the Theory of Constraints, Lean Production, and Just-In-Time (JIT) will be introduced. Finally, they will consider the benefit of partnering functions in purchasing and distribution, as well as integrating various systems for efficiency and effectiveness.

Offered: Fall or Spring  
 Applicable toward graduation at Sandburg where program structure permits:  
 Degree or Certificate: AAS, AGS and Certificates where applicable.  
 General Education -- Not Applicable

Hr/Wk	Hr/Wk	Sem
Lect/	Clin	Cr
Disc	Lab	Hr

**Courses**

**WEL.100 Welding Theory OFC & OAW** 1 1

This course provides a convenient source of know- how or information that is needed by all persons going into the field of welding. Much information provides aids in selecting the correct process since this is directly related to the metal being cut and/or welded. The processes are explained in detail and the course provides quality control data and reference material that is of high interest to welding personnel. Areas of concentration will include: . OFC, PAC, CAC-A and OAW processes, . Nomenclature specific to these processes, and . Safety, weld quality control, and other related welding information.

Offered: Fall or Spring  
 Prerequisites: The appropriate placement exam score, or ENG.097 with a,grade of C. WEL 102 and WEL 109 are corequisites.  
 Applicable toward graduation at Sandburg where program structure permits:  
 Degree or Certificate: AAS, AGS and Certificates where applicable.  
 General Education -- Not Applicable

**WEL.101 Fundamentals of Welding Theory** 2 2

This course provides a convenient source of know-how or information that is needed by all persons going into the field of welding. Much information provides aids in selecting the correct process since this is directly related to the metal being welded. The processes are explained in detail. In addition, the course provides quality control data and reference material that is of high interest to welding personnel. The information is purely technical in nature and there is nothing included on actual welding technique. Areas of concentration will include welding processes and definitions, the shielded metal-arc (stick) welding process, the gas metal-arc (MIG) welding process, the gas tungsten-arc (TIG) welding process, the oxyacetylene (gas) welding process, weld quality control and other related welding information.

Offered: Fall

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**WEL.102 Metal Preparation** 2 1

This course is designed to develop proficiency in metal preparation and cutting techniques. Emphasis will be placed upon oxyacetylene cutting, plasma cutting, and air arc welding processes.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**WEL.103 Welding Survey** .5 1.5 1

This course is designed to allow those who have an interest in the welding trade (but are not sure of the skills involved, the environment, or their abilities to meet the demands of this profession) an opportunity to sample a variety of the skills a student in welding would be exposed to. Areas of study would be determined in joint agreement with the student and the instructor. Areas of study could include a variety of arc skills, gas shielded skills and/or oxyacetylene skills.

Offered: Fall or Spring or Summer

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**WEL.104 Welding Theory Basic SMAW** 1 1

This course provides a convenient source of know-how or information that is needed by all persons going into the field of welding. Much information provides aids in selecting the correct process since this is directly related to the metal being welded. The processes are explained in detail and the course provides quality control data and reference material that is of high interest to welding personnel. Areas of concentration will include: SMAW process, Nomenclature and definitions specific to this process, and Safety, weld quality control, and other related welding information.

Offered: Fall or Spring

Prerequisites: Take WEL.102 WEL.109; minimum grade C;

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**WEL.105 Welding Theory Advanced SMAW** 1 1

This course is a continuation of WEL 104 and provides a convenient source of know-how or information that is needed by all persons advancing in the field of welding. Much information provides aids in selecting the correct process since this is directly related to the metal being welded. The processes are explained in detail and the course provides quality control data and reference material that is of high interest to welding personnel. Areas of concentration will include: \* SMAW process and advanced welding techniques, \* Nomenclature and definitions specific to this process, and \* Safety, weld quality control, and other related welding information.

Offered: Fall or Spring

Prerequisites: Take WEL.111 and WEL.112 with a grade of C or better, WEL.114 and WEL.115 are corequisites Take WEL.114 WEL.115

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**WEL.106 Welding Theory GTAW** 1 1

This course provides a convenient source of know-how or information that is needed by all persons going into the field of welding. Much information provides aids in selecting the correct process since this is directly related to the metal being welded. The processes are explained in detail and the course provides quality control data and reference material that is of high interest to welding personnel. Areas of concentration will include: \* GTAW process, \* Nomenclature and definitions specific to this process, and \* Safety, weld quality control, and other related welding information.

Offered: Fall or Spring

Prerequisites: Take WEL.114 and WEL.115 with a grade of C or better Take WEL.116 WEL.117

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**WEL.107 Welding Theory Basic GMAW** 1 1

This course provides a convenient source of know-how or information that is needed by all persons going into the field of welding. Much information provides aids in selecting the correct process since this is directly related to the metal being welded. The processes are explained in detail and the course provides quality control data and reference material that is of high interest to welding personnel. Areas of concentration will include: GMAW process, Nomenclature and definitions specific to this process, and Safety, weld quality control, and other related welding information.

Offered: Fall or Spring

Prerequisites: Take WEL.100 WEL.102. WEL.109; minimum grade C;

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**WEL.108 Welding Theory GMAW & FCAW** 1 1

This course provides a convenient source of know- how or information that is needed by all persons going into the field of welding. Much information provides aids in selecting the correct process since this is directly related to the metal being welded. The processes are explained in detail and the course provides quality control data and reference material that is of high interest to welding personnel. Areas of concentration will include: \* Advanced GMAW and FCAW processes, \* Nomenclature and definitions specific to these processes, and \* Safety, weld quality control, and other related welding information.

Offered: Fall or Spring

Prerequisites: Take WEL.107 WEL.118 and WEL.119,with grade of C or better. Take WEL.120 WEL.129;

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**WEL.109 Oxyacetylene Welding** 2 1

This is a course designed to prepare the student for employment by developing basic welding skills and proficiency in the safe operation of the oxyacetylene welding process. The student will get extensive practice in gas welding and brazing on mild steels.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**WEL.110 Welding Theory/Applications** 1 1

This course provides a convenient source of know- how or information that is needed by all persons going into the field of welding. Much information provides aids in selecting the correct process since this is directly related to the projects being fabricated and welded. The processes are explained in detail and the course provides quality control data and reference material that is of high interest to welding personnel. Areas of concentration will include: \* Fabrication and layout. \* Nomenclature and definitions specific to this process. \* Safety, weld quality control and other related welding information.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**WEL.111 Arc Welding Basic 1** 2 1

This courses is designed to prepare the student for entry level employment as a production arc welding operator in the steel fabricating and machinery building industry. The student will develop proficiency in the safe operation of the manual metallic shielded arc welding processes to meet commercial quality standards and is devoted primarily to introductory skills, safety, proper techniques to use in the welding process, and blueprint reading.

Offered: Fall or Spring

Prerequisites: Take WEL.102 WEL.109 with a grade of C or better Take WEL.104 WEL.112

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**WEL.112 Arc Welding Basic 2** 2 1

As a continuation of WEL 111, Arc Welding Basic 1, this courses is designed to prepare the student for entry level employment as a production arc welding operator in the steel fabricating and machinery building industry. The student will develop proficiency in the safe operation of manual metallic shielded arc welding processes to meet commercial quality standards and is devoted to welding mild steel in the downhand positions.

Offered: Fall or Spring

Prerequisites: Take WEL.102 and WEL.109 with a grade of C or better

Take WEL.104 WEL.111;

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**WEL.114 Arc Welding Advanced 1** 2 1

This is the first of two advanced courses designed to prepare the student for entry level employment as a production arc welding operator in the steel fabricating and machinery building industry. The student will develop proficiency in the safe operation of manual metallic shielded arc welding processes to meet commercial quality standards.

Offered: Fall or Spring

Prerequisites: Take WEL.111, WEL.112 and WEL.104 grade of C or better

Take WEL.105 WEL.115

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**WEL.115 Arc Welding Advanced 2** 2 1

As a continuation of WEL 114, Arc Welding Advanced 1 is designed to prepare students for entry level employment as production arc welding operators in the steel fabrication and machinery building industries. Students will develop proficiency in the safe operation of the manual metallic shielded arc welding processes in all positions to meet commercial quality standards.

Offered: Fall or Spring

Prerequisites: Take WEL.104 WEL.111 and WEL.112 with a grade of C or better Take WEL.105 WEL.114;

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**WEL.116 Gas Shielded Arc-TIG 1** 2 1

This course is designed to broaden the knowledge and skill of individuals who have already developed employment skills in arc welding. It is the first of two courses which offer students an opportunity to develop proficiency in the safe operation of the tungsten inert gas (TIG) welding process.

Offered: Fall or Spring

Prerequisites: Take WEL.105 WEL.114 and WEL.115 with grade of C or better Take WEL.106 WEL.117;

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**WEL.117 Gas Shielded Arc-TIG 2** 2 1

As a continuation of WEL 116, Gas Shielded ARC/TIG 1, this course is designed to broaden the knowledge and skill of individuals who have already developed employment skills in arc welding. It is the second of two courses which offer students an opportunity to develop proficiency in the safe operation of the tungsten inert gas (TIG) welding process.

Offered: Fall or Spring

Prerequisites: Take WEL.105 WEL.114 and WEL.115 grade of C or better  
Take WEL.106 WEL.116;

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**WEL.118 Gas Shielded Arc-MIG 1** 2 1

This is the first of two courses designed to develop proficiency in the safe operation of the metal inert gas (MIG) welding processes to commercial quality standards.

Offered: Fall or Spring

Prerequisites: Take WEL.106 WEL.116 and WEL.117 Take WEL.107 WEL.119;

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**WEL.119 Gas Shielded Arc-MIG 2** 2 1

As a continuation of WEL 118, Gas Shielded ARC/MIG 1, this is the second of two courses designed to continue to develop proficiency in the safe operation of the metal inert gas (MIG) welding processes to commercial quality standards.

Offered: Fall or Spring

Prerequisites: Take WEL.106 WEL.116 and WEL.117 Take WEL.107 WEL.118

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**WEL.120 Gas Shielded Applications** 2 1

This course is designed to help prepare a person for employment by developing proficiency in the application of advanced skills in the gas shielded welding processes. The student will gain extensive practice in the proper techniques employed by trade and industry in the application of Gas shielded processes.

Offered: Fall or Spring

Prerequisites: Take WEL.107 WEL.118 and WEL.119 grade of C or better  
Take WEL.108 WEL.129;

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**WEL.121 Application Welding 1** 2 1

This is the first of two courses designed for students to utilize their welding abilities to demonstrate comprehension of skills and knowledge. It provides the student with experience in the four welding positions - flat, horizontal, vertical, and overhead - using various welding procedures and related equipment. Emphasis will be on welding strength, multibead welding and fabrication.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**WEL.122 Application Welding 2** 2 1

A continuation of WEL 121, Application Welding 1, this course is considered to be one of the final courses that a welding student enrolls in, as it utilizes skills gained from a number of previously completed courses in the simulation of welding processes where the students will be directed by blueprints and shop notes. The finished product will be evaluated as to size, dimension, angle of cuts, bead placement, weld size, etc. as indicated by the prints provided.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**WEL.123 Work Experience** 7.5 1.5

This work experience is designed as a culminating experience for the student pursuing the Welding Certificate program. It provides a significant opportunity for the student to apply previously learned principles in the employment setting. This work experience requires 120 hours or more of on-the-job activities.

Offered: As Needed

Prerequisites: All courses in the Welding Certificate curriculum  
Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**WEL.124 Auto Body Welding** 1 1 1.5

This course is a continuation of WEL 118 with concentration on auto body applications. The types of joints and welds used on thin, high strength steel automobiles will be emphasized. An additional fee is required.

Offered: Fall

Prerequisites: WEL.118

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable



**WEL.125 Welding Blueprints** 1.5 1 2

This course provides an introduction to blueprint reading and related math for those individuals with limited or no background. Emphasis will be on welding prints, symbols, and mathematics pertinent to the welding field. Current welding prints from local businesses will be utilized throughout the course. This course is intended for welding majors or current welding employees seeking to improve their skills in these areas.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**WEL.126 Weld Test Evaluation** .5 1 1

This is a course designed to prepare students for employment by allowing them to practice skills already learned in preparation for completion of entry-level qualification tests given in various welding processes at local welding businesses.

Offered: Fall or Spring or Summer

Prerequisites: Completion of all other welding lab requirements of the certificate program

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**WEL.127 Welding Theory/Welding Evaluation** 1 1

This course provides a convenient source of know-how or information that is needed by all persons going into the field of welding. Much information provides aids in selecting the correct process since this is directly related to the metal being welded. The processes are explained in detail and the course provides quality control data and reference material that is of high interest to welding personnel. Areas of concentration will include: Review of the major processes associated with surrounding industries. Nomenclature and definitions specific to this process.

Offered: Fall or Spring

Prerequisites: Take wel.102 wel.109 wel.111 wel.112 wel.114 wel.115 wel.116 wel.117 wel.118 wel.119 wel.120 wel.121 wel.122 and wel.129

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

**WEL.129 Flux Cored Arc Welding** 2 1

This course is designed to enable students to produce quality fillet and groove welds in all positions using the flux cored arc welding process.

Students will learn proper electrode selection, equipment set-up, and proper techniques used in industrial applications.

Offered: Fall or Spring

Prerequisites: Take WEL.107 WEL.118 and WEL.119 grade of C or better Take WEL.108 WEL.120;

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**WEL.130 Industrial Safety** 1.5 .5 2

This course provides the student with specific instruction to facilitate safe work practices in industrial environments. Students will be introduced to different safety philosophies and terminology. Students will also become acquainted with OSHA policy and with the Right to Know laws. Also covered are units specific to fire safety, pressurized gases and welding, electrical hazards, and safe machine usage. Students will have the opportunity to earn the OSHA ten hour safety certification.

Offered: Summer

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**WEL.131 Electrical Principles of Welding** 1.5 1 2

This course introduces the fundamentals of electricity used in welding. Basic theory including Ohm's law, circuit characteristics, and power calculations as applied to power source selection for welding is covered. Some lab work will include testing meters and procedures used in trouble shooting power sources.

Offered: Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**WEL.149 Automated Welding Applications** 1 2 2

This course is designed to help students develop basic knowledge and skills related to automated welding and cutting processes used in commercial applications. The topics of the course will include CNC plasma cutting and robotic welding, including basic programming, system operation and maintenance. Safety procedures in automated operations will be emphasized.

Offered: Summer

Prerequisites: WEL.102, WEL.118, WEL.119 and WEL.120

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**WEL.150 Robotic Applications in Welding** 1 1.5 2

This course is designed to introduce the welder to the components of the welding robot and the application of robotics in production welding. Emphasis will be directed at the topics of robotic safety, robotic welding programming and robotic system maintenance.

Offered: As Needed

Prerequisites: WEL.118, WEL.119 and WEL.120

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable Elective Only

**WEL.151 Introduction to Pipe Welding 1G Rolled** 1 1 1.5

This is the first of a series of courses designed to prepare the student for entry-level employment as a pipe welder in the energy and infrastructure industries. The student will develop proficiency in the safe operation of the shielded metal arc welding processes on pipe to meet commercial quality standards. Emphasis will be on introductory skills, safety, and proper techniques used on welding pipe in the 1G (Flat rolled) position.

Offered: Fall or Spring or Summer

Prerequisites: WEL.101, WEL.102, WEL.111, WEL.112, WEL.114, WEL.115, WEL.116, and WEL.117 Take WEL.125;

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**WEL.152 Pipe Welding 2G Horizontal** 1 1 1.5

This is the second of a series of courses designed to prepare the student for entry-level employment as a pipe welder in the energy and infrastructure industries. The student will develop proficiency in the safe operation of the shielded metal arc and gas tungsten arc welding processes on pipe to meet commercial quality standards. Emphasis will be on welding pipe in the 2G position (Horizontal) using SMAW and GTAW with various electrodes.

Offered: Fall or Spring or Summer

Prerequisites: WEL.151

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**WEL.153 Pipe Welding 5G Vertical** 1 1 1.5

This is the third of a series of courses designed to prepare the student for entry-level employment as a pipe welder in the energy and infrastructure industries. The student will develop proficiency in the safe operation of the shielded metal arc and gas tungsten arc welding processes on pipe to meet commercial quality standards. Emphasis will be on welding pipe in the 5G (vertical up and down) position using SMAW and GTAW with various electrodes.

Offered: Fall or Spring or Summer

Prerequisites: WEL.152

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**WEL.154 Pipe Welding 6G Inclined** 1 1 1.5

This is the final pipe welding course designed to prepare the student for entry-level employment as a pipe welder in the energy and infrastructure industries. The student will develop proficiency in the safe operation of the shielded metal arc and gas tungsten arc welding processes on pipe to meet commercial quality standards. Emphasis will be on welding pipe in the 6G (inclined 45 degrees) position using SMAW and GTAW with various electrodes.

Offered: Fall or Spring or Summer

Prerequisites: WEL.153

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS, and Certificates where applicable.

General Education – Not Applicable

**WEL.160 Oxyacetylene Welding & Metal Preparation** 1 4 3

This course is designed to develop proficiency in metal preparation and cutting techniques, as well as develop basic welding skills. Information provides aid in selecting the correct process since this is directly related to the metal being cut and/or welded. Emphasis will be placed upon: .. IAI Course No. Oxy-fuel cutting (OFC), plasma arc-cutting (PAC), carbon arc-cutting (CAC-A) and oxy-acetylene welding (OAW) processes, . Nomenclature specific to these processes, and

**WEL.162 Arc Welding Basics** 1 4 3

This course is designed to prepare the student for entry level employment as a production arc welding operator in the steel fabricating and machinery building industry. The student will develop proficiency in the safe operation of the manual metallic shielded arc welding processes to meet commercial quality standards and is devoted to welding mild steel in the down hand positions. Areas of concentration will include: .. IAI Course No. SMAW process, . Nomenclature and definitions specific to this process, and

**WEL.164 Arc Welding Advanced** 1 4 3

This course is a continuation of WEL 162 and provides information that is needed by all persons advancing in the field of welding. The focus of this course is correctly matching the welding process to the metal being welded. The processes are explained in detail and the course provides quality control data and reference material that is of high interest to welding personnel. Areas of concentration will include: .. IAI Course No. Shielded Metal Arc Welding (SMAW) process and advanced welding techniques, . Nomenclature and definitions specific to this process, and

**WEL.166 Gas Shielded Arc Tig** 1 4 3

This course provides information that is needed by all persons going into the field of welding. Much information provides aids in selecting the correct process since this is directly related to the metal being welded. The processes are explained in detail and the course provides quality control data and reference material that is of high interest to welding personnel. Areas of concentration will include: .. IAI Course No. GTAW process, . Nomenclature and definitions specific to this process, and

**WEL.168 Gas Shielded Arc Mig** 1 4 3

This course provides information that is needed by all persons going into the field of welding. Much information provides aids in selecting the correct process since this is directly related to the metal being welded. The processes are explained in detail and the course provides quality control data and reference material that is of high interest to welding personnel. Areas of concentration will include: .. IAI Course No. GMAW process, . Nomenclature and definitions specific to this process, and

**WEL.170 Applications of GMAW & FCAW** 1 4 3

This course provides information that is needed by all persons going into the field of welding. The focus of this course is correctly matching the welding process to the metal being welded. The processes are explained in detail and the course provides quality control data and reference material that is of high interest to welding personnel. Areas of concentration will include: .. IAI Course No. Advanced gas metal arc welding (GMAW) and flux cored arc welding (FCAW) processes, . Nomenclature and definitions specific to this process, and

**WEL.172 Welding Applications** 1 4 3

This course provides information that is needed by all persons going into the field of welding. The focus of this course is correctly matching the welding process to the metal being welded. The processes are explained in detail and the course provides quality control data and reference material that is of high interest to welding personnel. Areas of concentration will include: . . IAI Course No. Fabrication and layout, . Nomenclature and definitions specific to this process, and

**WEL.202 Production and Inventory Control** 1 1

This course is designed for students in the welding program, and it will help them to effectively work in environments from small jobbing shops to major manufacturing plants. They will receive a broad overview of planning and control factors involved in controlling inventory as well as managing production. Students will learn the essentials of forecasting and the variety of ways forecasters attempt to minimize error, including the use of software programs. They will learn about Master Production Schedules (MPS) and Material Requirements Planning (MRP) as well as Capacity Management and required planning for input and output. Kanban, the Theory of Constraints, Lean Production, and Just-In-Time (JIT) will be introduced. Finally, they will consider the benefit of partnering functions in purchasing and distribution, as well as integrating various systems for efficiency and effectiveness.

Offered: Fall or Spring

Applicable toward graduation at Sandburg where program structure permits:

Degree or Certificate: AAS, AGS and Certificates where applicable.

General Education – Not Applicable

# DIRECTORIES

## Reference Guide

Inquiries concerning specific aspects of the College should be addressed to the appropriate office listed below:

Carl Sandburg College's Main Campus is located in Galesburg, Illinois, with a Branch Campus located in Carthage. The Main Campus phone number in Galesburg is (309) 344-2518. The Branch Campus phone number in Carthage is (217) 357-3129.

Academic Advising/ Registration	E100	(309) 341-5237
Main Campus Offices & Departments-Galesburg		(309) 344-2518
Admissions Office	E100	(309) 341-5233
Art Department	F101	(309) 341-5303
Academic Support Services/Tutoring	B068	(309) 341-5262
Auto Tech Shop	B127	(309) 341-5263
Automotive Tool Room	B111	(309) 341-5263
Bookstore	B057	(309) 341-5259
Business Office	E100	(309) 341-5210
Loft Cafe	E123	(309) 341-5284
Career, Technical & Health Education	B008	(309) 341-5341
Counseling	E100	(309) 341-5237
Cyber Cafe	B067	(309) 341-5459
Dental Hygiene, The Annex	AN102	(309) 344-2595
Disability Support Services	B068	(309) 341-5262
Dispatch Phone	D201	(309) 341-5304
Career Development Office	D207	(309) 341-5246
Faculty Teaching & Learning Center	E233A	(309) 341-5438
Financial Aid Office	E101	(309) 341-5283
Fitness Center	F142	(309) 341-5460
Foundation Office/ Scholarships	E208	(309) 341-5349
Tech Help	E233	(309) 341-5446
Humanities & Fine Arts	C109	(309) 341-5427
Human Resources	D202	(309) 341-5223
Information Booth/ Student Center	B101	(309) 345-8513
Information Technology Services	E211	(309) 341-5286
Library	E240	(309) 341-5257
Mailroom/Copy Center	E121	(309) 341-5240/5482
Maintenance Building	MN001	(309) 341-5302
Marketing & Public Relations	A009	(309) 341-5328

Math & Natural Science Office	C214	(309) 341-5229
College of Nursing Office	A103	(309) 341-5229
Records Office	E100	(309) 341-5260
Security/Public Safety	D201	(309) 341-5304
Security Emergencies	D201	(309) 341-5499
Shipping & Receiving	E140	(309) 341-5293
Social & Business Sciences	C109	(309) 341-5427
Student Government Office	B060	(309) 341-5295
Student Life	B056	(309) 341-5332
Student Services	E100	(309) 341-5237
Student Services Computer Center	D100	(309) 345-8512
Testing Center	B006	(309) 341-5323
Transcripts	E100	(309) 341-5260
TRIO Student Support Services	E136	(309) 341-5362
TRIO Upward Bound	E136	(309) 341-5268
Tutoring	B068	(309) 341-5262
Veterans	E101	(309) 341-5321
Other Offices:		
Annex, 209 E Main, Galesburg		(309) 344-2595
Branch Campus, 305 Sandburg Drive, Carthage		(217) 357-3129
Admissions/Advising, Business Office, Financial Aid, Registration, Records, & Testing		ext. 7237
Bookstore		ext. 7243
Director of Branch Campus		ext. 7247
Library		ext. 7244
Student Services Generalist		ext. 7247
Corporate & Leisure College, CME Building, 2051 Tom L. Wilson Blvd.		(309) 345-3501
Welcome Center	B09	309-345-3500

## Administrators

**Bailey, Michael**  
Athletic Director  
B.A., University of Northern Iowa

**Bentley, Anthony**  
Director of TRIO/Upward Bound  
B.A., Western Illinois University

**Blake, Lisa**

CFO/Treasurer  
B.S., C.P.A., University of Illinois

**Canfield, Kip**  
Director of Public Safety  
A.A.S., Carl Sandburg College

**Craterfield, Mollye**  
Director of Recruitment  
M.S., Saint Mary of the Woods College

**Grimes, Brittany**  
Director of Marketing & Public Relations  
B.S., Virginia State University  
M.B.A., University of Maryland - College Park

**Eddy, Derrick (Rick)**  
Director of Admissions & Records/ Title IX Coordinator  
A.A., Spoon River College  
B.A., Judson University  
M.A., National Louis University

**Gibb, Julie**  
Vice President of Academic Services  
B.A., Harding University  
M.A., University of Iowa

**Hanson, Lisa A.**  
Director of Financial Aid  
A.S., Carl Sandburg College  
B.S., Bradley University  
M.S., University of Akron

**Hilten, Stephanie**  
Director of Advancement  
B.A., Western Illinois University

**Henderson-Glasser, Ellen**  
Director of Branch Campus  
B.S., Western Illinois University  
M.S., Western Illinois University  
Ed.D., University of Kentucky

**Johnson, Michelle**  
Director of Adult Education/Institutional Effectiveness  
B.S., University of Iowa

**Krupps, Gina**  
Director of Human Resources

**Lyon, Misty**  
Dean of Student Success  
B.S., Illinois State University  
M.S., Western Illinois University

**Monagle, Mischelle**  
Dean of College of Nursing and Health Professions  
M.B.A., University of Phoenix  
M.S.N., University of Phoenix

**Norton, Steven**  
Vice President of Student Services  
B.A., Iowa Wesleyan College  
M.S., Western Illinois University

**Rucker, Stacey**

Director of Corporate & Leisure College  
A.S., Carl Sandburg College  
A.A.S., Carl Sandburg College  
B.A., Knox College

**Scott, Autumn**  
Director of TRIO SSS & Gales Scholar Advisor  
B.A., Monmouth College  
M.S., Western Illinois University

**Dr. Sundberg, Lori L.**  
President  
Certificate, Carl Sandburg College  
A.A., Carl Sandburg College  
B.A., Knox College  
M.B.A., Western Illinois University  
D.B.A., St. Ambrose University

**Dr. Thurman, Constance**  
Dean of Human Resources & Organizational development  
B.A., Knox College  
M.B.A., Western Illinois University  
D.B.A., St. Ambrose University

## Full-Time Faculty

**Archer, Jennie**  
Coordinator of Library Instructional Services/Librarian  
Library  
M.A. North Dakota State University  
M.S. University of Illinois

**Bainter , Stacy**  
Instructor, Nursing  
College of Nursing &  
Health Professions  
B.S.N. University of Phoenix  
M.S.N. McKendree University

**Burns, Dennis D (David)**  
Assistant Professor, Biology  
Associate Dean of Math & Natural Sciences  
Math &  
Natural Sciences  
A.A., A.S., Carl Sandburg College  
B.A. Knox College  
M.S. Western Illinois University

**Crandell, Michael S**  
Professor, Biology  
Math &  
Natural Sciences  
A.A. Illinois Central College  
B.S. Illinois State University  
M.S. Eastern Illinois University

**Douglas, Gary W (GW)**  
Assistant Professor, Sociology  
Social &  
Business Sciences  
B.A. Western Illinois University  
M.A. Western Illinois University (2 degrees)

**Eagen, Carla J**



Assistant Professor, Dental hygiene  
Career, Technical &  
Health Education  
A.A.S. Carl Sandburg College  
B.S. Truman State University  
M.Ed. National Louis University

**Endres, Kari**

Instructor, Nursing  
College of Nursing &  
Health Professions  
D.N. Graham Hospital  
B.S.N. Saint Francis College of Nursing  
M.S.N. Benedictine University

**Fox, Amber**

Instructor, Accounting  
Social &  
Business Sciences  
B.A. Monmouth College  
M.A.S. Bradley University

**Gray, Kristina**

Instructor, Nursing  
College of Nursing &  
Health Professions  
B.S.N. St. Francis Medical Center/College of Nursing  
M.S.N. St. Francis Medical Center/College of Nursing

**Hawkinson, Carrie A**

Associate Professor, Administrative Office Occupations  
Career, Technical &  
Health Education  
B.S. University of Illinois  
M.S. University of Illinois

**Higgins, Diana D**

Assistant Professor, Administrative Office Professional  
Associate Dean of Career Technical Health Education  
Career, Technical &  
Health Education  
B.S. Illinois State University  
M.S. Western Illinois University

**Hutchings, James B**

Instructor, Music  
Associate Dean of Humanities & Fine Arts  
Humanities &  
Fine Arts  
B.S. Manchester College  
M.M. University of Missouri

**Johnson, Jill L**

Assistant Professor, Psychology  
Associate Dean of Social & Business Sciences  
Social &  
Business Sciences  
A.A. Black Hawk College  
B.A. Knox College  
M.A. Bradley University

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