GRADUATION & TRANSFERRING

MOVING ON
Perhaps your time at Prairie State College has numbered a few months while you earn a certificate to boost your earnings potential. Or you might be among the many who have worked for years toward an associate’s degree while juggling other responsibilities.

Whatever you have accomplished, we’re pleased and proud to have been part of your educational journey. We wish you well with your next step, whether it is on your career path or on the path toward a bachelor’s degree and even graduate school.

GRADUATION

As outlined in the opening OVERVIEW section, PSC grants certificates and the following six associate’s degrees:

- Associate in Arts (A.A.)
- Associate in Science (A.S.)
- Associate in Fine Arts (A.F.A.)
- Associate of Arts in Teaching (A.A.T.)
- Associate in Applied Science (A.A.S.; career and technical degree)
- Associate in General Studies (A.G.S.; not intended for career program or a bachelor’s degree)

Specific curriculum requirements for a particular degree or certificate program are found in DEGREES, CERTIFICATES, COURSES. Consult that section of the catalog and the index for detailed information. The next section gives an overview of graduation requirements.

GRADUATION REQUIREMENTS

To earn a degree or certificate, you must complete the academic requirements shown in the catalog for the year in which you entered Prairie State College. If the degree or certificate requirements are changed during your attendance, you may elect to satisfy either the new requirement or the ones in force when you enrolled. If you withdraw from Prairie State College for either a Fall or Spring semester, you must satisfy requirements in force at the time you re-enroll.

When submitting a graduation petition, you will be asked to identify the year of the catalog from which you are graduating. Any petition for alteration of graduation requirements must be submitted in writing on a Course Substitution Form—available from the dean over the academic program—at least one semester prior to graduation. Graduation petitions must be submitted to the Admissions Office no later than the following dates:

- Fall graduation: October 1
- Spring graduation: March 1
- Summer graduation: July 1

Graduation petitions submitted after these deadlines will be subject to an additional charge.

December, May and August candidates may choose to participate in the annual May Commencement ceremony (see following section, “Commencement Ceremony”).

Students planning to receive a degree and/or certificate at PSC must request an official evaluation of their credits in the Office of Admissions & Enrollment Services, by completing the “Transcript Evaluation Request Form” at least one or two semesters prior to degree and/or certificate completion in order to ensure correct course selections. The form is also available on the College Web site and may be printed and mailed to the Office of Admissions & Enrollment Services at the Main Campus address, or filled out online and submitted.
COMMENCEMENT CEREMONY
A Commencement (graduation) ceremony is held once a year, at the end of the Spring semester in May. Graduates from the previous Fall, current Spring and forthcoming Summer terms are invited to participate.

Note: This is the only ceremony held all year, though you may be certified as a graduate at the end of any semester of the academic year. The deadline to apply for the ceremony is March 1, no matter which semester you actually fulfill the requirements for graduation.

For each degree application, a fee of $20 will be charged upon petitioning for graduation (this includes the cost of a degree diploma); there is no additional fee to participate in the ceremony. Students who earn a certificate will have that information posted to their college transcript free of charge; however, if a certificate recipient wishes to participate in the graduation ceremonies and therefore receive a diploma, a fee of $20 will be charged for each diploma.

For more information on academic honors, see “Grading & Other Academic Policies” within the section POLICIES & GUIDELINES. For information on the ceremony, please call the Office of the Vice President of Student Affairs at (708) 709-3507.

TRANSFERRING TO OTHER COLLEGES
If you wish to transfer from Prairie State College to another college, you must follow the admissions procedure for the institution you wish to attend. No matter what transfer hopes and plans you might have, recognize that each college or university has its own unique policies, selection process and admissions requirements.

It is the responsibility of students to be familiar with transfer policies at other institutions. Visit the Web site or obtain a catalog and application packet from the schools you are interested in attending. The PSC Counseling & Academic Advising Center can assist you in the transfer process. Contact the Transfer Coordinator at (708) 709-3508, or talk with any of PSC’s advisors and counselors for more information.

A transfer student agreement (commonly called the Compact Agreement) is established with a number of public universities in Illinois. This compact states that a transfer student who has completed an associate’s degree based on a baccalaureate-oriented sequence is considered to have attained junior standing and to have met lower-division general educational requirements.

ILLINOIS ARTICULATION INITIATIVE (IAI)
PSC is part of the Illinois Articulation Initiative, a statewide agreement allowing transfer of the completed Illinois General Education Core Curriculum (IAI GECC) between participating institutions. Completion of the transferable IAI GECC at any participating college or university in Illinois ensures transferring students that lower-division general education requirements for an associate’s or bachelor’s degree have been satisfied.

Here is good advice on transferring—one of many resources and tips found on the IAI Web site (www.itransfer.org):
1. Even though the Illinois Articulation Initiative (IAI) agreements and Web site are meant to make transfer smoother, you still need to see an academic advisor or admissions counselor.
2. To transfer as a junior, you need a minimum of 60 (and usually not more than 64) semester credits. Plan to earn an associate’s degree before transferring: at PSC, we offer Associate in Arts, Associate in Science, Associate in Fine Arts and Associate of Arts in Teaching.
3. If you already know where you will transfer, see that school’s catalog and a counselor for specific advice.
4. Every participating school does not offer all majors or all specialties in a major.
5. No two majors are alike; courses in one major are unlikely to meet requirements for a different major. Changing your major will likely increase the time needed to complete your degree.
6. Be sure to check to see if any specific Illinois Transferrable General Education Core Curriculum (IAI GECC) courses are recommended by your major. A few majors, like music and engineering, suggest you not finish the IAI GECC before transferring.
7. Most majors require at least a “C” for a course to count towards major requirements, and most schools won’t accept pass/fail.
8. Since admission is often competitive, completing the IAI Majors’ recommended courses will not by itself guarantee admission.
9. Some majors require assessment for admission: a basic skills test (reading, grammar, writing and math) is required for certification in all teacher education majors. Most music schools require an audition and most art schools require a portfolio.
10. When selecting courses for your major, always seek advice from an academic advisor at your current school and a counselor at the transfer school.

More information on IAI and transferring is found in DEGREES, CERTIFICATES, COURSES. Consult that section and the Index.

TRANSCRIPTS
The Office of Admissions, Enrollment & Career Development Services issues official transcripts; a nominal fee is charged for each transcript. Students and former students must make a request in writing to that office. The “Transcript Request Form” also is available on the College Web site and may be printed and mailed to the Office of Admissions, Enrollment & Career Development Services at the Main Campus address.

A transcript will not be issued to a student or former student if a record encumbrance has been placed on his or her academic record (indicating a past-due monetary obligation to the College such as unpaid tuition, fees, fines or financial aid repayment).

For more information on transcripts, please call (708) 709-3514.
DEGREES, CERTIFICATES, COURSES

DEGREE & CERTIFICATE PROGRAMS
ACADEMIC DEGREES AND CERTIFICATES

Prairie State College offers associate's degrees that prepare students for transfer to four-year institutions, associate's degrees and certificates that prepare students for specific careers, and an associate's degree that recognizes completion of a broad range of college-level courses.

TRANSFER DEGREES

The Associate in Arts degree (A.A.) includes the first two years of study for students who plan to pursue a bachelor's degree in liberal arts.

The Associate in Science degree (A.S.) covers the first two years of study for students pursuing a bachelor's degree in engineering, mathematics or science.

The Associate in Fine Arts:Art degree (A.F.A.) is designed to prepare students to transfer as juniors into a bachelor's degree program (B.F.A.) in Studio Art. Students are encouraged to complete their core courses in Art before enrolling in media-specific studio courses. A portfolio review is usually required for transfer to a four-year institution.

The Associate of Arts in Teaching degree (A.A.T.) is a two-year program designed for students preparing for careers in secondary education. It provides a foundation in teacher education, field-based experiences, and discipline-specific content. Current A.A.T. degrees are designed to facilitate transfer for students who intend to teach in high-need disciplines.

GENERAL STUDIES DEGREE

The Associate in General Studies degree (A.G.S.), while not intended for transfer or directed at a specific occupation, allows students to design their own two-year program. See page 76 for details.

CAREER PROGRAM DEGREES AND CERTIFICATES

The Associate in Applied Science (A.A.S.) represents completion of a minimum of 60 credit hours in a technical or career program.

Certificates are awarded after completion of up to 50 credits that focus on specific occupational or technical areas of study. For detailed information about career degree and certificate programs, see page 79.

ILLINOIS ARTICULATION INITIATIVE (IAI) www.itransfer.org

Prairie State College participates in the Illinois Articulation Initiative (IAI), a statewide transfer agreement among more than 100 participating college or universities in Illinois. IAI works best for students who know they are going to transfer but undecided on the college or university that will grant their baccalaureate degree.

All colleges and universities participating in the IAI agree to accept a “package” of IAI general education courses in lieu of their own comparable lower-division general education requirements. It is important to keep in mind that the IAI General Education Core Curriculum transfers as a package. Course-to-course transfer is not guaranteed.

IAI also includes major recommendations for the first two years of college in several popular majors. Faculty panels, which have expertise in the major field of study, created these recommendations. IAI major recommendations work best for students who have chosen their majors, are going to eventually transfer, but are undecided on the college or university that will grant their baccalaureate degree.

UNDERSTANDING IAI

1. The IAI Agreement and the iTransfer Web site are designed to simplify transferring to any participating school. Always seek the advice of academic advisors at Prairie State College and the school you plan to attend when making transfer plans.

2. Articulation is the process of transferring courses from one school to another and identifying the way the classes will be used at the receiving school.

3. The Illinois General Education Core Curriculum is for transfer students only.

4. To guarantee that you receive full credit, you should complete the Illinois General Education Core Curriculum package before transferring. When it is not completed before transfer, each college or university decides how to apply each individual course.

5. The Illinois General Education Core Curriculum requires a total of 12 to 13 courses (37 to 41 semester credits).

6. The General Education requirements at Prairie State College are aligned with the five major areas (fields or categories) within the Illinois General Education Core Curriculum: Area A-Communication, Area B-Humanities and Fine Arts, Area C-Mathematics, Area D-Physical and Life Sciences, and Area E-Social and Behavioral Sciences.


8. Application of credit earned prior to summer 1998 is the decision of the receiving institution. For information about IAI and graduation requirements, see page 44.

9. There are two types of undergraduate degrees: the associate's degree and the bachelor's degree.

10. The IAI is identifying courses which will apply to specific majors. Prairie State College students are encouraged to complete an Associate in Arts, Associate in Science, or Associate in Fine Arts degree prior to transfer.
IAI PARTICIPATING SCHOOLS
Participating public and private institutions that grant bachelor’s degrees are listed below. Institutions identified as [R] are receiving institutions only.

Four-Year Public Institutions
• Chicago State University
• Eastern Illinois University
• Governors State University [R]
• Illinois State University
• Northeastern Illinois University
• Northern Illinois University
• Southern Illinois University at Carbondale
• Southern Illinois University at Edwardsville
• University of Illinois at Chicago
• University of Illinois at Springfield
• University of Illinois at Urbana
• Western Illinois University

Four-Year Independent Institutions
• Argosy University [R]
• Aurora University
• Barat College
• Benedictine University
• Blackburn College
• Bradley University
• Concordia University
• DePaul University
• DeVry University, Chicago and DuPage
• Dominican University
• East-West University [R]
• Ellis College of New York Institute of Technology [R]
• Elmhurst College
• Eureka College [R]
• Illinois Institute of Art - Chicago [R]
• Illinois Institute of Technology
• Judson College
• Kendall College
• Knox College [R]
• Lake Forest College [R]
• Lakeview College of Nursing [R]
• Lewis University
• Lexington College
• Lincoln Christian College
• Lincoln College
• MacMurray College
• McKendree College [R]
• Midstate College
• Milliken University
• NAES College [R]
• National-Louis University
• North Central College
• North Park University
• Olivet Nazarene University
• Quincy University
• Robert Morris College
• Rockford College
• Roosevelt University
• Saint Anthony College of Nursing [R]
• Saint Francis Medical Center, Nursing [R]
• Saint Xavier University
• Trinity Christian College
• University of St. Francis
• West Suburban College of Nursing [R]

Additional information about the IAI is available from the Prairie State College Transfer Coordinator or by visiting the IAI Web site at www.itransfer.org.

IAI COURSE CODES
IAI has its own course numbering sequence for the Illinois Transferable General Education Core Curriculum. Here is an example of an IAI GECC course – S7 903D: Racial and Ethnic Relations
This code would be noted for a PSC course listed in this catalog as follows:
SOCIO 220 Race Relations: A Multicultural Perspective (IAI: S7 903D)

The first letter in the IAI GECC code indicates the discipline field for the course. The letter S, for example, indicates Social/Behavioral Sciences. IAI letter codes and their corresponding disciplines are as follows:

General Education Core Curriculum Course Codes:
IAI: C Communications
IAI: F Fine Arts
IAI: H Humanities
IAI: HF Interdisciplinary Humanities and Fine Arts
IAI: HS Interdisciplinary Humanities/Fine Arts and Social/Behavioral Sciences
IAI: L Life Sciences
IAI: M Mathematics
IAI: P Physical Sciences
IAI: S Social/Behavioral Sciences

The first number after the letter indicates the sub-area of the discipline. The S7 in this example represents the Sociology sub-area of Social/Behavioral Sciences. The next numbers represent the unique content category within this subdiscipline. Letters at the end of course numbers identify specific perspectives related to the course. The D in S7 903D, for example, represents courses that examine aspects of human diversity within the United States. Other end-of-course letters include:

N for courses designed to examine aspects of human diversity from a non-U.S./non-European perspective.
L for laboratory courses
R for research paper courses
COURSES
CERTIFICATES,
DEGREES

TRANSFER DEGREE GUIDELINES


TRANSFER DEGREE ADMISSIONS REQUIREMENTS

Students applying for admission to a baccalaureate transfer program must have 15 high school credits distributed as follows:

- 4 credits in English (written and oral communication, literature)
- 3 credits in Mathematics (introductory through advanced algebra plus geometry)
- 3 credits in Social Studies (emphasizing history and government)
- 3 credits in Science (laboratory science)
- 2 credits in electives (foreign language, art, music, vocational education)

(Illinois Public Act 86-0954)

Students who have academic deficiencies in these minimum requirements can satisfy these deficiencies upon successful completion of 24 transferable credit hours (with a minimum GPA of 2.0) which must include ENG 101 Composition I (3), COMM 101 Principles of Communication (3), one social science course, one four-credit laboratory science course, and one college-level mathematics course.

TRANSFER DEGREE GRADUATION REQUIREMENTS

Prairie State College offers four transfer degrees:

- Associate in Fine Arts: Art (A.F.A.),
- Associate in Arts (A.A.),
- Associate in Science (A.S.), and
- Associate of Arts in Teaching; Secondary Mathematics (A.A.T.).

Candidates for these degrees must fulfill the following requirements:

1. Enrolled at Prairie State College for the two semesters immediately preceding graduation, successfully completing at least 15 credit hours at Prairie State College (excluding proficiency credits).
2. Candidates for the A.F.A. Degree must complete 61 credit hours including the Transferable General Education Core Curriculum of 31-32 credits. Candidates for the A.A. or A.S. Degree must complete 62 semester hours of college credit as specified, including Transferable General Education Core Curriculum of 37-41 credits.
3. Attained a minimum cumulative grade point average of 2.0 on a 4.0 scale in all Prairie State College courses.
4. Filed appropriate evidence of high school graduation or GED certification with the Admissions and Records Office.
5. Satisfied the U.S. and State of Illinois Constitution requirements by submitting a high school transcript that proves the test was successfully completed in high school, or by taking POLSC 140 or 152 or a proficiency exam.

TRANSFER DEGREE COMPONENTS

There are three components of degree programs: The Transferable General Education Core Curriculum, the area of concentration or major field, and electives.

I. TRANSFERABLE GENERAL EDUCATION CORE CURRICULUM REQUIREMENTS

A.A./A.S. Degrees: 37-41 credit hours
A.F.A. Degree: 31-32 credit hours
A.A.T. Degree: 39-40 credit hours

THE GENERAL EDUCATION CORE

The goal of the general education is to help students understand the world they live in. The general education curriculum consists of liberal arts courses in five key areas: communication, humanities and the fine arts, social sciences, mathematics, and science. A good education in these disciplines develops habits of mind like curiosity, critical thinking and introspection that help one adapt to the changing world. Courses in English and Communication foster the ability to read critically and speak and write effectively. Those in the humanities and social science broaden understanding of different cultures and lead to an appreciation of the diversity of human experience. Mathematics and science courses develop the ability to analyze problems and find solutions, while courses in literature, music, and the fine and performing arts enrich understanding of human nature, enhance aesthetic appreciation, and broaden understanding of human nature and society. Taken together, study in these traditional academic disciplines leads to a better understanding of the key issues that face our society and helps students become more responsible citizens.

Prairie State College’s General Education Core is designed to ensure that all our students develop competencies in the following areas:

Communication:

Students will read with comprehension, listen critically, and speak and write effectively.

Critical Thinking:

Students will analyze problems, develop solutions, and evaluate results, forming a self-conscious habit of inquiry as a foundation for a lifetime of continuous learning and personal transformation.

Knowledge:

Students will be able to organize and apply discipline-specific ways of knowing.

Social and Cultural Awareness:

Students will understand and recognize the values and ethics of Western and non-Western cultural traditions, and appreciate the diversity of human experience both within the United States and throughout the world.

Literacy:

Students will function with competence in writing, working with numbers, speaking in large and small groups, using basic technology for learning, and evaluating information from a range of sources.

AREA A: COMMUNICATION


To facilitate development of these essential abilities, students take courses in the following areas:

- The purpose of courses in writing and speaking is to foster the ability to communicate effectively with others, whether in speech or writing.
- The complexities of the modern world require the ability to think independently and express ideas clearly. Because these courses provide important foundation skills, students should complete them early in the degree program so what they learn can improve their performance in other courses.
- Satisfactory completion of the required writing course sequence, ENG101 Composition I and ENG102 Composition II, will mean a grade of “C” or better in both courses.

The following 3 courses (9 credit hours), including a two-course sequence in writing and one course in oral communication, are required:

- Writing Course Sequence [IAI Code]
  - ENG 101 [C1 900] - Composition I - with a grade of C or better (3)
  - Note: All students must complete the English 101 Exit Test with a passing grade in order to pass ENG101
DEGREES, CERTIFICATES, COURSES

TRANSFER DEGREES

2008-2010 CATALOG

ENG 102 [C1 901R] Composition II - with a grade of C or better (3)
Oral Communication [IAI Code]
COMM 101 [C2 900] Principles of Communication (3)

AREA B: HUMANITIES AND FINE ARTS

• A.A., A.S., A.A.T.: 9 credit hours
• A.F.A.: 6 credit hours

Study in the Humanities, Fine Arts, and Philosophy helps develop an understanding of what it means to be human. These courses expose students to great works of literature, art, music, and theater, enhancing their appreciation and understanding of the arts. They also examine the religious traditions and cultural expressions of people in a variety of cultures who have struggled to understand the basic questions that confront human beings – questions about good and evil, identity, courage, love, truth, justice, and morality.

Select 2 or 3 courses (6 or 9 credit hours), with at least one course selected from fine arts and at least one course from the humanities:

Fine Arts Courses

Art [IAI Code]
ART211 [F2 901] History of Western Art I (3)
ART212 [F2 902] History of Western Art II (3)
ART216 [F2 904] History of Photography (3)
ART219 [F2 900] Art Appreciation (3)

Art [IAI Code]
ART2131 [F2 903N] Survey of Non-Western Art (3)

Music [IAI Code]
MUSIC 130 [F1 900] Music Appreciation (3)
MUSIC 132 [F1 904] American Music (3)

Theatre [IAI Code]
THTR 101 [F1 907] Understanding Theatre (3)

Foreign Languages [IAI Code]
SPAN 202 [H1 900] Spanish IV (4)*

*Foreign Language Requirements: Some universities have a foreign language requirement. Generally, four years of a single foreign language in high school or four semesters of language in college will fulfill this requirement. It is recommended that students complete the entire sequence at one institution.

Humanities [IAI Code]

HUMAN 101 [H5 904N] Comparative Religions (3)
HUMAN 102 [H5 901] Foundational Religious Texts (3)
HUMAN 201 [H9 900] Humanities Themes: Myth, Reason, & God (3)

Literature [IAI Code]

ENG 211 [H3 914] American Literature I (3)
ENG 212 [H3 915] American Literature II (3)
ENG 215 [H3 910D] African-American Literature (3)
ENG 221 [H3 903] Introduction to Poetry (3)
ENG 231 [H3 912] British Literature I (3)
ENG 232 [H3 913] British Literature II (3)
ENG 240 [H3 901] Introduction to Fiction (3)
ENG 243 [H3 908N] Non-Western Literature in English (3)
ENG 252 [H3 902] Introduction to Drama (3)
ENG 261 [H3 906] Western/World Literature I (3)
ENG 262 [H3 907] Western/World Literature II (3)
ENG 271 [H3 905] Introduction to Shakespeare (3)

Philosophy [IAI Code]

PHILO 201 [H4 900] Introduction to Philosophy (3)
PHILO 202 [H4 904] Ethics (3)
PHILO 203 [H4 906] Introduction to Logic (3)
PHILO 204 [H4 903] Philosophy of Religion (3)
PHILO 205 [H4 903N] Eastern Philosophy (3)

Interdisciplinary Humanities and Fine Arts [IAI Code] may be used for either humanities or fine arts credit.

HUMAN 202 [HF 900] Form and Structure in the Arts (3)

AREA C: MATHEMATICS (3-6 credit hours)

Mathematics focuses on quantitative reasoning as a basis for understanding the relationships found in both work and everyday life. Mathematics provides the tools and skills necessary to organize thinking, apply problem-solving strategies and recognize patterns and processes across many different fields. Mathematics is also used to determine reasonableness, identify alternatives and select optimal results.

Select 1 to 2 courses (3 to 6 credit hours) from:

Mathematics [IAI Code]

MATH 112 [M1 904] General Education Math (3)
MATH 115 [M1 902] General Education Statistics (3)
MATH 112 and 115 are recommended for A.A. and A.F.A. students who do not intend to take higher levels of mathematics.

BUS 240 [M1 902] Elementary Statistics (4)
MATH 153 [M1 902] Probability and Statistics (4)
MATH 153 is intended for students with advanced math skills; it may be taken in place of MATH 115. Students can receive credit for only one of BUS 240, MATH 115 and 153.

MATH 155 [M1 906] Finite Mathematics (4)
MATH 157 [M1 900-B] Calculus for Business and Social Science (4)
MATH 171 [M1 900-1] Calculus with Analytic Geometry I (5)
MATH 172 [M1 900-2] Calculus with Analytic Geometry II (5)
MATH 173 [M1 900-3] Calculus with Analytic Geometry III (5)

MATH 210 [M1 905] Discrete Mathematics (3)

**Prerequisite: MATH 200 Mathematics for Elementary Teaching I (4)

**MATH 206 fulfills general education requirements only for students seeking state certification as elementary teachers. Students must complete both MATH 200 and 206 prior to transfer.

AREA D: PHYSICAL AND LIFE SCIENCES

• A.S., A.A.A.F., A.A.T.: 7-8 semester hours

The study of science helps students learn how the scientific method is used to discover new truths and re-assess old ones. In science courses, students learn how scientists formulate and test hypotheses to investigate and understand phenomena in the natural world. By participating in laboratory sessions where they use the scientific method themselves, students get first hand experience in how scientists think. Students also become familiar with the physical and biological concepts developed through scientific study. Familiarity with these scientific principles promotes understanding of the natural world and enhances the ability to make informed decisions about environmental, health, and technological problems.

Select 2 courses (7-8 credit hours), with one course selected from the life sciences and one course from the physical sciences and including at least one laboratory course from:

(The “L” in the IAI code indicates a “lab science” course.)

Life Science Courses [IAI Code]

BIOL 100 [L1 900L] General Education Biology (4)
BIOL 103 [L1 901] Plants and Society (3)
BIOL 105 [L1 905] Environmental Biology (3)
BIOL 106 [L1 906L] Heredity and Society (4)
BIOL 112 [L1 900L] Organismal Biology (4)*

*This course is intended for science majors only and should not be selected by non-science majors to meet general education science requirements.

Students cannot receive credit for both BIOL 100 and 112.

Students who demonstrate successful completion of BIOL 111 may use this course to fulfill their general education life science requirement.

Physical Science Courses [IAI Code]

ASTRO 101 [P1 906] Guide to the Universe (3)
ASTRO 104 [P1 906L] The Solar System and Beyond (4)
CHEM 105 [P1 902L] Survey of General Chemistry (4)
CHEM 110 [P1 902L] General Chemistry I (5)*

*This course is intended for science majors only and should not be selected by non-science majors to meet general education science requirements.

Student cannot receive credit for both CHEM 105 and 110.

GEOG 105 [P1 909] Introduction to Physical Geography (3)
GEOL 101 [P1 907L] Physical Geology (4)
METEO 150 [P1 905] Introduction to Meteorology (3)
PHYS 111 [P9 900L] Physical Science (4)
PHYS 112 [P9 905L] Earth Science (4)

Students cannot receive credit for both METEO 150 and PHYS 112.

PHYSI 101 [P1 901L] Conceptual Physics (4)
PHYSI 120 [P1 900L] College Physics I (4)*

*This course is intended for science majors only and should not be selected by non-science majors to meet general education science requirements.

Student cannot receive credit for both PHYSI 120 and 210.
AREA E: SOCIAL SCIENCES AND BEHAVIORAL SCIENCES

• A.A., A.S., A.A.T.: 9 credit hours
• A.F.A.: 6 credit hours

The Social Sciences focus on an appreciation of human continuity and change on both the personal and societal level. Through analysis of historical, political, cultural and economic institutions, students become better able to understand themselves and their own society. They also develop insights into contemporary life including a broader understanding of how society works and what good citizenship means. They also become more self-aware and more attuned to issues relating to the environment, diversity, and social justice. In these courses, students are encouraged to become more reflective and use their new insights to think about how to address contemporary problems. Select 2 or 3 courses (6 or 9 credit hours), with courses selected from at least two disciplines, from:

Anthropology [IAI Code]
ANTHR 215 [S1 900N] Introduction to Anthropology (3)
ANTHR 222 [S1 901N] Introduction to Cultural and Social Anthropology (3)

Economics [IAI Code]
ECON 201 [S3 901] Macroeconomic Principles (3)
ECON 202 [S3 902] Microeconomic Principles (3)

Geography [IAI Code]
GEOG 101 [S4 900N] Cultural Geography (3)

History [IAI Code]
HIST 111 [S2 912N] World History: Origins to 1714 (3)
HIST 112 [S2 913N] World History: 1714 to Present (3)
HIST 115 [S2 906N] African Civilizations I (3)
HIST 116 [S2 907N] African Civilizations II (3)
HIST 140 [S2 910N] History of Latin America (3)
HIST 151 [S2 902] History of Western Civilization I (3)
HIST 152 [S2 903] History of Western Civilization II (3)
HIST 201 [S2 900] U.S. History 1492-1877 (3)
HIST 202 [S2 901] U.S. History 1877 to Present (3)

Political Science [IAI Code]
POLSC 101 [S5 903] Principles of Political Science (3)
POLSC 140 [S5 900] Introduction to U.S. Government and Politics (3)
POLSC 152 [S5 902] U.S. State and Local Government (3)
POLSC 230 [S5 905] Introduction to Comparative Government (3)
POLSC 240 [S5 904N] Introduction to International Relations (3)

Psychology [IAI Code]
PSYCH 101 [S6 900] Introduction to Psychology (3)
PSYCH 102 [S6 902] Human Growth and Development: Life-Span (3)
PSYCH 215 [S8 900] Social Psychology (3)

Sociology [IAI Code]
SOCIO 101 [S7 900] Introduction to Sociology (3)
SOCIO 111 [S7 901] Contemporary Social Issues (3)
SOCIO 210 [S7 902] Marriage and the Family (3)
SOCIO 215 [S7 904D] Sex, Gender and Power (3)
SOCIO 220 [S7 903D] Race Relations: A Multicultural Perspective (3)

II. AREA OF CONCENTRATION/MAJOR FIELD

A.A., A.S.: 12 credit hours
A.F.A.: 21 credit hours
A.A.T.: 25-26 credit hours

The Associate in Fine Arts Degree requires 21 credits of 100-level or above transfer courses from any of the following areas of concentration. The Associate of Arts and Associate in Science degrees require 12 credits from the same group of courses (of 100-level or above transfer courses from any of the following areas of concentration). To review the suggested curriculum for specific areas of concentration, see Transfer Degree Areas of Concentration on page 45. Depending upon the chosen course of study, additional credit hours may be recommended in the area of concentration, reducing the elective courses.

III. ELECTIVES (9-13 credit hours)
The A.F.A. Degree requires 9 semester hours of media specific courses to meet a total of 61 credits. The A.A. and A.S. Degrees require an additional 9-13 credit hours to meet a degree total of 62 credits. The elective courses must be selected from transfer courses of 100 level or above. Developmental, community service, apprentice, and vocational/technical courses cannot be used to satisfy degree requirements in the A.F.A. or A.A./A.S. degree. No more than four credits of physical education courses can be applied to a degree.

REQUIRED TRANSFER DEGREE CREDIT HOURS
A.A./A.S.: 62
A.F.A.: 61
A.A.T.: 64

DUAL DEGREE GRADUATION REQUIREMENT

Students who wish to receive both the Associate in Arts and the Associate in Science degrees must complete an additional 12 credit hours in the second concentration area that is selected.

TRANSFER CREDIT GUARANTEE

Courses taken by students who earn an Associate in Fine Arts: Art (A.F.A.) Degree or an Associate in Arts (A.A.), or Associate in Science (A.S.) Degree will transfer to Illinois state colleges or universities (including Purdue University Calumet at Hammond) as identified and defined in the Course Equivalency Tables (CET) on file at PSC’s Transfer Center.

If a course is taken and successfully completed in compliance with the CET and not accepted in transfer, Prairie State College will refund the tuition for the course. Call (708) 709-3508 for details.
TRANSFER DEGREE AREAS OF CONCENTRATION

A suggested curriculum of study is proposed for each transfer degree area based on PSC degree requirements, IAI majors panels and/or articulation agreements with specific four-year institutions.

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For information about the Associate in General Studies degree, turn to page 76.

For information about Career Programs, both A.A.S. degrees and certificates, turn to pages 78 & 79.
ART / ART HISTORY
A.A. Degree • Suggested Curriculum

Prairie State College offers the foundation courses in art appreciation, art history, and studio art required in the first two years of the Art major. Through painting, drawing, graphic design, and photography, students may pursue a variety of interests. Students planning to pursue a baccalaureate degree should be aware that transfer admission to art-related programs is competitive, and a portfolio is generally required for admission to the major as well as for registration in advanced art courses and for scholarship consideration. Each senior institution has its own transfer policies. Therefore, we cannot guarantee the accuracy of this information in regard to every individual school. Consult the school of your choice and/or the Prairie State College Counseling & Academic Advising Center to discuss the transferability of courses.

I. GENERAL EDUCATION CORE (37-38)
Area A: Communication (9 credits)
ENG 101 [C1 900] Composition I - with a grade of C or better (3)
ENG 102 [C1 901R] Composition II - with a grade of C or better (3)
COMM 101 [C2 900] Principles of Communication (3)
Area B: Humanities & Fine Arts (6 credits)
Select two IAI humanities courses from the list for Area B on pages 50-52.
Area C: Mathematics (3 credits)
MATH 112 [M1 904] General Education Mathematics (3)
OR
MATH 115 [M1 902] General Education Statistics (3)
Area D: Physical & Life Sciences (7-8 credits)
Select one life science course and one physical science course from the list for Area D on pages 50-52. One course must have a lab component.
Area E: Social & Behavioral Sciences (6 credits)
Select 2 courses from different disciplines from the list for Area E on pages 50-52.

II. AREA OF CONCENTRATION/MAJOR FIELD (21)
ART 101 [ART 907] Two Dimensional Design (3)
ART 102 [ART 908] Three Dimensional Design (3)
ART 104 [ART 904] Drawing I (3)
ART 106 [ART 905] Drawing II (3)
ART 121 [ART 901] History of Western Art I (3)
ART 122 [ART 902] History of Western Art II (3)
ART 162 [ART 906] Life Drawing (3)

III. ELECTIVES/STUDIO COURSES (9)
Select 9 credits of media specific studio courses from at least two media. Choose from the following areas of concentration in consultation with an art department advisor:

Art:
ART 109 Ceramics (3)
ART 201 [ART 911] Painting I (3)
ART 202 Photography (3)
ART 205 [ART 914] Printmaking (3)

Graphic Design:
ART 115 [ART 919] Introduction to Computer Art (3)
GC 151 [ART 918] Principles of Graphic Design (3)

Photography:
PHOTO 171 [ART 917] Introduction to Black & White Photography (3)

Required A.A. Degree Program Total: 62 credits

Foreign Language Requirements: Some universities have a foreign language requirement. Generally, four years of a single foreign language in high school or four semesters of language in college will fulfill this requirement. It is recommended that students complete the entire sequence at one institution.
ART EDUCATION
A.A. Degree • Suggested Curriculum

To teach art in Illinois public schools, teachers must be certified by the State of Illinois. To transfer into an approved baccalaureate program in art education as a junior, students must complete a minimum of 60 semester credits. Since admission is competitive, completion of the courses recommended below does not guarantee admission. Community and junior college students are strongly encouraged to complete an Associate in Arts degree prior to transfer. Students should be aware that a minimum grade point average of 2.5 on a 4.0 scale is required for program admission, and passage of a basic skills (reading, writing, grammar, and math) test also is required.

I. GENERAL EDUCATION CORE (38)
Area A: Communication (9 credits)
ENG 101 [C1 900] Composition I - with a grade of C or better (3)
ENG 102 [C1 901R] Composition II - with a grade of C or better (3)
COMM 101 [C2 900] Principles of Communication (3)
Area B: Humanities and Fine Arts (9 credits)
Select three courses from the list for Area B on pages 50-52 with at least one course selected from humanities and one course from fine arts.
ART 121 [F2 901] History of Western Art I (3)
ART 122 [F2 902] History of Western Art II (3)
ENG (200 Level) Select any Literature Course (3) OR HUMAN 101 [HS 904N] Comparative Religions (3)
Area C: Mathematics (3 credits)
Select one math course from:
MATH 112 [M1 904] General Education Mathematics (3)
MATH 115 [M1 902] General Education Statistics (3)
Area D: Physical and Life Sciences (8 credits)
Select one life science course and one physical science course from the list for Area D on pages 50-52. One course must have a lab component.
Area E: Social and Behavioral Sciences (9 credits)
HIST 201 [S2 900] U.S. History: 1492 to 1877 (3) OR HIST 202 [S2 901] U.S. History: 1877 to Present (3)
POLS/C 140 [S5 900] Introduction to U.S. Government & Politics (3)
PSYCH 101 [S6 900] Introduction to Psychology (3)

II. AREA OF CONCENTRATION/MAJOR FIELD (15-21)
Art Core Courses (12 credits)
ART 101 [ART 907] Two Dimensional Design (3)
ART 102 [ART 908] Three Dimensional Design (3)
ART 104 [ART 904] Drawing I (3)
ART 106 [ART 905] Drawing II (3)
Media-Specific Studio Art Course (3-9 credits)
Select at least one studio art course from the following:
ART 109 Ceramics (3)
ART 162 [ART 906] Life Drawing (3)
ART 201 [ART 911] Painting I (3)
ART 205 [ART 914] Printmaking (3)
GC 151 [ART 918] Principles of Graphic Design (3)
PHOTO 171 [ART 917] Introduction to Black & White Photography (3)

III. ELECTIVES (3-9)
Select from the following teacher education electives.
Additional non-Western course from: ART 131, ED 100, 101, 160, 212, GEOG 101, HUMAN 101, or HIST 115, 116, 140 (3)

Required A.A. Degree Program Total: 62 credits

SPECIAL NOTE: Before enrolling in any additional courses with an “ECED,” “ED” or “EDU” prefix at Prairie State College, consult a PSC counselor or advisor to determine the transferability of these courses.

ASTRONOMY
A.S. Degree • Suggested Curriculum

The astronomer is concerned with the earth and its position in the solar system and the universe. Employment opportunities include the National Aeronautics and Space Administration (NASA), air traffic control, and weather forecasting and monitoring. In the typical four-year curriculum, the first two years are spent studying the basic sciences, including mathematics and physics. The last two years emphasize advanced mathematics and science courses. Prairie State College offers courses comparable to the first two years of the curriculum required for a major in astronomy and will grant the Associate in Science degree to successful students.

I. GENERAL EDUCATION CORE (39-40)
Area A: Communication (9 credits)
ENG 101 [C1 900] Composition I - with a grade of C or better (3)
ENG 102 [C1 901R] Composition II - with a grade of C or better (3)
COMM 101 [C2 900] Principles of Communication (3)
Area B: Humanities and Fine Arts (9 credits)
Select three courses from the list for Area B on pages 50-52, with at least one course from humanities and one course from fine arts.
Area C: Mathematics (5 credits)
MATH 171 [M1 900-1] Calculus with Analytic Geometry I (5)
Area D: Physical and Life Sciences (7-8 credits)
ASTRO 104 [P1 906L] The Solar System and Beyond (4)
Area E: Social and Behavioral Sciences (9 credits)
Select three courses in at least two different disciplines from the list for Area E on pages 50-52.
II. AREA OF CONCENTRATION/MAJOR FIELD (17)
MATH 172 Calculus with Analytic Geometry II (5)
PHYSI 210 University Physics I (4)
PHYSI 220 University Physics II (4)
PHYSI 230 University Physics III (4)

III. ELECTIVES (5-6)
Select additional science, calculus, and foreign language courses or other general education core courses.

Required A.S. Degree Program Total: 62 credits

Foreign Language Requirements: Some universities have a foreign language requirement. Generally, four years of a single foreign language in high school or four semesters of language in college will fulfill this requirement. It is recommended that students complete the entire sequence at one institution.
DEGREES, CERTIFICATES, COURSES

2008-2010 CATALOG

BIOLOGICAL SCIENCES
A.S. Degree • Suggested Curriculum

Biology, the study of living organisms, is an extremely large and diverse field. Career opportunities exist in many areas such as research, government agencies (conservation department, environmental protection, etc.), industry, sales, and teaching at all educational levels. In addition, the biology curriculum provides the pre-professional foundation for many of the health care areas. Baccalaureate biological science programs are diverse. Some programs emphasize cell and molecular biology, whereas others emphasize organismal, ecological, and evolutionary biology. Research universities offer specific programs of study, optional tracks, or specializations within biology. Students should decide the direction or specialization within biology as early as possible, preferably by the beginning of sophomore year. Students are strongly encouraged to complete the Associate in Science degree prior to transfer.

I. GENERAL EDUCATION CORE (39-41)
Area A: Communication (9 credits)
ENG 101 [C1 900] Composition I - with a grade of C or better (3)
ENG 102 [C1 901R] Composition II - with a grade of C or better (3)
COMM 101 [C2 900] Principles of Communication (3)
Area B: Humanities and Fine Arts (9 credits)
Select three courses from the list for Area B on pages 50-52, with at least one course from humanities and one course from fine arts.
Area C: Mathematics (3-5 credits)
Select one math course from:
MATH 115 [M1 902] General Education Statistics (3)
MATH 153 [M1 902] Probability and Statistics (4)
MATH 171 [M1 906] Calculus with Analytic Geometry I (5)
Area D: Physical and Life Sciences (9 credits)
BIOL 112 [BIO 910] Organismal Biology (4)
CHEM 110 [BIO 906] General Chemistry I (5)
Area E: Social and Behavioral Sciences (9 credits)
Select three courses in at least two different disciplines from the list for Area E on pages 50-52.

II. AREA OF CONCENTRATION/MAJOR FIELD (17-19)
Select a minimum of 21-22 credits from the foundation courses listed below.
BIOL 111 [BIO 910] Cellular and Molecular Biology (4) required
CHEM 130 [BIO 907] General Chemistry II (5) required
Select 2 courses in physics, or 2 courses in chemistry, or 1 course each in each from:
CHEM 203 [BIO 908] Organic Chemistry I (5)
CHEM 204 [BIO 909] Organic Chemistry II (5)
PHYS 210 [BIO 903] University Physics I (4)
PHYS 220 [BIO 904] University Physics II (4)

III. ELECTIVES (2-6)
Select one course from CHEM 203, 204 or PHYSI 210, 220 if not already selected from Area II above, or any additional BIOL course. Courses such as microbiology and human anatomy and physiology sometimes will transfer for credit in allied health majors, but most often do not transfer as biology major credit.

Required A.S. Degree Program Total: 62 credits

BUSINESS
A.A. Degree • Suggested Curriculum

Business programs at community colleges and bachelor's degree institutions include courses and majors in general business, accounting, finance, marketing, and management. The following recommendations apply to programs in all of these fields. These are suggested courses which are designed to satisfy requirements in the Associate in Arts Degree at Prairie State College and to provide the basis for transferring to a four-year institution.

I. GENERAL EDUCATION CORE (38-40)
Area A: Communication (9 credits)
ENG 101 [C1 900] Composition I - with a grade of C or better (3)
ENG 102 [C1 901R] Composition II - with a grade of C or better (3)
COMM 101 [C2 900] Principles of Communication (3)
Area B: Humanities and Fine Arts (9 credits)
Select three courses from the list for Area B on pages 50-52, with at least one course from humanities and one course from fine arts.
PHILO 202 [H4 904] Ethics (3) recommended
Area C: Mathematics (4-5 credits)
Select one math course from:
MATH 157 [M1 900-B] Calculus for Business & Social Science (4)
MATH 171 [M1 900-I] Calculus with Analytic Geometry I (5)
Area D: Physical and Life Sciences (7-8 credits)
Select one life science course and one physical science course from the list for Area D on pages 50-52. One course must have a lab component.
Area E: Social and Behavioral Sciences (9 credits)
Select three courses in at least two different disciplines from the list for Area E on pages 50-52.
ECON 201 [S3 901] Macroeconomic Principles (3) recommended
ECON 202 [S3 902] Microeconomic Principles (3) recommended

II. AREA OF CONCENTRATION/MAJOR FIELD (14)
BUS 131 [BUS 903] Financial Accounting (4)
BUS 132 [BUS 904] Managerial Accounting (3)
BUS 240 [BUS 901] Elementary Statistics (4)
ITAPP 101 [BUS 902] Introduction to Computers (3)

III. ELECTIVES (8-10)
BUS 101 [BUS 911] Introduction to Modern Business (3)
BUS 201 [BUS 912] Business Law (3)
OR
BUS 210 [BUS 913] Business Law and Its Environment (3)
Select any other business course (2-4)

Special note: Courses such as Principles of Management, Principles of Marketing, Principles of Finance, Intermediate Accounting, and Cost Accounting, etc., are considered junior-level or upper-division courses at most universities. Some universities, though, will accept these courses as elective credit (but it often will not count toward the hours you need for a major in business). Some have provisions for validating this credit. In this case, a student may be requested to take a proficiency examination, take the next course in sequence, or take a specific CLEP subject examination. Students are strongly advised to consult the information for the school of their choice before registering for these courses.

Required A.A. Degree Program Total: 62 credits

Foreign Language Requirements: Some universities have a foreign language requirement. Generally, four years of a single foreign language in high school or four semesters of language in college will fulfill this requirement. It is recommended that students complete the entire sequence at one institution.
CHEMISTRY

A.S. Degree • Suggested Curriculum

The chemist is concerned with the application of scientific principles to practical problems. Employment opportunities for chemists include, among others, theoretical research activities, and problem-solving in management, marketing, and production. Bachelor’s programs in chemistry are built on an in-depth foundation of sequential courses in science and math, while upper-division courses provide the preparation necessary for graduate studies and/or work in industry.

I. GENERAL EDUCATION CORE (39-40)

Area A: Communication (9 credits)
ENG 101 [C1 900] Composition I - with a grade of C or better (3)
ENG 102 [C1 901R] Composition II - with a grade of C or better (3)
COMM 101 [C2 900] Principles of Communication (3)

Area B: Humanities and Fine Arts (9 credits)
Select three courses from the list for Area B on pages 50-52 with at least one course from humanities and one course from fine arts.

Area C: Mathematics (5 credits)
MATH 171 [M1 900-1] Calculus with Analytic Geometry I (5)

Area D: Physical and Life Sciences (7-8 credits)
PHYSI 210 [P2 900L] University Physics I (4) recommended
Select one life science from the list for Area D on pages 50-52 (3-4)

Area E: Social and Behavioral Sciences (9 credits)
Select three courses in at least two different disciplines from the list for Area E on pages 50-52.

II. AREA OF CONCENTRATION/MAJOR FIELD (22-23)
Select a minimum of 22-23 credits from the foundation courses listed below. Be aware that because of differences among schools in the number of credits for which various courses are offered, and the possible need for prerequisite courses, it may be difficult to complete an Associate in Science degree without taking more credits than will be accepted in transfer.

CHEM 110 [CHM 911] General Chemistry I (5)
CHEM 130 [CHM 912] General Chemistry II (5)
CHEM 203 [CHM 913] Organic Chemistry I (5)
CHEM 204 [CHM 914] Organic Chemistry II (5)
MATH 172 [MTH 902] Calculus with Analytic Geometry II (5)
MATH 173 [MTH 903] Calculus with Analytic Geometry III (5)
PHYSI 220 [BIO 904] University Physics II (4)

Required A.S. Degree Program Total: 62 credits

Foreign Language Requirements: Some universities have a foreign language requirement. Generally, four years of a single foreign language in high school or four semesters of language in college will fulfill this requirement. It is recommended that students complete the entire sequence at one institution.

PRE-CLINICAL LABORATORY SCIENCE

A.S. Degree • Suggested Curriculum

Clinical Laboratory Scientists play an important role in the detection, diagnosis and treatment of many diseases. Baccalaureate programs in the field are called clinical laboratory science or medical laboratory science and prepare students to perform complex analyses and manage all areas of the laboratory as a Level III practitioner.

I. GENERAL EDUCATION CORE (39-40)

Area A: Communication (9 credits)
ENG 101 [C1 900] Composition I - with a grade of C or better (3)
ENG 102 [C1 901R] Composition II - with a grade of C or better (3)
COMM 101 [C2 900] Principles of Communication (3)

Area B: Humanities and Fine Arts (9 credits)
Select three courses from the list for Area B on pages 50-52 with at least one course from humanities and one from fine arts.

Area C: Mathematics (3-4 credits)
Select one math course from:
MATH 115 [M1 902] General Education Statistics (3)
MATH 153 [M1 902] Probability and Statistics (4)

Area D: Physical and Life Sciences (9 credits)
BIOL 112 [CLS 901] Organismal Biology (4)
CHEM 130 [CLS 907] General Chemistry II (5)
CHEM 203 [CLS 908] Organic Chemistry I (5)
CHEM 204 [CLS 909] Organic Chemistry II (5)

Area E: Social and Behavioral Sciences (9 credits)
Select three courses in at least two different disciplines from the list for Area E on pages 50-52.

II. AREA OF CONCENTRATION/MAJOR FIELD (22-23)

BIOL 211 [CLS 905] Microbiology (4) required
CHEM 130 [CLS 907] General Chemistry II (5) required
CHEM 203 [CLS 908] Organic Chemistry I (5)
CHEM 204 [CLS 909] Organic Chemistry II (5)

Select two biology courses from the following:
BIOL 111 [CLS 902] Cellular and Molecular Biology (4)
BIOL 221 [CLS 903] Human Anatomy & Physiology I (4)
BIOL 222 [CLS 904] Human Anatomy & Physiology II (4)

Required A.S. Degree Program Total: 62 credits

Foreign Language Requirements: Some universities have a foreign language requirement. Generally, four years of a single foreign language in high school or four semesters of language in college will fulfill this requirement. It is recommended that students complete the entire sequence at one institution.
COMMUNICATION DISORDERS
A.A. Degree • Suggested Curriculum

This program is designed for students who plan to transfer to Governors State University for a Bachelor of Health Science Degree in Communication Disorders. The undergraduate major in Communication Disorders at Governors State offers preprofessional education in speech-language pathology, audiology, and related areas. The Associate of Arts Degree at Prairie State and Bachelor of Health Science Degree at Governors State do not qualify students for state teaching and national certification, but rather provide the foundation necessary for the graduate curriculum which leads to certification. Students will begin taking the General Education and Professional Education requirements for Illinois teaching certificates (Type 10 or Type 03/09) endorsed as Speech and Language Impaired, or the School Service Personnel certificate (Type 73), endorsed as Speech-Language Pathologist.

Please note: Each senior institution has its own transfer policies. We strongly urge you to consult the school of your choice and/or the Prairie State College Counseling & Academic Advising Center to discuss the transferability of courses in relation to the school and major selected.

I. GENERAL EDUCATION CORE (38)

Area A: Communication (9 credits)
- ENGL 101 [C1 900] Composition I - with a grade of C or better (3)
- ENGL 102 [C1 901R] Composition II - with a grade of C or better (3)
- COMM 101 [C2 900] Principles of Communication (3)

Area B: Humanities and Fine Arts (9 credits)
Select from three courses from the list for Area B on pages 50-52, with at least one course selected from humanities and one from fine arts.

Area C: Mathematics (3 credits)
- MATH 105 [M1 902] General Education Statistics (3)

Area D: Physical and Life Sciences (8 credits)
Select one life science and physical science course from the list for Area D on pages 50-52. One course must have a lab component.

Area E: Social and Behavioral Sciences (9 credits)
- PSYC 101 [S6 900] Introduction to Psychology (3)
- HIST 201 [S2 900] U.S. History: 1492-1877 (3)

II. AREA OF CONCENTRATION/MAJOR FIELD (6)

ED 100 Introduction to Education (3)
ED 101 Child Growth and Development (3)

III. ELECTIVES (18)

ECED 103 Health, Safety and Nutrition (3)
OR
HLTH 101 Health and Human Development (2)
ECED 201 Sign Language I (3) suggested
ECED 202 Sign Language II (3) suggested
One Non-Western Culture Course (3)
One English literature course (3)
Any additional general education course from the list on pages 50-52.

Required A.A. Degree Program Total: 62 credits

Foreign Language Requirements: Some universities have a foreign language requirement. Generally, four years of a single foreign language in high school or four semesters of language in college will fulfill this requirement. It is recommended that students complete the entire sequence at one institution.

COMPUTER SCIENCE - INFORMATION SYSTEMS EMPHASIS
A.S. Degree • Suggested Curriculum

The study of computer science and business focuses on the development of problem-solving skills and tools, and the ability to analyze situations and effectively use these tools. Career opportunities exist for business and financial analysts and information systems specialists. Students are strongly encouraged to complete the Associate in Science degree prior to transfer.

I. GENERAL EDUCATION CORE (38-40)

Area A: Communication (9 credits)
- ENGL 101 [C1 900] Composition I - with a grade of C or better (3)
- ENGL 102 [C1 901R] Composition II - with a grade of C or better (3)
- COMM 101 [C2 900] Principles of Communication (3)

Area B: Humanities and Fine Arts (9 credits)
Select three courses from the list for Area B on pages 50-52, with at least one course from humanities and one course from fine arts.

Area C: Mathematics (4-5 credits)
Select one math course from:
- MATH 155 [M1 906] Finite Mathematics (4)
- MATH 157 [M1 900-8] Calculus for Business and Social Sciences (4)
- MATH 171* [M1 900-1] Calculus with Analytic Geometry I (5)

Area D: Physical and Life Sciences (7-8 credits)
Select one life science course and one physical science course from the list for Area D on pages 50-52. One course must have a lab component.

Area E: Social and Behavioral Sciences (9 credits)
Select three courses in at least two different disciplines from the list for Area E on pages 50-52 including:
- ECON 201 [S3 901] Macroeconomic Principles (3)
- ECON 202 [S3 902] Microeconomic Principles (3)
Select one course other than ECON (3)

II. AREA OF CONCENTRATION/MAJOR FIELD (9)

ITAPP 101 [CS 910] Introduction to Computers (3)
Select one programming language sequence from the following:
- MATH 142 Introduction to Visual Basic Programming (3)
- AND ITPRG 242 Advanced Visual Basic Programming (3)

OR
- ITPRG 144 Introduction to C++ Programming (3)
- AND ITPRG 244 Advanced C++ Programming (3)

OR
- ITPRG 147 Introduction to JAVA Programming (3)
- AND ITPRG 247 Advanced JAVA Programming (3)

III. ELECTIVES (13-15)

BUS 131 [BUS 903] Financial Accounting (4)
BUS 132 [BUS 904] Managerial Accounting (3)
BUS 240 [BUS 901] Elementary Statistics (4)
MATH 210 [CS 915] Discrete Mathematics (3)
Select additional general education courses from the list on pages 50-52, or contact the planned transfer institution for additional course recommendations.

Required A.S. Degree Program Total: 62 credits

* Students should complete the entire sequence of MATH 171, 172, and 173 in the same school prior to transfer, since topics are covered in different order by different schools.
COMPUTER SCIENCE - TECHNICAL EMPHASIS
A.S. Degree • Suggested Curriculum

The Computer Science - Technical Emphasis curriculum focuses on algorithms, theoretical foundations of computer science, and development of software. A strong foundation in mathematics and science is needed for this emphasis. Graduates of this emphasis will be prepared to work for a variety of companies including those that have a software, engineering, scientific or mathematical focus. Baccalaureate schools may have multiple computer degree programs, often located in different departments, which build on the recommendations for the Computer Science - Technical Emphasis. This major is typically found in a department named Computer Science or Mathematics and Computer Science or within a College of Engineering. Some schools may not require all of the courses listed below.

Consult the baccalaureate schools you are considering and an advisor to select the appropriate courses for you.

I. GENERAL EDUCATION CORE (39-40)

Area A: Communication (9 credits)
- ENG 101 [C1 900] Composition I - with a grade of C or better (3)
- ENG 102 [C1 901R] Composition II - with a grade of C or better (3)
- COMM 101 [C2 900] Principles of Communication (3)

Area B: Humanities and Fine Arts (9 credits)
Select three courses from the list for Area B on pages 50-52, with at least one course from humanities and one from fine arts.

Area C: Mathematics (5 credits)
- MATH 171 [M1 900-1] Calculus with Analytic Geometry I* (5)

Area D: Physical and Life Sciences (7-8 credits)
- PHYSI 210 [P2 900L] University Physics I* (4)
Life Science course (3-4)

Area E: Social and Behavioral Sciences (9 credits)
Select three courses in at least two different disciplines.
- PSYCH 101 [S6 900] Introduction to Psychology (3) recommended
- SOCIO 101 [S7 900] Introduction to Sociology (3) recommended

II. AREA OF CONCENTRATION/MAJOR FIELD (9)

- MATH 172 [EGR 900-2] Calculus with Analytic Geometry II* (5)
- MATH 173 [EGR 900-3] Calculus with Analytic Geometry III* (5)
- MATH 210 [CS 915] Discrete Mathematics (3)
- PHYSI 220 [EGR 912] University Physics II* (4)
- PHYSI 230 [EGR 914] University Physics III* (4)

III. ELECTIVES (13-14)
Students should select electives from the general education course list on pages 42-44.

Required A.S. Degree Program Total: 62 credits

CRIMINAL JUSTICE
A.A. Degree • Suggested Curriculum

This curriculum is designed for students pursuing baccalaureate degrees in the fields of corrections, criminal justice, law enforcement and security management. Students are strongly encouraged to complete the Associate in Arts degree prior to transfer.

I. GENERAL EDUCATION CORE (37-38)

Area A: Communication (9 credits)
- ENG 101 [C1 900] Composition I - with a grade of C or better (3)
- ENG 102 [C1 901R] Composition II - with a grade of C or better (3)
- COMM 101 [C2 900] Principles of Communication (3)

Area B: Humanities and Fine Arts (9 credits)
Select three courses from the list for Area B on pages 50-52, with at least one course from humanities and one from fine arts.

Area C: Mathematics (3 credits)
Select one math course from:
- MATH 112 [M1 904] General Education Mathematics (3)
- MATH 115 [M1 902] General Education Statistics (3)

Area D: Physical and Life Sciences (7-8 credits)
Select one life science course and one physical science course from the list for Area D on pages 50-52. One course must have a lab component.

Area E: Social and Behavioral Sciences (9 credits)
Select three courses in at least two different disciplines.
- PSYCH 101 [S6 900] Introduction to Psychology (3) recommended
- SOCIO 101 [S7 900] Introduction to Sociology (3) recommended

II. AREA OF CONCENTRATION/MAJOR FIELD (12)

- CJ 101 [CRJ 901] Introduction to Criminal Justice (3)
- CJ 102 [CRJ 912] Introduction to Criminology (3)
- CJ 106 [CRJ 911] Introduction to Corrections (3)
- CJ 204 [CRJ 914] Juvenile Justice (3)

III. ELECTIVES (12-13)
Select additional general education electives or refer to the program requirements for the university you plan to attend.
- CJ 201 Introduction to Criminal Law (3) recommended
- ITAPP 101 Introduction to Computers (3) recommended

Required A.A. Degree Program Total: 62 credits

Foreign Language Requirements: Some universities have a foreign language requirement. Generally, four years of a single foreign language in high school or four semesters of language in college will fulfill this requirement. It is recommended that students complete the entire sequence at one institution.
PRE-DENTISTRY  
A.S. Degree • Suggested Curriculum

This program provides the foundation coursework in biology, chemistry and math for students who plan to apply to dental school. Admission to dental school is very competitive. These courses also help prepare students to take the Dental Admission Test (DAT), which is required as part of the admissions screening program.

I. GENERAL EDUCATION CORE (41)

Area A: Communication (9 credits)
ENG 101 [C1 900] Composition I - with a grade of C or better (3)
ENG 102 [C1 901R] Composition II - with a grade of C or better (3)
COMM 101 [C2 900] Principles of Communication (3)

Area B: Humanities and Fine Arts (9 credits)
Select three courses from the list for Area B on pages 50-52, with at least one course from humanities and one course from fine arts.

Area C: Mathematics (5 credits)
MATH 171 [M1 900-1] Calculus with Analytic Geometry I (5)

Area D: Physical and Life Sciences (9 credits)
BIOL 112 [L1 900L] Organismal Biology (4)
CHEM 110 [P1 902L] General Chemistry I (5)

Area E: Social and Behavioral Sciences (9 credits)
PSYCH 101 [S6 900] Introduction to Psychology (3)
Select two additional courses from the list for Area E on pages 50-52. At least one course must be from a discipline other than PSYCH.

II. AREA OF CONCENTRATION/MAJOR FIELD (14)

BIOL 111 Cellular and Molecular Biology (4)
CHEM 130 General Chemistry II (5)
MATH 172 Calculus with Analytic Geometry II (5)

III. ELECTIVES (7) Select at least 7 credits from:

BIOL 221 Human Anatomy and Physiology I (4)
BIOL 222 Human Anatomy and Physiology II (4)
BIOL 225 Functional Human Anatomy Lab (2)
CHEM 203 Organic Chemistry I (5)
CHEM 204 Organic Chemistry II (5)

Required A.S. Degree Program Total: 62 credits

EDUCATION - EARLY CHILDHOOD EDUCATION
A.A. Degree • Suggested Curriculum

This curriculum has been designed to help students select courses which are likely to apply to a major in Early Childhood Education. This program meets the guidelines of the Illinois Articulation Initiative Baccalaureate Major Panel for Early Childhood Education. Students should obtain a copy of the Associate in Arts Degree Worksheet and should visit the IAI Web site at www.itransfer.org to get specific transfer course equivalencies for participating Illinois colleges and universities.

STATE CERTIFICATION REQUIREMENTS IN EARLY CHILDHOOD EDUCATION

To teach young children (birth to age 8) in Illinois public schools, teachers must be certified by the State of Illinois upon completion of their baccalaureate degree program. To transfer into an approved baccalaureate program in Early Childhood Education as a junior, students must complete a minimum of 60 semester credits. Since admission is competitive, completion of the courses recommended below does not guarantee admission. Community college students are strongly encouraged to complete an Associate in Arts degree prior to transfer. A minimum grade point average of 2.5 on a 4.0 scale is usually required for program admission, and passage of a basic skills test (reading, writing, grammar, and math) also is required.

I. GENERAL EDUCATION CORE (42-43)

Area A: Communication (9 credits)
ENG 101 [C1 900] Composition I - with a grade of C or better (3)
ENG 102 [C1 901R] Composition II - with a grade of C or better (3)

Area B: Humanities and Fine Arts (9 credits)
Select three courses from the list for Area B on pages 50-52. At least one course must be from a discipline other than PSYCH.

Area C: Mathematics (8 credits)
MATH 200 Mathematics for Elementary Teaching I (4)
MATH 206 [M1 903] Mathematics for Elementary Teaching II (4)

Area D: Physical and Life Sciences (7-8 credits)
Select one life science course and one physical science course from the list for Area D on pages 50-52. One course must have a lab component.

Area E: Social and Behavioral Sciences (9 credits)
HIST 201 [S2 900] U.S. History: 1492 to 1877 (3)
OR
HIST 202 [S2 901] U.S. History: 1877 to Present (3)
POLSC 140 [S5 900] Introduction to U.S. Government and Politics (3)
PSYCH 101 [S6 900] Introduction to Psychology (3)

II. AREA OF CONCENTRATION/MAJOR FIELD (9)

Professional Early Childhood Education Courses
ED 100 Foundations of American Public Education (3)
ED 101 [ECE 912] Child Growth and Development (3)
ECED 104 [ECE 911] Introduction to Early Childhood Education (3)*
Select one course from:
ED 160 Technology for Teachers (3)
ED 212 Exceptional Child (3)
PSYCH 202 Educational Psychology (3)

Continued
EDUCATION:
EARLY CHILDHOOD EDUCATION

Continued from previous page

III. ELECTIVES (7-8)
ECED 103 [ECE 902] Health, Safety and Nutrition (3)* recommended
OR
HLTH 101 Health and Wellness (2)
EDU 120 Child, Family and Community (3) recommended
Additional Humanities course (3)
Additional Science course (4)
Select one non-Western or Third World Cultures course: ART131, GEOG102, HUMAN101, HIST111, 115, 116, or 140 (3)
Additional general education course from the lists on pages 50-52.

*Note: Before enrolling in any additional courses with an ECED or ED prefix at Prairie State College, consult the Transfer Guides in the Counseling & Academic Advising Center to determine the transferability of these courses.

Required A.A. Degree Program Total: 62 credits

Please note: Each senior institution has its own transfer policies. We strongly urge you to consult the school of your choice early in your program and/or the Prairie State College Counseling & Academic Advising Center to discuss the transferability of courses.

EDUCATION: ASSOCIATE OF ARTS IN TEACHING: SECONDARY MATHEMATICS

A.A.T Degree • Required Curriculum

The A.A.T in Secondary Mathematics is a two-year transfer degree program designed for students preparing for careers as secondary education mathematics teachers. The program incorporates foundation coursework in teacher education, field based experiences and content coursework in mathematics. Students who successfully complete the program should be able to begin their upper-division coursework upon transfer.

I. GENERAL EDUCATION CORE (39-40)
Area A: Communication (9 credits)
ENG 101 Composition I (3)
ENG 102 Composition II (3)
COMM 101 Principles of Communication (3)
Area B: Humanities and Fine Arts (9 credits) **
Select three courses from the list for Area B on pages 50-52, with at least one from humanities and one fine arts.
Area C: Mathematics (3 credits)
MATH 171 Calculus with Analytic Geometry I (5)
*Note: The Calculus sequence (MATH 171, 172, 173) must be completed prior to transfer.
Area D: Physical and Life Sciences (7-8 credits)
Select one life science course and one physical science course from the list for Area D on pages 50-52. One course must have a lab component.
Area E: Social and Behavioral Sciences (9 credits) **
Select three courses in at least two disciplines from the list for Area E on pages 50-52.
*Note: Select at least one course designated by IAI as non-Western (N) or Diversity (D) from either Social and Behavioral Sciences or Humanities and Fine Arts. Any of these courses will fulfill this requirement: ANTHR 215, 222; ART 131; ENG 215, 243; GEOG 101; HIST 111, 112, 115, 116, 140; HUMAN 101; POLSC 240; SOCIO 215, 220

II. PROGRAM REQUIREMENTS (25-26)
ED 100 Foundations of American Public Education (3)
MATH 172 Calculus with Analytic Geometry II* (5)
MATH 173 Calculus with Analytic Geometry III* (5)
MATH 220 Linear Algebra (3)
Choose one professional education course from the following courses (3)
ED 101 Child Growth and Development
OR
PSYCH 102 Human Growth and Development: Life Span
ED 160 Technology for Teachers
ED 212 Exceptional Child
PSYCH 202 Educational Psychology
Select one mathematics course from the following (3-4)
MATH 153 Probability and Statistics (4)
MATH 216 Differential Equations (3)
Select one additional course (3-4);
Select either one mathematics course from
MATH 153 Probability and Statistics (4)
MATH 216 Differential Equations (3)
OR
one professional education course from
ED 101 Child Growth and Development (3)
OR
one course from
PSYCH 102 Human Growth and Development: Life Span (3)
ED 212 Exceptional Child (3)
PSYCH 202 Educational Psychology (3)

Required A.A.T Degree Program Total: 64 credit hours
EDUCATION: TEACHER EDUCATION
A.A Degree • Suggested Curriculum

This curriculum suggests courses which are likely to apply to a major in Elementary, Secondary or Special Education. This program meets the guidelines of the Illinois Articulation Initiative Baccalaureate Major Panel for Teacher Education. Students should obtain a copy of the Associate in Arts Degree Worksheet and should visit the IAI Web site at www.itransfer.org to get specific transfer course equivalencies for participating Illinois colleges and universities.

STATE CERTIFICATION REQUIREMENTS
To teach in Illinois public schools, teachers must be certified by the State of Illinois. To transfer into a baccalaureate program in education as a junior, students must have 60-64 semester credits. Admission to university teacher preparation programs is competitive; completion of recommended courses does not guarantee acceptance into a program. Students must pass the Illinois Basic Skills test, which includes reading, writing, grammar and math, as a university requirement for program admission. Students should consult their community college advisor and an advisor at the senior university early and often.

I. GENERAL EDUCATION CORE (43)
Area A: Communication (9 credits)
ENG 101 Composition I (3)
ENG 102 Composition II (3)
COMM 101 Principles of Communication (3)
Area B: Humanities and Fine Arts (9 credits)**
ART 131 [F2 903N] Survey of Non-Western Art (3)
Select any English literature course (ENG 200 level courses) (3)
Select any additional course from the list for Area B on pages 50-52. (3)
Area C: Mathematics (8 credits)
MATH 101 Mathematics for Elementary Teaching I (4)
MATH 206 [M1 903] Mathematics for Elementary Teaching II (4)
Note: Students should consult advisors to determine the appropriate math course for their area of interest.
Area D: Physical and Life Sciences (7-8 credits)
Select one life science course and one physical science course from the list for Area D on pages 50-52. One course must have a lab component.
Area E: Social and Behavioral Sciences (9 credits)**
HIST 201 [S2 900] U.S. History: 1492 to 1877 (3) or
HIST 202 [S2 901] U.S. History: 1877 to Present (3)
PSYCH 101 [S6 900] Introduction to Psychology (3)
Area F: Additional Science course (4)
ED 160 Technology for Teachers (3)
ED 212 Exceptional Child (3)
PSYCH 202 Educational Psychology (3)
HLTH 101 Health and Human Development (2)
Additional Humanities course (3)
Additional Science course (4)
Select 3-6 credits in one academic discipline at the 200 level in consultation with an academic advisor.
Note: Select at least one course designated by IAI as non-Western (N) or Diversity (D) from either Social and Behavioral Sciences or Humanities and Fine Arts. Any of these courses will fulfill this requirement: ANTH 215, 222; ART 131; ENG 215, 243; GEOG 101; HIST 111, 112, 115, 116, 140; HUMAN 101; POLSC 240; SOCIO 215, 220

II. AREA OF CONCENTRATION/MAJOR FIELD (19)
Select 19 credits from:
ED 100 Foundations of American Public Education (3)
ED 101 Child Growth and Development (3)
Note: Secondary Education majors should select PSYCH 102 in place of ED 101.
ED 160 Technology for Teachers (3)
ED 212 Exceptional Child (3)
PSYCH 202 Educational Psychology (3)
HLTH 101 Health and Human Development (2)
Additional Humanities course (3)
Additional Science course (4)
Select 3-6 credits in one academic discipline at the 200 level in consultation with an academic advisor.
Note: Select at least one course designated by IAI as non-Western (N) or Diversity (D) from either Social and Behavioral Sciences or Humanities and Fine Arts. Any of these courses will fulfill this requirement: ANTH 215, 222; ART 131; ENG 215, 243; GEOG 101; HIST 111, 112, 115, 116, 140; HUMAN 101; POLSC 240; SOCIO 215, 220

Required A.A. Degree Program Total: 62 credits

PRE-ENGINEERING
A.S Degree • Suggested Curriculum

The engineer is concerned with the application of scientific principles to practical problems. Employment opportunities for engineers include the complete spectrum of the workforce and theoretical research activities. In the typical four-year curriculum, the first two years concentrate on the basic sciences including mathematics, chemistry and physics. The last two years emphasize advanced mathematics and science courses.

Prairie State College offers courses applicable to the first two years of the curriculum and will grant an Associate in Science degree to successful students.

I. GENERAL EDUCATION CORE (39-40)
Area A: Communication (9 credits)
ENG 101 [C1 900] Composition I - with a grade of C or better (3)
ENG 102 [C1 901R] Composition II - with a grade of C or better (3)
COMM 101 [C2 900] Principles of Communication (3)
Area B: Humanities and Fine Arts (9 credits)
Select 3 courses from the list for Area B on pages 50-52, with at least one course from humanities and one course from fine arts.
Area C: Mathematics (5 credits)
MATH 171 [EGR 901] Calculus with Analytic Geometry I (5)
Area D: Physical and Life Sciences (7-8 credits)
PHYS 210 [EGR 911] University Physics I (4)
Select one life science course (3-4)
Area E: Social and Behavioral Sciences (9 credits)
Select 3 courses in at least two different disciplines from list for Area E on pages 50-52.
ECON 201 [S3 901] Macroeconomic Principles (3) recommended
ECON 202 [S3 902] Microeconomic Principles (3) recommended
Select one Social & Behavioral Science Course, other than ECON (3)

II. AREA OF CONCENTRATION/MAJOR FIELD (22-23)
Essential Engineering prerequisite courses:
CHEM 110 [EGR 961] General Chemistry I (5)
MATH 172 [EGR 902] Calculus with Analytic Geometry II (5)
MATH 173 [EGR 903] Calculus with Analytic Geometry III (5)
MATH 216 [EGR 904] Differential Equations (3)
PHYSI 220 [EGR 912] University Physics II (4)
Suggested IAI Engineering Specialty Courses
For Chemical Engineering:
CHEM 130 [EGR 931] General Chemistry II (5)
CHEM 203 [EGR 932] Organic Chemistry I (5)
CHEM 204 [EGR 933] Organic Chemistry II (5)
For Civil Engineering:
CADMD 245 [EGR 941] Computer Aided Design (3)
For Computer Engineering Majors:
PHYS 230 [EGR 914] University Physics III (4)
For Electrical Engineering Majors:
PHYS 230 [EGR 914] University Physics III (4)

Required A.S. Degree Program Total: 62 credits
ENGLISH/LITERATURE

A.A. Degree • Suggested Curriculum

Four-year degree programs in English emphasize study of literature and literary criticism. Specializations in creative and/or technical writing prepare a student for certification as a high-school English teacher as well as for a wide range of professional writing jobs. An English major is considered good preparation for some professional programs. Students seeking a bachelor’s degree in English are strongly encouraged to complete an A.A. or A.S. degree prior to transfer. Since all literature courses require substantial formal writing, it is highly recommended that students complete the two-course writing sequence before enrolling in literature courses. Students are encouraged to keep course syllabi and a personal writing portfolio.

I. GENERAL EDUCATION CORE (37-38)

Area A: Communication (9 credits)
ENG 101 [C1 900] Composition I - with a grade of C or better (3)
ENG 102 [C1 901R] Composition II - with a grade of C or better (3)
COMM 101 [C2 900] Principles of Communication (3)

Area B: Humanities and Fine Arts (9 credits)
Select three courses from the list for Area B on pages 50-52 with at least one course from humanities and one course from fine arts.

Area C: Mathematics (3 credits)
Select one math course from:
MATH 112 [M1 904] General Education Mathematics (3)
MATH 115 [M1 902] General Education Statistics (3)

Area D: Physical and Life Sciences (7-8 credits)
Select one life science course and one physical science course from the list for Area D on pages 50-52. One course must have a lab component.

Area E: Social and Behavioral Sciences (9 credits)
Select three courses in at least two different disciplines from the list for Area E on pages 50-52.

II. AREA OF CONCENTRATION/MAJOR FIELD (21)

Select up to three courses from the following survey courses:
ENG 211 [EGL 911] American Literature I (3)
ENG 212 [EGL 912] American Literature II (3)
ENG 231 [EGL 913] British Literature I (3)
ENG 232 [EGL 914] British Literature II (3)

In addition to the survey courses, or in place of one of them, select one course from the following genre courses:
ENG 221 [EGL 915] Introduction to Poetry (3)
ENG 240 [EGL 917] Introduction to Fiction (3)
ENG 252 [EGL 916] Introduction to Drama (3)

III. ELECTIVES (12-13)

Some universities require multicultural dimensions within the major. The following courses will fulfill that requirement:
ENG 215 [H3 910D] African-American Literature (3)
ENG 243 [EGL 919] Non-Western Literature in Translation (3)

Universities offering a creative writing specialization will accept the following course in the creative writing specialization only:
ENG 110 [EGL 922] Creative Writing: Poetry (3)
ENG 111 [EGL 924] Creative Writing: Nonfiction Prose (3)

Foreign Language Requirements: Some universities have a foreign language requirement. Generally, four years of a single foreign language in high school or four semesters of language in college will fulfill this requirement. It is recommended that students complete the entire sequence at one institution.

Required A.A. Degree Program Total: 62 credits

GENERAL MATH/SCIENCE

A.S. Degree • Suggested Curriculum

This curriculum has been designed for students who plan to transfer into a bachelor of science degree program but are undecided about their specific major. It provides the basic foundation in math, the sciences, and general education required by universities for entry into math/science-related programs.

I. GENERAL EDUCATION CORE (41)

Area A: Communication (9 credits)
ENG 101 [C1 900] Composition I - with a grade of C or better (3)
ENG 102 [C1 901R] Composition II - with a grade of C or better (3)
COMM 101 [C2 900] Principles of Communication (3)

Area B: Humanities and Fine Arts (9 credits)
Select three courses from the list for Area B on pages 50-52, with at least one course from humanities and one course from fine arts.

Area C: Mathematics (5 credits)
MATH 171 [M1 900-1] Calculus with Analytic Geometry I (5)

Area D: Physical and Life Sciences (9 credits)
Select one life science course and one physical science course from the list for Area D on pages 50-52. One course must have a lab component.

Area E: Social and Behavioral Sciences (9 credits)
Select three courses in at least two different disciplines from the list for Area E on pages 50-52.

II. AREA OF CONCENTRATION/MAJOR FIELD (21)

Select 21 credits from college-level transfer-oriented courses such as:

A. Science and math foundation courses

Suggested science/math foundation courses include:

Biological Science:
BIOL 112 Organismal Biology (4) recommended
CHEM 110 General Chemistry I (5) recommended

Area E: Social and Behavioral Sciences (9 credits)

Required A.S. Degree Program Total: 62 credits

Foreign Language Requirements: Some universities have a foreign language requirement. Generally, four years of a single foreign language in high school or four semesters of language in college will fulfill this requirement. It is recommended that students complete the entire sequence at one institution.

Required A.S. Degree Program Total: 62 credits

Foreign Language Requirements: Some universities have a foreign language requirement. Generally, four years of a single foreign language in high school or four semesters of language in college will fulfill this requirement. It is recommended that students complete the entire sequence at one institution.
GEOLGY

A.S. Degree • Suggested Curriculum

Geologists study the earth, the processes that shape it, the resources we get from it, and the impact of human action on it. Geologists work in petroleum and mineral exploration, researching and predicting natural disasters, and teaching. An increasing number of geologists focus on environmental work, ensuring adequate water supplies and reducing pollution. In the typical four-year curriculum, the first two years are spent studying basic sciences, including mathematics, chemistry, and physics. The last two years emphasize advanced science courses. Students are strongly encouraged to complete the Associate in Science degree prior to transfer.

I. GENERAL EDUCATION CORE (40)

Area A: Communication (9 credits)
ENG 101 [C1 900] Composition I - with a grade of C or better (3)
ENG 102 [C1 901R] Composition II - with a grade of C or better (3)
COMM 101 [C2 900] Principles of Communication (3)

Area B: Humanities and Fine Arts (9 credits)
Select three courses from the list for Area B on pages 50-52, with at least one course selected from the humanities area and at least one course from the fine arts area.

Area C: Mathematics (5 credits)
MATH 171 [M1 900-1] Calculus with Analytic Geometry I (5)

Area D: Physical and Life Sciences (7-8 credits)
GEOL 101 [P1 907L] Physical Geology (4)
CHEM 110 General Chemistry I (5)

Area E: Social and Behavioral Sciences (9 credits)
Select three courses in at least two different disciplines from the list for Area B on pages 50-52.

II. AREA OF CONCENTRATION/MAJOR FIELD (22)
Select a minimum of 22 hours from the following courses. Check with the school you plan to transfer to before selecting courses in this area.

CHEM 110 General Chemistry I (5)
CHEM 130 General Chemistry II (5)
GEOL 101 Physical Geology (4)
GEOL 102 Physical Geology II (5)
MATH 172 Calculus with Analytic Geometry II (5)
MATH 173 Calculus with Analytic Geometry III (5)
PHYSI 120 College Physics I (4)*
PHYSI 130 College Physics II (4)*
PHYSI 210 University Physics I (4)*
PHYSI 220 University Physics II (4)*
Foreign Language Courses (4-16)

Required A.S. Degree Program Total: 62 credits

Some universities require algebra-based physics (PHYSI 120, 130). Others require calculus-based physics (PHYSI 210, 220)

Foreign Language Requirements: Some universities have a foreign language requirement. Generally, four years of a single foreign language in high school or four semesters of language in college will fulfill this requirement. It is recommended that students complete the entire sequence at one institution.

HEALTH ADMINISTRATION

A.A. Degree • Suggested Curriculum

This curriculum is designed for students who plan to transfer into a Bachelor of Health Science program in Health Administration. Health administrators develop and manage health services organizations and programs. Graduates of bachelor’s degree programs become unit or department heads in large and complex health care institutions such as hospitals, clinics, nursing homes, insurance companies, ambulatory care facilities and medical group management teams.

Please note: Each senior institution has its own transfer policies. We strongly urge you to consult the school of your choice and/or the Prairie State College Counseling & Academic Advising Center to discuss the transferability of courses in relation to the school and major selected.

I. GENERAL EDUCATION CORE (37-38)

Area A: Communication (9 credits)
ENG 101 [C1 900] Composition I - with a grade of C or better (3)
ENG 102 [C1 901R] Composition II - with a grade of C or better (3)
COMM 101 [C2 900] Principles of Communication (3)

Area B: Humanities and Fine Arts (9 credits)
Select three courses from the list for Area B on pages 50-52, with at least one course from humanities and one course from fine arts.

Area C: Mathematics (3 credits)
MATH 115 [M1 902] General Education Statistics (3)

Area D: Physical and Life Sciences (7-8 credits)
Select one life science and one physical science course from the list for Area D on pages 50-52. One course must have a lab component.

Area E: Social and Behavioral Sciences (9 credits)
ECON 201 [S3 901] Macroeconomic Principles (3)
ECON 202 [S3 902] Microeconomic Principles (3)

Select one additional course from an area other than ECON from the list for Area E on pages 50-52.

II. AREA OF CONCENTRATION/MAJOR FIELD (24-25)

BUS 101 Introduction to Modern Business (3)
BUS 131 Financial Accounting (4)
BUS 132 Managerial Accounting (3)
ITAPP 101 Introduction to Computers (3)
Any additional courses in Business
Any general education course from the lists on pages 50-52. Other elective courses recommended by the senior institution to which this degree will transfer.

Required A.S. Degree Program Total: 62 credits

This program represents an Articulation Agreement between Prairie State College and Governors State University. Students transferring to other universities should consult their institution of choice for course recommendations in each area.

Foreign Language Requirements: Some universities have a foreign language requirement. Generally, four years of a single foreign language in high school or four semesters of language in college will fulfill this requirement. It is recommended that students complete the entire sequence at one institution.
HISTORY
A.A. Degree • Suggested Curriculum

This transfer program is designed for students pursuing a baccalaureate degree in various areas of history. The history curriculum at Prairie State College provides students with the background in history and general education courses necessary for advanced work at a four-year institution. Students are strongly encouraged to complete the Associate in Arts degree prior to transfer.

I. GENERAL EDUCATION CORE (37-38)

Area A: Communication (9 credits)
- ENG 101 [C1 900] Composition I - with a grade of C or better (3)
- ENG 102 [C1 901R] Composition II - with a grade of C or better (3)

Area B: Humanities and Fine Arts (9 credits)
- Select three courses from the list for Area B on pages 50-52, with at least one course from humanities and at least one from fine arts.

Area C: Mathematics (3 credits)
- Select one math course from:
  - MATH 112 [M1 904] General Education Mathematics (3)
  - MATH 115 [M1 902] General Education Statistics (3)

Area D: Physical and Life Sciences (7-8 credits)
- Select one science course and one physical science course from the list for Area D on pages 50-52. One course must have a lab component.

Area E: Social and Behavioral Sciences (9 credits)
- Select three courses in at least two different disciplines from the list for Area E on pages 50-52. Students seeking certification as high school history teachers should select the following social and behavioral science courses:
  - GEOG 101 [S4 900N] Cultural Geography (3)
  - POLSC 140 [S5 900] Introduction to U.S. Government and Politics (3)
  - PSYCH 101 [S6 900] Introduction to Psychology (3)

II. AREA OF CONCENTRATION/MAJOR FIELD (12)

Area C: Mathematics (3 credits)
- Select one math course from:
  - MATH 115 [M1 902] General Education Statistics (3)

Area D: Physical and Life Sciences (7-8 credits)
- Select one life science course from the list for Area D on pages 50-52.
- Select one physical science course from the list for Area D on pages 50-52.

Area E: Social and Behavioral Sciences (9 credits)
- Select three courses from the list for Area E on pages 50-52. Students seeking certification as high school history teachers should select three courses from at least two different disciplines from the list for Area E on pages 50-52.

III. ELECTIVES (12-13)

1) Additional history courses may transfer either for history major credit or as general education credits, depending upon the transfer school.
2) Minor Field: Students who have decided on a minor field may complete one or more courses in their minor.
3) High School Teacher Certification: Students planning to seek high school teacher certification may complete one or more of the following professional education courses:
   - ED 100 [SED 901] Introduction to Education (3)
   - PSYCH 102 [SED 903] Human Growth & Development: Life-Span (3)
   - PSYCH 202 [SED 902] Educational Psychology (3)
   - HLTH 101 Health and Human Development (2)
4) Foreign Language: Competency through the fourth semester of a single foreign language is required for the B.A. degree in History in some schools, and for all majors in the College of Arts and Sciences at many schools.

Required A.A. Degree Program Total: 62 credits

INDUSTRIAL TECHNOLOGY
A.S. Degree • Suggested Curriculum

Manufacturing Technology is a combination of a technical (math/science) education with hands-on skills. It is a field of study that specializes in the application of manufacturing concepts, principles and processes to plan, design and manage machines and people. Employment in manufacturing industries in Illinois accounts for nearly 17 percent of Illinois’ non-farm employment. Three subcategories of durable goods manufacturers—primary metals, fabricated metals, and industrial machinery—together employ more than 300,000 Illinoisans. Programs of study as described in this recommendation include machining standards that comply with those outlined by the National Institute for Manufacturing Skills and the Illinois Occupational Skills Standards Machining Skills Cluster.

I. GENERAL EDUCATION CORE (37-38)

Area A: Communication (9 credits)
- ENG 101 [C1 900] Composition I - with a grade of C or better (3)
- ENG 102 [C1 901R] Composition II - with a grade of C or better (3)
- COMM 101 [C2 900] Principles of Communication (3)

Area B: Humanities and Fine Arts (9 credits)
- Select three courses from the list for Area B on pages 50-52, with at least one course from humanities and one from fine arts.

Area C: Mathematics (3 credits)
- Select one math course from:
  - MATH 115 [M1 902] General Education Statistics (3)

Area D: Physical and Life Sciences (7-8 credits)
- Select one life science course from the list for Area D on pages 50-52.
- Select one physical science course from the list for Area D on pages 50-52.

Area E: Social and Behavioral Sciences (9 credits)
- Select three courses from the list for Area E on pages 50-52.

Required A.S. Degree Program Total: 62 credits

Foreign Language Requirements: Some universities have a foreign language requirement. Generally, four years of a single foreign language in high school or four semesters of language in college will fulfill this requirement. It is recommended that students complete the entire sequence at one institution.
**PRE-LAW**  
**A.A. Degree • Suggested Curriculum**

This transfer program is designed to provide students with the background necessary for advanced work at a four-year institution. A baccalaureate degree from an accredited college and a satisfactory score on the Law School Admission Test (LSAT) are required for admission to most law schools. Most law schools have no specific requirements with regard to the courses chosen in pre-legal study.

Common majors among pre-law students include business, history, political science, psychology, sociology, and English. These subject areas help develop skills in close reading, critical thinking, and logical argument. Proficiency in these skills is considered essential for a career in law. Students are strongly encouraged to complete an Associate in Arts degree prior to transfer.

**I. GENERAL EDUCATION CORE (37-38)**

**Area A: Communication (9 credits)**
- ENG 101 [C1 900] Composition I - with a grade of C or better (3)
- ENG 102 [C1 901R] Composition II - with a grade of C or better (3)
- COMM 101 [C2 900] Principles of Communication (3)

**Area B: Humanities and Fine Arts (9 credits)**
Select three courses from the list for Area B on pages 50-52, with at least one course from humanities and one from fine arts.

**Area C: Mathematics (3 credits)**
Select one math course from:
- MATH 112 [M1 904] General Education Mathematics (3)
- MATH 115 [M1 902] General Education Statistics (3)

**Area D: Physical and Life Sciences (7-8 credits)**
Select one life science course and one physical science course from the list for Area D on pages 50-52. One course must have a lab component.

**Area E: Social and Behavioral Sciences (9 credits)**
Select three courses in at least two different disciplines from the list for Area E on pages 50-52.

**II. AREA OF CONCENTRATION/MAJOR FIELD (12)**
Select four courses from the baccalaureate major you plan to pursue.

**III. ELECTIVES (12-13)**
Select any additional courses from the general education core courses listed on pages 50-52.

**Required A.A. Degree Program Total: 62 credits**

Foreign Language Requirements: Some universities have a foreign language requirement. Generally, four years of a single foreign language in high school or four semesters of language in college will fulfill this requirement. It is recommended that students complete the entire sequence at one institution.

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**LIBERAL ARTS**  
**A.A. Degree • Suggested Curriculum**

This curriculum is designed for students who plan to transfer into a bachelor of arts degree program but are undecided about their specific major. It provides the basic foundation in the humanities, fine arts, social and behavioral sciences, mathematics, communication, and physical and life sciences that is required by universities for entry into arts- and sciences-related programs.

**I. GENERAL EDUCATION CORE (37-38)**

**Area A: Communication (9 credits)**
- ENG 101 [C1 900] Composition I - with a grade of C or better (3)
- ENG 102 [C1 901R] Composition II - with a grade of C or better (3)
- COMM 101 [C2 900] Principles of Communication (3)

**Area B: Humanities and Fine Arts (9 credits)**
Select three courses from the list for Area B on pages 50-52, with at least one course from humanities and one from fine arts.

**Area C: Mathematics (3 credits)**
Select one math course from:
- MATH 112 [M1 904] General Education Mathematics (3)
- MATH 115 [M1 902] General Education Statistics (3)

**Area D: Physical and Life Sciences (7-8 credits)**
Select one life science course and one physical science course from the list for Area D on pages 50-52. One course must have a lab component.

**Area E: Social and Behavioral Sciences (9 credits)**
Select three courses in at least two different disciplines from the list for Area E on pages 50-52.

**II. AREA OF CONCENTRATION/MAJOR FIELD (12-16)**
Select four courses from college-level transfer-oriented courses such as additional general education core courses from Areas B through E on pages 50-52, or beginning-level courses in baccalaureate majors you wish to explore, or foreign language courses.

Liberal Arts Elective or Entry-Level Major Course or Foreign Language (12-16)

**III. ELECTIVES (8-13)**
Select any additional courses from general education core courses listed in Areas B through E on pages 50-52.

**Required A.A. Degree Program Total: 62 credits**

Foreign Language Requirements: Some universities have a foreign language requirement. Generally, four years of a single foreign language in high school or four semesters of language in college will fulfill this requirement. It is recommended that students complete the entire sequence at one institution.
MASS COMMUNICATION
A.A. Degree • Suggested Curriculum

ADVERTISING/PUBLIC RELATIONS; RADIO/TV/FILM; JOURNALISM/NEWS; EDITORIAL/PHOTO

It is recommended that students complete the entire sequence at one institution.

Mass Communication encompasses four major program areas: Advertising/Public Relations; Radio/TV/Film; Journalism/News; Editorial/Photojournalism; and Mass Communication (Integrated). For each major, nine credit hours in the major in addition to the General Education Core Curriculum are recommended. Remaining credits needed to complete an associate’s degree should be chosen with the assistance of an academic advisor. Some schools have specific requirements for admission to the major (e.g., minimum GPA, portfolio review, or other forms of assessment). Check with an advisor.

I. GENERAL EDUCATION CORE (37-38)

Area A: Communication (9 credits)
ENG 101 [C1 900] Composition I - with a grade of C or better (3)
ENG 102 [C1 901R] Composition II - with a grade of C or better (3)
COMM 101 [C2 900] Principles of Communication (3)

Area B: Humanities and Fine Arts (9 credits)
Select three courses from the list for Area B on pages 50-52, with at least one course from humanities and one course from fine arts.

Area C: Mathematics (3 credits) recommended
Select one math course from:
MATH 112 [M1 904] General Education Mathematics (3)
MATH 115 [M1 902] General Education Statistics (3)

Area D: Physical and Life Sciences (7-8 credits)
Select one life science course from the list for Area D on pages 50-52. One course must have a lab component.

Area E: Social and Behavioral Sciences (9 credits)
Select three courses in at least two different disciplines from the list for Area E on pages 50-52.

II. AREA OF CONCENTRATION/MAJOR FIELD (12)
BUS 261 [MC 912] Advertising (3)
COMM 111 [MC 911] Introduction to Mass Communication (3)
COMM 115 [MC 914] Introduction to Broadcasting (3)
GC 175 Animation Techniques (3)
ITAPP 101 Introduction to Computers (3)
ITWEB 103 Introduction to Web Site Development (3)
ITWEB 105 Multimedia Writing (3)
JRNLM 101 [MC 919] Introduction to Journalism (3)

III. ELECTIVES (12-13)
Students should select electives from the list on pages 50-52. Students planning to teach at the high school level should also refer to the recommended curriculum for Secondary Education for additional course selections.

Required A.A. Degree Program Total: 62 credits

Forex Language Requirements: Some universities have a foreign language requirement. Generally, four years of a single foreign language in high school or four semesters of language in college will fulfill this requirement. It is recommended that students complete the entire sequence at one institution.

MATHEMATICS
A.S. Degree • Suggested Curriculum

It is recommended that students complete the entire sequence at one institution. Bachelor’s degree programs in mathematics prepare students with diverse career goals by developing rigorous, logical thinking; an appreciation and familiarity with complex structures and algorithms; and the ability to learn technical material and abstract concepts. Students are strongly encouraged to complete an Associate in Arts or Associate in Science degree prior to transfer into a baccalaureate Mathematics program. Since admission is competitive, completing the courses recommended below does not by itself guarantee admission.

I. GENERAL EDUCATION CORE (39-40)
Area A: Communication (9 credits)
ENG 101 [C1 900] Composition I - with a grade of C or better (3)
ENG 102 [C1 901R] Composition II - with a grade of C or better (3)
COMM 101 [C2 900] Principles of Communication (3)

Area B: Humanities and Fine Arts (9 credits)
Select three courses from the list for Area B on pages 50-52, with at least one course from humanities and one course from fine arts.

Area C: Mathematics (5 credits)
MATH 171 [M1 900-1] Calculus with Analytic Geometry I (5)

Area D: Physical and Life Sciences (7-8 credits)
PHYSI 210 [P2 900L] University Physics I (4)

Area E: Social and Behavioral Sciences (9 credits)
Select three courses in at least two different disciplines from the list for Area E on pages 50-52.

II. AREA OF CONCENTRATION/MAJOR FIELD (16)
MATH 172 [MTH 902] Calculus with Analytic Geometry II (5)
MATH 173 [MTH 903] Calculus with Analytic Geometry III (5)
MATH 201 [MTH 922] Engineering Computer Programming (3)
MATH 216 [MTH 912] Differential Equations (3)

III. ELECTIVES (6-7)
Select additional general education electives from the list on pages 50-52 or refer to the recommended curriculum for Computer Science or Secondary Education for additional course choices.

Required A.S. Degree Program Total: 62 credits

Note: Students who intend to teach mathematics at the secondary level should pursue the A.A.T. degree in Secondary Mathematics. See page 61.
PRE-MEDICINE

A.S. Degree • Suggested Curriculum

This program provides the foundation course work in biology, chemistry and mathematics for students who plan to apply to medical school. Admission to medical school is highly competitive and it is important for students to maintain a high overall grade point average, as well as to excel in laboratory science courses. This course work also helps to prepare the student to take the Medical College Admissions Test (MCAT), which is required as part of the admissions screening program.

I. GENERAL EDUCATION CORE (41)

Area A: Communication (9 credits)
ENG 101 [C1 900] Composition I - with a grade of C or better (3)
ENG 102 [C1 901R] Composition II - with a grade of C or better (3)
COMM 101 [C2 900] Principles of Speech Communication (3)

Area B: Humanities and Fine Arts (9 credits)
Select three courses from the list for Area B on pages 50-52, with at least one course from humanities and one from fine arts.

Area C: Mathematics (5 credits)
MATH 171 [M1 901-1] Calculus with Analytic Geometry I (5)

Area D: Physical and Life Sciences (9 credits)
BIOL 112 [L1 900L] Organismal Biology (4)
CHEM 110 [PI 902L] General Chemistry I (5)

Area E: Social and Behavioral Sciences (9 credits)
Select three courses from at least two different disciplines from the list for Area E on pages 50-52.
PSYCH 101 [S6 900] Introduction to Psychology (3) recommended

II. AREA OF CONCENTRATION/MAJOR FIELD (21)

BIOL 111 Cellular and Molecular Biology (4)
BIOL 221 Human Anatomy & Physiology I (4)
BIOL 222 Human Anatomy & Physiology II (4)
CHEM 130 General Chemistry II (5)
CHEM 203 Organic Chemistry I (5)
CHEM 204 Organic Chemistry II (5)
MATH 172 Calculus with Analytic Geometry II (5)

Required A.S. Degree Program Total: 62 credits

Foreign Language Requirements: Some universities have a foreign language requirement. Generally, four years of a single foreign language in high school or four semesters of language in college will fulfill this requirement. It is recommended that students complete the entire sequence at one institution.

MUSIC EDUCATION

A.A. Degree • Suggested Curriculum

This curriculum has been designed for students who plan to transfer into a Bachelor of Arts degree program with a major in music education. A broad background in music theory, literature, keyboarding skills, aural skills, ensemble performance and applied music instruction is offered at the community college level to provide a foundation for advanced study in music at a senior institution. Transfer admission in music education is competitive! Students may need to demonstrate their skill level through auditions and/or placement testing at the senior institution. To teach music in the Illinois public schools, teachers must be certified by the State of Illinois. All senior institutions require passage of basic skills tests in reading, writing, grammar, and math.

I. GENERAL EDUCATION CORE (38)

Area A: Communication (9 credits)
ENG 101 [C1 900] Composition I - with a grade of C or better (3)
ENG 102 [C1 901R] Composition II - with a grade of C or better (3)
COMM 101 [C2 900] Principles of Communication (3)

Area B: Humanities and Fine Arts (9 credits)
Select three courses from the list for Area B on pages 50-52, with at least one course from humanities and one from fine arts.

ART 131 [F2 903N] Survey of Non-Western Art (3) recommended

Area C: Mathematics (3 credits)
Select one math course from:
MATH 112 [M1 904] General Education Mathematics (3)
MATH 115 [M1 902] General Education Statistics (3)

Area D: Physical and Life Sciences (8 credits)
Select one life science course and one physical science course from the list for Area D on pages 50-52. One course must have a lab component.

Area E: Social and Behavioral Sciences (9 credits)
Select three courses from at least two different disciplines from the list for Area E on pages 50-52. The following courses are recommended to fulfill teacher certification requirement:
HIST 201 [S2 900] U.S. History: 1492 to 1877 (3)
HIST 202 [S2 901] U.S. History: 1877 to Present (3)
POLSC 140 [S5 900] Introduction to U.S. Government and Politics (3)
PSYCH 101 [S6 900] Introduction to Psychology (3)

II. AREA OF CONCENTRATION/MAJOR FIELD (min. of 24)

Take one musicianship course each term for a total of 16 credits.

MUSIC 101 Musicianship I (4)
MUSIC 102 [MUS 902] Musicianship II (4)
MUSIC 201 [MUS 903] Musicianship III (4)
MUSIC 202 [MUS 904] Musicianship IV (4)

Select from Ensemble Groups I-IV: Take one each term for total of 4 credits.
MUSIC 110 [MUS 908] Community Chorus (1)
MUSIC 120 [MUS 908] Wind Ensemble (1)
MUSIC 152 [MUS 908] Jazz Ensemble I (1)
MUSIC 153 [MUS 908] Jazz Ensemble II (1)
MUSIC 162 [MUS 908] Vocal Ensemble I (1)
MUSIC 163 [MUS 908] Vocal Ensemble II (1)

Select from Applied Music Instruction I-IV (Private Music Lessons): Take one each term for a total of 8 credits.
MUSIC 191 [MUS 909] Private Applied Music I (2)
MUSIC 192 [MUS 909] Private Applied Music II (2)
MUSIC 291 [MUS 909] Private Applied Music III (2)
MUSIC 292 [MUS 909] Private Applied Music IV (2)

Required A.A. Degree Program Total: 62 credits

Foreign Language Requirements: Some universities have a foreign language requirement. Generally, four years of a single foreign language in high school or four semesters of language in college will fulfill this requirement. It is recommended that students complete the entire sequence at one institution.
## MUSIC PERFORMANCE

**A.A. Degree • Suggested Curriculum**

This curriculum is designed for students who plan to transfer into a Bachelor of Arts degree program with a major in music performance. A broad background in music theory, literature, keyboarding skills, aural skills, ensemble performance and applied music instruction is offered at the community college level to provide a foundation for advanced study in music at a senior institution. Transfer admission in music is competitive, and most senior colleges require auditions and placement testing as part of the transfer admissions process.

### I. GENERAL EDUCATION CORE (37-38)

**Area A: Communication (9 credits)**
- ENG 101 [C1 900] Composition I - with a grade of C or better (3)
- ENG 102 [C1 901R] Composition II - with a grade of C or better (3)
- COMM 101 [C2 900] Principles of Communication (3)

**Area B: Humanities and Fine Arts (9 credits)**
Select three courses from the list for Area B on pages 50-52, with at least one course from humanities and one from fine arts.

**Area C: Mathematics (3 credits)**
Select one math course from:
- MATH 112 [M1 904] General Education Mathematics (3)
- MATH 115 [M1 902] General Education Statistics (3)

**Area D: Physical and Life Sciences (7-8 credits)**
Select one life science course and one physical science course from the list for Area B on pages 50-52. One course must have a lab component.

**Area E: Social and Behavioral Sciences (9 credits)**
Select three courses in at least two different disciplines from the list for Area E on pages 50-52.

### II. AREA OF CONCENTRATION/MAJOR FIELD (min. of 24-25)

Take one musicianship course each term for a total of 16 credits.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUSIC 101</td>
<td>4</td>
</tr>
<tr>
<td>MUSIC 102</td>
<td>4</td>
</tr>
<tr>
<td>MUSIC 201</td>
<td>4</td>
</tr>
<tr>
<td>MUSIC 202</td>
<td>4</td>
</tr>
</tbody>
</table>

Select from Ensemble Groups I-IV: Take one each term for a total of 4 credits.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUSIC 110</td>
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<tr>
<td>MUSIC 120</td>
<td>1</td>
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<tr>
<td>MUSIC 152</td>
<td>1</td>
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<tr>
<td>MUSIC 153</td>
<td>1</td>
</tr>
<tr>
<td>MUSIC 162</td>
<td>1</td>
</tr>
<tr>
<td>MUSIC 163</td>
<td>1</td>
</tr>
</tbody>
</table>

Select from Applied Music Instruction I-IV (Private Music Lessons): Take one each term for a total of 8 credits.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUSIC 191</td>
<td>2</td>
</tr>
<tr>
<td>MUSIC 192</td>
<td>2</td>
</tr>
<tr>
<td>MUSIC 291</td>
<td>2</td>
</tr>
<tr>
<td>MUSIC 292</td>
<td>2</td>
</tr>
</tbody>
</table>

Required A.A. Degree Program Total: 62 credits

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## PRE-NURSING

**A.S. Degree • Suggested Curriculum**

A registered nurse (RN) supervises, teaches and delegates nursing care to health team members and delivers direct care and treatment. The RN also prepares patients for surgery, administers intravenous therapy, establishes patient care plans, assesses and evaluates patient needs, and supervises nursing care. Students who earn a bachelor’s degree in nursing are also licensed RN’s by the Illinois Department of Financial and Professional Regulation. For optimum transfer, students should take courses in chemistry, math and humanities.

### I. GENERAL EDUCATION CORE (39)

**Area A: Communication (9 credits)**
- ENG 101 [C1 900] Composition I - with a grade of C or better (3)
- ENG 102 [C1 901R] Composition II - with a grade of C or better (3)
- COMM 101 [C2 900] Principles of Communication (3)

**Area B: Humanities and Fine Arts (9 credits)**
Select three courses from the list for Area B on pages 50-52, with at least one course from humanities and one from fine arts.

**Area C: Mathematics (3 credits)**
- MATH 115 [M1 902] General Education Statistics (3)

**Area D: Physical and Life Sciences (9 credits)**
- BIOL 112 [L1 900L] Organismal Biology (4)
- CHEM 110 [NUR 906] General Chemistry I (5)

**Area E: Social and Behavioral Sciences (9 credits)**
- PSYCH 101 [S6 902] Introduction to Psychology (3)
- PSYCH 102 [S6 900] Human Growth & Development: Life-Span (3)

One course other than PSYCH from the list for Area E on pages 50-52.

### II. AREA OF CONCENTRATION/MAJOR FIELD (23)

Take one musicianship course each term for a total of 16 credits.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 111</td>
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<td>BIOL 211</td>
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<tr>
<td>BIOL 221</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 130</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 203</td>
<td>4</td>
</tr>
</tbody>
</table>

Required A.S. Degree Program Total: 62 credits

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Foreign Language Requirements: Some universities have a foreign language requirement. Generally, four years of a single foreign language in high school or four semesters of language in college will fulfill this requirement. It is recommended that students complete the entire sequence at one institution.
PRE-OCCUPATIONAL THERAPY
A.S. Degree • Suggested Curriculum

This curriculum is designed to help students select courses which are likely to apply to a major in Occupational Therapy. The courses listed are suggested courses which are designed to satisfy requirements in the Associate in Science degree program at Prairie State College and to provide the basis for transferring to a four-year institution.

Occupational therapists are concerned with people’s ability to perform their work, self-care, and play in a competent, self-satisfying manner. When disease, trauma, or stress interferes with performance, the occupational therapist uses various methods of mutual problem-solving, environmental modification, and adaptive devices to support and enhance performance. This program provides the foundation course work necessary for admission to an occupational therapy program. Occupational therapy programs are masters degree level programs which require two years of prerequisite course work followed by four years in an approved occupational therapy program. Admission to occupational therapy programs is very competitive.

### I. GENERAL EDUCATION CORE (39-40)

**Area A: Communication (9 credits)**
- ENG 101 [C1 900] Composition I - with a grade of C or better (3)
- ENG 102 [C1 901R] Composition II - with a grade of C or better (3)
- COMM 101 [C2 900] Principles of Communication (3)

**Area B: Humanities and Fine Arts (9 credits)**
Select three courses from the list for Area B on pages 50-52, with at least one course from humanities and one from fine arts.

**Area C: Mathematics (3-4 credits)**
Select one math course from:
- MATH 115 [M1 902] General Education Statistics (3)
- MATH 153 [M1 902] Probability and Statistics (4)

**Area D: Physical and Life Sciences (9 credits)**
- BIOL 111 [L1 900L] Organismal Biology (4)
- CHEM 110 [P1 902L] General Chemistry I (5)

**Area E: Social and Behavioral Sciences (9 credits)**
- PSYCH 101 [S6 900] Introduction to Psychology (3) recommended
- SOCIO 101 [S7 900] Introduction to Sociology (3) recommended

One additional course from the list for Area E on pages 50-52.

### II. AREA OF CONCENTRATION/MAJOR FIELD (22-23)

- BIOL 221 Human Anatomy & Physiology I (4)
- BIOL 222 Human Anatomy & Physiology II (4)
- ED 101 Child Growth and Development (3)
- OR
- PSYCH 102 Human Growth and Development: Life-Span (3)
- PSYCH 203 Abnormal Psychology (3)

Other courses recommended by the senior institution (8-9)

Required A.S. Degree Program Total: 62 credits

Foreign Language Requirements: Some universities have a foreign language requirement. Generally, four years of a single foreign language in high school or four semesters of language in college will fulfill this requirement. It is recommended that students complete the entire sequence at one institution.

Please note: Each senior institution has its own transfer policies. We strongly urge you to consult the school of your choice and/or the Prairie State College Counseling & Academic Advising Center to discuss the transferability of courses in relation to the school you have selected.

PRE-PHARMACY
A.S. Degree • Suggested Curriculum

This curriculum is designed to help students select courses which are likely to apply to a pre-Pharmacy program. The courses listed are suggested courses which are designed to satisfy requirements in the Associate in Science degree program at Prairie State College and to provide the basis for transferring to a four-year institution.

The practice of clinical pharmacy promotes optimal, safe and appropriate drug use by patients. The clinical pharmacist is trained in all aspects of drug therapy management and patient drug education. The Pre-Pharmacy program provides students with the foundation course work necessary to meet the prerequisites for admission to a school of pharmacy. Pharmacy schools require applicants to complete two years of pre-pharmacy course work. The colleges of Pharmacy then offer the final four years of a six-year program leading to the Doctor of Pharmacy degree (PharmD). Admission to these programs is very competitive.

### I. GENERAL EDUCATION CORE (41)

**Area A: Communication (9 credits)**
- ENG 101 [C1 900] Composition I - with a grade of C or better (3)
- ENG 102 [C1 901R] Composition II - with a grade of C or better (3)
- COMM 101 [C2 900] Principles of Communication (3)

**Area B: Humanities and Fine Arts (9 credits)**
Select three courses from the list for Area B on pages 50-52, with at least one course from humanities and one from fine arts.

**Area C: Mathematics (5 credits)**
- MATH 171 [M1 900-1] Calculus with Analytic Geometry (5)

**Area D: Physical and Life Sciences (9 credits)**
- BIOL 112 [L1 902L] Organismal Biology (4)
- CHEM 110 [P1 902L] General Chemistry I (5)

**Area E: Social and Behavioral Sciences (9 credits)**
- PSYCH 101 [S6 900] Introduction to Psychology (3) recommended
- SOCIO 101 [S7 900] Introduction to Sociology (3) recommended
- Select one course from a discipline other than ECON from the list for Area B on pages 50-52.

### II. AREA OF CONCENTRATION/MAJOR FIELD (min. of 21)

Select from:
- BIOL 111 Cellular & Molecular Biology (4)
- BIOL 221 Human Anatomy & Physiology I (4)
- CHEM 130 General Chemistry II (5)
- CHEM 203 Organic Chemistry I (5)
- CHEM 204 Organic Chemistry II (5)

Required A.S. Degree Program Total: 62 credits

Please note: Each senior institution has its own transfer policies. We strongly urge you to consult the school of your choice and/or the Prairie State College Counseling & Academic Advising Center to discuss the transferability of courses in relation to the school you have selected.
PHOTOGRAPHY
A.A. Degree • Suggested Curriculum

This curriculum is designed for students who plan to pursue a baccalaureate program in fine arts photography, photojournalism or professional photography. The program provides basic courses for building technical competency as well as the general education foundation needed to enhance creativity and appreciation for aesthetics. Students are encouraged to begin development of a substantial portfolio. Students should complete the Associate in Arts degree prior to transfer. Admission to baccalaureate programs is highly competitive.

I. GENERAL EDUCATION CORE (37-38)
Area A: Communication (9 credits)
ENG 101 [C1 900] Composition I - with a grade of C or better (3)
ENG 102 [C1 901R] Composition II - with a grade of C or better (3)
COMM 101 [C2 900] Principles of Communication (3)
Area B: Humanities and Fine Arts (9 credits)
ART 126 [F2 904] History of Photography (3)
ART 121 History of Western Art I (3)
OR
ART 122 History of Western Art II (3) recommended
Select one humanities course from the list for Area B on pages 50-52.
Area C: Mathematics (3 credits)
Select one math course from:
MATH 112 [M1 904] General Education Mathematics (3)
MATH 115 [M1 902] General Education Statistics (3)
Area D: Physical and Life Sciences (7-8 credits)
Select one life science course and one physical science course from the list for Area D on pages 50-52. One course must have a lab component.
Area E: Social and Behavioral Sciences (9 credits)
Select three courses in at least two different disciplines from the list for Area E on pages 50-52.

II. AREA OF CONCENTRATION/MAJOR FIELD (12)
ART 101 Two Dimensional Design (3)
ART 102 Three Dimensional Design (3)
PHOTO 171 Introduction to Black & White Photography (3)
PHOTO 291 Survey of Contemporary Photography (3)

III. ELECTIVES (12-13)
Select any additional electives in photography or general education in consultation with an advisor. Some recommended courses include:
PHOTO 170 Digital Camera Skills (1)
PHOTO 174 Digital Darkroom Techniques (2)
PHOTO 175 Basic Lighting Skills (2)
PHOTO 180 Photoshop I (2)
PHOTO 275 Photographic Design (3)
PHOTO 285 Digital Color Production (3)
PHOTO 286 Independent Photo Project (3)
PHOTO 297 Professional Portfolio (3)
Any additional PHOTO course
Any additional general education course from the list on pages 50-52.

Required A.A. Degree Program Total: 62 credits

PHYSICAL SCIENCE
A.S. Degree • Suggested Curriculum

This program provides the foundation work for students planning to transfer to upper-division physical science programs or to teach physical science at the high school level. Students are strongly encouraged to complete the Associate in Science Degree prior to transfer.

I. GENERAL EDUCATION CORE (39-40)
Area A: Communication (9 credits)
ENG 101 [C1 900] Composition I - with a grade of C or better (3)
ENG 102 [C1 901R] Composition II - with a grade of C or better (3)
COMM 101 [C2 900] Principles of Communication (3)
Area B: Humanities and Fine Arts (9 credits)
Select three courses from the list for Area B on pages 50-52, with at least one course from humanities and one from fine arts.
Area C: Mathematics (5 credits)
MATH 171 [M1 900-1] Calculus with Analytic Geometry I (5)
Area D: Physical and Life Sciences (7-8 credits)
PHYS 112 [P9 900L] Earth Science (4)
One life science course from the list for Area D on pages 50-52. (3-4)
Area E: Social and Behavioral Sciences (9 credits)
Select three courses in at least two different disciplines from the list for Area E on pages 50-52.

II. AREA OF CONCENTRATION/MAJOR FIELD (12)
Select courses from Astronomy, Geology, Meteorology, or Physical Science:
ASTRO 101 Guide to the Universe (3)
ASTRO 104 The Solar System and Beyond (4)
GEOG 105 Introduction to Physical Geography (3)
GEOLO 101 Physical Geology (4)
METEO 150 Introduction to Meteorology (3)
PHYS 111 Physical Science (4)

III. ELECTIVES (10-11)
Select any additional courses from the general education core courses listed above. Students planning to teach at the high school level should also refer to the recommended curriculum for Secondary Education for additional course choices.

Required A.S. Degree Program Total: 62 credits

Foreign Language Requirements: Some universities have a foreign language requirement. Generally, four years of a single foreign language in high school or four semesters of language in college will fulfill this requirement. It is recommended that students complete the entire sequence at one institution.
PRE-PHYSICAL THERAPY
A.S. Degree • Suggested Curriculum

Physical therapy is the promotion of optimum human health and function through the application of scientific principles to prevent, identify, correct or alleviate dysfunctions originating in anatomy. This program provides the student with a sound background in the basic sciences and mathematics necessary for admission to a physical therapy program. Admission to these programs is very competitive! Physical therapy programs look for students with high grade point averages, especially in the science and math courses. In addition, documented clinical experience is a prerequisite for admission to most programs.

I. GENERAL EDUCATION CORE (41)
Area A: Communication (9 credits)
ENG 101 [C1 900] Composition I - with a grade of C or better (3)
ENG 102 [C1 901R] Composition II - with a grade of C or better (3)
COMM 101 [C2 900] Principles of Communication (3)

Area B: Humanities and Fine Arts (9 credits)
Select three courses from the list for Area B on pages 50-52, with at least one course from humanities and one from fine arts.

Area C: Mathematics (5 credits)
MATH 171 [M1 900-1] Calculus with Analytic Geometry (5)

Area D: Physical and Life Sciences (9 credits)
BIOL 112 [L1 902L] Organismal Biology (4)
CHEM 110 [P1 902L] General Chemistry I (5)

Area E: Social and Behavioral Sciences (9 credits)
PSYCH 101 [S6 900] Introduction to Psychology (3)
Select two remaining courses from the list for Area E on pages 50-52. One course must be in a discipline other than PSYCH.

II. AREA OF CONCENTRATION/MAJOR FIELD (21)
BIOL 111 Cellular & Molecular Biology (4)
CHEM 130 General Chemistry II (5)
MATH 153 Probability and Statistics (4)
PHYS 120 College Physics I (4)
PHYS 130 College Physics II (4)

III. ELECTIVES (0)
Although no elective hours are required for this degree, two semesters of Anatomy and Physiology are highly recommended for students who wish to gain admission to a physical therapy program.
BIOL 221 Human Anatomy & Physiology I (4)
BIOL 222 Human Anatomy & Physiology II (4)

Required A.S. Degree Program Total: 62 credits

FOREIGN LANGUAGE REQUIREMENTS: Some universities have a foreign language requirement. Generally, four years of a single foreign language in high school or four semesters of language in college will fulfill this requirement. It is recommended that students complete the entire sequence at one institution.

PHYSICS
A.S. Degree • Suggested Curriculum

The physicist is concerned with theoretical scientific principles. Employment opportunities for engineers and physicists include theoretical research activities plus many other options. In the typical four-year curriculum, the first two years concentrate on the basic sciences including mathematics, chemistry and physics. The last two years emphasize advanced mathematics and science courses. Prairie State College offers courses applicable to the first two years of the curriculum, and will grant an Associate in Science degree to successful students.

I. GENERAL EDUCATION CORE: (39-40)
Area A: Communication (9 credits)
ENG 101 [C1 900] Composition I - with a grade of C or better (3)
ENG 102 [C1 901R] Composition II - with a grade of C or better (3)
COMM 101 [C2 900] Principles of Communication (3)

Area B: Humanities and Fine Arts (9 credits)
Select three courses from the list for Area B on pages 50-52, with at least one course from humanities and one from fine arts.

Area C: Mathematics (5 credits)
MATH 171 [M1 900-1] Calculus with Analytic Geometry I (5)

Area D: Physical and Life Sciences (7-8 credits)
CHEM 110 [P1 902L] General Chemistry I (5)

Area E: Social and Behavioral Sciences (9 credits)
Select three courses in at least two different disciplines from the list for Area E on pages 50-52.

II. AREA OF CONCENTRATION/MAJOR FIELD
(a min. of 23)
Physics core courses:
PHYS 210 University Physics I (4)
PHYS 220 University Physics II (4)
PHYS 230 University Physics III (4)

Support courses:
CHEM 130 General Chemistry II (5)
MATH 172 Calculus with Analytic Geometry II (5)
MATH 173 Calculus with Analytic Geometry III (5)
MATH 201 Engineering Computer Programming (3)
MATH 216 Differential Equations (3)

Required A.S. Degree Program Total: 62 credits
POLITICAL SCIENCE
A.A. Degree • Suggested Curriculum

This curriculum is designed for students pursuing a baccalaureate degree in Political Science. The transfer program provides students with a broad background to examine all aspects of public life, and prepares them to be alert and well-informed participants in a wide variety of local, state, national, and international issues. Students are strongly encouraged to complete the Associate in Arts degree prior to transfer.

I. GENERAL EDUCATION CORE (37-38)
Area A: Communication (9 credits)
ENG 101 [C1 900] Composition I - with a grade of C or better (3)
ENG 102 [C1 901R] Composition II - with a grade of C or better (3)
COMM 101 [C2 900] Principles of Communication (3)

Area B: Humanities and Fine Arts (9 credits)
Select three courses from the list for Area B on pages 50-52 with at least one course from humanities and one course from fine arts.

Area C: Mathematics (3 credits)
Select one math course from:
MATH 112 [M1 904] General Education Mathematics (3)
MATH 115 [M1 902] General Education Statistics (3)

Area D: Physical and Life Sciences (7-8 credits)
Select one life science course and one physical science course from the list for Area D on pages 50-52. One course must have a lab component.

Area E: Social and Behavioral Sciences (9 credits)
Select three courses from the list for Area E on pages 50-52.

II. AREA OF CONCENTRATION/MAJOR FIELD (12)
POLSC 140 [PLS 911] Introduction to U.S. Government and Politics (3)
POLSC 152 [PLS 912] U.S., State and Local Government (3)
POLSC 230 [PLS 914] Introduction to Comparative Government (3)

III. ELECTIVES (12-13)
Select additional courses as recommended by the senior institution you plan to attend. Typical elective courses include, but are not limited to, economics, foreign language, geography, history, etc.

Required A.A. Degree Program Total: 62 credits

Foreign Language Requirements: Some universities have a foreign language requirement. Generally, four years of a single foreign language in high school or four semesters of language in college will fulfill this requirement. It is recommended that students complete the entire sequence at one institution.

PSYCHOLOGY
A.A. Degree • Suggested Curriculum

The Psychology transfer program provides a broad general education background and prepares students for the specialized coursework undertaken during the last two years of a baccalaureate program. Students who plan to major in psychology are encouraged to complete foundation coursework in sciences and mathematics in addition to completing a core of basic psychology courses. It is recommended that students complete the Associate in Arts degree prior to transfer.

I. GENERAL EDUCATION CORE: (37-40)
Area A: Communication (9 credits)
ENG 101 [C1 900] Composition I - with a grade of C or better (3)
ENG 102 [C1 901R] Composition II - with a grade of C or better (3)
COMM 101 [C2 900] Principles of Communication (3)

Area B: Humanities and Fine Arts (9 credits)
Select three courses from the list for Area B on pages 50-52, with at least one course selected from the humanities area and one course from the fine arts area.

Area C: Mathematics (3-5 credits)
Select one math course from:
MATH 115 [M1 902] General Education Statistics (3)
MATH 153 [M1 906] Finite Mathematics (4)
MATH 171 [M1 900-1] Calculus with Analytic Geometry I (5)

Area D: Physical and Life Sciences (7-8 credits)
Select one life science course and one physical science course from the list for Area D on pages 50-52. One course must have a lab component.

Area E: Social and Behavioral Sciences (9 credits)
PSYCH 101 [S6 900] Introduction to Psychology (3)
Select two additional courses from the list for Area E on pages 50-52. At least one course must be from a discipline other than psychology.

II. AREA OF CONCENTRATION/MAJOR FIELD (9)
Select three of the following courses:
PSYCH 102 [PSY 904] Human Growth & Development: Life-Span (3)
PSYCH 203 [PSY 903] Abnormal Psychology (3)
PSYCH 204 [PSY 906] Industrial/Organizational Psychology (3)
PSYCH 212 [PSY 907] Theories of Personality (3)
PSYCH 215 [PSY 908] Social Psychology (3)

III. ELECTIVES (13-16)
Select any additional courses as recommended by the senior institution you plan to attend. Students who plan to major in psychology are encouraged to complete additional foundation courses in sciences (e.g. biology, chemistry, physics, anatomy and physiology) and mathematics (e.g. college algebra, calculus and statistics). The number of psychology courses taken at the freshman/sophomore level should generally not exceed 12 credits and should be limited to the courses recommended above. Other recommended electives include foreign language, social science, and sociology.

Required A.A. Degree Program Total: 62 credits

Foreign Language Requirements: Some universities have a foreign language requirement. Generally, four years of a single foreign language in high school or four semesters of language in college will fulfill this requirement. It is recommended that students complete the entire sequence at one institution.
SOCIAL WORK
A.A. Degree • Suggested Curriculum

The profession of social work is devoted to helping people function optimally in their environment by providing direct and indirect services to individuals, families, groups and communities and by working to improve social conditions. Bachelor’s degree programs in social work prepare students for careers in public and private agencies such as child welfare, mental health, corrections, shelters, and many other workplaces. Community college students interested in completing bachelor’s degrees in social work are strongly encouraged to complete an Associate in Arts degree prior to transfer. Students should see their advisors about particular social work baccalaureate programs for specific entry requirements since admission to these programs is competitive and completion of courses does not guarantee admission to a program at a senior institution.

I. GENERAL EDUCATION CORE: (37-39)
Area A: Communication (9 credits)
ENG 101 [C1 900] Composition I - with a grade of C or better (3)
ENG 102 [C1 901R] Composition II - with a grade of C or better (3)
COMM 101 [C2 900] Principles of Communication (3)

Area B: Humanities and Fine Arts (9 credits)
PHILO 201 [H4 900] Introduction to Philosophy (3) recommended
PHILO 202 [H4 904] Ethics (3) recommended
Select an additional course in fine arts or interdisciplinary humanities/fine arts from the list for Area B on pages 50-52.

Area C: Mathematics (3 credits)
MATH 115 [M1 902] General Education Statistics (3)

Area D: Physical and Life Sciences (7-8 credits)
Select one life science course and one physical science course from the list for Area D on pages 50-52. One course must have a lab component.

Area E: Social and Behavioral Sciences (9 credits)
Select 3 courses in at least two different disciplines from the list for Area E on pages 50-52. The following are recommended:
ANTHR 222 [S1 901N] Introduction to Cultural & Social Anthropology (3)
PSYCH 101 [S6 900] Introduction to Psychology (3)
SOCIO 101 [S7 900] Introduction to Sociology (3)

II. AREA OF CONCENTRATION/MAJOR FIELD (15)
Recommended Social Work Core Courses:
PSYCH 102 [S6 903] Human Growth and Development: Life-Span (3)
PSYCH 203 [PSY 905] Abnormal Psychology (3)
PSYCH 215 [S8 900] Social Psychology (3)
SOCIO 111 [S7 901] Contemporary Social Issues (3)
SOCIO 201 Introduction to Social Work (3)

III. ELECTIVES (10-11)
Select additional courses as recommended by the senior institutions you plan to attend. Typical elective courses include:
ECON 201 [S3 901] Macroeconomic Principles (3)
PHILO 203 [H4 906] Introduction to Logic (3)
POLSC 140 [S5 900] Introduction to U.S. Governments and Politics (3)
PSYCH 217 Human Sexuality (3)
SOCIO 220 [SOC 913] Race Relations: A Multicultural Perspective (3)
Foreign Language (4-16)
Other elective courses recommended by the senior institution of your choice.

Required A.A. Degree Program Total: 62 credits

SOCIOLOGY
A.A. Degree • Suggested Curriculum

This curriculum is designed for students who plan to pursue a bachelor’s degree in such fields as behavioral science, and sociology. The Sociology transfer program provides students with a broad, general education background and prepares them for the specialized coursework undertaken during the last two years of a baccalaureate program and for eventual graduate-level study in social work. Students are strongly encouraged to complete the Associate in Arts degree prior to transfer.

I. GENERAL EDUCATION CORE (37-39)
Area A: Communication (9 credits)
ENG 101 [C1 900] Composition I - with a grade of C or better (3)
ENG 102 [C1 901R] Composition II - with a grade of C or better (3)
COMM 101 [C2 900] Principles of Communication (3)

Area B: Humanities and Fine Arts (9 credits)
Select three courses from the list for Area B on pages 50-52, with at least one course from humanities and one from fine arts.

Area C: Mathematics (3-4 credits)
Select one math course from:
MATH 115 [M1 902] General Education Statistics (3)
MATH 153 [M1 902] Probability & Statistics (4)
MATH 155 [M1 906] Finite Mathematics (4)

Area D: Physical and Life Sciences (7-8 credits)
Select one life science course and one physical science course from the list for Area D on pages 50-52. One course must have a lab component.

Area E: Social and Behavioral Sciences (9 credits)
ANTHR 215 [S1 900N] Introduction to Anthropology (3)
ANTHR 221 [S1 901N] Introduction to Cultural and Social Anthropology (3)
SOCIO 101 [S7 900] Introduction to Sociology (3)

Area F: Minor Field (12 credits)
SOCIO 210 [SOC 912] Marriage and the Family (3)
SOCIO 215 [SOC 914] Sex, Gender and Power (3)
SOCIO 220 [SOC 913] Race Relations: A Multicultural Perspective (3)

III. ELECTIVES (11-13)
Select any additional courses from the general education core courses, foreign language, or courses which are non-Western or multicultural in content. Students planning to teach at the high school level should refer to the Recommended Curriculum for Secondary Education for additional elective choices.

Required A.A. Degree Program Total: 62 credits

Foreign Language Requirements: Some universities have a foreign language requirement. Generally, four years of a single foreign language in high school or four semesters of language in college will fulfill this requirement. It is recommended that students complete the entire sequence at one institution.
SPEECH COMMUNICATION
A.A. Degree • Suggested Curriculum

This program provides the foundation for students planning to transfer to speech communication programs and specializing in such areas as interpersonal, organization, or persuasive communication; speech performance; or high school teaching. It is recommended that students complete a well-rounded general education core curriculum. Students are strongly encouraged to complete the Associate in Arts degree prior to transfer.

I. GENERAL EDUCATION CORE (37-38)

Area A: Communication (9 credits)
ENG 101 [C1 900] Composition I - with a grade of C or better (3)
ENG 102 [C1 901R] Composition II - with a grade of C or better (3)
COMM 101 [C2 900] Principles of Communication (3)

Area B: Humanities and Fine Arts (9 credits)
Select three courses from the list for Area B on pages 50-52, with at least one course from humanities and one course from fine arts.

Area C: Mathematics (3 credits)
Select one math course from:
MATH 112 [M1 904] General Education Mathematics (3)
MATH 115 [M1 902] General Education Statistics (3)

Area D: Physical and Life Sciences (7-8 credits)
Select one life science course and one physical science course from the list for Area D on pages 50-52. One course must have a lab component.

Area E: Social and Behavioral Sciences (9 credits)
Select three courses in at least two different disciplines from the list for Area E on pages 50-52.

II. AREA OF CONCENTRATION/MAJOR FIELD (9)

Recommended Speech Communication Courses
COMM 102 [SPC 911] Persuasive Public Speaking (3)
COMM 103 Group Discussion (3)
COMM 108 [SPC 921] Interpersonal Communication (3)

III. ELECTIVES (15-16)
Select additional courses as recommended by the senior institution you plan to attend. Typical elective courses include, but are not limited to:
COMM 111 Introduction to Mass Communication (3)
COMM 196 Applied Forensics I (1)
COMM 197 Applied Forensics II (1)
COMM 198 Applied Forensics III (1)
COMM 199 Applied Forensics IV (1)
Foreign Language courses (4-16)
Other elective courses

Required A.A. Degree Program Total: 62 credits

THEATRE ARTS
A.A. Degree • Suggested Curriculum

Students planning to pursue a baccalaureate degree are encouraged to complete an Associate in Arts degree prior to transfer. Transfer admission to theatre arts-related programs is competitive and some schools require an audition for admission to the program. Because each senior institution has its own transfer policies, we cannot guarantee the accuracy of this information for every school. Consult the school of your choice and/or the Prairie State College Counseling & Academic Advising Center to discuss the transferability of courses.

I. GENERAL EDUCATION CORE (37-38)

Area A: Communication (9 credits)
ENG 101 [C1 900] Composition I - with a grade of C or better (3)
ENG 102 [C1 901R] Composition II - with a grade of C or better (3)
COMM 101 [C2 900] Principles of Communication (3)

Area B: Humanities and Fine Arts (9 credits)
Select three courses from the list for Area B on pages 50-52, with at least one course from humanities and one course from fine arts (other than THTRE).

Area C: Mathematics (3 credits)
Select one math course from:
MATH 112 [M1 904] General Education Mathematics (3)
MATH 115 [M1 902] General Education Statistics (3)

Area D: Physical and Life Sciences (7-8 credits)
Select one life science course and one physical science course from the list for Area D on pages 50-52. One course must have a lab component.

Area E: Social and Behavioral Sciences (9 credits)
Select three courses in at least two different disciplines from the list for Area E on pages 50-52.

II. AREA OF CONCENTRATION/MAJOR FIELD (6)

THTRE 111 [TA 914] Fundamentals of Acting (3)
THTRE 112 [TA 918] Theatre Practicum/Acting (3)

III. ELECTIVES (18-19)
Select additional courses as recommended by the senior institution you plan to attend. Typical elective courses include but are not limited to:
ENG 271 [H3 905] Introduction to Shakespeare (3)
HUMAN 202 [HF 900] Form and Structure in the Arts (3)
THTRE 101 [F1 907] Understanding Theatre (3)
Foreign Language courses (4-16)
Other elective courses

Required A.A. Degree Program Total: 62 credits

Foreign Language Requirements: Some universities have a foreign language requirement. Generally, four years of a single foreign language in high school or four semesters of language in college will fulfill this requirement. It is recommended that students complete the entire sequence at one institution.
ASSOCIATE IN GENERAL STUDIES
DEGREE (A.G.S.) GUIDELINES

The Associate in General Studies (A.G.S.) degree, while not intended for transfer or directed at a specific occupation, allows students to design their own two-year program. It provides an opportunity for you to complete an associate’s degree of your own making. This degree has minimal general education requirements and thus allows you considerable freedom in designing and pursuing a course of study that meets your individualized learning goals. Note, however, that this degree is not recommended as a stepping-stone toward a baccalaureate degree, nor is it covered by the College’s Educational Guarantee. Students considering the Associate in General Studies degree should meet with an advisor or counselor to determine whether this degree is well suited to their educational goals and needs.

A.G.S. DEGREE REQUIREMENTS
A student will be recommended for an Associate in General Studies degree upon completion of the following requirements:

1. Enrolled at Prairie State College for one semester immediately preceding graduation, with passing grades in at least 15 semester hours of credit at Prairie State College (excluding proficiency credits).
2. Completed 62 semester hours of college credit, 20 of which are specified below.
3. Attained a minimum grade point average of 2.0.
4. Completed at least one course in each of the major General Education components (communication, humanities, science and mathematics and the social sciences).
5. Completed the remaining 47 credit hours for the degree based on the student’s area of interest, and including any baccalaureate or occupationally oriented courses offered by the College and numbered 100 or higher.
ASSOCIATE IN APPLIED SCIENCE DEGREE (A.A.S.) GUIDELINES

The Associate in Applied Science (A.A.S.) represents completion of a minimum of 60 credit hours in a technical or career program. Certificates are awarded after completion of up to 50 credits that focus on specific occupational or technical areas of study.

A.A.S. DEGREE REQUIREMENTS

An Associate in Applied Science degree is awarded to those students who successfully complete a program of study for a specific occupational area.

Candidates for the A.A.S. Degree must fulfill the following requirements:

1. Enrolled at Prairie State College for two semesters immediately preceding graduation and successfully completed at least 15 semester hours of credits at Prairie State College (excluding proficiency credits).
2. Completed program requirements as specified by the occupational/technical degree program (minimum of 60 semester hours). This includes a General Education Core Curriculum, program-mandated occupational/technical courses, and electives as determined by the A.A.S. degree program.
3. Attained a minimum cumulative grade point average of 2.0 on a 4.0 scale in all Prairie State College courses.
4. Filed appropriate evidence of high school graduation or GED certificate with the Admissions and Records Office.
5. Satisfied the U.S. and State of Illinois Constitution requirements by submitting a high school transcript that proves the test was successfully completed in high school, or by taking POLSC 140 or 152 or a proficiency exam.

A.A.S. DEGREE COMPONENTS

The A.A.S. degree is composed of a general education component, a core concentration of occupational/technical courses, and other program electives.

I. GENERAL EDUCATION CORE CURRICULUM FOR THE A.A.S. DEGREE

AREA A: Communication (6 semester hrs)
AREA A: Communication (6 semester hrs)
ENG 101 [C1 900] Composition I - with a grade of C or better
COMM 101 [C2 900] Principles of Communication

AREA B: Humanities and Fine Arts (3 semester hours)
One course, specified by program or selected from list for Area B on pages 50-52.

AREA C: Mathematics - demonstrate competence by:

a) Placing into MATH 095 or above on the Prairie State College Assessment Test; or
b) Completing MATH 090 - with a grade of C or better; or

completed math course(s) as specified by the degree program.

AREA D: Physical and Life Sciences (3-4 semester hours)
One course, specified by program or selected from the list for Area D on pages 50-52.

AREA E: Social and Behavioral Sciences (3 semester hours)
One course, specified by program or selected from the list for Area E on pages 50-52.

II. AREA OF CONCENTRATION/PROGRAM REQUIREMENTS

Program requirements are established by each department to reflect the core competencies expected in the workplace for specific occupations.

III. ELECTIVES

Electives are determined by each department based on options for specialization within a program or to provide students with choices related to their career goals.

CERTIFICATE GUIDELINES

Certificates are awarded after completion of up to 50 credits that focus on specific occupational or technical areas of study. Certificates are awarded to those students completing education and training in a particular occupational field of study. A student will be recommended for a certificate if the following requirements are met:

CERTIFICATE REQUIREMENTS

1. Completed the certificate requirements as specified in the certificate program.
2. Attained a minimum grade point average of 2.0 in the courses identified in the certificate program.
3. Completed 15 credit hours or one-half of the required credit hours for programs that exceed 30 credit hours, as a student at Prairie State College and enrolled at Prairie State College during the regular semester immediately preceding the awarding of the certificate.
CAREER PROGRAMS

The following list designates career degree and certificate programs by specific areas of study. Consult each program for the required curriculum. Curriculum for career programs reflects current workforce trends, skills standards, and licensure/accreditation standards where applicable.

AUTOMOTIVE
Automotive Technology (A.A.S.)
Automotive Alignment Specialist (Cert.)
Automotive Brake Specialist (Cert.)
Automotive Driveability Specialist (Cert.)
Automotive Engines Specialist (Cert.)
Automotive Heating/Air Conditioning Specialist (Cert.)
Automotive Parts Specialist (Cert.)
Automotive Service Management Specialist (Cert.)
Automotive Services Technology (Cert.)
Automotive Transmission Specialist (Cert.)

BUSINESS
Management (A.A.S.)
Accounting Technician (Cert.)
Bookkeeping (Cert.)
E-Business (see Information Technology)
Global Supply Chain (Cert.)
Management & Supervision (Cert.)
Supply Chain Management (Cert.)

COMPUTER AIDED DESIGN (CAD)
CAD/Mechanical Design Technology (A.A.S.)
CAD/Mechanical Design Technology (Cert.)
CAD Drafter (Cert.)
CAD Technician (Cert.)

COMPUTER ELECTRONICS
Computer Electronics Technology (A.A.S.)
Computer Electronics Technician (Cert.)

CRIMINAL JUSTICE
Criminal Justice Services (A.A.S.)
Criminal Justice Services (Cert.)

EARLY CHILDHOOD
Child and Family Studies (A.A.S.)
Child Care Assistant (Cert.)
Early Childhood Director (Cert.)
Early Childhood Teacher Basic (Cert.)

EDUCATION—PARAPROFESSIONAL
Paraprofessional Educator (A.A.S.)
Paraprofessional Educator (Cert.)

EMERGENCY SERVICES
Paramedicine (A.A.S.)
Emergency Medical Technician (Cert.)
First Responder (Cert.)

FIRE SCIENCE
Fire Science Technology (A.A.S.)
Fire Science Technology (Cert.)
Firefighter II (Cert.)
Firefighter/EMT (Cert.)

FITNESS
Fitness and Exercise (A.A.S.)
Group Fitness Instructor (Cert.)
Personal Trainer (Cert.)

GRAPHIC COMMUNICATIONS
Graphic Communications (A.A.S.)
Digital Design (Cert.)
E-Business (see Information Technology)
Interactive Design (Cert.)

HEALTH PROFESSIONS
Dental Hygiene (A.A.S.)
Nursing (A.A.S.)
Advanced Bedside Care Provider (Cert.)
CNA/Nurse Assistant (Cert.)
RN First Surgical Assistant (Cert.)
Surgical Technology (Cert.)

INDUSTRIAL TECHNOLOGY
CNC Programmer/Operator (Cert.)
Heating, Ventilation, A/C & Refrigeration (Cert.)
Hydraulics (Cert.)
Industrial Electrician (A.A.S.)
Industrial Electrician (Cert.)
Industrial Maintenance Technician (Cert.)
Machinist (Cert.)
Manufacturing Technology (A.A.S.)
Manufacturing Technology (Cert.)
Millwright (Cert.)
Tool & Die Making (A.A.S.)
Tool & Die Making (Cert.)
Welder Technician (Cert.)
Welding Specialist (Cert.)

INFORMATION TECHNOLOGY
Information Technology (A.A.S.)
Computer Repair Specialist (Cert.)
Database - Expert (Cert.)
Desktop Publishing (Cert.)
E-Business (Cert.)
Game Design and Development (Cert.)
Networking Specialist (Cert.)
Networking Specialist (Cert.)
Office Assistant (Cert.)
Programming (Cert.)
Software Specialist (Cert.)
Software Suite Applications (Cert.)
Software Technician (Cert.)
Software User (Cert.)
Spreadsheet - Proficient (Cert.)
Spreadsheet - Expert (Cert.)
Web Developer (Cert.)
Webmaster (Cert.)
Word Processing - Proficient (Cert.)
Word Processing - Expert (Cert.)

MUSIC
Music Production (A.A.S.) approval pending
Music Technology (Cert.)

PERSONAL TRAINER
(see Fitness)

PHOTOGRAPHY
Photographic Studies (A.A.S.)
Photography (Cert.)
Portrait Photography (Cert.)
AUTOMOTIVE TECHNOLOGY

A.A.S. Degree
This program provides the balance of theory and practical knowledge necessary for students preparing for careers in the automotive technology industry. Service technicians are trained to maintain and repair cars, vans, small trucks, and other vehicles. Using both hand tools and specialized diagnostic test equipment, they learn to pinpoint problems and make necessary repairs or adjustments. In addition to forming complex and difficult repairs, technicians handle a number of routine maintenance procedures such as oil changes, tire rotation and battery replacement. Technicians also interact with customers to explain repair procedures and discuss maintenance needs.

I. GENERAL EDUCATION CORE (20)
Area A: Communication (6 credits)
ENG 101 Composition I - with a grade of C or better (3)
COMM 101 Principles of Communication (3)
Area B: Humanities and Fine Arts (3 credits)
Select one course from Area B on pages 50-52 (3)
Area C: Mathematics (4 credits)
TECH 109 Technical Mathematics I (4) required
Area D: Physical and Life Sciences (4 credits)
TECH 221 Technical Physics I (4) required
Area E: Social and Behavioral Sciences (3 credits)
Select one course from Area E on pages 50-52 (3)

II. AREA OF CONCENTRATION/PROGRAM REQUIREMENTS (47)
AUTO 101 Basic Automobile Service and Systems (3)
AUTO 102 Automotive Engines (4)
AUTO 107 Automotive Electricity/Electronics I (4)
AUTO 108 Suspension and Steering Systems (4)
AUTO 202 Automotive Brake Systems (4)
AUTO 205 Manual Transmissions and Transaxles (4)
AUTO 206 Automotive Engine Performance (4)
AUTO 207 Automotive Heating/Air-Conditioning (4)
AUTO 208 Automotive Transmissions/Transaxles (4)
AUTO 210 Automotive Electricity/Electronics II (4)
AUTO 211 Automotive Engine Performance II (4)
AUTO 215 Advanced Automotive Service and Systems (4)

Program Total: 67 credits

AUTOMOTIVE ALIGNMENT SPECIALIST
Certificate
This short-term program trains students to function as front-end mechanics. Students learn to align and balance wheels, as well as repair steering mechanisms and suspension systems.

PROGRAM REQUIREMENTS
AUTO 101 Basic Automobile Service and Systems (3)
AUTO 108 Steering and Suspension Systems (4)

Program Total: 7 credits

AUTOMOTIVE BRAKE SPECIALIST
Certificate
Students in this program are trained to work on drum and disk braking systems, parking brakes and their hydraulic systems. Students learn to inspect, adjust, remove, repair and reinstall brake shoes, disk pads, rotors, wheel and master cylinders, and hydraulic fluid lines.

PROGRAM REQUIREMENTS
AMATH 100 Basic Mathematics for the Skilled Trades (2)
AUTO 101 Basic Automobile Service and Systems (3)
AUTO 107 Automotive Electricity/Electronics I (4)
AUTO 202 Automotive Brake Systems (4)

Program Total: 13 credits
AUTOMOTIVE DRIVEABILITY SPECIALIST
Certificate
This short-term program trains students to diagnose driveability problems. Students learn the basics of the engine, engine performance, how the electronics work, as well as the computer system functions of the vehicle. Students are taught to adjust the ignition timing and valves, and adjust or replace spark plugs or other parts to ensure efficient engine performance. Electronic test equipment is used to adjust and locate malfunctions in fuel, ignition, and emissions control systems.

PROGRAM REQUIREMENTS
AUTO 101 Basic Automobile Service and Systems (3)
AUTO 102 Automotive Engines (4)
AUTO 107 Automotive Electricity/Electronics I (4)
AUTO 206 Automotive Engine Performance (4)
AUTO 211 Automotive Engine Performance II (4)

Program Total: 19 credits

AUTOMOTIVE ENGINES SPECIALIST
Certificate
This short-term program trains the student to function as an engine mechanic. Students learn to overhaul engines, as well as service the electrical needs of the engine.

PROGRAM REQUIREMENTS
AMATH 100 Basic Mathematics for the Skilled Trades (2)
AUTO 101 Basic Automobile Service and Systems (3)
AUTO 102 Automotive Engines (4)
AUTO 107 Automotive Electricity/Electronics I (4)

Program Total: 13 credits

AUTOMOTIVE HEATING/AIR CONDITIONING SPECIALIST
Certificate
This short-term program prepares technicians to install and repair air-conditioners as well as service components such as compressors and condensers.

PROGRAM REQUIREMENTS
AMATH 100 Basic Mathematics for the Skilled Trades (2)
AUTO 101 Basic Automobile Service and Systems (3)
AUTO 107 Automotive Electricity/Electronics I (4)
AUTO 207 Automotive Heating/Air Conditioning (4)

Program Total: 13 credits

AUTOMOTIVE PARTS SPECIALIST
Certificate
This short-term program trains the student for positions in parts management. Students learn the parts management system as well as basic business management techniques and introductory computer skills.

PROGRAM REQUIREMENTS
AMATH 100 Basic Mathematics for the Skilled Trades (2)
AUTO 101 Basic Automobile Service and Systems (3)
AUTO 223 Automotive Parts Management (2)
ITAPP 101 Introduction to Computers (3)
Business Elective: Select one course from BUS 107, 127, 170, or 241 (3)

Program Total: 13 credits

AUTOMOTIVE SERVICES TECHNOLOGY
Certificate
This program prepares students for employment in automotive servicing and repair, engine testing, automotive field services, and automotive parts and shop management.

PROGRAM REQUIREMENTS
AUTO 101 Basic Automobile Service and Systems (3)
AUTO 102 Automotive Engines (4)
AUTO 107 Automotive Electricity/Electronics I (4)
AUTO 108 Suspension and Steering Systems (4)
AUTO 202 Automotive Brake Systems (4)
AUTO 205 Manual Transmissions and Transaxles (4)
AUTO 206 Automotive Engine Performance (4)
AUTO 208 Automatic Transmissions and Transaxles (4)
AUTO 210 Automotive Electricity/Electronics II (4)
AUTO 211 Automotive Engine Performance II (4)

Program Total: 39 credits
AUTOMOTIVE SERVICE MANAGEMENT SPECIALIST

Certificate
Service management specialists are the link between the customers seeking repair or maintenance for their vehicles and the technicians who perform the work. Students are trained to write repair orders, inspect vehicles to determine work that needs to be done, determine costs of the work, and prepare itemized estimates. In addition, students learn basic computer skills and basic business management skills. After gaining experience in entry-level positions, successful students can go on to the management/supervisory levels in auto shops.

PROGRAM REQUIREMENTS
AUTO 101       Basic Automobile Service and Systems (3)
AUTO 224       Automotive Services Management (2)
BUS 103          Business Mathematics (3)
BUS 127          Business Communications (3)
ITAPP 101        Introduction to Computers (3)
Business Elective: Select from BUS 105, 107, 109, 170, 241, 242 (3)

Program Total: 17 credits

AUTOMOTIVE TRANSMISSION SPECIALIST

Certificate
This short-term program trains mechanics to work on gear trains, couplings, hydraulic pumps and other parts of automotive transmissions. Because these are complex mechanisms and include electronic parts, their repair requires considerable experience and training, including a knowledge of hydraulics.

PROGRAM REQUIREMENTS
AUTO 101       Basic Automobile Service and Systems (3)
AUTO 102       Automotive Engines (4)
AUTO 205       Manual Transmissions and Transaxles (4)
AUTO 208       Automatic Transmissions/Transaxles (4)

Program Total: 15 credits
BUSINESS

Management (A.A.S.) 83
Accounting Technician 83
Bookkeeping 84
E-Business [see Information Technology] 107
Global Supply Chain 84
Management and Supervision 84
Supply Chain Management 84

MANAGEMENT

A.A.S. Degree

This program is designed for working adults who wish to develop or enhance skills for positions of greater responsibility. The program draws from business, finance and economics to give prospective supervisors and managers guidelines for directing the work of others in a business environment and institutional organizations. Students may specialize in the functional areas of financial, marketing, human resources, or supply chain management.

I. GENERAL EDUCATION CORE (18-19)

Area A: Communication (6 credits)
ENG 101                Composition I - with a grade of C or better. (3)
COMM 101             Principles of Communications (3)
Area B: Humanities and Fine Arts (3 credits)
Select one course from Area B on pages 50-52. (3)
Area C: Mathematics (3 credits)
MATH 112              General Education Mathematics (3)
Area D: Physical and Life Sciences (3-4 credits)
Select one course from Area D on pages 50-52. (3-4)
Area E: Social and Behavioral Science (3 credits)
ECON 201              Macroeconomic Principles (3)

II. AREA OF CONCENTRATION/PROGRAM REQUIREMENTS (39-41)

BUS 101 Introduction to Modern Business (3)
BUS 105 Business Relations (3)
BUS 127 Business Communications (3)
BUS 131 Financial Accounting (4)
BUS 201 Business Law I (3)
BUS 241 Principles of Management (3)
ECON 202 Microeconomic Principles (3)
BUS 251 Principles of Marketing (3)
BUS 298 Seminar (1)
BUS 299 Internship (1-3)
ITAPP 101 Introduction to Computers (3)
Select ONE of the Specialization Options listed below (9-10)

Option A: FINANCIAL MANAGEMENT

BUS 132 Managerial Accounting (3)
BUS 138 Accounting Software I (1.5)
BUS 139 Accounting Software II (1.5)
BUS 165 Personal Asset Management (4)

Option B: MARKETING MANAGEMENT

BUS 120 Sales (3)
BUS 170 Small Business Management (3)
BUS 261 Advertising (3)

ACCOUNTING TECHNICIAN

Certificate

This certificate program prepares students for entry-level employment as an accounting assistant, junior accountant, junior auditor, head or full-charge bookkeeper, or junior analyst. This program is not designed for students who plan to become professional accountants and CPAs. Students interested in these careers should follow the Associate in Arts degree program for Pre-Business Majors.

PROGRAM REQUIREMENTS

BUS 101 Introduction to Modern Business (3)
BUS 103 Business Mathematics (3)
BUS 127 Business Communications (3)
BUS 131 Financial Accounting (4)
BUS 132 Managerial Accounting (3)
BUS 138 Accounting Software I (1.5)
BUS 139 Accounting Software II (1.5)
BUS 201 Business Law (3)
BUS 298 Seminar (1)
BUS 299 Internship (1-3)
ECON 201 Macroeconomic Principles (3)
ITAPP 125 Spreadsheet Applications - Level 1 (2)
ITAPP 126 Spreadsheet Applications - Level 2 (2)

Program Total: 31-33 credits
BOOKKEEPING

Certificate
This career certificate program is designed for individuals interested in pursuing careers as bookkeepers, accounts receivable or payable clerks, or payroll clerks. This program is not designed for students who plan to become professional accountants and CPAs. Students interested in these careers should follow the Associate in Arts Degree program for Pre-Business Majors.

PROGRAM REQUIREMENTS

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 101</td>
<td>Introduction to Modern Business</td>
<td>3</td>
</tr>
<tr>
<td>BUS 103</td>
<td>Business Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>BUS 107</td>
<td>Bookkeeping and Procedural Accounting</td>
<td>3</td>
</tr>
<tr>
<td>BUS 138</td>
<td>Accounting Software I</td>
<td>1.5</td>
</tr>
<tr>
<td>BUS 139</td>
<td>Accounting Software II</td>
<td>1.5</td>
</tr>
</tbody>
</table>

Program Total: 12 credits

GLOBAL SUPPLY CHAIN

Certificate
The Global Supply Chain curriculum is designed to meet the educational and training needs of advancement-oriented individuals working in fields associated with the flow of materials from the supplier to the customer. Such activities include inventory and warehouse management, physical distribution, order management, materials handling, and capacity management. In addition, the curriculum provides individuals with the conceptual and applied skills necessary for advancement to positions of enhanced responsibilities including written and oral communication skills, human resource management skills, and basic computer literacy skills. The curriculum may also provide a review of content for various certification exams in the field.

PROGRAM REQUIREMENTS

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 101</td>
<td>Introduction to Modern Business</td>
<td>3</td>
</tr>
<tr>
<td>BUS 105</td>
<td>Human Relations</td>
<td>3</td>
</tr>
<tr>
<td>BUS 127</td>
<td>Business Communications</td>
<td>3</td>
</tr>
<tr>
<td>BUS 241</td>
<td>Principles of Management</td>
<td>3</td>
</tr>
<tr>
<td>ITAPP 101</td>
<td>Introduction to Computers</td>
<td>1</td>
</tr>
<tr>
<td>TWL 100</td>
<td>Transportation and Physical Distribution</td>
<td>3</td>
</tr>
<tr>
<td>TWL 110</td>
<td>Introduction to Supply Chain Management</td>
<td>3</td>
</tr>
<tr>
<td>TWL 120</td>
<td>Introduction to Import/Export</td>
<td>3</td>
</tr>
<tr>
<td>TWL 130</td>
<td>Principles of Operations Management</td>
<td>3</td>
</tr>
<tr>
<td>TWL 140</td>
<td>Transportation and Cargo Security</td>
<td>2</td>
</tr>
</tbody>
</table>

Program Total: 29 credits

MANAGEMENT & SUPERVISION

Certificate
This program is intended for adult employees in public service, business and industry who wish to develop or enhance skills in management and supervision for positions of greater responsibility. Courses in management and supervision have been developed in cooperation with area business and industry. Classes are open to adult employees in public service, business, and industry.

PROGRAM REQUIREMENTS

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 101</td>
<td>Introduction to Modern Business</td>
<td>3</td>
</tr>
<tr>
<td>BUS 105</td>
<td>Human Relations</td>
<td>3</td>
</tr>
<tr>
<td>BUS 109</td>
<td>Principles of Supervision</td>
<td>3</td>
</tr>
<tr>
<td>BUS 209</td>
<td>Supervisors as Trainers</td>
<td>3</td>
</tr>
<tr>
<td>BUS 241</td>
<td>Principles of Management</td>
<td>3</td>
</tr>
<tr>
<td>BUS 242</td>
<td>Human Resources Management</td>
<td>3</td>
</tr>
<tr>
<td>BUS 298</td>
<td>Seminar</td>
<td>1</td>
</tr>
<tr>
<td>BUS 299</td>
<td>Internship</td>
<td>2-3</td>
</tr>
<tr>
<td>ITAPP 101</td>
<td>Introduction to Computers</td>
<td>1</td>
</tr>
</tbody>
</table>

Select additional courses as recommended by program coordinator. (6)

Program Total: 30-31 credits

SUPPLY CHAIN MANAGEMENT

Certificate
The Supply Chain Management curriculum is designed to meet the educational and training needs of advancement-oriented individuals working in fields associated with the flow of materials from the supplier to the customer. Such activities include inventory and warehouse management, physical distribution, order management, materials handling, and capacity management. In addition, the curriculum may provide pre-service education and training for individuals seeking entry-level positions in supply chain management and provide a review of content for various certification exams in the field.

PROGRAM REQUIREMENTS

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>TWL 100</td>
<td>Transportation and Physical Distribution</td>
<td>3</td>
</tr>
<tr>
<td>TWL 110</td>
<td>Introduction to Supply Chain Management</td>
<td>3</td>
</tr>
<tr>
<td>TWL 120</td>
<td>Introduction to Import/Export</td>
<td>3</td>
</tr>
<tr>
<td>TWL 130</td>
<td>Principles of Operations Management</td>
<td>3</td>
</tr>
<tr>
<td>TWL 140</td>
<td>Transportation and Cargo Security</td>
<td>2</td>
</tr>
</tbody>
</table>

Program Total: 14 credits
COMPUTER AIDED DESIGN (CAD)

CAD/Mechanical Design Technology (A.A.S.) 85
CAD Drafter 85
CAD/Mechanical Design Technology 85
CAD Technician 86

CAD/MECHANICAL DESIGN TECHNOLOGY

A.A.S. Degree
This program prepares students for careers as drafters, mechanical designers and CAD technicians. Areas of potential employment include drafter, detailer, layout designer, design technician, CAD operator and CAD technician. The courses emphasize basic drafting and drawing skills, design and analysis of mechanisms and mechanical parts, and the use of CAD systems to draw, design and analyze mechanical devices.

I. GENERAL EDUCATION CORE (20)
Area A: Communication (6 credits)
ENG 101 Composition I - with a grade of C or better (3)
COMM 101 Principles of Communication (3)
Area B: Humanities and Fine Arts (3 credits)
Select one course from Area B on pages 50-52 (3)
Area C: Mathematics (4 credits)
TECH 109 Technical Mathematics I (4)
Area D: Physical and Life Sciences (4 credits)
TECH 221 Technical Physics I (4)
Area E: Social and Behavioral Sciences (3 credits)
Select one course from Area E on pages 50-52 (3)

II. AREA OF CONCENTRATION/PROGRAM REQUIREMENTS (39)
CADMD 141 Technical Drafting I (3)
CADMD 201 Mechanical Layout and Design I (3)
CADMD 203 Statics and Strength of Materials (4)
CADMD 243 Introduction to Auto-CAD (3)
CADMD 244 Intermediate Auto-CAD (3)
CADMD 245 Computer Aided Design (3)
MT 101 Metal Working Processes I (3)
MT 102 Metal Working Processes II (3)
MT 210 CNC Programming I (3)
MT 211 CNC Programming II (3)
TECH 110 Technical Mathematics II (4)
TECH 222 Technical Physics II (4)

III. ELECTIVES (2)
Select from CADMD 246, 247

Program Total: 61 credits

CAD DRAFTER

Certificate
This program is designed to prepare students for employment as entry-level CAD Drafters. Students will learn the skills and knowledge necessary to produce drawings, diagrams, charts, etc., using the Auto-CAD software. Hands-on experiences will include CAD system operation, drawing set-up, original drawings, copy, and modification of existing drawings and plotting.

PROGRAM REQUIREMENTS
CADMD 141 Technical Drafting I (3)
CADMD 243 Introduction to Auto-CAD (3)
CADMD 244 Intermediate Auto-CAD (3)
TECH 109 Technical Mathematics I (4)

Program Total: 13 credits

CAD/MECHANICAL DESIGN TECHNOLOGY

Certificate
This certificate program prepares students for entry-level positions in mechanical drafting and CAD. The skills developed will enable the student to work as a drafter, detailer, technical illustrator, and CAD operator.

PROGRAM REQUIREMENTS
CADMD 141 Technical Drafting I (3)
CADMD 201 Mechanical Layout and Design I (3)
CADMD 203 Statics and Strength of Materials (4)
CADMD 243 Introduction to Auto-CAD (3)
CADMD 244 Intermediate Auto-CAD (3)
CADMD 245 Computer Aided Design (3)
CADMD 246 Architectural Desktop (2)
MT 101 Metal Working Processes I (3)
TECH 109 Technical Mathematics I (4)

Program Total: 28 credits
This program is designed to prepare students for a career as a CAD Technician and Designer. It provides a concentrated exposure in computer-aided drafting and design. This program is especially suitable for those currently employed in the field of mechanical design to update their design skills in the context of CAD systems. Persons seeking positions such as checker, layout designer, specifications writer, mechanical design technician, and CAD technician or designer will benefit from this program.

**PROGRAM REQUIREMENTS**

- CADMD 141 Technical Drafting I (3)
- CADMD 201 Mechanical Layout and Design I (3)
- CADMD 243 Introduction to Auto-CAD (3)
- CADMD 244 Intermediate Auto-CAD (3)
- CADMD 245 Computer-Aided Design (3)
- TECH 109 Technical Mathematics I (4)

**Program Total: 19 credits**
COMPUTER ELECTRONICS

A.A.S. Degree
This program prepares students to work with the electronics components of computers and related equipment.

I. GENERAL EDUCATION CORE (18-20)
Area A: Communication (6 credits)
ENG 101 Composition I - with a grade of C or better (3)
COMM 101 Principles of Communication (3)
Area B: Humanities and Fine Arts (3 credits)
Select one course from Area B on pages 50-52. (3)
Area C: Mathematics (3-4 credits)
Select from the following courses:
ITPRG 106, MATH 151, TECH 109, or AMATH 100 and 101 (3-4)
Area D: Physical and Life Sciences (3-4 credits)
Select one course from Area B on pages 50-52. (3-4)
Area E: Social and Behavioral Sciences (3 credits)
Select one course from Area E on pages 50-52. (3)

II. AREA OF CONCENTRATION/PROGRAM REQUIREMENTS (34)
CADMD 243 Introduction to Auto-CAD (3)
CET 101 Fundamentals of Electricity (2)
CET 103 Alternating Current (2)
CET 111 Electronic Principles (4)
CET 114 Digital Fundamentals (4)
CET 203 Instrumentation Fundamentals (4)
CET 211 Communication Electronics (4)
CET 220 Programmable Logic Controllers (4)
ITNET 160 Computer Repair (4)
ITPRG 140 Introduction to Operating Systems (3)

III. ELECTIVES (10)
Select from the following courses: (10)
ELECT 108, 109, 203, 204, 290; CADMD 244; ITWEB 101, 103, 201

Program Total: 62 credits

COMPUTER ELECTRONICS

Certificate
This program provides the electronics foundation for servicing computers and related electronics equipment.

PROGRAM REQUIREMENTS (18-19)
CADMD 243 Introduction to Auto-CAD (3)
CET 101 Fundamentals of Electricity (or ELECT 101) (2)
CET 103 Alternating Current (2)
CET 111 Electronic Principles (or ELECT 111 and 112) (4)
CET 114 Digital Fundamentals (or ELECT 201 and 202) (4)
ITNET 160 Computer Repair (4)
ITPRG 140 Introduction to Operating Systems (3)

Select a minimum of 3 credit hours in mathematics from the following courses: (3-4)
AMATH 100 Basic Mathematics for the Skilled Trades (2)
and
AMATH 101 Algebra for the Skilled Trades (2)
ITRPG 106 Mathematics for Computers (3)
MATH 151 College Algebra (4)
TECH 109 Technical Mathematics I (4)

Select from the following courses: (9)
ELECT 108, 109, 203, 204, 290; CADMD 244; ITWEB 101, 103, 201

Program Total: 34-35 credits
CRIMINAL JUSTICE SERVICES

A.A.S. Degree
This program provides a foundation in criminal justice for individuals planning careers in the fields of law enforcement, corrections, probation, parole, or private security. The core criminal justice classes focus on the major components and operations of our system of justice at the local, county, state, and federal levels. Students study criminal law and procedure, corrections, and the courts. They also review the administration, organization and processes of the overall criminal justice system.

Proficiency credits are available for actively working full-time police officers (and corrections officers) who are certified by the Illinois Law Enforcement Training and Standards Board as a Law Enforcement Officer or Corrections Officer. These officers must have completed the Approved Basic Law Enforcement (or Corrections) Officer Training Academies (400 or 480 hours) and have one year or more of full-time experience as a police (or corrections) officer, and they must have completed their probationary period.

I. GENERAL EDUCATION CORE (18-19)
Area A: Communication (6 credits)
ENG 101 Composition I - with a grade of C or better (3)
ENG 102 Composition II - with a grade of C or better (3)
COMM 101 Principles of Communication (3)

Area B: Humanities and Fine Arts (3 credits)
Select one course from the list for Area B on pages 50-52. (3)

Area C: Mathematics (demonstrated competence required)
Placement into MATH 095 or completion of MATH 090 - with a grade of C or better

Area D: Physical And Life Sciences (3-4 credits)
One course from the list for Area D on pages 50-52. (4) required

Area E: Social and Behavioral Sciences (3 credits)
POLSC 140 Introduction to U.S. Government & Politics (3) required

II. AREA OF CONCENTRATION/PROGRAM REQUIREMENTS (42)
CJ 101 Introduction to Criminal Justice (3)
CJ 102 Introduction to Criminology (3)
CJ 103 Law Enforcement Organization and Administration (3)
CJ 106 Introduction to Corrections (3)
CJ 110 Community Based Policing (3)
CJ 120 Introduction to Homeland Security (3)
CJ 201 Introduction to Criminal Law (3)
CJ 202 Civil and Criminal Laws/Procedures (3)
CJ 203 Principles of Criminal Investigation (3)
CJ 204 Juvenile Justice (3)
CJ 208 Principles of Criminalistics (3)
CJ 270 Computer Forensics (3)
ITAPP 101 Introduction to Computers (3)
Select one course from:
CJ 299 Criminal Justice Internship (3)
PSYCH 101 Introduction to Psychology (3)
SOCIO 101 Introduction to Sociology (3)

Program Total: 60 credits
CHILD AND FAMILY STUDIES
A.A.S. Degree
The Child and Family Studies Associate in Applied Science degree program is designed for individuals who want to work directly with young children and their families in early care and education programs, human service organizations, or professional development services. The program provides both theoretical knowledge and practical skills.

Please note: Students interested in teaching in the elementary schools in Illinois should enroll in the Associate in Arts Degree in pre-elementary or pre-early childhood education. Consult a counselor or advisor for further information.

Students interested in pursuing the Level 1 Illinois Director Credential from the Illinois Network of Child Care Resource and Referral Agencies (INCCRA) have up to two years following graduation to document 1200 hours of early childhood/school age management experience. Either while earning their AAS degree or following its completion, students must demonstrate that they have made contributions to the profession in one of the areas described in the program brochure.

I. GENERAL EDUCATION CORE (19)
Area A: Communication (6 credits)
ENG 101 Composition I - with a grade of C or better. (3)
COMM 101 Principles of Communication (3)
Area B: Humanities and Fine Arts (3 credits)
Select one course from Area B on pages 50-52. (3)
Area C: Mathematics
MATH 111 Mathematics for Paraprofessionals (3)**
Area D: Physical and Life Sciences (4 credits)
Select one laboratory science course from the courses for Area D on pages 50-52. (3-4)
Area E: Social and Behavioral Science (3 credits)
PSYCH 101 Introduction to Psychology (3)

II. PROGRAM REQUIREMENTS (42)
ED 101 Child Growth and Development (3)
ED 212 Exceptional Child (3)
ECED 102 Observation and Guidance of Children (3)
ECED 103 Health, Safety, and Nutrition (3)
ECED 104 Introduction to Early Childhood Education (3)
ECED 120 Child, Family, and Community (3)
ECED 130 Classroom Management (3)
ECED 205 Language Arts for Children (3)
ECED 213 Multicultural Education (3)
ED 220 Children’s Literature (3)
ECED 299 Early Childhood Education Internship (3)
ED 210 Children's Literature (3)
Select 9 credit hours from the following courses:
ECED 106 Art for Teachers (3)
ECED 108 Science and Math for the Young Child (3)
ECED 110 Care and Education: Infants, Toddlers, 2-yr olds (3)
ECED 214 Administration of Early Childhood Education Centers (3) Required for students who plan to obtain the Illinois Director Credential
ECED 215 Music and Movement for Children (3)

Program Total: 61 credits

** Note: Students who plan to continue studies beyond the A.A.S. degree should substitute MATH 112 or 115 for MATH 111.
EARLY CHILDHOOD DIRECTOR

Certificate
This program prepares students to meet basic requirements to be an Early Childhood Care Director. DCFS requires two years of college credit in any area, with at least 18 hours in Early Childhood Education.

PROGRAM REQUIREMENTS
ED 101  Child Growth and Development (3)
ECED 102  Observation and Guidance of Children (3)
ECED 103  Health, Safety, and Nutrition (3)
ECED 104  Introduction to Early Childhood Education (3)
ECED 214  Administration of Early Childhood Education Centers (3)
ECED 299  Early Childhood Education Internship (3)

Program Total: 18 credits

EARLY CHILDHOOD TEACHER BASIC

Certificate
This program prepares students to meet basic requirements for day care teacher approval. DCFS requires two years of college credit in any area including at least 6 hours in Early Childhood Education. Students completing this work are eligible for entry-level teaching in early childhood programs.

PROGRAM REQUIREMENTS
ED 101  Child Growth and Development (3)
ECED 104  Introduction to Early Childhood Education (3)

Program Total: 6 credits
PARAPROFESSIONAL EDUCATOR

A.A.S. Degree

The Paraprofessional Educator Associate in Applied Science Degree program is designed to prepare students to assist teachers in a variety of classroom settings, and to meet the standards for paraprofessionals developed in response to the federal No Child Left Behind Act (NCLB). This curriculum is based on professional standards developed by the American Federation of Teachers, as well as the Paraprofessional Task Force convened by the Illinois State Board of Education (ISBE) and the Illinois Community College Board (ICCB).

Please note: This program is not for students planning to become regularly certified professional teachers in Illinois public schools. Consult an advisor for more information.

I. GENERAL EDUCATION CORE (22)

Area A: Communication (9 credits)
ENG 101 Composition I - with a grade of C or better (3)
ENG 102 Composition II (3)
COMM 101 Principles of Communication (3)

Area B: Humanities and Fine Arts (3 credits)
Select one course from Area B on pages 50-52. Strongly recommended courses include ART 131; HUMAN 101; ENG 215

Area C: Mathematics (demonstrated competence required)

Area D: Physical and Life Sciences (4 credits)
Select one IAI approved laboratory science course from the courses for Area D on pages 50-52. (4)

Area E: Social and Behavioral Science (6 credits)
PSYCH 101 Introduction to Psychology (3) required
Select one additional course from Area E on pages 50-52. (3)
Strongly recommended courses include:
ANTHR 222 Introduction to Cultural and Social Anthropology (3)
HIST 112 World History: 1714 to Present (3)
HIST 115 African Civilizations I (3)
HIST 116 African Civilizations II (3)
HIST 140 History of Latin America (3)
HIST 201 U.S. History: 1492 to 1877 (3)
HIST 202 U.S. History: 1877 to Present (3)
POLSC 140 Introduction to U.S. Government & Politics (3)
SOCIO 220 Race Relations: A Multicultural Perspective (3)

II. PROGRAM REQUIREMENTS (28)

ED 100 Foundations of American Public Education (3)
ED 101 Child Growth and Development (3)
ED 212 Exceptional Child (3)
ED 160 Technology for Teachers (3)
ED 220 Children’s Literature (3)
ECED 103 Health, Safety, and Nutrition (3)
EDU 111 Mathematics for Paraprofessionals (3)
EDU 221 Clinical Experience (3)

Select one cultural awareness course from the following:
EDU 213 Multicultural Education (3)

OR
EDU 120 Child, Family, and Community (3)

Select one teaching strategies course from the following:
EDU 106 Art for Teachers (3)
EDU 205 Language Arts for Children (3)
EDU 215 Music and Movement for Children (3)
EDU 216 Teaching Mathematics to the Young Child (3)

III. ELECTIVES (12)
Select 12 credit hours from the following courses:
CJ 204 Juvenile Justice (3)
ECED 104 Introduction to Early Childhood Education (3)
EDU 130 Classroom Management (3)
EDU 213 Multicultural Education (3)

OR
EDU 120 Child, Family, and Community (3)
PSYCH 202 Educational Psychology (3)
PSYCH 203 Abnormal Psychology (3)
SOCIO 210 Marriage & the Family (3)

Any Social/Behavioral Science course (non-Western or diversity emphasis) listed on pages 42-44. (3)

Any of the following courses required for elementary teacher certification:
HIST 201 U.S. History: 1492 to 1877 (3)
HIST 202 U.S. History: 1877 to Present (3)
POLSC 140 Introduction to U.S. Government & Politics (3)

Other identified courses related to content specialization. Consult with program coordinator.

Program Total: 62 credits

Note: Students already working as aides should arrange for proficiency credit for EDU 221
The Paraprofessional Educator Certificate program provides a foundation of important skills and standards that prepare paraprofessionals to work in non-Title I programs. Professional Education core requirements are combined with general education and special emphasis electives. Paraprofessionals who possess college credits that, when combined with this certificate total 60 credit hours, meet requirements of NCLB and are eligible to work in Title I positions.

**PROGRAM REQUIREMENTS**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>ENG 101</td>
<td>Composition I - with a grade of C or better</td>
<td>3</td>
</tr>
<tr>
<td>ED 100</td>
<td>Introduction to Education</td>
<td>3</td>
</tr>
<tr>
<td>COMM 101</td>
<td>Principles of Communication</td>
<td>3</td>
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Note: ENG 101 should be taken prior to or concurrently with ED 100. These two courses and COMM 101 should be completed prior to enrollment in remaining courses.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>ED 212</td>
<td>Exceptional Child</td>
<td>3</td>
</tr>
<tr>
<td>ED 160</td>
<td>Technology for Teachers</td>
<td>3</td>
</tr>
<tr>
<td>ED 101</td>
<td>Child Growth, and Development</td>
<td>3</td>
</tr>
<tr>
<td>ED 220</td>
<td>Children’s Literature</td>
<td>3</td>
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<tr>
<td>ECED 103</td>
<td>Health, Safety, and Nutrition</td>
<td>3</td>
</tr>
<tr>
<td>EDU 111</td>
<td>Mathematics for Paraprofessionals</td>
<td>3</td>
</tr>
<tr>
<td>SOCIO 101</td>
<td>Introduction to Sociology</td>
<td>3</td>
</tr>
</tbody>
</table>

**OR**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOCIO 210</td>
<td>Marriage and the Family</td>
<td>3</td>
</tr>
</tbody>
</table>

Select one of the following courses:

CJ 204; ECED 104; HUMAN 101; PSYCH 202; SOCIO 101, 210

**Program Total: 33 credits**
PARAMEDICINE

A.A.S. Degree

This program prepares men and women for careers as advanced pre-hospital care providers, trained to administer care to clients who have experienced acute medical or trauma emergencies. As skilled health care providers, paramedics function independently in the field or under the guidance of standing medical orders. The program provides a combination of general education courses, core courses in paramedicine, and selected clinical and field experiences in hospitals and EMS departments. Upon successful completion, students will be eligible to write the National Registry licensing examination. No student will be permitted to write the licensing exam prior to completion of the Associate in Applied Science degree.

Prior to admission to the Paramedicine program, students must submit a Paramedicine Intent Form. The deadline for the intent form is June 1 of each year. To be eligible to enroll in the core paramedicine courses, students must have successfully completed the EMT-B course, passed the state licensing exam, presented documentation of a minimum of six months of field experience as an EMT-B and be “in good standing” with required continuing education credits. Students must also complete SRT 100 Medical Terminology, BIOL 221 Anatomy and Physiology I, and BIOL 222 Anatomy and Physiology II, all with a grade of C or better, before being eligible to enroll in EMS 200-level courses.

PROGRAM REQUIREMENTS

I. GENERAL EDUCATION CORE (24)

Area A: Communication (6 credits)
ENG 101 Composition I - with a grade of C or better (3)
COMM 101 Principles of Communication (3)

Area B: Humanities and Fine Arts (3 credits)
Select one course from Area B on pages 50-52.

Area C: Mathematics (4 credits)
MATH 151 College Algebra (4)

Area D: Physical and Life Sciences (8 credits)
BIOL 221 Anatomy and Physiology I (4)
BIOL 222 Anatomy and Physiology II (4)

Area E: Social and Behavioral Sciences (3 credits)
PSYCH 101 Introduction to Psychology (3)

II. AREA OF CONCENTRATION/PROGRAM REQUIREMENTS (43)

EMS 101 Emergency Medical Technician (7)
SRT 100 Medical Terminology (2)
EMS 200 Paramedicine I (12)
EMS 205 Paramedicine: Field Practicum I (2)
EMS 210 Paramedicine: Hospital Practicum (2)
EMS 215 Paramedicine: Seminar I (1)
EMS 220 Paramedicine II (12)
EMS 225 Paramedicine: Field Practicum II (2)
EMS 230 Paramedicine: Leadership Practicum (2)
EMS 235 Paramedicine: Seminar II (1)

Program Total: 67 credits
FIRE SCIENCE

Fire Science Technology (A.A.S.) 94
Fire Science Technology 94
Firefighter II 94
Firefighter/EMT 95

FIRE SCIENCE TECHNOLOGY

A.A.S. Degree
This curriculum prepares the student for employment as a volunteer, paid-on-call part-time, or full-time municipal firefighter.

I. GENERAL EDUCATION CORE (19)
Area A: Communication (6 credits)
ENG 101 Composition I - with a grade of C or better (3)
COMM 101 Principles of Communication (3)
Area B: Humanities and Fine Arts (3 credits)
Select one course from Area B on pages 42-44.
Area C: Mathematics (3 credits)
MATH 112 General Education Mathematics (3)
OR
MATH 115 General Education Statistics (3)
Area D: Physical and Life Sciences (4 credits)
Select one course from:
BIOL 100 General Education Biology (4)
BIOL 112 Organismal Biology (4)
CHEM 105 Survey of General Chemistry (4)
PHYS I11 Physical Science (4)
PHYS I12 Earth Science (4)
PHYS I10 Conceptual Physics (4)
Area E: Social and Behavioral Sciences (3 credits)
PSYCH 101 Introduction to Psychology (3) required

II. AREA OF CONCENTRATION/PROGRAM REQUIREMENTS (37)
BUS I27 Business Communications (3)
FST I01 Introduction to Fire Science Technology (3)
FST I02 Fire Prevention Principles I (3)
FST I04 Fire Tactics and Strategy I (3)
FST I05 Construction and Fire Systems (3)
FST I06 Hazardous Materials Operations (3)
FST I19 Firefighter II (7)
FST I22 Fire Service - Instructor I (3)
FST I20 Fire Apparatus Engineer (3)
FST I21 Fire Apparatus Engineer (3)
FST I22 Vehicle and Machinery Operations (3)
FST I24 Fire Tactics and Strategy II (3)
FST I25 Fire Tactics and Strategy II (3)
FST I26 Fire Apparatus Engineer (3)
FST I27 Fire Apparatus Engineer (3)

III. ELECTIVES (6)
Select from EMS I01; FST I21, I20, I25, I26, I27, I28, I29, I30, I31, I32, I33, I34; FRESP I01; PHOTO I71 (6)
Program Total: 62 credits

FIRE SCIENCE TECHNOLOGY

Certificate
This curriculum prepares the student for employment as a volunteer, paid-on-call part-time or full-time firefighter.

PROGRAM REQUIREMENTS
FST I01 Introduction to Fire Science Technology (3)
FST I02 Fire Prevention Principles I (3)
FST I04 Fire Tactics & Strategy I (3)
FST I05 Construction & Fire Systems (3)
FST I06 Hazardous Materials Operations (3)
FST I20 Fire Department Management I (3)
FST I28 Fire Department Management II (3)
FST I20 Fire Apparatus Engineer (3)
Program Total: 24 credits

FIREFIGHTER II

Certificate
This program is designed for students seeking employment in fire service by preparing them for the State Firefighter II certification exam. Students receive training in areas that include fire behavior, safety, fire control, communication, hazardous materials and fire prevention. Students demonstrate basic firefighter skills such as the use of ladders, hose, ropes, and breathing apparatus in a supervised setting.

Students must complete FST I01 Introduction to Fire Science Technology with a grade of C or better, or document current affiliation with a fire department prior to admission to this program.

PROGRAM REQUIREMENTS
FST I19 Firefighter II (7)
Program Total: 7 credits
FIREFIGHTER/EMT

Certificate
The Firefighter/EMT certificate will provide the beginning student in the emergency response occupations with fundamental skills in basic fire fighting techniques and emergency medical care. Both areas have independent certification exams that must be successfully completed to obtain employment in the field.

PROGRAM REQUIREMENTS
EMS 101    Emergency Medical Technician (7)
FST 119    Firefighter II (7)

Program Total: 14 credits
FITNESS AND EXERCISE

A.A.S. Degree
Fitness and exercise students will be taught the skills needed to pursue professions in the fitness/exercise industry. Students in the fitness/exercise program will acquire an academic foundation in the fundamentals, principles of exercise and nutrition as well as an understanding of human anatomy and physiology. Practical skills will focus on the development of expertise in fitness assessment, creative health and fitness programming, biomechanically sound exercise techniques, training methodology, lifestyle change prescription, personalized exercise leadership, and business practices. In addition, courses in English, math, communication, exercise physiology, special populations, and administration of an exercise facility will prepare the student to be a qualified fitness professional.

I. GENERAL EDUCATION CORE (16)
Area A: Communication (6 credits)
ENG 101 Composition I - with a grade of C or better (3)
COMM 101 Principles of Communication (3)
Area B: Humanities (3 credits)
Select one course from Area B on pages 50-52. (3)
Area C: Mathematics (demonstrated competence required)
Placement into MATH 095 or completion of MATH 090 - with a grade of C or better
Area D: Physical and Life Sciences (4 credits)
BIOL 111 Cellular and Molecular Biology (4) required
Area E: Social and Behavioral Sciences (3 credits)
PSYCH 101 Introduction to Psychology (3) required

II. PROGRAM REQUIREMENTS (47)
BIOL 108 Essentials of Anatomy and Physiology (4)*
Note: Completion of BIOL 221 and 222, Anatomy and Physiology I and II with a grade of C or better will be accepted in place of BIOL 108.
BUS 101 Introduction to Modern Business (3)
COL 104 Leadership Development (2)
FRESP 101 First Responder (3)
HLTH 101 Health and Wellness (2)
PE 215 Group Fitness Instructor Training (3)
PE 220 Fitness Assessment/Program Design (3)
PE 225 Weight Training/Theory and Application (2)
PE 230 Nutrition for Sports and Exercise (3)
PE 235 Athletic Training Techniques (3)
PE 250 Introduction to Biomechanics (3)
PE 255 Special Populations (3)
PE 260 Fitness/Exercise Facility Management (3)
PE 265 Physiology of Exercise (3)
PE 298 Internship Seminar (1)
PE 299 Internship (3)
PSYCH 212 Theories of Personality (3)

III. ELECTIVES (2)
Select two of the following group exercise courses:
PE 105, 106, 107, 108 (1)

Program Total: 65 credits

GROUP FITNESS INSTRUCTOR
Certificate
Group Fitness Instructor prepares students to provide group instruction in fitness. Students acquire basic knowledge of anatomy and physiology and nutrition as it relates to weight management. They are trained in first aid, CPR, and AED, and learn to motivate students using a full range of instructional strategies.

PROGRAM REQUIREMENTS
BIOL 108 Essentials of Anatomy & Physiology (4)
FRESP 101 First Responder (3)
PE 215 Group Fitness Instructor Training (3)
PE 230 Nutrition for Sports & Exercise (3)
Select one course from:
PE 105, 106, 107, or 108 Aerobics I-IV (1)

Program Total: 14 credits

PERSONAL TRAINER
Certificate
Personal Trainers will acquire an academic foundation in the fundamental principles of exercise and nutrition, and a basic understanding of human anatomy and physiology. Practical skill training will focus on the development of expertise in fitness assessment, creative health and fitness programming, biomechanically sound exercise techniques, training methodology, lifestyle change prescription, personalized exercise leadership and business practices.

PROGRAM REQUIREMENTS
BIOL 108 Essentials of Anatomy and Physiology (4)
BUS 101 Introduction to Modern Business (3)
COL 104 Leadership Development (2)
FRESP 101 First Responder (3)
HLTH 101 Health and Wellness (2)
PE 215 Group Fitness Instructor Training (3)
PE 220 Fitness Assessment/Program Design (3)
PE 225 Weight Training/Theory and Application (2)
PE 230 Nutrition for Sports and Exercise (3)
PE 235 Athletic Training Techniques (3)
PE 250 Introduction to Biomechanics (3)
PE 298 Internship Seminar (1)
PE 299 Internship for Personal Trainers (3)

Program Total: 35 credits
GRAPHIC COMMUNICATIONS

A.A.S. Degree
This visual communication program prepares students for entry-level positions as digital designers and illustrators in the graphics publishing and multimedia industry. Students may choose to emphasize digital design, illustration, or interactive design.

I. GENERAL EDUCATION CORE (15-16)
Area A: Communication (6 credits)
ENG 101    Composition I - with a grade of C or better. (3)
COMM 101   Principles of Communication
Area B: Humanities and Fine Arts (3 credits)
ART 131    Survey of Non-Western Art (3) recommended or select one course from Area B on pages 50-52. (3)
Area C: Mathematics (demonstrated competence required)
Placement into MATH 095 or completion of MATH 090 - with a grade of C or better.
Area D: Physical and Life Sciences (3-4 credits)
Select one course from Area D on pages 50-52. (3-4)
Area E: Social and Behavioral Science (3 credits)
Select one course from Area E on pages 50-52. (3)

II. PROGRAM REQUIREMENTS (36)
ART 101 Two Dimensional Design (3)
ART 102 Three Dimensional Design (3)
ART 104 Drawing I (3)
ART 106 Drawing II (3)
ART 115 Introduction to Computer Art (3)
ART 121 History of Western Art I (3)
ART 122 History of Western Art II (3)
GC 151 Introduction to Graphic Design (3)
GC 299 Internship/Seminar (3)
OR
ART 295 Portfolio Seminar (3)

Select one Option for Specialization from the list below: (9)

Option A:
DIGITAL DESIGN (9 hrs)
GC 160 Design for Publishing (3)
GC 287 Professional Design (3)
ART 205 Printmaking (3)

Option B:
ILLUSTRATION (9 hrs)
GC 171 Illustration I (3)
ART 162 Life Drawing (3)
ART 201 Painting I (3)

Option C:
INTERACTIVE DESIGN SPECIALIZATION (9 hrs)
GC 162 Introduction to Web Site Development (3)
GC 262 Flash/Interface Design (3)
GC 265 Interactive Design Project (3)

III. ELECTIVES (9)
Select 9 credits from ART, GC, and/or PHOTO courses.
Recommended electives for the Interactive Design Option include:
GC 175 Animation Techniques (2)
GC 182 Digital Video (2)
GC 185 Digital Sound (2)

Program Total: 60 credits

DIGITAL DESIGN
Certificate
This program provides a foundation in design and computer art and experience with specialized software and techniques required to work in the field of digital design. Students are prepared for entry-level or freelance work in electronic and print media.

PROGRAM REQUIREMENTS:
ART 115 Introduction to Computer Art (3)
ART 205 Printmaking (3)
GC 151 Introduction to Graphic Design (3)
GC 160 Design for Publishing (3)
GC 287 Professional Design (3)

Program Total: 15 credits

E-BUSINESS
(See Information Technology)

INTERACTIVE DESIGN
Certificate
This program provides a foundation in design and computer art and experience with specialized software and techniques required to work in the field of interactive design. Students are prepared for entry-level or freelance work in interactive design.

PROGRAM REQUIREMENTS:
ART 115 Introduction to Computer Art (3)
GC 151 Introduction to Graphic Design (3)
GC 162 Introduction to Web Site Development (3)
GC 262 Flash/Interface Design (3)
GC 265 Interactive Design Project (3)

Program Total: 15 credits
## HEALTH PROFESSIONS

### COURSES

**DEGREES, CERTIFICATES, COURSES**

**CAREER PROGRAMS**

**DENTAL HYGIENE**

**A.A.S. Degree**

This program prepares students for careers in dental hygiene. It combines courses in general education, basic science, dental science, and clinical science with learning experiences in the Dental Hygiene Clinic. Graduates of this program are eligible to sit for the state and regional licensing examinations. Courses must be completed in sequence. Those who desire part-time college enrollment may enroll only in the general education courses prior to applying for entry into the Dental Hygiene program.

*Please note: This program begins during Summer sessions only and has special admissions requirements. Contact the Office of Admissions and Records to obtain a copy of the Dental Hygiene Information Booklet.*

### I. GENERAL EDUCATION CORE (19)

**Area A: Communication (6 credits)**

- ENG 101 Composition I - with a grade of C or better (3)
- COMM 101 Principles of Communication (3)

**Area B: Humanities and Fine Arts (3 credits)**

Select one course from Area B on pages 50-52. (3)

**Area C: Mathematics** (demonstrated competence required)

Placement into MATH 095 or completion of MATH 090 - with a grade of C or better

**Area D: Physical and Life Sciences (4 credits)**

- BIOL 211 Microbiology (4)
- BIOL 221 Human Anatomy and Physiology I (4)
- BIOL 222 Human Anatomy and Physiology II (4)
- DH 101 Histology (2)
- DH 103 Head & Neck Anatomy and Tooth Morphology (5)
- DH 104 Dental Radiology (4)
- DH 105 Nutrition (2)
- DH 106 General and Oral Pathology (2)
- DH 107 Fundamentals of Dental Hygiene (2)
- DH 108 Clinical Dental Hygiene I (4)
- DH 109 Clinical Dental Hygiene II (4)
- DH 116 Periodontology (2)
- DH 120 Care of Special Populations (2)
- DH 201 Clinical Dental Hygiene III (3)
- DH 202 Clinical Dental Hygiene IV (5)
- DH 203 Clinical Dental Hygiene V (5)
- DH 204 Ethics, Law and Administration (2)
- DH 205 Pharmacology (2)
- DH 207 The Science and Application of Dental Material (4)
- DH 220 Community Dental Health (2)

**Program Total: 83 credits**

### NURSING**

**A.A.S. Degree**

This program prepares men and women for careers in nursing. The program combines courses in general and nursing education with selected learning experiences in hospitals and health agencies. Students will be required to perform at a predetermined satisfactory level on a nationally normed comprehensive exit exam at the conclusion of the program. Graduates of the Associate in Applied Science degree program may apply to take the NCLEX-RN examination for licensure as a registered nurse.

*Please note: This program has special admissions requirements! Contact the Office of Admissions and Records to obtain a copy of the Nursing Information Booklet. (starts fall only)*

Prior to admission to the Nursing program, students must complete NURS 100 Nurse Assistant Training (7) with a grade of C or better or demonstrate current status on the Illinois Certified Nurse Assistant (CNA) Registry. Credit earned for NURS 100 is not included in the 66 credit hours required for the Nursing A.A.S. degree.

Students also must complete BIOL 221 Human Anatomy and Physiology I (4) with a grade of C or better prior to admission to the Nursing program. Credit earned for BIOL 221 is included in the 66 credit hours required. Students are encouraged to complete as many general education courses as possible before enrolling in the Nursing Core Courses listed below in Section II.

**LPN Bridge Program**

LPNs who are seeking the A.A.S. in Nursing degree should consult with the Nursing Advisor in the Admissions Office for information on bridging options.

### I. GENERAL EDUCATION CORE (22)

**Area A: Communication (9 credits)**

- ENG 101 Composition I - with a grade of C or better (3)
- ENG 102 Composition II (3)
- COMM 101 Principles of Communication (3)

**Area B: Humanities and Fine Arts (3 credits)**

Select one course from Area B on pages 50-52. (3)

**Area C: Mathematics** (demonstrated competence required)

Placement into MATH 095 or completion of MATH 090 - with a grade of C or better

**Area D: Physical and Life Sciences (4 credits)**

- BIOL 211 Microbiology (4)
- BIOL 221 Human Anatomy and Physiology I (4)
- BIOL 222 Human Anatomy and Physiology II (4)
- DH 101 Histology (2)
- DH 103 Head & Neck Anatomy and Tooth Morphology (5)
- DH 104 Dental Radiology (4)
- DH 105 Nutrition (2)
- DH 106 General and Oral Pathology (2)
- DH 107 Fundamentals of Dental Hygiene (2)
- DH 108 Clinical Dental Hygiene I (4)
- DH 109 Clinical Dental Hygiene II (4)
- DH 116 Periodontology (2)
- DH 120 Care of Special Populations (2)
- DH 201 Clinical Dental Hygiene III (3)
- DH 202 Clinical Dental Hygiene IV (5)
- DH 203 Clinical Dental Hygiene V (5)
- DH 204 Ethics, Law and Administration (2)
- DH 205 Pharmacology (2)
- DH 207 The Science and Application of Dental Material (4)
- DH 220 Community Dental Health (2)

**Program Total: 83 credits**

Continued
**NURSING Continued**

- NURS 111 Nursing as a Profession (1)
- NURS 201 Family Care Needs (11)
- NURS 202 Advanced Care Needs (11)
- NURS 211 Preparation for Professional Nursing (2)

Program Total: 68 credits

**ADVANCED BEDSIDE CARE PROVIDER Certificate**

This certificate program will provide students with theoretical background and psychomotor skills needed to provide basic bedside care. CNA competencies are enhanced by instruction in communication strategies and human behavior. This will prepare the bedside care provider to improve his/her ability to interact with clients, families and other members of the health care team.

Note: Students must be actively listed in the State of Illinois CNA Registry in order to complete this certificate. Students currently listed in the State of Illinois CNA Registry may qualify for proficiency credit for NURS 100. Contact the Dean of Health Professions for information.

**PROGRAM REQUIREMENTS**

- COMM 101 Principles of Communication (3)
- NURS 100 Nurse Assistant Training (7)
- PSYCH 101 Introduction to Psychology (3)

Program Total: 13 credits

**CNA/NURSE ASSISTANT Certificate**

The Nursing Assistant Training Program has been designed to provide students with the theory and skills necessary to give basic patient care in a nursing home or hospital. The course includes instruction in basic bedside skills such as bed baths, moving and lifting, enemas, and other techniques. Students will receive practice in a lab setting and in a nursing home.

Successful completion of this program qualifies the student for the Illinois Basic Nursing Assistant Certificate and to take the state approved Competency Examination.

**PROGRAM REQUIREMENTS**

- NURS 100 Nurse Assistant Training (7)

Program Total: 7 credits

* Along with regular lectures, students will have clinicals in some local facilities such as long-term care facilities, where they will perform basic nursing care under the guidance of a registered nurse.

**R.N. FIRST SURGICAL ASSISTANT Certificate**

This program is designed for employed registered nurses with a minimum of two years current acute care setting operating room experience. It provides further training to enable nurses to competently assist the surgeon during surgical procedures requiring an assistant. Note: Contact the Dean of Health Professions for additional enrollment requirements.

**PROGRAM REQUIREMENTS**

- RN 100 R.N. First Assistant (3)
- RN 101 R.N. First Assistant Internship (3)

Program Total: 6 credits

**SURGICAL TECHNOLOGY Certificate**

Please note: This program has special admissions requirements. Contact the Office of Admissions and Records to obtain a copy of the Surgical Technologist Application Procedures Booklet.

This program prepares students to work as surgical technologists in the operating room, labor and delivery, ambulatory surgical care centers, cardiac catheterization laboratories, physician’s offices or central supply units. Surgical technologists work under medical supervision to facilitate safe and effective performance of invasive surgical procedures aimed at optimizing patient safety. This program meets nationally established standards for Surgical Technology. It has been approved by the Commission on Accreditation of Allied Health Programs (CAAHEP). Graduates may sit for the Surgical Technologist national certification exam administered by the Liaison Council on Certification for the Surgical Technologist (LCCST).

This program begins only in the Fall Semester and takes one year to complete. It is essentially a 40-hour per week day-time program which includes both classes and clinical labs. Clinicals will be held in hospital operating rooms with students working with a preceptor. Students must have their own transportation to travel to a hospital site within a 45-mile radius. Upon completion of the program, students will take the certification examination administered by the Liaison Council on Certification for the Surgical Technologies (LCCST) to become a Certified Surgical Technologist (CST).

**PROGRAM REQUIREMENTS**

- BIOL 115 Microbiology for Surgical Technologists (4)
- HLTH 102 Workplace Issues for Allied Health (1)
- SRT 102 Patient Care I (2)
- SRT 103 Patient Care II (1)
- SRT 110 Introduction to Surgical Technology (7)
- SRT 120 Surgical Procedures I (3)
- SRT 122 Applied Surgical Procedures I (2)
- SRT 130 Surgical Procedures II (2)
- SRT 132 Applied Surgical Procedures II (3)
- SRT 140 Surgical Procedures III (3)
- SRT 142 Applied Surgical Procedures III (3)
- SRT 298 Surgical Technology Seminar (1)
- SRT 299 Applied Surgical Procedures IV (3)

Program Total: 36 credits
CNC PROGRAMMER/OPERATOR
Certificate
This program is designed to prepare people to be CNC Programmers/Operators. The curriculum emphasizes programming and operation of both milling and turning CNC equipment. Additionally, the student will receive instruction in these important related areas: machine tool operation and applications, mathematics, and drafting/CAD.

PROGRAM REQUIREMENTS
CADMD 243 Introduction to AutoCAD (3)
MT 101 Metal Working Processes I (3)
MT 102 Metal Working Processes II (3)
MT 210 CNC Programming I (3)
MT 211 CNC Programming II (3)
MT 214 CAD/CAM Systems (3)
TECH 109 Technical Mathematics I (4)
TECH 110 Technical Mathematics II (4)
Electives: Select from CADMD 244, 245; MT 212, 215 (6)

Program Total: 32 credits

HYDRAULICS
Certificate
This program is designed for students who are working on machines in industry that have fluid control devices.

PROGRAM REQUIREMENTS
AMATH 100 Basic Math for the Skilled Trades (2)
AMATH 101 Algebra for the Skilled Trades (2)
AMATH 103 Geometry for the Skilled Trades (2)
AMATH 106 Applied Trigonometry for the Skilled Trades (2)
AMATH 107 Trigonometry & Shop Applications I (2)
APHYS 100 Applied Physics (2)
DRAFT 101 Drafting Essentials (2)
DRAFT 102 Drafting Conventions and Symbols (2)
ELECT 100 Electric Wiring I (2)
ELECT 170 Electricity Non-Electrical Trades (2)
HYDR 101 Fundamentals of Hydraulics (2)
HYDR 102 Hydraulic Pumps (2)
HYDR 103 Hydraulic Controls (2)
HYDR 104 Basic Hydraulic Circuits (2)
HYDR 106 Pneumatics (2)
MILL 101 Industrial Maintenance Techniques I (2)
PLUMB 101 Fundamentals of Plumbing (2)

Program Total: 34 credits
INDUSTRIAL ELECTRICIAN

A.A.S. Degree

The industrial electrician degree program prepares students for work as electricians in industry. To meet the demands of changing technology, training encompasses electronics as well as electrician skills. Students pursing the A.A.S. degree on a full-time schedule will be prepared for entry-level positions as industrial electricians. This training has been approved by the United States Bureau of Apprenticeship Training.

I. GENERAL EDUCATION CORE (17-18)

Area A: Communication (6 credits)
ENG 101 Composition I - with a grade of C or better. (3)
COMM 101 Principles of Communication (3)

Area B: Humanities and Fine Arts (3 credits)
Select one course from Area B on pages 50-52. (3)

Area C: Mathematics (2)
AMATH 101 Algebra for the Skilled Trades (2)

Area D: Physical and Life Sciences (3-4 credits)
Select one course from Area D on pages 50-52. (3-4)

Area E: Social and Behavioral Science (3 credits)
Select one course from Area E on pages 50-52. (3)

II. PROGRAM REQUIREMENTS (37)

ELECT 100 Electric Wiring I (2)
ELECT 101 Fundamentals of Electricity I (2)
ELECT 102 Fundamentals of Electricity II (2)
ELECT 103 Alternating Current (2)
ELECT 105 Power, Transformers, Polyphase Circuits (2)
ELECT 106 DC Motors and Generators (2)
ELECT 107 AC Motors and Generators (2)
ELECT 108 Electrical Control for Machines I (2)
ELECT 109 Electric Control for Machines II (2)
ELECT 110 Electronic Principles I (2)
ELECT 112 Electronic Principles II (2)
ELECT 113 Blueprint Reading for Electricians (2)
ELECT 114 National Electrical Code (2)
ELECT 203 Industrial Electronics I (2)
ELECT 206 Industrial Electronics II (2)
ELECT 208 Programmable Logic Controllers I (2)
ELECT 209 Programmable Logic Controllers II (2)
ELECT 299 Electrical Internship (2)

Program Total: 64-65 credits

INDUSTRIAL ELECTRICIAN

Certificate

Industrial Electricians are prepared to troubleshoot and maintain electrical devices used in a manufacturing industry; install electrical machines and wiring; and wire electrical panels.

PROGRAM REQUIREMENTS

AMATH 101 Algebra for the Skilled Trades (2)
ELECT 100 Electric Wiring I (2)
ELECT 101 Fundamentals of Electricity I (2)
ELECT 103 Alternating Current (2)
ELECT 106 DC Motors and Generators (2)
ELECT 107 AC Motors and Generators (2)
ELECT 108 Electrical Control for Machines I (2)
ELECT 109 Electric Control for Machines II (2)
ELECT 113 Blueprint Reading for Electricians (2)
ELECT 114 National Electrical Code (2)
ELECT 203 Industrial Electronics I (2)
ELECT 204 Industrial Electronics II (2)
ELECT 208 Programmable Logic Controllers I (2)
ELECT 299 Electrical Internship (2)

Select from ELECT 102, 105, 110, 111, 112, 120, 141, 142, 150, 160, 201, 202, 206, 207, 209, 210, 220, 290; MT 120; TECH 109, 110, 221 (9)

Program Total: 35 credits

INDUSTRIAL MAINTENANCE TECHNICIAN

Certificate

This program trains students for a company’s individual workplace needs. Students complete a core program and then focus in one or several technical areas.

PROGRAM REQUIREMENTS

AMATH 100 Basic Mathematics for the Skilled Trades (2)
AMATH 101 Algebra for the Skilled Trades (2)
ELECT 100 Electric Wiring I (2)
ELECT 200 Electric Wiring II (2)
MILL 101 Industrial Maintenance Techniques I (2)
PLUMB 101 Fundamentals of Plumbing (2)
WELD 101 Principles of Flat Welding (2)

Select one drafting or blueprint reading course from the following: DRAFT 101, 102, 115; CADMD 141 (2-3)
Select one OSHA mandated safety elective from ELECT 120 or MT 120 (2)

Select technical courses from the following areas: (18)
(Air Conditioning) HVACR 101, 102, 104, 105, 107, 108, 109
(Applied Math) AMATH 103, 106, 107, 108, 110
(Applied Physics) APHYS 100
(Business) BUS 109, 242
(Drafting) DRAFT 101, 102, 105, CADMD 141
(Hydraulics) HYDR 101, 103, 106
(Industrial Electricity) ELECT 101, 102, 103, 105, 106, 107, 109, 110, 111, 112, 113, 114, 200, 150, 201, 202, 203, 204, 206, 207, 208, 209, 210, 298, 299

Select technical courses from the following areas: (18)
(Air Conditioning) HVACR 101, 102, 104, 105, 107, 108, 109
(Applied Math) AMATH 103, 106, 107, 108, 110
(Applied Physics) APHYS 100
(Business) BUS 109, 242
(Drafting) DRAFT 101, 102, 105, CADMD 141
(Hydraulics) HYDR 101, 103, 106
(Industrial Electricity) ELECT 101, 102, 103, 105, 106, 107, 109, 110, 111, 112, 113, 114, 120, 150, 201, 202, 203, 204, 206, 207, 208, 209, 210, 298, 299

Program Total: 34-35 credits
MACHINIST

Certificate
This program prepares students to enter machinist craft fields. Machinist training teaches students to custom build metal devices in both a job shop or a manufacturing establishment.

PROGRAM REQUIREMENTS

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMATH 100</td>
<td>Basic Math for the Skilled Trades</td>
<td>2</td>
</tr>
<tr>
<td>AMATH 101</td>
<td>Algebra for the Skilled Trades</td>
<td>2</td>
</tr>
<tr>
<td>AMATH 103</td>
<td>Geometry for the Skilled Trades</td>
<td>2</td>
</tr>
<tr>
<td>DRAFT 115</td>
<td>Blueprint Reading for Mechanical Trades</td>
<td>2</td>
</tr>
<tr>
<td>CADMD 141</td>
<td>Technical Drafting I</td>
<td>3</td>
</tr>
<tr>
<td>CADMD 243</td>
<td>Introduction to AutoCAD</td>
<td>3</td>
</tr>
<tr>
<td>MT 101</td>
<td>Metal Working Processes I</td>
<td>3</td>
</tr>
<tr>
<td>MT 102</td>
<td>Metal Working Processes II</td>
<td>3</td>
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<tr>
<td>MT 105</td>
<td>Metal Working Processes III</td>
<td>3</td>
</tr>
<tr>
<td>MT 210</td>
<td>CNC Programming I</td>
<td>3</td>
</tr>
<tr>
<td>MT 211</td>
<td>CNC Programming II</td>
<td>3</td>
</tr>
<tr>
<td>MT 220</td>
<td>Metallurgy - Ferrous</td>
<td>2</td>
</tr>
</tbody>
</table>

Program Total: 31 credits

MANUFACTURING TECHNOLOGY

A.A.S. Degree
This program prepares personnel for a wide range of manufacturing related occupations. These include machine operator, machinist, CNC operator, CNC programmer, and robotics programmer. Coursework includes basic machine shop operations and processes, CNC machine operation and programming, CAD/CAM fundamentals, robotics and automated manufacturing applications. This program prepares technicians to operate, program, design and install manufacturing, assembly and materials handling equipment. Students who wish to pursue a bachelor’s degree in this program should consult an enrollment advisor regarding transfer information.

I. GENERAL EDUCATION CORE (20)

<table>
<thead>
<tr>
<th>Area A: Communication (6 credits)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 101</td>
</tr>
<tr>
<td>COMM 101</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Area B: Humanities and Fine Arts (3 credits)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Select one course from the list for Area B on pages 50-52. (3)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Area C: Mathematics (4 credits)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TECH 109</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Area D: Physical and Life Sciences (4 credits)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TECH 221</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Area E: Social and Behavioral Sciences (3 credits)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Select one course from the list for Area E on pages 50-52. (3)</td>
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</tbody>
</table>

II. AREA OF CONCENTRATION/PROGRAM REQUIREMENTS (39)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CADMD 141</td>
<td>Technical Drafting I</td>
<td>3</td>
</tr>
<tr>
<td>CADMD 243</td>
<td>Introduction to Auto-CAD</td>
<td>3</td>
</tr>
<tr>
<td>MT 101</td>
<td>Metal Working Processes I</td>
<td>3</td>
</tr>
<tr>
<td>MT 102</td>
<td>Metal Working Processes II</td>
<td>3</td>
</tr>
<tr>
<td>MT 105</td>
<td>Metal Working Processes III</td>
<td>3</td>
</tr>
<tr>
<td>MT 210</td>
<td>CNC Programming I</td>
<td>3</td>
</tr>
<tr>
<td>MT 211</td>
<td>CNC Programming II</td>
<td>3</td>
</tr>
<tr>
<td>MT 212</td>
<td>Introduction to Robotics</td>
<td>3</td>
</tr>
<tr>
<td>MT 214</td>
<td>CAD/CAM Systems</td>
<td>3</td>
</tr>
<tr>
<td>MT 215</td>
<td>Manufacturing Systems</td>
<td>4</td>
</tr>
<tr>
<td>TECH 110</td>
<td>Technical Mathematics II</td>
<td>4</td>
</tr>
<tr>
<td>TECH 222</td>
<td>Technical Physics II</td>
<td>4</td>
</tr>
</tbody>
</table>

III. ELECTIVES (2)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CADMD 244</td>
<td>Fundamentals of Hydraulics</td>
</tr>
<tr>
<td>HYDR 101</td>
<td>Pneumatics</td>
</tr>
<tr>
<td>HYDR 106</td>
<td>Industrial Maintenance Techniques I</td>
</tr>
<tr>
<td>MILL 101</td>
<td>Rigging</td>
</tr>
<tr>
<td>MILL 102</td>
<td>Power Train Elements</td>
</tr>
<tr>
<td>MILL 103</td>
<td>Machine Vibration Analysis I</td>
</tr>
<tr>
<td>MILL 104</td>
<td>Horizontal Welding and Brazing</td>
</tr>
</tbody>
</table>

Program Total: 61 credits
TOOL AND DIE MAKING

A.A.S. Degree

The Tool and Die Making curriculum meets the standards of the United States Bureau of Apprenticeship which requires a minimum of 144 contact hours of related classroom instruction per year for an apprenticeship. The program is coordinated with area firms.

I. GENERAL EDUCATION CORE (19-20)

Area A: Communication (6 credits)
ENG 101 Composition I - with a grade of C or better (3)
COMM 101 Principles of Communication (3)

Area B: Humanities and Fine Arts (3 credits)
Select one course from Area B on pages 50-52. (3)

Area C: Mathematics (4)
AMATH 100 Basic Math for the Skilled Trades (2)
AMATH 101 Algebra for the Skilled Trades (2)

Area D: Physical and Life Sciences (3-4 credits)
Select one course from Area D on pages 50-52.

Area E: Social and Behavioral Sciences (3 credits)
Select one course from Area E on pages 50-52. (3)

II. AREA OF CONCENTRATION/PROGRAM REQUIREMENTS (41)

AMATH 103 Geometry for the Skilled Trades (2)
AMATH 106 Applied Trigonometry for the Skilled Trades (2)
AMATH 107 Trigonometry & Shop Applications for the Skilled Trades (2)
AMATH 108 Compound Angles for the Skilled Trades (2)
AMATH 110 Gearing & Cams for the Skilled Trades (2)
CADMD 141 Technical Drafting I (3)
CADMD 243 Introduction to Auto-CAD (3)
DRAFT 105 Design Applications for Mechanical Trades (2)
HYDR 101 Fundamentals of Hydraulics (2)
HYDR 106 Pneumatics (2)
TOOL 101 Tool and Die Processes (2)
TOOL 102 Tool and Die Maintenance (2)
MT 101 Metal Working Processes I (3)
MT 102 Metal Working Processes II (3)
MT 105 Metal Working Processes III (3)
MT 220 Metallurgy- Ferrous (2)

Program Total: 60 credits

TOOL AND DIE MAKING

Certificate

This curriculum prepares students to reconstruct and rebuild dies, maintain old dies, replace punches and redress, make adjustments on draw dies, redress and keep equipment to quality performance while in production.

PROGRAM REQUIREMENTS

AMATH 100 Basic Math for the Skilled Trades (2)
AMATH 106 Applied Trigonometry for the Skilled Trades (2)
AMATH 107 Trigonometry and Shop Applications for the Skilled Trades (2)
CADMD 141 Technical Drafting I (3)
CADMD 243 Introduction to Auto-CAD (3)
DRAFT 105 Design Applications for Mechanical Trades (2)
HYDR 101 Fundamentals of Hydraulics (2)
HYDR 106 Pneumatics (2)
TOOL 101 Tool and Die Processes (2)
TOOL 102 Tool and Die Maintenance (2)
MT 101 Metal Working Processes I (3)
MT 102 Metal Working Processes II (3)
MT 105 Metal Working Processes III (3)
MT 220 Metallurgy- Ferrous (2)

Program Total: 37 credits

WELDER TECHNICIAN

Certificate

The curriculum prepares students to perform various welding jobs for maintenance manufacturing machines. The training also prepares students to custom build devices by working from machine drawings and specifications.

PROGRAM REQUIREMENTS

AMATH 100 Basic Mathematics for the Skilled Trades (2)
AMATH 101 Algebra for the Skilled Trades (2)
AMATH 103 Geometry for the Skilled Trades (2)
AMATH 106 Applied Trigonometry for the Skilled Trades (2)
DRAFT 101 Drafting Essentials (2)
DRAFT 102 Drafting Conventions & Symbols (2)
DRAFT 103 Three Dimensional Shapes (2)
MT 220 Metallurgy- Ferrous (2)
WELD 101 Principles of Flat Welding (2)
WELD 102 Metal Inert and Vertical Welding (2)
WELD 103 Tungsten Inert and Overhead Welding (2)
WELD 105 A.W.S. Structural Certification (2)

Select 8 credits from the following courses: APHYS 100; HYDR 101; MT 101, 221; PLUMB 103; WELD 106, 201, 202 (8)

Program Total: 34 credits
WELDING SPECIALIST

Certificate
This certificate program is designed to concentrate on welding skills utilizing processes that are most widely employed in business and industry. The welding proficiency and knowledge gained in this program supplement most skilled construction trades.

PROGRAM REQUIREMENTS

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMATH 100</td>
<td>Basic Mathematics for the Skilled Trades (2)</td>
<td></td>
</tr>
<tr>
<td>DRAFT 101</td>
<td>Drafting Essentials (2)</td>
<td></td>
</tr>
<tr>
<td>WELD 101</td>
<td>Principles of Flat Welding (2)</td>
<td></td>
</tr>
<tr>
<td>WELD 102</td>
<td>Horizontal Welding and Brazing (2)</td>
<td></td>
</tr>
<tr>
<td>WELD 103</td>
<td>Metal Inert and Vertical Welding (2)</td>
<td></td>
</tr>
<tr>
<td>WELD 104</td>
<td>Tungsten Inert and Overhead Welding (2)</td>
<td></td>
</tr>
<tr>
<td>WELD 105</td>
<td>A.W.S. Structural Certification (2)</td>
<td></td>
</tr>
<tr>
<td>WELD 106</td>
<td>Pipe and Pressure Vessel Certification (2)</td>
<td></td>
</tr>
<tr>
<td>WELD 201</td>
<td>Advanced Gas Metal Arc Welding (2)</td>
<td></td>
</tr>
<tr>
<td>WELD 202</td>
<td>Advanced Gas Tungsten Arc Welding (2)</td>
<td></td>
</tr>
</tbody>
</table>

Program Total: 20 credits
INFORMATION TECHNOLOGY

A.A.S. Degree
This program prepares students for the rapidly changing world of computers, computer applications and the office environment. After completing introductory courses, students may choose one of the following options: administrative assistant, networking, programming, software applications or Webmaster. Career opportunities vary according to the option selected.

INFORMATION TECHNOLOGY:
ADMINISTRATIVE ASSISTANT OPTION

I. GENERAL EDUCATION CORE (18-19)
Area A: Communication (6 credits)
ENG 101 Composition I - with a grade of C of better (3)
COMM 101 Principles of Communication (3)
Area B: Humanities and Fine Arts (3 credits)
Select one course from Area B on pages 50-52. (3)
Area C: Mathematics (3 credits)
BUS 103 Business Mathematics (3)
Area D: Physical and Life Sciences (3-4 credits)
Select one course from Area D on pages 50-52. (3-4)
Area E: Social and Behavioral Sciences (3 credits)
Select one course from Area E on pages 50-52. (3)

II. AREA OF CONCENTRATION/PROGRAM REQUIREMENTS (46)
Core Courses:
BUS 101 Introduction to Modern Business (3)
ITAPP 101 Introduction to Computers (3)
BUS 107 Bookkeeping and Procedural Accounting (3)
ITOFS 299 Internship (2)
Administrative Assistant Concentration Courses:
ITAPP 109 Introduction to the Internet (1)
ITAPP 121 Word Processing Applications - Level 1 (3)
ITAPP 122 Word Processing Applications - Level 2(3)
ITAPP 125 Spreadsheet Applications - Level 1 (2)
ITAPP 128 Database Applications - Level 1 (2)
ITAPP 132 Desktop Publishing (3)
ITAPP 133 Business Presentations (2)
ITOFS 111 Beginning Keyboarding Applications (2)
ITOFS 112 Intermediate Keyboarding Applications (2)
ITOFS 117 Keyboarding Skill Development (1)
ITOFS 119 Office Procedures (3)
ITOFS 122 Transcription Skills (3)
ITOFS 219 Office Management (3)
ITOFS 221 Advanced Keyboarding Applications (2)

INFORMATION TECHNOLOGY:
NETWORKING OPTION

I. GENERAL EDUCATION CORE (18-19)
Area A: Communication (6 credits)
ENG 101 Composition I - with a grade of C of better (3)
COMM 101 Principles of Communication (3)
Area B: Humanities and Fine Arts (3 credits)
Select one course from Area B on pages 50-52. (3)
Area C: Mathematics (3 credits)
BUS 103 Business Mathematics (3)
Area D: Physical and Life Sciences (3-4 credits)
Select one course from Area D on pages 50-52. (3-4)
Area E: Social and Behavioral Sciences (3 credits)
Select one course from Area E on pages 50-52. (3)

II. AREA OF CONCENTRATION/PROGRAM REQUIREMENTS (46)
Core Courses:
BUS 101 Introduction to Modern Business (3)
ITAPP 101 Introduction to Computers (3)
BUS 107 Bookkeeping and Procedural Accounting (3)
ITNET 299 Internship (2)
Networking Concentration Courses:
ITNET 160 Computer Repair (4)
ITNET 165 Introduction to Networking (3)
ITNET 250 Intro to LAN Administration (3)
ITPRG 103 Intro to Programming (3)
ITPRG 140 Intro to Operating Systems (3)
ITPRG 142 Intro to Visual Basic Prog. (3)
ITPRG 201 Systems Design and Develop.(3)
ITPRG 240 Intro to Linux Operating System (3)
ITWEB 101 Web Page Authoring (3)
Select from the following:
ITAPP 126, 155, 232; ITOFS 100; ITPRG 103, 140, 142 (3)

Program Total: 64 credits
INFORMATION TECHNOLOGY: PROGRAMMING OPTION

I. GENERAL EDUCATION CORE (18-19)
Area A: Communication (6 credits)
ENG 101 Composition I - with a grade of C of better (3)
COMM 101 Principles of Communication (3)
Area B: Humanities and Fine Arts (3 credits)
Select one course from Area B on pages 50-52. (3)
Area C: Mathematics (3 credits)
BUS 103 Business Mathematics (3)
Area D: Physical and Life Sciences (3-4 credits)
Select one course from Area D on pages 50-52. (3-4)
Area E: Social and Behavioral Sciences (3 credits)
Select one course from Area E on pages 50-52. (3)

II. AREA OF CONCENTRATION/PROGRAM REQUIREMENTS (46)
Core Courses:
BUS 101 Introduction to Modern Business (3)
ITAPP 101 Introduction to Computers (3)
BUS 131 Financial Accounting (4)
ITPRG 299 Internship (2)

Programming Concentration Courses:
ITPRG 103 Introduction to Programming (3)
ITPRG 140 Introduction to Operating Systems (3)
ITPRG 142 Introduction to Visual Basic Programming (3)
OR
ITPRG 147 Introduction to JAVA Programming (3)
ITPRG 201 Systems Design and Development (3)
ITPRG 248 Introduction to COBOL Programming (3)
Select from the following:
ITAPP 133; ITOFS 100; ITPRG 144, 147, 154, 242, 244, 247, 249;
ITWEB 101, 103, 201 (16)

Program Total: 64 credits

INFORMATION TECHNOLOGY: SOFTWARE APPLICATIONS OPTION

I. GENERAL EDUCATION CORE (18-19)
Area A: Communication (6 credits)
ENG 101 Composition I - with a grade of C of better (3)
COMM 101 Principles of Communication (3)
Area B: Humanities and Fine Arts (3 credits)
Select one course from Area B on pages 50-52. (3-4)
Area C: Mathematics (3 credits)
BUS 103 Business Mathematics (3)
Area D: Physical and Life Sciences (3-4 credits)
Select one course from Area D on pages 50-52. (3-4)
Area E: Social and Behavioral Sciences (3 credits)
Select one course from Area E on pages 50-52. (3)

II. AREA OF CONCENTRATION/PROGRAM REQUIREMENTS (46)
Core Courses:
BUS 101 Introduction to Modern Business (3)
ITAPP 101 Introduction to Computers (3)
BUS 131 Financial Accounting (4)
ITWEB 299 Internship (2)

Software Applications Concentration Courses:
ITAPP 109 Introduction to the Internet (1)
ITAPP 121 Word Processing Applications - Level 1 (3)
ITAPP 122 Word Processing Applications - Level 2 (3)
ITAPP 125 Spreadsheet Applications - Level 1 (2)
ITAPP 126 Spreadsheet Applications - Level 2 (2)

Program Total: 64 credits

INFORMATION TECHNOLOGY: WEBMASTER OPTION

I. GENERAL EDUCATION CORE (18-19)
Area A: Communication (6 credits)
ENG 101 Composition I - with a grade of C of better (3)
COMM 101 Principles of Communication (3)
Area B: Humanities and Fine Arts (3 credits)
Select one course from Area B on pages 50-52. (3)
Area C: Mathematics (3 credits)
BUS 103 Business Mathematics (3)
Area D: Physical and Life Sciences (3-4 credits)
Select one course from Area D on pages 50-52. (3-4)
Area E: Social and Behavioral Sciences (3 credits)
Select one course from Area E on pages 50-52. (3)

II. AREA OF CONCENTRATION/PROGRAM REQUIREMENTS (46)
Core Courses:
BUS 101 Introduction to Modern Business (3)
ITAPP 101 Introduction to Computers (3)
BUS 131 Financial Accounting (4)
ITWEB 299 Internship (2)

Webmaster Concentration Courses:
BUS 287 E-Business (3)
ITAPP 128 Database Applications - Level 1 (2)
ITNET 165 Introduction to Networking (3)
ITPRG 103 Introduction to Programming (3)
ITPRG 140 Introduction to Operating Systems (3)
ITPRG 142 Introduction to Visual Basic Programming (3)
ITWEB 101 Web Page Authoring (3)
ITWEB 103 Introduction to Web Site Development (3)
ITWEB 201 Technology of E-Commerce (3)
ITWEB 225 Web Workshop: Advanced Topics (2)
Select from ITAPP 129, 240; ITPRG 147, 154, 157, 240; ITWEB 205 (6)

Program Total: 64 credits
COMPUTER REPAIR SPECIALIST
Certificate
This program is for those individuals who want to work with computer hardware and software. This certificate provides students with skills needed as a first-level troubleshooting technician in a computer facility.

PROGRAM REQUIREMENTS
CET 111   Electronic Principles (4)
ITNET 160  Computer Repair (4)
ITPRG 140  Introduction to Operating Systems (3)
Select from CET 114; ITNET 250; ITWEB 101 (5)

Program Total: 16 credits

DATABASE - EXPERT
Certificate
This short-term program trains students to use Microsoft ACCESS 2007 in preparation for Microsoft certification testing. Students will learn to create a database, use forms, modify a database, view, organize and locate information, refine results of a query, analyze data, create sub forms, build a relational database, integrate information from other applications, utilize Web capability, and produce reports and prints. Typing or keyboarding skills recommended.

PROGRAM REQUIREMENTS
ITAPP 128  Database Applications - Level 1 (2)
ITAPP 129  Database Applications - Level 2 (2)
ITAPP 240  Application Development in Database (2)
ITPRG 142  Introduction to Visual Basic Programming (3)

Program Total: 9 credits

DESKTOP PUBLISHING
Certificate
This program prepares students to produce professional looking publications using desktop publishing software.

PROGRAM REQUIREMENTS
ITAPP 101  Introduction to Computers (3)
ITAPP 121  Word Processing Applications - Level 1 (3)
ITAPP 132  Desktop Publishing (3)
ITAPP 133  Business Presentations (2)
ITAPP 232  Advanced Desktop Publishing (3)
ITOFIS 100  Keyboarding (1)

Program Total: 15 credits

E-BUSINESS
Certificate
This certificate program includes the experiences necessary to create and maintain a successful E-business site. Topics include business, marketing, legal issues, programming, online monetary security issues and graphic design considerations.

PROGRAM REQUIREMENTS
BUS 101  Introduction to Modern Business (3)
BUS 287  E-Business (3)
GC 162  Introduction to Web Site Development (3)
ITPRG 142  Introduction to Visual Basic Programming (3)
ITWEB 201  Technology of E-Commerce (3)

Program Total: 15 credits

GAME DESIGN AND DEVELOPMENT
Certificate
Games Design and Development is a rapidly growing field that produces a wide variety of jobs. The program offers students the ability to explore different facets of the industry, as well as other digital entertainment and educational areas. This program combines current technology skills with art, design, writing, and programming.

PROGRAM REQUIREMENTS
ENG 101  Composition I (3)
GC 115 or ART 115  Introduction to Computer Art (3)
GC 175  Animation (3)
ITPRG 103  Introduction to Programming (3)
ITPRG 142  Introduction to Visual Basic Programming (3)
ITPRG 144  Introduction to C++ Programming (3)
ITPRG 171  Game Design I (3)
ITPRG 173  Digital Storytelling (3)
ITWEB 203  Flash/Interface Design (3)
Select one of the following courses:
ITPRG 140  Introduction to Operating Systems (3)
ITPRG 147  Introduction to JAVA Programming (3)
ITPRG 205  Ethics in Information Technology (3)
ITWEB 205  Web Languages (3)

Program Total: 30 credits
NETWORK SECURITY SPECIALIST
Certificate
This program covers the fundamentals of computer networking with an emphasis on network security, network defense, data integrity and computer forensics. It prepares students for jobs in network administration, network security, and computer forensics. Students are prepared for a range of industry certifications.

PROGRAM REQUIREMENTS
CJ 101       Introduction to Criminal Justice (3)
ITPRG 140    Introduction to Operating Systems (3)
ITNET 160    Linux Operating System (3)
ITNET 165    Introduction to Networking (3)
ITNET 250    Introduction to LAN Administration (3)
ITNET 260    Network Security Fundamentals (3)
ITNET 270    Computer Forensics (3)
ITNET 280    Ethical Hacking (3)

Program Total: 28 credits

NETWORKING SPECIALIST
Certificate
This program provides a foundation in computer networking including network planning, installation, configuration, maintenance and troubleshooting. It includes coverage of both Microsoft and Linux operating systems. Upon completion, student may seek various industry certification credentials such as CompTIA’s A+, Network +, and/or Linux+.

PROGRAM REQUIREMENTS
ITNET 160    Computer Repair (4)
ITNET 165    Introduction to Networking (3)
ITNET 250    Introduction to LAN Administration (3)
ITPRG 140    Introduction to Operating Systems (3)
ITPRG 240    Linux Operating System (3)

Program Total: 16 credits

OFFICE ASSISTANT
Certificate
This program prepares students to perform clerical duties for supervisors, including setting up and maintaining files, answering and placing telephone calls, compiling and maintaining reports and records, and performing office-related duties.

PROGRAM REQUIREMENTS
ITAPP 121    Word Processing Applications - Level 1 (3)
ITAPP 125    Spreadsheet Applications - Level 1 (2)
ITAPP 133    Business Presentations (2)
ITOF 111     Beginning Keyboarding Applications (2)
ITOF 119     Office Procedures (3)
ITOF 122     Transcription Skills (3)
ITOF 199     Office Assistant Practicum (1)

Program Total: 16 credits

SOFTWARE SPECIALIST
Certificate
This program provides students with the information and skills needed to be marketable and productive in a microcomputer environment. Career opportunities include database programmer, BASIC programmer, spreadsheet specialist, technical support coordinator, office manager, and office productivity coordinator.

PROGRAM REQUIREMENTS
BUS 107*    Bookkeeping and Procedural Accounting (3)
BUS 127    Business Communications (3)
ITAPP 101    Introduction to Computers (3)
ITAPP 109    Introduction to the Internet (1)
ITAPP 121    Word Processing Applications - Level 1 (3)
ITAPP 125    Spreadsheet Applications - Level 1 (2)
ITAPP 126    Spreadsheet Applications - Level 2 (2)
ITAPP 128    Database Applications - Level 1 (2)
ITAPP 129    Data Base Applications - Level 2 (2)
ITAPP 130    Software Integration and Applications (2)
ITAPP 240    Application Development in Database (2)
ITPRG 140    Introduction to Operating Systems (3)
ITPRG 142    Introduction to Visual Basic Programming (3)
* BUS 131 - Financial Accounting will be accepted in place of BUS 107

Program Total: 31 credits

SOFTWARE SUITE APPLICATIONS
Certificate
This program prepares students to use the components of a software suite and to integrate those components to business applications.

PROGRAM REQUIREMENTS
ITAPP 150    Software Suite Applications:Word Processing (1)
ITAPP 151    Software Suite Applications: Spreadsheets (1)
ITAPP 152    Software Suite Applications: Database (1)
ITAPP 153    Software Suite Applications: Presentation (1)
ITAPP 155    Integrated Software Suite Applications (1)

Program Total: 5 credits
SOFTWARE TECHNICIAN
Certificate
This program prepares students to be a software technician for a small or large company. As an employee, this technician could install, upgrade and maintain software programs and files, as well as diagnose and troubleshoot software-related problems. Career opportunities include computer troubleshooter, software maintenance technician and DOS/Windows Specialists.

PROGRAM REQUIREMENTS
ITAPP 101 Introduction to Computers (3)
ITAPP 109 Introduction to the Internet (1)
ITPRG 140 Introduction to Operating Systems (3)
Electives:
Select from: ITPRG 142, 144, 147 (3)
Select one additional IT course (2)

Program Total: 12 credits

SOFTWARE USER
Certificate
This program exposes students to a variety of application programs including spreadsheets, database and word processing software. Students will gain experience in operating systems (DOS and Windows), diagnostic tools and integration techniques. Some possible career opportunities include administrative assistant, secretary, office manager, and office productivity coordinator.

PROGRAM REQUIREMENTS
ITAPP 101 Introduction to Computers (3)
ITAPP 109 Introduction to the Internet (1)
ITAPP 121 Word Processing Applications - Level 1 (3)
ITAPP 125 Spreadsheet Applications - Level 1 (2)
ITAPP 128 Database Applications - Level 1 (2)
ITAPP 130 Software Integration and Application (2)
ITPRG 140 Introduction to Operating Systems (3)

Program Total: 16 credits

SPREADSHEET - PROFICIENT
Certificate
This short-term program trains students to use Microsoft EXCEL 2007 in preparation for Microsoft certification testing. Students will learn to create budgets, marketing, and sales reports, expense reports, invoices and purchase orders, basic financial statements and spreadsheet information for use on the Intranet/Internet. Typing or keyboarding skills recommended prior to admission.

PROGRAM REQUIREMENTS
ITAPP 125 Spreadsheet Applications - Level 1 (2)
ITAPP 126 Spreadsheet Applications - Level 2 (2)

Program Total: 4 credits

SPREADSHEET - EXPERT
Certificate
This short-term program trains students to use Microsoft EXCEL 2007 in preparation for Microsoft certification testing, In addition to the skills learned for Spreadsheet-Proficient, students will learn to create accounting financial statements, data analysis, statistical tables, amortization schedules, forecasts, personnel records and lists. Typing or keyboarding skills recommended prior to admission.

PROGRAM REQUIREMENTS
ITAPP 125 Spreadsheet Applications - Level 1 (2)
ITAPP 126 Spreadsheet Applications - Level 2 (2)
ITPRG 142 Introduction to Visual Basic Programming (3)

Program Total: 7 credits

WEB DEVELOPER
Certificate
This program is designed for students who wish to become Web developers or Web programmers. Students are offered hands-on experience in database, graphic design and Web programming using popular Web development software.

PROGRAM REQUIREMENTS
ITAPP 128 Database Applications - Level 1 (2)
ITPRG 140 Introduction to Operating Systems (3)
ITPRG 157 Javascript Programming (3)
ITWEB 101 Web Page Authoring (3)
ITWEB 103 Introduction to Web Site Development (3)
ITWEB 204 Technology of E-Commerce (3)
ITWEB 225 Web Workshop: Advanced Topics (2)

Program Total: 19 credits

WEBMASTER
Certificate
The Webmaster program is designed for students who wish to become Webmasters in small- to medium-sized companies. Students are offered hands-on experience in networking, operating systems, and Web programming.

PROGRAM REQUIREMENTS
ITNET 165 Introduction to Networking (3)
ITNET 250 Introduction to LAN Administration (3)
ITPRG 140 Introduction to Operating Systems (3)
ITPRG 240 Linux Operating System (3)
ITWEB 101 Web Page Authoring (3)
ITWEB 103 Introduction to Web Site Development (3)
ITWEB 201 Technology of E-Commerce (3)

Program Total: 21 credits
WORD PROCESSING - PROFICIENT

Certificate
This short-term program trains students in the use of Microsoft WORD 2007 and prepares them for Microsoft certification testing. Students learn to create letters, memos, faxes, envelopes, basic reports, resumes, time sheets and WORD documents for Intranet/Internet.

PROGRAM REQUIREMENTS
ITAPP 121        Word Processing Applications - Level 1 (3)
ITAPP 122        Word Processing Applications - Level 2 (3)

Program Total: 6 credits

WORD PROCESSING - EXPERT

Certificate
This short-term program trains students to use Microsoft WORD 2007 in preparation for Microsoft certification testing. In addition to the skills learned in Word Processing-Proficient, students will learn to create personalized form letters, formal reports, newsletters, brochures and forms.

PROGRAM REQUIREMENTS
ITAPP 121        Word Processing Applications - Level 1 (3)
ITAPP 122        Word Processing Applications - Level 2 (3)
ITOFS 221        Advanced Keyboarding Applications (2)

Program Total: 8 credits
MUSIC PRODUCTION
A.A.S. Degree
This program is designed to give students the basic practical and theoretical skills necessary to function in a variety of positions within the music industry.

I. GENERAL EDUCATION CORE (19)
Area A: Communication (6 credits)
ENG 101 Composition I - with a grade of C or better (3)
COMM 101 Principles of Communication (3)
Area B: Humanities (3 credits)
MUSIC 130 Music Appreciation (3)
OR
MUSIC 132 American Music (3)
Area C: Mathematics (3 credits)
BUS 103 Business Mathematics (3)
Area D: Physical and Life Sciences (4 credits)
PHYSI 101 Conceptual Physics (4)
Area E: Social and Behavioral Sciences (3 credits)
One course from the IAI courses listed for Area E.

II. PROGRAM REQUIREMENTS (32)
CET 101 Fundamentals of Electricity (2)
CET 111 Electronic Principles (4)
ITPRG 140 Introduction to Operating Systems (3)
MUSIC 100 Fundamentals of Music Theory (3)
MUSIC 101 Musicianship I (4)
MUSIC 172 Music in Film and Television (3)
MUSIC 174 Computer-Assisted Music Production (4)
MUSIC 176 Sound Recording Techniques (3)
MUSIC 171 Digital Keyboard Techniques (2)
OR
MUSIC 181 Private Lessons I (1) (piano)
MUSIC 274 Digital Composition for Video (4)
MUSIC 299 Music Production Internship (2)
PHYSI 101 Conceptual Physics (4)

Program Total: 60 credits

MUSIC TECHNOLOGY
Certificate
This program is designed to give students the basic practical and theoretical skills necessary to work as assistants and technicians in the music industry.

PROGRAM REQUIREMENTS
CET 101 Fundamentals of Electricity (2)
ITPRG 140 Introduction to Operating Systems (3)
MUSIC 100 Fundamentals of Music Theory (3)
MUSIC 130 Music Appreciation (3)
OR
MUSIC 132 American Music (3)
MUSIC 172 Music in Film and Television (3)
MUSIC 174 Computer-Assisted Music Production (4)
MUSIC 176 Sound Recording Techniques (3)
MUSIC 181 Private Lessons I (1) (piano)
MUSIC 274 Digital Composition for Video (4)
MUSIC 299 Music Production Internship (2)

Program Total: 32 credits
PHOTOGRAPHY

PHOTOGRAPHIC STUDIES

A.A.S. Degree
This program is designed to provide the student with practical experience in creative and vocational applications of photography. Each student is challenged to explore their ideas through commercial, social and aesthetic visual problems. Options are available for specialization in print or studio production.

I. GENERAL EDUCATION CORE (15-16)
Area A: Communication (6 credits)
ENG 101 Composition I - with a grade of C or better (3)
COMM 101 Principles of Communication (3)
Area B: Humanities and Fine Arts (3 credits)
Select one course from Area B on pages 50-52. (3)
Area C: Mathematics (demonstrated competence required)
Placement into MATH 095 or completion of MATH 090 - with a grade of C or better (demonstrated competence required) (3)
Area D: Physical and Life Sciences (3-4 credits)
Select one course from Area D on pages 50-52. (3-4)
Area E: Social and Behavioral Science (3 credits)
Select one course from Area E on pages 50-52. (3)

II. AREA OF CONCENTRATION/PROGRAM REQUIREMENTS (47)
ART 101 Two Dimensional Design (3)
ART 126 History of Photography (3)
PHOTO 171 Introduction to Black & White Photography (3)
PHOTO 174 Digital Darkroom Techniques (2)
PHOTO 175 Basic Lighting Skills (2)
PHOTO 176 Electronic Flash Techniques (2)
PHOTO 180 Photoshop I (2)
PHOTO 196 Careers in Photography (1)
PHOTO 273 Photographic Methods (3)
PHOTO 275 Photographic Design (3)
PHOTO 285 Digital Color Production (3)
PHOTO 290 Color Slide Photography (4)
PHOTO 291 Survey of Contemporary Photography (3)

Option: Select one area of specialization from the options listed below (13)

Option A: PRINT PRODUCTION
Select 13 credits from
PHOTO 280 Photoshop II (2)
PHOTO 281 Digital Applications (4)
PHOTO 282 Experimental Techniques (3)
PHOTO 286 Independent Photo Project (3)
PHOTO 292 Photo Workshop: Special Topics (4)
PHOTO 297 Professional Portfolio (3)
PHOTO 298 Seminar (1)
PHOTO 299 Internship (1-3)

Option B: STUDIO PRODUCTION
Select 13 credits from
PHOTO 276 Commercial Techniques (4)
PHOTO 283 Portraiture (3)
PHOTO 287 Independent Photo Studio (3)
PHOTO 292 Photo Workshop: Special Topics (4)
PHOTO 293 Advanced Portraiture (4)
PHOTO 297 Professional Portfolio (3)
PHOTO 298 Seminar (1)
PHOTO 299 Internship (1-3)

Program Total: 62-63 credits

PHOTOGRAPHY

Certificate
This program builds a technical and visual foundation using photographic techniques while encouraging students to become effective communicators with their cameras.

PROGRAM REQUIREMENTS
ART 101 Two Dimensional Design (3)
PHOTO 171 Introduction to Black & White Photography (3)
PHOTO 174 Digital Darkroom Techniques (2)
PHOTO 175 Basic Lighting Skills (2)
PHOTO 176 Electronic Flash Techniques (2)
PHOTO 180 Photoshop I (2)
PHOTO 196 Careers in Photography (1)
PHOTO 273 Photographic Methods (3)
PHOTO 275 Photographic Design (3)
PHOTO 285 Digital Color Production (3)
PHOTO 290 Color Slide Photography (4)
PHOTO 291 Survey of Contemporary Photography (3)

Program Total: 31 credits
PORTRAIT PHOTOGRAPHY

Certificate
This program is designed to thoroughly prepare students in specific photographic techniques of portrait photography. Participants gain substantial experience creating successful studio and location portraits while working in a professional studio/lab environment.

PROGRAM REQUIREMENTS

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<td>PHOTO 297</td>
<td>Professional Portfolio</td>
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Program Total: 24 credits

Note: Students must take the first four courses in sequence, or enroll in two consecutively numbered courses in the same semester. Students must earn a grade of B or better in PHOTO 171 or a score of 80% or better on a proficiency exam with portfolio review.

* PHOTO 298 and 299 (3 credits total) will be accepted in place of PHOTO 297.
CAREER COOPERATIVE PROGRAM

Prairie State College is a partner in CAREER (Comprehensive Agreement Regarding the Expansion of Educational Resources) Cooperative with the community colleges listed below. If PSC does not offer a particular degree or certificate program, residents of PSC District 515 may apply for a Cooperative Agreement. Upon approval, residents can enroll at any of these colleges. If accepted into the desired program they will be charged the in-district tuition rate at these partner colleges.

Applications must be received at PSC 30 days prior to the beginning of the semester at the college the student will be attending. Developmental course work (courses below 100 level) and required prerequisites must be completed at PSC. A 2.0 grade point average must be maintained at PSC before a cooperative agreement will be approved. Individual courses are not eligible for cooperative agreements nor are programs that are generally considered to be baccalaureate oriented. In addition, repeated courses are not covered under these agreements.

Courses taken which are not part of the approved program will not be honored for the cooperative agreement. That is, the entire out-of-district tuition for such courses must be borne by the student. Students who change to programs of study outside of these existing agreements will be billed at out-of-state tuition for all course work. Community colleges often have comparable programs. Cooperative agreements are granted at the discretion of PSC and will not be granted for comparable programs.

For more information about specific programs, contact the college where the program is offered. For more information about the CAREER application process, call the Counseling and Academic Advising Center at (708) 709-3506.

COMMUNITY COLLEGES PART OF CAREER COOPERATIVE PROGRAM

• Black Hawk College
• Carl Sandburg College
• Danville Area 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 College
• Lake Land College
• Lewis and Clark Community College
• Lincoln Land Community College
• McHenry County College
• Morton College
• Prairie State College
• Richland Community College
• Rock Valley College
• Sauk Valley Community College
• South Suburban College
• Spoon River College
• Waubonsee Community College

TECH PREP

COLLEGE CREDIT FOR HIGH SCHOOL STUDENTS

Just as Advanced Placement (AP) courses provide a way to earn college credit in subjects such as English, History, and the Sciences, Tech Prep is a national program that grants college credit in career and technical disciplines. Its purpose is to prepare any student to enter and succeed in a career as well as further his or her education beyond high school.

Depending on the courses offered at the particular high school and the articulation (dual-credit) agreements made with PSC, Tech Prep courses include (but are not limited to) the following subjects: Business, Child Development, Graphic Communications, Industrial Technology (Automotive Technology, Industrial Electronics Technology, Welding, and more), Information Technology, and Photography.

If you are a high school student, contact your school’s guidance office or career administrator for more information.

High school career administrators work with the Career Preparation Network, the consortium that coordinates Tech Prep programs in PSC’s District 515:

Career Preparation Network
Tom Hysell, Director
Prairie State College - ATOC
202 South Halsted Street
Chicago Heights, IL 60411
phone (708) 709-7905; fax (708) 709-7904
e-mail: thysell@yahoo.com
### DEGREES, CERTIFICATES, COURSES

#### COURSE DESCRIPTIONS

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#### ILLINOIS ARTICULATION INITIATIVE (IAI) [www.itransfer.org]

Prairie State College participates in the Illinois Articulation Initiative (IAI), a statewide agreement that allows transfer of the completed Illinois Transferable General Education Core Curriculum between participating institutions. Completion of the Transferable General Education Core Curriculum at any participating college or university in Illinois assures transferring students that lower-division general education requirements for an associate’s or bachelor’s degree have been satisfied. This agreement became effective statewide in the Summer of 1998. It applies to students who enrolled in an associate or baccalaureate degree-granting institution as a first-time freshman in summer 1998 or later. More than 100 schools, including all community colleges and all public state universities in Illinois, as well as most independent colleges and universities in the state, participate in the IAI.
IAI COURSE CODES
IAI has its own course numbering sequence for the Illinois Transferable General Education Core Curriculum (GECC).
Here is an example of an IAI GECC course —
S7 903D: Racial and Ethnic Relations
This code would be noted for a PSC course listed in this catalog as follows:
SOCIO 220 (IAI: S7 903D)
Race Relations: A Multicultural Perspective

The first letter in the IAI GECC code indicates the discipline field for the course. The letter S, for example, indicates Social/Behavioral Sciences. IAI letter codes and their corresponding disciplines are as follows:

General Education Core Curriculum Course Codes:
IAI: C Communication
IAI: F Fine Arts
IAI: H Humanities
IAI: HF Interdisciplinary Humanities and Fine Arts
IAI: HS Interdisciplinary Humanities/Fine Arts and Social/Behavioral Sciences
IAI: L, LP Life Sciences
IAI: M Mathematics
IAI: P, LP Physical Sciences
IAI: S Social/Behavioral Sciences

The first number after the letter indicates the sub-area of the discipline. The S7 in this example represents the Sociology sub-area of Social/Behavioral Sciences. The next numbers represent the unique content category within this subdiscipline. Letters at the end of course numbers identify specific perspectives related to the course. The D in S7 903D, for example, represents courses that examine aspects of human diversity within the United States. Other end-of-course letters include:
N for courses designed to examine aspects of human diversity from a non-U.S./non-European perspective
L for laboratory courses
R for research paper courses

Codes which represent the IAI Baccalaureate Majors recommendations have two parts: a letter code that represents the field of study and a unique number that represents the course content.

Baccalaureate Major Course Codes:
IAI: AG Agriculture
IAI: ART Art & Art Education
IAI: BIO Biological Sciences
IAI: BUS Business
IAI: CHM Chemistry
IAI: CLS Clinical Laboratory Sciences
IAI: CS Computer Science
IAI: CRJ Criminal Justice
IAI: ECE Early Childhood Education
IAI: EDU Teacher Education
IAI: EGL English
IAI: EGR Engineering
IAI: HST History
IAI: MC Mass Communication
IAI: MTH Mathematics
IAI: MTM Manufacturing Tech./Machining
IAI: MUS Music & Music Education
IAI: NUR Nursing
IAI: PHY Physics
IAI: PLS Political Science
IAI: PSY Psychology
IAI: SOC Sociology
IAI: SPC Speech Communication
IAI: SW Social Work
IAI: TA Theatre Arts
ANTHROPOLOGY

ANTHR 215 (IAI: S1 900N)
INTRODUCTION TO ANTHROPOLOGY
Prerequisite: Placement into ENG 099 or higher
3 lectures per week: 3 hrs credit
Introduction to the major areas: physical anthropology, cultural anthropology, ethnology, and archeology. Topics include race, language, prehistory, the culture and social organization of contemporary primitive or preliterate peoples, human origins, and basic research methods in anthropology.

ANTHR 222 (IAI: S1 901N)
INTRODUCTION TO CULTURAL AND SOCIAL ANTHROPOLOGY
Prerequisite: Placement into ENG 099 or higher
3 lectures per week: 3 hrs credit
The cultural and social systems of both simple and complex societies: technology, aesthetics, language, religion, family and kinship, and associational life. Basic theories and methods relevant to those topics are introduced. This course is especially valuable for students in education, the humanities, and the social sciences.

APPLIED PHYSICS
(See Physics)

ART
(See also Graphic Communications and Photographic Studies)

ART 101 (IAI: ART 907)
TWO DIMENSIONAL DESIGN
Prerequisite: None
6 lab hrs per week: 3 hrs credit
This course introduces the theory and practice of the elements and principles of 2-D design. Students experiment with a variety of media as they develop an understanding of the visual elements and principles of 2-D design.

ART 102 (IAI: ART 908)
THREE DIMENSIONAL DESIGN
Prerequisite: ART 101
6 lab hrs per week: 3 hrs credit
This course introduces the theory and practice of 3-D design. Students work with a variety of three-dimensional media and techniques as they develop an understanding of form, mass contour, space, and texture.

ART 104 (IAI: ART 904)
DRAWING I
Prerequisite: None
6 lab hrs per week: 3 hrs credit
This course is an introduction to the materials and techniques of drawing as an art form. Working in black-and-white and colored media, students explore the formal, conceptual, and expressive dimensions of drawing. Emphasis is placed upon the observation, interpretation, and rendering of visible form.

ART 105
COLOR THEORY
Prerequisite: ART 101
1 lecture, 4 lab hrs per week: 3 hrs credit
This course is a study of color and its use and the perception, psychology and physical characteristics of color as related to aesthetics and creativity.

ART 106 (IAI: ART 905)
DRAWING II
Prerequisite: ART 104
6 lab hrs per week: 3 hrs credit
ART 106 reinforces the formal and technical concepts introduced in Drawing I. Students work with a variety of subjects and materials, exploring a wide range of conceptual approaches culminating in a final series of related drawings.

ART 109
CERAMICS
Prerequisite: None
6 lab hrs per week: 3 hrs credit
This studio course introduces ceramic clay-forming techniques with emphasis placed on wheel-throwing and hand-building methods of construction. Procedures on glazing, surface decorations, and clay and glaze theory are examined.

ART 115 (IAI: ART 919)
INTRODUCTION TO COMPUTER ART
Prerequisite: None
6 lab hrs per week: 3 hrs credit
This studio course introduces students to the history and use of computer applications in the visual arts. Students learn to generate, combine, and manipulate traditional and contemporary visual ideas using both raster paint/photo retouching programs and professional quality vector drawing programs. (same as GC 115)

ART 121 (IAI: F2 901; ART 901)
HISTORY OF WESTERN ART I
Prerequisite: Placement into ENG 099 or higher
3 lectures per week: 3 hrs credit
This course surveys the chronological development of the visual arts in Western society from prehistory through the Middle Ages. Emphasis is placed upon the analysis of form, style and content as well as the historical context in which works of art are created.

ART 122 (IAI: F2 902; ART 902)
HISTORY OF WESTERN ART II
Prerequisite: Placement into ENG 099 or higher
3 lectures per week: 3 hrs credit
This course surveys the chronological development of the visual arts in Western society from the early Renaissance through the Modern period. Emphasis is placed upon the analysis of form, style and content, as well as the historical context in which works of art are created.
ART 126 (IAI: F2 904)
HISTORY OF PHOTOGRAPHY
Prerequisite: Placement into ENG 099 or higher
3 lectures per week: 3 hrs credit
This course surveys the history of photography as an art form from 1839 to the present, with an emphasis upon the medium’s technological and aesthetic development. Students learn to examine photographs as expressions of ideas and beliefs of individual photographers within their social and cultural context.

ART 129 (IAI: F2 900)
ART APPRECIATION
Prerequisite: Placement into ENG 099 or higher
3 lectures per week: 3 hrs credit
Art Appreciation serves as an introduction to the visual arts for non-art majors. Students examine selected works in painting, drawing, printmaking, sculpture, and architecture from various cultures and periods. Emphasis is placed upon historical, social, and technological factors that contribute to understanding the aesthetic form, function, and meaning of art. Field trips may be included.

ART 131 (IAI: F2 903N)
SURVEY OF NON-WESTERN ART
Prerequisite: Placement into ENG 099 or higher
3 lectures per week: 3 hrs credit
This course surveys the visual arts of non-Western societies, including, India, China, Japan, Oceania, Africa, and Native North and South America, and examines the influence of non-Western art on contemporary Western art.

ART 162 (IAI: ART 906)
LIFE DRAWING
Prerequisite: ART 101 & 104
6 lab hrs per week: 3 hrs credit
This advanced course in drawing focuses upon the direct observation and interpretation of visual form, with an emphasis on the human figure. Students are expected to demonstrate competence with diverse drawing materials and various compositional strategies.

ART 201 (IAI: ART 911)
PAINTING I
Prerequisite: None
6 lab hrs per week: 3 hrs credit
This course introduces students to the technical and aesthetic dimensions of painting. Students address both formal and expressive qualities of painting as they observe and interpret a variety of subjects from life. A final portfolio is required.

ART 202
PAINTING II
Prerequisite: ART 201
6 lab hrs per week: 3 hrs credit
This course is a continuation of ART 201 and introduces a wider range of both technical and conceptual approaches to painting. Students are encouraged to seek a more personal voice through exploring the expressive dimensions of painting and developing a final series of related works on a chosen theme.

ART 205 (IAI: ART 914)
PRINTMAKING
Prerequisite: ART 101 and 104
6 lab hrs per week: 3 hrs credit
This course is an introduction to traditional and contemporary fine art printmaking practices. Students produce a portfolio that demonstrates a basic understanding of the technical and aesthetic dimensions of this art form.

ART 246
INDEPENDENT STUDY
Prerequisite: None
1 lecture, 4 lab hrs per week: 3 hrs credit
May be repeated two times.
The independent study in fine arts provides advanced students with the opportunity to pursue a specialized creative project that goes beyond the normal course offerings. Students contract a problem, present alternative directions to its solution and present a final portfolio of artwork accompanied by a written statement. Frequent critiques are conducted throughout the semester.

ART 295
PORTFOLIO SEMINAR
Prerequisite: Completion of first year of relevant degree, or 12 credit hrs toward certificate program, or consent of instructor
2 lectures, 2 lab hrs per week: 3 hrs credit
This course is an interdisciplinary arts seminar that is intended to expose students to a wide range of artistic concerns and practices through lectures, discussions, and critiques. Specific workshops focus on the development of a resume, an art portfolio, and a statement of artistic purpose.

ASTRONOMY

ASTRO 101 (IAI: P1 906)
GUIDE TO THE UNIVERSE
Prerequisite: Placement into ENG 099 or higher
3 lectures per week: 3 hrs credit
This is a one-semester conceptual astronomy course. It explores the night sky, stars and constellations, light and astrophysical tools, and the history and origin of the solar system and the universe. Students cannot receive credit for both ASTRO 101 and ASTRO 104.

ASTRO 104 (IAI: P1 906L)
THE SOLAR SYSTEM AND BEYOND
Prerequisite: Placement into ENG 099 or higher
3 lectures, 2 lab hrs per week: 4 hrs credit
This course offers a non-mathematical survey of astronomical phenomena including the cycles of the night sky, the origins of modern astronomy, the solar system, galaxies, planetary motion, and cosmology. Students cannot receive credit for both ASTRO 101 and ASTRO 104.
**AUTO 101**
**BASIC AUTOMOBILE SERVICE AND SYSTEMS**
*Prerequisite: Placement into RDG 098 or higher*
2 lectures, 2 lab hrs per week: 3 hrs credit
This course introduces automotive systems and service. It includes safety systems, drive lines, engines, transmissions, transaxles, heating and cooling systems, fuel systems, steering and brake systems, ignition systems, construction, and operating systems.

**AUTO 102**
**AUTOMOTIVE ENGINES**
*Prerequisite: AUTO 101*
2 lectures, 4 lab hrs per week: 4 hrs credit
This course focuses on automotive engine repair, disassembly, adjustments, assembly, and operation. Service units include block, cylinder heads, valve assembly, lubrication system, and cooling system.

**AUTO 107**
**AUTOMOTIVE ELECTRICITY/ELECTRONICS I**
*Prerequisite: Placement into RDG 098 or higher*
2 lectures, 4 lab hrs per week: 4 hrs credit
Specialized training is provided in the basic automotive electrical system, including the electrical circuits, storage batteries, cranking systems, charging systems, ignition systems, electrical system-circuit-component tests, and the testing equipment that pertains to the automotive diagnostic-service field.

**AUTO 108**
**SUSPENSION AND STEERING SYSTEMS**
*Prerequisite: AUTO 101*
2 lectures, 4 lab hrs per week: 4 hrs credit
This course covers component repair operations, adjustments, and performance testing of front and rear suspension systems. Service units include control arm pivot shaft bushings, ball joints, springs, shocks, MacPherson struts, bearings, wheels, tires, steering linkages, and gears.

**AUTO 206**
**AUTOMOTIVE ENGINE PERFORMANCE**
*Prerequisite: AUTO 102, 107*
2 lectures, 4 lab hrs per week: 4 hrs credit
This course covers diagnosing and repairing complex engine and computer problems and driveability problems of the modern automobile.

**AUTO 207**
**AUTOMOTIVE HEATING/AIR CONDITIONING**
*Prerequisite: AUTO 101, 107*
2 lectures, 4 lab hrs per week: 4 hrs credit
This course focuses on component repair operations and adjustments. Performance testing on heating, defrosting, and air conditioning systems is included. Retro fitting and alternative refrigerants also are studied.

**AUTO 208**
**AUTOMATIC TRANSMISSIONS/TRANSAXLES**
*Prerequisite: AUTO 101*
2 lectures, 4 lab hrs per week: 4 hrs credit
This course covers component repair operations, adjustments, and performance testing on automatic transmissions, transmission controls, auto transaxle transmissions, overdrives, and drive lines.

**AUTO 209**
**AUTOMOTIVE ELECTRICITY/ELECTRONICS II**
*Prerequisite: AUTO 101 and 107*
2 lectures, 4 lab hrs per week: 4 hrs credit
This course covers electrical circuit identification, isolation, testing repair, and component operation. Service units include batteries, starting system, ignition system, charging system, light circuits, gauges, and electrical accessories, and diagnosis on chassis electronics and all electrical components of the vehicle.

**AUTO 210**
**AUTOMOTIVE ENGINE PERFORMANCE II**
*Prerequisite: AUTO 206, 210*
2 lectures, 4 lab hrs per week: 4 hrs credit
Student technicians cover the operational aspects of automotive computer output/input control systems, performance diagnosis procedures, repair, service, and OBD I, OBD II, readiness monitors, and IM-240.

**AUTO 211**
**COLLISION REPAIR I: FRAME-BODY**
*Prerequisite: AUTO 111 and 112 (or concurrent registration)*
2 lectures, 4 lab hrs per week: 4 hrs credit
Body-frame service equipment is used in the repair of frame and unibody type vehicles, along with panel replacement, panel alignment, sectioning, clipping, and various repair services.

**AUTO 215**
**ADVANCED AUTOMOTIVE SERVICE AND SYSTEMS**
*Prerequisite: AUTO 206, 210*
2 lectures, 4 lab hrs per week: 4 hrs credit
This course focuses on advanced automotive engine, engine performance, brake, electric/electronic, computer, and transmission system operation and diagnosis.
AUTO 223
AUTOMOTIVE PARTS MANAGEMENT
Prerequisite: Placement into ENG 099 or higher
2 lectures per week: 2 hrs credit
Parts training includes the use of parts, equipment and supply catalogs, descriptive nomenclature, stock familiarization, pricing procedures, and inventory control.

AUTO 224
AUTOMOTIVE SERVICE MANAGEMENT
Prerequisite: Placement into ENG 099 or higher
2 lectures per week: 2 hrs credit
This course covers automotive repair shop operations including the use of flat rate manuals, repair and order writing, familiarization with manufacturer and company policies and procedures, and existing labor agreements.

AUTO 298
INTERNSHIP SEMINAR
Prerequisite: 12 hrs in AUTO courses
1 lecture per week: 1 hr credit
This course is structured to enable interns to participate in group discussions on current automotive repair practices and experiences related to their internship studies. A written report of work related activities is required.

AUTO 299
INTERNSHIP: AUTOMOTIVE
Prerequisite: 12 hrs in AUTO and consent of program coordinator
20 lab hrs per week: 2 hrs credit (variable hrs of credit)
This course provides on-the-job experience combined with supervision. It is designed to present service technicians with a performance view of the automotive service professions.

BIOLOGICAL SCIENCE

BIOL 100 (IAI: L1 900L)
GENERAL EDUCATION BIOLOGY
Prerequisite: Placement into ENG 099 or higher
3 lectures, 2 lab hrs per week: 4 hrs credit
This one-semester introductory course for non-science majors is designed to fill the general education requirement for life science with a laboratory. The course covers cell biology, genetics, evolution and diversity, plant and animal structure and functions, animal behavior, and ecology. Students cannot receive credit for both BIOL 100 and 112.

BIOL 103 (IAI: L1 901)
PLANTS AND SOCIETY
Prerequisite: Placement into ENG 099 or higher
3 lectures per week: 3 hrs credit
This course emphasizes scientific inquiry through selected concepts in biology such as organization, function, heredity, evolution, and ecology. Topics include plant structure, growth, genetics, evolution, physiology, reproduction, and the economic importance and inter-relationships between plants and humans. This course is for non-majors.

BIOL 105 (IAI: L1 905)
ENVIRONMENTAL BIOLOGY
Prerequisite: Placement into ENG 099 or higher
3 lectures per week: 3 hrs credit
A consideration of the timely and urgent problems of mankind of a biological nature: pollution of air and water, adverse effects of radiation and insecticides on the environment, overpopulation, food production, thermal pollution, noise pollution, and other related topics.

BIOL 106 (IAI: L1 906L)
HEREDITY AND SOCIETY
Prerequisite: Placement into ENG 099 or higher
3 lectures, 2 lab hrs per week: 4 hrs credit
This course is an introduction to basic genetic principles and contemporary issues in biotechnology. The ethical, political, and social implications of biological advances in genetics are addressed.

BIOL 108
ESSENTIALS OF ANATOMY & PHYSIOLOGY
Prerequisite: None
4 lectures per week: 4 hrs credit
The course involves the basic structure and function of the organs and systems of the human body. This one-semester lecture class is recommended for students in the Surgical Technology and Personal Trainer programs.

BIOL 111 (IAI: BIO 910; CLS 902)
CELLULAR AND MOLECULAR BIOLOGY
Prerequisite: High school biology or equivalent; placement into ENG 099 or higher
3 lectures, 3 lab hrs per week: 4 hrs credit
This is a course designed for science and health majors. It provides an introduction to biochemistry, molecular genetics, cell structure, cell function, cellular process, and cell division. This course also includes an introduction to Mendelian inheritance and gene activity.
DEGREES, CERTIFICATES, COURSES

COURSE DESCRIPTIONS

BIOL 112 (IAI: LI 900L; BIO 910; CLS 901)
ORGANISMSAL BIOLOGY
Prerequisite: High school biology or equivalent; placement into ENG 099 or higher
3 lectures, 3 lab hrs per week: 4 hrs credit
This is a course designed for science and health majors. It provides an introduction to the structure and function of microorganisms, fungi, plants, and animals. This course also includes an introduction to evolutionary and ecological principles. Students cannot get credit for both BIOL 100 and 112.

BIOL 115
MICROBIOLOGY FOR SURGICAL TECHNOLOGISTS
Prerequisite: Admission to Surgical Technology program
4 lectures per week: 4 hrs credit
Students learn the impact of microbiology on the practice of aseptic technique and how to apply those principles in controlling infection in the operating room. The immune response, hypersensitivity, vaccines, common pathogens, and the process of infection also are addressed.

BIOL 120
INDEPENDENT STUDIES IN ECOLOGY
Prerequisite: Consent of instructor
15 lab hrs per week: 3 hrs credit (variable credit)
This course is designed to allow students to obtain hands-on experience in the various phases of ecosystem restoration and preservation as well as in monitoring the factors involved in ecosystem functioning. Students inventory flora and fauna of ecosystems, monitor water and soil quality, and perform activities needed to maintain viable ecosystems. The course includes field work and writing reports on activities carried out in the field.

BIOL 211 (IAI: CLS 905; NUR 905)
MICROBIOLOGY
Prerequisite: BIOL 111 with C or better; or CHEM 105 with a C or better; or high school chemistry within the past 5 years with a C or better.
3 lectures, 3 lab hrs per week: 4 hrs credit
This is an introduction to the study of microscopic organisms, with an emphasis on bacteria. Special attention is given to their structure, physiology, and ecology. This course also includes an introduction to virology, medical parasitology, medical mycology, and immunological concepts. This course is especially beneficial for health profession majors because of the emphasis on the microbial role in the disease process focusing on the epidemiology, clinical manifestation, and treatment of microbial diseases.

BIOL 221 (IAI: CLS 903; NUR 903)
HUMAN ANATOMY AND PHYSIOLOGY I
Prerequisite: BIOL 111 with a C or better; or CHEM 105 with a C or better; or high school chemistry within the past 5 years, with a C or better.
3 lectures, 2 lab hrs per week: 4 hrs credit
This is Part I of a two-semester sequence of study concerning anatomy and physiology of the human body. Part I includes the study of basic principles of chemistry, cell biology, cellular metabolism, and tissue histology. It also covers the integumentary system, skeletal system, muscle system, and the nervous system.

BIOL 222 (IAI: CLS 904; NUR 904)
HUMAN ANATOMY AND PHYSIOLOGY II
Prerequisite: BIOL 221
3 lectures, 2 lab hrs per week: 4 hrs credit
This is Part II of a two-semester sequence of study on the anatomy and physiology of the human body. It also covers senses, endocrine system, digestive tract, nutrition, metabolism, respiratory system, cardiovascular system, lymphatic system, urinary system, water and electrolyte balance, reproductive system, human growth and development, and human genetics.

BUSINESS
(See also Economics, and Transportation, Warehousing, and Logistics)

BUS 101 (IAI: BUS 911)
INTRODUCTION TO MODERN BUSINESS
Prerequisite: None
3 lectures per week: 3 hrs credit
This course is designed to provide an overview of business and the environment in which it operates. The topics studied include organization of business, business environment, management and organization of business, managing employees, marketing, financial management, information for business strategy, and special topics. Students develop a business plan.

BUS 103
BUSINESS MATHEMATICS
Prerequisite: Math 085 with a C or better or qualifying score on the Math Placement Test.
3 lectures per week: 3 hrs credit
This course emphasizes development of skill in handling the mathematics of business transactions in business and as consumers. Included are fundamental processes of percentage, discounts, profit and loss, net present value, annuities, simple and compound interest, and payroll taxes as well as depreciation and inventories.

BUS 105
HUMAN RELATIONS
Prerequisite: None
3 lectures per week: 3 hrs credit
This course teaches how to develop and maintain positive and productive relationships in the workplace. Students learn how, as managers, to provide a better quality of work life for employees. They also learn communication skills, how to conduct meetings, how to properly delegate, theories of motivation and leadership, and problem-solving skills.

BUS 107
BOOKKEEPING AND PROCEDURAL ACCOUNTING
Prerequisite: None
3 lectures per week: 3 hrs credit
This course emphasizes how to keep records rather than how to analyze them. Work is devoted to developing procedures within the framework of acceptable accounting concepts. Students also acquire the vocabulary necessary to understand communications with others in the field.
BUS 109
PRINCIPLES OF SUPERVISION
Prerequisite: None
3 lectures per week: 3 hrs credit
This course examines the principles of planning, organizing, directing and controlling the work of others by first-level managers. Real world applications and productivity are emphasized.

BUS 120
SALES
Prerequisite: None
3 lectures per week: 3 hrs credit
This course is a study of the sales process and the psychology involved in the sales process. Special emphasis is given to application of sales techniques and management of sales campaigns. Emphasis is also placed on student oral presentations and research.

BUS 127
BUSINESS COMMUNICATIONS
Prerequisite: ENG 101 or consent of instructor
3 lectures per week: 3 hrs credit
This course offers a comprehensive study of the types of communications used in business with special emphasis on written communication. The course teaches how to write a business memo, letter, and report. Everything from layout to content is covered, as are such things as proper listening, semantics, and psychology of business communication, and tips which make writing easier and more professional.

BUS 129
PRINCIPLES OF PHYSICAL DISTRIBUTION
Prerequisite: None
3 lectures per week: 3 hrs credit
This course describes the movement of goods from production to delivery to distribution channel intermediaries. Attention is focused upon distribution channels, traffic management, warehousing, inventories, organization, control, and communication. Distribution design and distribution system analysis are emphasized.

BUS 131 (IAI: BUS 903)
FINANCIAL ACCOUNTING
Prerequisite: Placement into ENG 099 or higher
4 lectures per week: 4 hrs credit
This is an introduction to financial accounting and the communication of relevant information to external parties. It includes the development of the accounting model, internal control, measurement processes, data classification, and terminology. Interpretation and use of the resultant financial statements are emphasized. Sole proprietorships, corporations, service businesses, and merchandisers are covered. The additional feature of this course is the inclusion of computer applications.

BUS 132 (IAI: BUS 904)
MANAGERIAL ACCOUNTING
Prerequisite: BUS 131
3 lectures per week: 3 hrs credit
This is an introduction to managerial accounting emphasizing information required for internal decision making. The fundamentals of product costing, cost/volume/profit analysis, absorption costing, variable costing, budgeting, standard costs, variance analysis, cost control, responsibility accounting, short-run decision analyses, capital budgeting, activity-based costing, just-in-time concepts, and quality management are included.

BUS 137
ACCOUNTING–MICROCOMPUTER APPLICATIONS
Prerequisite: BUS 107 or 131 or equivalent
3 lectures per week: 3 hrs credit
This course is for students who have completed one semester of accounting and wish to learn how computerized accounting systems function through a hands-on approach. The integrated skills approach is based upon commercial software packages. Students complete the following modules: general ledger, accounts receivable, accounts payable, job cost, and system.

BUS 138
ACCOUNTING SOFTWARE I
Prerequisite: BUS 107 or BUS 131
1.5 lecture hrs per week: 1.5 hrs credit
This is an introductory course in the use of commercial microcomputer accounting software applications. General ledger, financial statements, customer, vendor, payroll, and inventory applications are included. Students intending to transfer credit should take BUS 137.

BUS 139
ACCOUNTING SOFTWARE II
Prerequisite: BUS 107 or 131
1.5 lecture hrs per week: 1.5 hrs credit
This course continues the study of commercial microcomputer accounting software applications. General ledger, financial statements, customer, vendor, payroll, and inventory applications are included. Students intending to transfer credit should take BUS 137.

BUS 140
INTERNATIONAL BUSINESS
Prerequisite: BUS 101
3 lectures per week: 3 hrs credit
This course provides an understanding of the concepts, principles, and practices of the international business environment. Included are a study of the nature of international business; differences between conducting business in the United States and in other countries; international organizations; functional management and monetary systems; foreign forces such as economic, labor, cultural, political, and competitive; and the impact of a foreign country’s economy and business practices on U.S. economy and business.
BUS 157
FINANCE AND CREDIT OPERATIONS
Prerequisite: None
3 lectures per week: 3 hrs credit
The operations of financial institutions including banks, credit unions, and savings and loans are covered. Described are the operations of the financial community: mortgage houses, financial firms, and credit agencies. The course gives insight into the operations and the role they play in our economic life.

BUS 165
PERSONAL ASSET MANAGEMENT
Prerequisite: None
4 lectures per week: 4 hrs credit
This course is a study of investment vehicles and the securities market. The content includes a study of stocks, bonds, money market instruments, mutual funds, and real estate; what they are used for and how; why and when they should be traded; who should invest in them; how interest rates affect them; investment strategies; and how a portfolio should be managed. The course also informs students of their financial responsibilities, helps them to develop strategies for managing their debt, and explores skills for the wise use of credit.

BUS 169
MATERIALS HANDLING AND PACKAGING
Prerequisite: None
3 lectures per week: 3 hrs credit
This course presents materials handling and packaging as tools for use in a total system of materials management. Materials handling concepts include palletization, containerization, conveyor systems, fully automated warehousing, and integrated production lines. Packaging is examined beyond its role in protecting the product.

BUS 170
SMALL BUSINESS MANAGEMENT
Prerequisite: None
3 lectures per week: 3 hrs credit
This course provides a study of the steps in founding, organizing, financing, developing, operating, and managing a small business firm. The course also includes a study of the planning, budgeting, purchasing, inventory control, hiring, supervision, advertising, promotion, selling, record keeping, taxation, risk management, and other topics as they pertain to the small business firm.

BUS 190
PURCHASING
Prerequisite: None
3 lectures per week: 3 hrs credit
This course covers the nature and importance of procurement in modern business organizations. Principles, tools, methods, and techniques for acquisition of materials, supplies, and equipment are studied.

BUS 201 (IAI: BUS 912)
BUSINESS LAW
Prerequisite: None
3 lectures per week: 3 hrs credit
This course emphasizes the development of law and effects on transacting business. Specifically, it deals with settlement of disputes, torts, contract sales, product liability, and breach of contracts. Also included are agency and the duties and responsibilities of an agent contract.

BUS 209
SUPERVISORS AS TRAINERS
Prerequisite: None
3 lectures per week: 3 hrs credit
This course presents principles, practices, and basic methods of instruction as related to business and industry. Emphasis is on the supervisor as a trainer.

BUS 210 (IAI: BUS 913)
BUSINESS LAW AND ITS ENVIRONMENT
Prerequisite: None
3 lectures per week: 3 hrs credit
This course provides a broad and general overview of legal precepts concerning personal property and its liability, forms of business organization and the regulations governing them, and consumer protection as it affects business.

BUS 229
QUALITY MANAGEMENT
Prerequisite: None
3 lectures per week: 3 hrs credit
This course provides an introduction to quality management principles and related high-performance strategies. The course covers fundamental quality concepts, adapting quality to a specific setting, and tools and techniques for achieving and sustaining quality.

BUS 234
ACCOUNTING FOR FEDERAL INCOME TAXES
Prerequisite: BUS 132
3 lectures per week: 3 hrs credit
This course is intended for those who need an understanding of tax accounting to assist them in making managerial decisions. Principles and procedures for determining taxable income for federal income tax purposes as it pertains to single proprietorships, partnerships, and corporations. This course includes topics dealing with history of taxes, tax research, income items, deductions, accounting periods, methods, and installment sales and sales exchanges.

BUS 240 (IAI: MI 902; BUS 901)
ELEMENTARY STATISTICS
Prerequisite: MATH 151 or qualifying score on Math Placement Test
4 lectures per week: 4 hrs credit
This is an introductory course in probability and statistics. Topics covered in the course include frequency distributions, percentiles, measures of central tendency, measures of dispersion, standard deviation, correlation, probability, line of regression, statistical inferences, the binomial distribution, the t-distribution, and the chi-square distribution. Computer software such as minitab is used. A comprehensive project is assigned. Students who complete this course cannot also receive credit for MATH 115 and 153. (same as MATH 153)
BUS 241
PRINCIPLES OF MANAGEMENT
Prerequisite: BUS 101
3 lectures per week: 3 hrs credit
This course introduces the concept of the managerial functions in the modern business enterprise including the presentation and development of managerial principles in all activities, most specifically in the business enterprise. Basic management philosophies and theories are presented in relation to planning, organizing, staffing, directing, and controlling. Attention is given to basic management concepts and applications of motivation in the formal and informal organizational structures. Discussions and case studies are directed toward management theory and practice.

BUS 242
HUMAN RESOURCES MANAGEMENT
Prerequisite: None
3 lectures per week: 3 hrs credit
Modern concepts of supervisory principles and practice are studied. Emphasis is on the human relations aspects of supervision, as well as on the functions of staffing, training, compensation, employee services, fringe benefits, health and safety, job evaluation, and industrial relations. Role playing and case studies supplement the course.

BUS 251
PRINCIPLES OF MARKETING
Prerequisite: BUS 101
3 lectures per week: 3 hrs credit
This survey course presents the concepts, principles and functions of marketing in the dynamic business and economic environment. Emphasis is on the understanding of channels of distribution, marketing costs, motivations, and pricing. Planning policies and strategies also are studied, and casework is used as a supplement.

BUS 260
PRINCIPLES OF FINANCE
Prerequisite: BUS 132
3 lectures per week: 3 hrs credit
This course explores managerial decisions reflecting upon the various types of business ownership (tracing the need for capital because of growth), the tools for financial analysis, the analysis of capital structures, and the long- and short-term sources and uses of capital are covered. Securities markets, their regulation, their purposes and their relationships are studied.

BUS 261 (IAI: MC 912)
ADVERTISING
Prerequisite: None
3 lectures per week: 3 hrs credit
This course is a survey of social and economic aspects of advertising, the advertising cycle, kinds of advertising, selection of media, costs, analysis of copy and displays, format, layout, labels, trademarks, slogans, campaigns, and measurement of results. Students prepare magazine and advertising copy.

BUS 287
E-BUSINESS
Prerequisite: BUS 101
3 lectures per week: 3 hrs credit
This course is designed to provide an overview of how business can profit from current technology, primarily the Internet. Topics studied include e-business versus e-commerce, foundations of e-business, business to business electronic commerce, e-business legal issues, electronic payment systems, and e-business strategy and implementation.

BUS 298
SEMINAR
Prerequisite: Consent of Coordinator
1 lecture per week: 1 hr credit
This seminar is taken in conjunction with BUS 299, Internship. The content of the seminar relates to internship work which is correlated with students’ fields of study.

BUS 299
INTERNSHIP
Prerequisite: Consent of Coordinator
15 lab hrs per week: 3 hrs credit (variable credit)
The student internship allows students to earn variable amounts of college credits for managerial responsibilities while working in commerce or industry. A formalized work training program is structured to allow supervision by both the employer and the College’s coordinator. The internship work should be directly related to students’ fields of study.

CAD/Mechanical Design Technology

CADMD 141
TECHNICAL DRAFTING I
Prerequisite: None
2 lectures, 2 lab hrs per week: 3 hrs credit
A beginning course in drafting for students who have little or no drafting experience. Principal objectives are basic understanding of orthographic, isometric, and assembly working drawings; understanding the principles and applications of descriptive geometry; experience in using handbooks and other resource materials; and use of simplified drafting practices in industry. ASA standards are stressed. Interpretation of industrial sketches and prints is introduced to emphasize accepted drawing practices.

CADMD 201
MECHANICAL LAYOUT AND DESIGN I
Prerequisite: None
2 lectures, 2 lab hrs per week: 3 hrs credit
An advanced course in graphics for all students taking the mechanical design curriculum. The instructional unit provides experience in mechanical layout and design. Design problems require solution by math, graphics, and creative imagination. Experience also is given in industrial filing systems, engineering specifications, blueprint corrections, manufacturing processes, and other products.
CADMD 203
STATICS AND STRENGTH OF MATERIALS
Prerequisite: TECH 109
4 lectures per week: 4 hrs credit
A study of the stress and deformation of mechanical parts and structural members. The properties of materials, the geometry of parts, and the type of loading are considered for the design of shafts, beams, columns, and welded joints based on both strength and stiffness requirements. Methods of analyzing force systems, shear and moment diagrams, and the concepts of deflections and moments of inertia on an area are also covered by the course. This course is calculator based.

CADMD 243 (IAI: MTM 911)
INTRODUCTION TO AUTOCAD
Prerequisite: CADMD 141
2 lectures, 2 lab hrs per week: 3 hrs credit
This is an introductory course in Computer Aided Drafting (CAD). Through lecture and hands-on experience, students learn to use the most popular microcomputer CAD software, AutoCAD. Students learn basic CAD skills that enable them to produce mechanical drawings. Topics include: setting up AutoCAD, utility commands, drawing construction techniques, editing, display controls, layers, drawing aids, dimensioning, and plotting. Although there are no specific prerequisites, prospective students should have a working knowledge of IBM-compatible PCs, an understanding of plane geometry, and be able to deal with both common and decimal fractions.

CADMD 244
INTERMEDIATE AUTOCAD
Prerequisite: CADMD 243
2 lecture, 2 lab hrs per week: 3 hrs credit
This course is a continuation of CADMD 243. Students learn to use advanced AutoCAD commands to create complex mechanical drawings. The topics to be covered include: attributes and polylines, AutoCAD 3-D, customizing AutoCAD, and a brief intro to AutoLisp.

CADMD 245 (IAI: EGR 941)
COMPUTER AIDED DESIGN
Prerequisite: CADMD 244
2 lecture, 2 lab hrs per week: 3 hrs credit
This is a course in Computer Aided Design for the advanced CAD user. Students learn to use a typical CAD system to design and analyze mechanical mechanisms. The course content stresses reinforcement of CAD capabilities covered in previous courses, creating AutoLisp programs using AutoCAD commands in AutoLisp, conditional and loop statements, and programming logic. Design concepts such as design automation and product design analysis are covered.

CADMD 246
ARCHITECTURAL DESKTOP
Prerequisite: CADMD 243
1 lecture, 2 lab hrs per week: 2 hrs credit
This course teaches advanced CAD students to use Architectural Desktop software to create architectural drawings. It is not a course in architectural design. Students are expected to have previous AutoCAD experience and have a working knowledge of conventional architectural drawing techniques. Topics include creating typical architectural drawings such as floor plans, elevations, sections, and site plans.

CADMD 247
MECHANICAL DESKTOP
Prerequisite: CADMD 244
1 lecture, 2 lab hrs per week: 2 hrs credit
This course teaches students to create mechanical designs using Autodesk’s Mechanical Desktop software. Students who are already proficient in 2-D CAD learn to convert rough sketches into working solid model mechanical drawings.

CADMD 248
INTRODUCTION TO INVENTOR
Prerequisite: CADMD 244
1 lecture, 2 lab hrs per week: 2 hrs credit
This course is an introduction to Autodesk Inventor, which is an advanced 3-D parametric solid modeling system with surface modeling capabilities. Students learn to create solid parts, assemblies of solid parts, exploded presentations of assemblies and engineering drawings.

CHEMISTRY

CHEM 105 (IAI: P1 902L)
SURVEY OF GENERAL CHEMISTRY
Prerequisite: MATH 090 with a C or better or qualifying score on Math Placement Test
3 lectures, 3 lab hrs per week: 4 hrs credit
This course includes the basic concepts of general chemistry such as nomenclature, mass relationships, solutions, acids and bases, and bonding. Students cannot receive credit for both CHEM 105 and 110.

CHEM 110
(IAI: P1 902L; BIO 906; CHM 911; CLS 906; EGR 961; NUR 906)
GENERAL CHEMISTRY I
Prerequisite: MATH 095 with a C or better or placement in MATH 906
4 lectures, 3 lab hrs per week: 5 hrs credit
This is the first course of a two-semester sequence and is strongly recommended for all science majors and pre-engineering students. It includes the mole concept, bonding theory, formulas and equations, periodic classification of the elements, and physical properties of gases, liquids, solids, and solutions. Students cannot receive credit for both CHEM 105 and 110.

CHEM 130 (IAI: BIO 907; CHM 912; CLS 907; EGR 962; NUR 907)
GENERAL CHEMISTRY II
Prerequisite: CHEM 110 with a C or better
4 lecture, 3 lab hrs per week: 5 hrs credit
This is the second course of the two-semester sequence and is strongly recommended for all science majors and pre-engineering students. This class includes a study of acids and bases, general equilibria, qualitative analysis, electrochemistry, oxidation-reduction, general descriptive chemistry, thermodynamics, molecular structure, coordination compounds, and introduction to organic chemistry.
CHEM 203 (IAI: BIO 908; CHM 913; CLS 908; EGR 963; NUR 908)
ORGANIC CHEMISTRY I
Prerequisite: CHEM 130 with a C or better
4 lectures, 3 lab hrs per week: 5 hrs credit
This course covers the properties, preparation, and reactions of aliphatic and aromatic compounds, alkenes, alkynes, alkyl halides and alcohols, mechanism or reactions, stereochemistry, infrared, and nuclear magnetic resonance spectroscopy.

CHEM 204 (IAI: BIO 909; CHM 914; CLS 909; EGR 964)
ORGANIC CHEMISTRY II
Prerequisite: CHEM 203 with a C or better
4 lectures, 3 lab hrs per week: 5 hrs credit
The course focuses on interpretation of NMR, IR, and mass spectra, heterocyclic compounds, polymers.

COLLEGE SKILLS

COL 100
COMPUTER SKILLS FOR COLLEGE WRITING
Prerequisite: None
1 lecture per week: 1 hr credit
This course is designed to teach the basic computer skills necessary to become successful writers in the college environment. Topics covered include computer skills, beginning word processing functions, the fundamentals of composing on the computer, and computer terminology. In addition, students learn the basics of the Internet, including using the Prairie State College e-mail system and WebAdvisor.

COL 101
COLLEGE SUCCESS SEMINAR
Prerequisite: None
1 lecture per week: 1 hr credit
The purpose of this course is to provide an opportunity for students to learn and adopt methods that promote success in college. Students learn about the challenges and choices they face as college students as they set education and career goals, explore their values and decision-making skills, learn study strategies, and develop an appreciation for diversity. Students complete a master academic plan.

COL 102
CAREER DEVELOPMENT SEMINAR
Prerequisite: None
1 lecture per week: 1 hr credit
This course provides the opportunity to explore career interests, skills, abilities, and work-related values. Topics include the nature of various careers, labor market trends, job search strategies, education and training requirements, and diversity in the workplace. Students learn to develop a career and educational plan based upon informed career decisions.

COL 104
LEADERSHIP DEVELOPMENT
Prerequisite: Instructor Consent
2 lectures per week: 2 hrs credit
This course provides a basic understanding of leadership and group dynamics theory, and assists students in developing a personal philosophy of leadership, an awareness of moral and ethical responsibilities of leadership, and one’s own style of leadership.

COL 105
PERSONAL AWARENESS
Prerequisite: None
1 lecture per week: 1 hr credit
The focus of this course is to help each individual assess his or her personal resources and communication styles and then set realistic goals. Students examine their own values, interpersonal relationships, emotions, decision-making processes, motivations, etc. Various personal growth theories also are explored. Emphasis is placed on the application of these characteristics and theories to help students obtain and maintain positive control over their lives and lifestyles.

COL 106
PERSONAL WELLNESS
Prerequisite: None
1 lecture per week: 1 hr credit
This course is designed for those who want to improve their choice of lifestyle relative to personal responsibilities, balance, and personal enhancement of physical, mental, and spiritual health. The course also assists individuals in making voluntary behavior changes which reduce health risks and enhance individual productivity.

COMMUNICATION

COMM 101 (IAI: C2 900)
PRINCIPLES OF COMMUNICATION
Prerequisite: Placement into ENG 099 or higher
3 lectures per week: 3 hrs credit
This is a course in the theory and practice of interpersonal, group, and public communication. Emphasis is placed on the speaker’s confidence, audience adaptation, discovery of ideas, organization, and delivery. Students are given opportunities to improve their speaking and critical listening skills.

COMM 102 (IAI: SPC 911)
PERSUASIVE PUBLIC SPEAKING
Prerequisite: COMM 101
3 lectures per week: 3 hrs credit
This course develops one’s ability to formulate, construct, deliver, receive, and analyze formal and informal persuasive messages. It is primarily a speaking course with an emphasis on the discovery of multiple methods for designing messages that evoke change in society.

COMM 103
GROUP DISCUSSION
Prerequisite: Placement into ENG 099 or higher
3 lectures per week: 3 hrs credit
This course examines the nature of small group discussion. Topics include defining problems, preparation, process, leadership, participation, types and forms of discussion, and evaluation. Students practice techniques of effective group discussion.
COMM 108 (IAI: SPC 921)
INTERPERSONAL COMMUNICATION
Prerequisite: None
3 lectures per week: 3 hrs credit
This course explores one-to-one, face-to-face communication through experience, theory and skill application. Communication in family, work, and social contexts are examined. Stress is placed on satisfying individual needs, functioning in appropriate roles, resolving conflicts, and communicating effectively.

COMM 111 (IAI: MC 911)
INTRODUCTION TO MASS COMMUNICATION
Prerequisite: None
3 lectures per week: 3 hrs credit
This course provides an overview of the nature, functions and responsibilities of the mass communications industry in a global environment with an emphasis on the media’s role in American society.

COMM 115 (IAI: MC 914)
INTRODUCTION TO BROADCASTING
Prerequisite: None
3 lectures per week: 3 hrs credit
This is a beginning course in broadcasting. An understanding of the historical development, theory, writing, broadcasting, and engineering is stressed.

COMM 196
APPLIED FORENSICS I
Prerequisite: None
2 lab hrs per week: 1 hr credit
This course provides instruction and experience on speech competition, including participation in a variety of competitive speech events. Students enrolled in this course are automatically part of the Forensics Team.

COMM 197
APPLIED FORENSICS II
Prerequisite: COMM 196
2 lab hrs per week: 1 hr credit
Continuation of COMM 196.

COMM 198
APPLIED FORENSICS III
Prerequisite: COMM 197
2 lab hrs per week: 1 hr credit
Continuation of COMM 197.

COMM 199
APPLIED FORENSICS IV
Prerequisite: COMM 198
2 lab hrs per week: 1 hr credit
Continuation of COMM 198.

CET 101
FUNDAMENTALS OF ELECTRICITY
Prerequisite: None
2 lectures per week: 2 hrs credit
This is an introductory course in the fundamentals of electricity. The nature of voltage, current, resistance, and power are studied. Students analyze, calculate, measure, and wire parameters of electrical devices and circuits. Included are series, parallel, and combination circuits.

CET 103
ALTERNATING CURRENT
Prerequisite: CET 101
2 lectures per week: 2 hrs credit
This is a fundamental course in alternating current theory and analysis. Students analyze, calculate, measure, and wire circuits and electrical parameters involving transformers, relays, inductors, capacitors, series and parallel alternating current circuits.

CET 111
ELECTRONIC PRINCIPLES
Prerequisite: Concurrently with CET 101
4 lectures per week: 4 hrs credit
This is an introductory course in the principles of how electronic devices work and how they are connected into basic electronic circuits. Students calculate, measure and wire electronic components as they are used in electronic circuits. The content includes introductory analysis of device parameters and circuit application of switches, relays, diodes, transistors, and digital integrated circuits.

CET 114
DIGITAL FUNDAMENTALS
Prerequisite: None
4 lectures per week: 4 hrs credit
This is an introductory course in digital systems. Numbering systems and codes are introduced along with logic representation, and combination digital logic circuits. Logic gates, logic families, and interfacing of components are studied. Related circuitry is wired and analyzed.

CET 203
INSTRUMENTATION FUNDAMENTALS
Prerequisite: CET 101
4 lectures per week: 4 hrs credit
This course is a study of electronic instrumentation with applications to the control of industrial processes. Topics include measuring instruments, an introduction to process control, transducers, controller principles, and control elements.

CET 211
COMMUNICATION ELECTRONICS
Prerequisite: CET 103
4 lectures per week: 4 hrs credit
This course is a continuation of electronic studies extending into communications applications. Topics include feedback, oscillators, modulation, demodulation, R.F. amplification, wave propagation, wave transmission, and wave radiation. Analysis techniques are extended from the time domain to frequency domain.
CET 220
PROGRAMMABLE LOGIC CONTROLLERS
Prerequisite: None
4 lectures per week: 4 hrs credit
Students program, download and wire input and output devices using Allen-Bradley software for the S.L.C.-500 and Micro-Logic 1000 programmable logic controllers.

CRIMINAL JUSTICE SERVICES

CJ 101 (IAI: CRJ 901)
INTRODUCTION TO CRIMINAL JUSTICE
Prerequisite: None
3 lectures per week: 3 hrs credit
This is a survey and analysis of the criminal justice system, including an historical and philosophical overview of its development, with special emphasis on the system’s primary components, and the relationship of these components in the administration of criminal justice in the United States.

CJ 102 (IAI: CRJ 912)
INTRODUCTION TO CRIMINOLOGY
Prerequisite: None
3 lectures per week: 3 hrs credit
This course is an introduction to the multidisciplinary study and analysis of the nature, causes and control of crime in America. The measurement of crime and the interactive roles of the system, victim, offender, and society also are covered.

CJ 103
LAW ENFORCEMENT ORGANIZATION AND ADMINISTRATION
Prerequisite: None
3 lectures per week: 3 hrs credit
This course focuses on the principles of organization and management as applied to law enforcement agencies. Topics covered include concepts of organization behavior, formulation of policy and procedure, and coordination of operational units.

CJ 106 (IAI: CRJ 911)
INTRODUCTION TO CORRECTIONS
Prerequisite: None
3 lectures per week: 3 hrs credit
An overview and analysis of the American correction system is presented, including the history, evolution, and philosophy of punishment and treatment. The operation and administration of criminal justice in both institutional and non-institutional settings is covered. Current issues in correctional law also are presented.

CJ 110
COMMUNITY-BASED POLICING
Prerequisite: CJ 101
3 lectures per week: 3 hrs credit
The philosophical and practical applications of community based policing are presented.

CJ 120
INTRODUCTION TO HOMELAND SECURITY
Prerequisite: None
3 lectures per week: 3 hrs credit
This course examines the programs and activities that have been implemented to improve the safety of our country. Special emphasis is placed on the threat of terrorism and strategies to address that threat. (same as FST 121)

CJ 201
INTRODUCTION TO CRIMINAL LAW
Prerequisite: CJ 101
3 lectures per week: 3 hrs credit
This course examines and analyzes the structure and functions of substantive criminal law. The principles of criminal law are presented, including the acts, mental state, and attendant circumstances that are necessary elements of the crime.

CJ 202
CIVIL AND CRIMINAL LAWS/PROCEDURES
Prerequisite: None
3 lectures per week: 3 hrs credit
This course examines legal concepts and criminal procedures in the areas of arrest, force, search and seizure, interrogation, and obtaining of physical evidence. Also included are studies on trials, indictments, bail, grand and petit juries, and the rules of evidence in the State of Illinois.

CJ 203
PRINCIPLES OF CRIMINAL INVESTIGATION
Prerequisite: CJ 101
3 lectures per week: 3 hrs credit
This course covers the fundamentals and procedures of investigation including applications of deductive and inductive reasoning, and other investigative techniques; collection, marking and preservation of evidence suitable for court presentation; due process; and techniques and procedures of follow-up investigation.

CJ 204 (IAI: CRJ 914)
JUVENILE JUSTICE
Prerequisite: None
3 lectures per week: 3 hrs credit
The history and philosophy of society’s reaction to juvenile behavior and problems are covered. The interaction among the police, judiciary and corrections systems are examined within the context of cultural influences. Theoretical perspectives of causation and control are examined.

CJ 208
PRINCIPLES OF CRIMINALISTICS
Prerequisite: None
3 lectures per week: 3 hrs credit
This course covers the application of the natural and physical sciences to crime solutions in law enforcement. All aspects of crime scene processing including evidence recognition, collection, protection and transmission, examination and evaluation of physical evidence, and identification and comparison of crime laboratory procedures are included. The role of the crime laboratory in modern law enforcement also is studied.
CJ 270
COMPUTER FORENSICS
Prerequisite: CJ 101 or ITPRG 140
2 lectures, 2 lab hrs per week: 3 hrs credit
This course provides an introduction to computer forensics, preparing students to acquire and analyze digital crime evidence. Students learn tools and techniques for conducting digital investigations, preserving evidence, and preparing expert witness testimony. Topics include file structures, data recovery, forensic analysis, e-mail and network investigations, and ethics. (same as ITNET 270)

CJ 299
CRIMINAL JUSTICE INTERNSHIP
Prerequisite: Consent of program coordinator.
1 lecture, 10 lab hrs per week: 3 hrs credit
Students are assigned to a criminal justice agency for supervised exposure to the various aspects of a working agency. Students spend a minimum of 10 hours per week on-site and one hour per week in a seminar setting.

DENTAL HYGIENE

DH 101
HISTOLOGY
Prerequisite: Consent of program coordinator
2 lecture hrs per week: 2 hrs credit
A basic course in the minute structural and functional units of living tissue. This course provides sufficient knowledge of that part of the body whose healthful condition is the particular responsibility of the dental hygienist.

DH 103
HEAD AND NECK ANATOMY AND TOOTH MORPHOLOGY
Prerequisite: Consent of program coordinator
3 lectures, 4 lab hrs per week: 5 hrs credit
This course deals with the study of structure, function, and morphology of the teeth. Also included are surrounding anatomical structures such as salivary glands, muscles of mastication, bones of the skull and ligaments. Terminology is included so that students may communicate effectively in the profession.

DH 104
DENTAL RADIOLOGY
Prerequisite: DH 103
2 lectures, 4 lab hrs per week: 4 hrs credit
This in-depth introduction to dental radiography concentrates on the history and characteristics of radiation in dentistry, technical aspects of radiation production, computerized digital radiography, and the components and functions of the dental X-ray machine. Hazards, safety precautions, and infection control are covered. Intraoral techniques, landmarks, processing of radiographs, and the mounting and viewing of films are emphasized. Regulations and management of clients with special needs are covered. Students assess clients, complete treatment plans, and perform a required number of examinations and radiographic surveys on manikins and selected clients in a laboratory setting. Students are responsible for client recruitment.

DH 105
NUTRITION
Prerequisite: DH 101
2 lectures per week: 2 hrs credit
This seminar provides a comprehensive review of the role of nutrients in the biological development of health and disease. Attention is given to process of assimilating nutritional information and making it applicable to the clinical setting. Special emphasis will be placed on methods of controlling dental disease.

DH 106
GENERAL AND ORAL PATHOLOGY
Prerequisite: DH 101
2 lectures per week: 2 hrs credit
This course serves as an introduction to general pathology with consideration of the more common diseases affecting the human body, covering in particular the clinical pathology of the diseases affecting the teeth and supporting structures and the physiological/pathological changes which affect the gingivae and the hard and soft structures of the oral cavity.

DH 107
FUNDAMENTALS OF DENTAL HYGIENE
Prerequisite: Consent of program coordinator
1 lecture, 2 lab hrs per week: 2 hrs credit
This first of five clinical dental hygiene courses is designed for the entry-level, first-year dental hygiene student. Students perform selected services on clients, student partners, and a laboratory manikin, but do not provide a full range of client services. Didactic and clinical studies include infection control, clinical barriers, patient reception and positioning, instrument grasp, finger rests, tooth brushing, and interdental care. Laboratory evaluations are performed as well as continual evaluation of the essential functions of dental hygiene.

DH 108
CLINICAL DENTAL HYGIENE I
Prerequisite: DH 107
2 lectures, 8 lab hrs per week: 4 hrs credit
This course provides lecture, pre-clinical, and laboratory instruction in the techniques utilized for the assessment, diagnosis, planning, implementation, and evaluation of client treatment care plans. Clinical activities are coordinated with Fundamentals of Dental Hygiene (DH 107). Students deliver some client care including histories and vitals, oral examinations, occlusion determination, evaluation of teeth, tooth brushing, and interdental care. Patient care plans and health care issues are addressed. Instrument design is discussed with demonstration of the strokes used with hand instruments. Students practice demonstrated techniques on manikins, student partners, and clients. Students are responsible for client recruitment. There is continued evaluation of the essential functions of dental hygiene.
DH 109  
CLINICAL DENTAL HYGIENE II  
Prerequisite: DH 108  
2 lectures, 8 lab hrs per week: 4 hrs credit  
Students continue to apply and refine skills of dental prophylaxis acquired in Clinical Dental Hygiene I. Dental calculus identification, records and charting, mouth rinse, dentifrices, care of dental appliances, topical application of fluoride, clinical technique of irrigation, indice and scoring methods, extrinsic stain removal, use of Gracey curets, care of implants, and history of tobacco use are emphasized. Students provide dental hygiene care by assessing, diagnosing, planning, implementing and evaluating dental hygiene care on clients. Students are responsible for client recruitment.

DH 116  
PERIODONTOLOGY  
Prerequisite: DH 108  
2 lectures per week: 2 hrs credit  
This course emphasizes the etiology, classification, symptomatology, treatment and prognosis of periodontal disease. A basic understanding of periodontics is necessary for the dental hygiene student to realize the significance of client education and of the dental prophylaxis. Non-surgical periodontal therapy and current treatment modalities are emphasized.

DH 120  
CARE OF SPECIAL POPULATIONS  
Prerequisite: DH 108  
2 lectures per week: 2 hrs credit  
This course emphasizes care of clients with special oral and general systemic conditions. Included are people with physical, mental, social/emotional, and selected medical conditions, as well as the elderly and medically compromised. An interdisciplinary, problem-solving teaching strategy provides a comprehensive, coordinated approach to dental care for individuals with special needs.

DH 201  
CLINICAL DENTAL HYGIENE III  
Prerequisite: DH 109  
1 lecture, 4 lab hrs per week; 3 hrs credit  
This course continues to integrate the scientific and clinical principles of the process of providing dental hygiene care. Adjunctive dental hygiene procedures are introduced, including: pain and anxiety control with emphasis on local anesthesia; intraoral photography; ultrasonics; advanced fulcruming techniques; phase microscopes; and alternative instruments and techniques. Portfolio assessment is introduced as a means to document the development of dental hygiene competencies. Students are responsible for client recruitment.

DH 202  
CLINICAL DENTAL HYGIENE IV  
Prerequisite: DH 201  
1 lecture, 16 lab hrs per week: 5 hrs credit  
Students continue to provide comprehensive dental hygiene care by assessing, diagnosing, planning, implementing, and evaluating dental hygiene care on clients in the clinical setting. Additional clinical procedures include care and maintenance of instruments, maintenance of oral hygiene (reCare), air polishing, whitening, debonding, use of alternative instruments, advanced root morphology, and setting up a tobacco control program, portfolio development, and dental hypersensitivity. Students provide complete preventive and therapeutic care of a periodontally involved client. Students are responsible for selected client recruitment.

DH 203  
CLINICAL DENTAL HYGIENE V  
Prerequisite: DH 202  
1 lecture, 16 lab hrs per week: 5 hrs credit  
Dental Hygiene students provide comprehensive client care in a clinical setting. Emphasis is on advanced dental hygiene theory and adjunctive therapies to treat complex dental hygiene clients. This course includes utilizing alternative hand instruments and therapies, radiology skills review and update, and preparation for board examinations.

DH 204  
ETHICS, LAW AND ADMINISTRATION  
Prerequisite: DH 202  
2 lectures per week: 2 hrs credit  
This course examines the relationship of the dental hygienist to the practice of dental hygiene and dentistry. It explores the ethics, laws, and administrative issues involved in the practice of dental hygiene.

DH 205  
PHARMACOLOGY  
Prerequisite: DH 109  
2 lectures per week: 2 hrs credit  
This course presents a study of drugs by groups, with special consideration of those used in dentistry, including their physical and chemical properties, dosage, and therapeutic effects.

DH 207  
THE SCIENCE AND APPLICATION OF DENTAL MATERIAL  
Prerequisite: DH 201  
2 lectures, 4 lab hrs per week: 4 hrs credit  
This course covers the basic science, clinical indications, manipulative variables and procedures, physical and mechanical characteristics and clinical performance of materials used in dentistry. Lecture and laboratory emphasizes an understanding of the science of dental materials, which is essential to assess patient needs, to plan for and treat those needs, and to evaluate treatment outcomes.
DH 220  
COMMUNITY DENTAL HEALTH  
Prerequisite: DH 201 (or taken concurrently with DH 201)  
2 lectures per week: 2 hrs credit  
Students learn the history and influence of public health concepts and practices on the dental hygiene profession. The theory, functions, services, and administration of public health organizations are summarized. Students use research tools and statistical analysis to review and interpret dental scientific literature.

DRAFTING

DRAFT 101  
DRAFTING ESSENTIALS  
Prerequisite: None  
2 lectures per week: 2 hrs credit  
This course provides an introduction to blueprint reading and drafting which includes class exercises in interpreting lines, view positions, conventions, and standards found on prints; use of drawing tools, simple geometric construction, fundamentals of orthographic construction, use of finish symbols, and the application of scale and precision dimensioning.

DRAFT 102  
DRAFTING CONVENTIONS AND SYMBOLS  
Prerequisite: DRAFT 101  
2 lectures per week: 2 hrs credit  
This course introduces the notation used on detail and assembly drawings. In addition, assembly and detail drawings are used to illustrate print identification, holes, sections, tapers, and castings. Emphasis is placed on reading shop prints.

DRAFT 103  
THREE DIMENSIONAL SHAPES  
Prerequisite: DRAFT 102  
2 lectures per week: 2 hrs credit  
This course employs pictorial drawings to enable practice in three dimensional visualization interpretation, the accuracy of such interpretation being determined by the clay models students produce.

DRAFT 105  
DESIGN APPLICATIONS FOR MECHANICAL TRADES  
Prerequisite: AMATH 101  
2 lectures per week: 2 hrs credit  
This course deals with the application of geometry and trigonometry to fundamental design problems in the mechanical trades. The areas of instruction include such topics as: computing pulley distances, finding pitch diameter, finding the chord length on a bolt hole pattern, determining diameter given part of a circle, and determining fillet radius.

DRAFT 115  
BLUEPRINT READING FOR MECHANICAL TRADES  
Prerequisite: None  
2 lectures per week: 2 hrs credit  
This course in blueprint reading emphasizes the sketching and reading of mechanical drawings. Topics include sketching of machine parts, common notations, fits and finish marks, threads and tapers, sectioning, isometric, and oblique drawings.

ECED 102  
OBSERVATION AND GUIDANCE OF CHILDREN  
Prerequisite: ED 101 or concurrent enrollment in ED 101  
3 lectures per week: 3 hrs credit  
This course examines the guidance and observation practices that support the development of the young child. Practice in observation, reflection, and guidance is included so students have the chance to apply child development theory to practical situations.

ECED 103  
HEALTH, SAFETY AND NUTRITION  
Prerequisite: None  
3 lectures per week: 3 hrs credit  
This course focuses on the personal health of the child and covers nutrition and safety issues. It meets the State of Illinois teacher certification requirement in health and general education.

ECED 104  
INTRODUCTION TO EARLY CHILDHOOD EDUCATION  
Prerequisite: None  
3 lectures per week: 3 hrs credit  
This overview of early childhood care and education includes basic values, structure, organization, and programming in early childhood education. A clinical component of 15 hours is required.

ECED 106  
ART FOR TEACHERS  
Prerequisite: None  
3 lectures per week: 3 hrs credit  
This course focuses on the developmental stages of children’s use of art materials and their ability to express thought and emotions through creativity. The appropriate use and care of art media are stressed along with an emphasis on providing an environment and activities conducive to creative exploration, discovery, and self-expression. (same as EDU 106)

ECED 108  
SCIENCE AND MATH FOR THE YOUNG CHILD  
Prerequisite: None  
3 lectures per week: 3 hrs credit  
This is a methods course introducing the theory and practice of teaching science and mathematics to young children. It focuses on developing a curriculum that emphasizes discovery methods of teaching and learning. It also includes model activities and instructional materials.

ECED 110  
CARE AND EDUCATION: INFANTS, TODDLERS, 2-YEAR OLDS  
Prerequisite: ED 101  
3 lectures per week: 3 hrs credit  
This course provides an overview of developmentally appropriate infant, toddler, and 2-year old programs. Students focus on practices that foster children’s well-being, and on creating a curriculum and environment that supports physical and social growth and good communication with parents.
ECED 120 (IAI: ECE 915)
CHILD, FAMILY, AND COMMUNITY
Prerequisite: None
3 lectures per week: 3 hrs credit
This course examines ways in which the structure, values, and resources of family and community affect children. It explores the relationships between the child, family, community, and educators including parent education and involvement, family and community lifestyles, child abuse, and current family life issues. (same as EDU 120)

ECED 130
CLASSROOM MANAGEMENT
Prerequisite: None
3 lectures per week: 3 hrs credit
This course studies different approaches to classroom management with the aim of analyzing and modifying classroom behavior to facilitate the learning of diverse and exceptional students. (same as EDU 130)

ECED 201
SIGN LANGUAGE I—MANUAL COMMUNICATIONS I
Prerequisite: None
3 lectures per week: 3 hrs credit
This course is an introduction to sign language and deaf culture covering basic American sign language skills, both receptive and expressive. Course focus is on building sign vocabulary, fingerspelling, grammar and syntax rules as well as developing awareness of the deaf community.

ECED 202
SIGN LANGUAGE II—MANUAL COMMUNICATIONS II
Prerequisite: ECED 201
3 lectures per week: 3 hrs credit
This is a continuation of Sign Language I. It explores deaf culture, and introduces intermediate American sign language skills, both receptive and expressive. The course focuses on increasing sign language vocabulary, improving fingerspelling fluidity, and furthering knowledge of grammar and syntax.

ECED 205
LANGUAGE ARTS FOR CHILDREN
Prerequisite: None
3 lectures per week: 3 hrs credit
This course focuses on teaching methods that foster the development of language in the young child, and explores the role of the teacher in creating an effective language arts curriculum. Students learn how to incorporate activities and materials that enhance the development of languages and literacy. (same as EDU 205)

ECED 213
MULTICULTURAL EDUCATION
Prerequisite: None
3 lab hrs per week: 3 hrs credit
Multicultural education examines social factors that affect education decision-making and student achievement in United States schools. It addresses the need for intercultural competence, culturally informed instructional strategies, promotion of social justice, and reduction of racism in order to create democratic classrooms. (same as EDU 213)

ECED 214
ADMINISTRATION OF EARLY CHILDHOOD EDUCATION CENTERS
Prerequisite: None
3 lectures per week: 3 hrs credit
This course is for teachers or directors of early childhood centers who wish to improve their skills in administration and supervision, and for those who want to become directors. Students explore licensing and accreditation standards, management processes including fiscal and legal guidelines, and staff management and supervision.

ECED 215
MUSIC AND MOVEMENT FOR CHILDREN
Prerequisite: None
3 lectures per week: 3 hrs credit
Students learn how to incorporate music and movement activities into preschools and primary grade lessons. The course emphasizes the long-term cognitive, social, physical, and aesthetic growth that music helps develop in children as well as practical tools, techniques, and information for the classroom teacher. (same as EDU 215)

ECED 216
TEACHING MATHEMATICS TO THE YOUNG CHILD
Prerequisite: MATH 090 with a C or better
3 lectures per week: 3 hrs credit
This course focuses on the development of mathematical reasoning in young children. It includes hands-on activities that foster problem solving skills and encourage further exploration. (same as EDU 216)

ECED 299 (IAI: ECE 914)
EARLY CHILDHOOD EDUCATION INTERNSHIP
Prerequisite: ED 101 and ECED 104 and consent of instructor
1 lecture, 10 lab hrs per week: 3 hrs credit
This course includes participation in the Prairie State College Children’s Learning Center under faculty supervision. Students use knowledge and practice skills gained in early childhood education courses as they spend a minimum of 10 hours per week in the center. The course includes a one hour per week seminar that gives students a chance to discuss and review the internship experience.
ECONOMICS

ECON 201 (IAI: S3 901)
MACROECONOMIC PRINCIPLES
Prerequisite: Placement into ENG 099 or higher
3 lectures per week: 3 hrs credit
This course provides an understanding of the structure, institutions, and general economic principles governing the operation of the American economy. Included are a study of the basic economic concepts and theories, and the forces which determine the level of production and employment in the economy. The basic principles of money and banking, economic growth and development and the world economy, and a study of the role that monetary and fiscal policy play in the determination of the economy’s level of production, employment and income are presented.

ECON 202 (IAI: S3 902)
MICROECONOMIC PRINCIPLES
Prerequisite: ECON 201
3 lectures per week: 3 hrs credit
This course examines factors that determine the structure of resource and product markets, consumer choice, the sources that determine the level of production and employment in individual industries, and the factors which govern the level of price and output at which individual firms choose to operate. Attention is given to a study of international economics and certain contemporary economic problems.

EDUCATION

ED 100 (IAI: EED 901; SED 901; SPE 911)
FOUNDATIONS OF AMERICAN PUBLIC EDUCATION
Prerequisite: Placement into ENG 099 or higher
3 lectures per week: 3 hrs credit
This course is an overview of American education as both a profession and a public enterprise. The social, historical, and philosophical foundations are used to give perspective to an examination of current issues, policies and trends in the field of education, including cultural diversity and the standards movement. The organization and structure, financing, and curriculum issues in education are also discussed. A clinical component of 15 hours is required.

ED 101 (IAI: ECE 912; EDU 902)
CHILD GROWTH AND DEVELOPMENT
Prerequisite: Placement into ENG 099 or higher
3 lectures per week: 3 hrs credit
This is a foundation course in the theories and principles of child growth and development from the prenatal through the adolescent years. It is an in-depth study of physical, cognitive, language, and social-emotional development. There is a special emphasis on the application of this knowledge in planning, implementing, and assessing student activities. A clinical component of 15 hours is required.

ED 160
TECHNOLOGY FOR TEACHERS
Prerequisite: None
3 lectures per week: 3 hrs credit
This course introduces educators to the use of the computer as an educational tool. The course focuses on a solid understanding of educational technology, and how to integrate computers into the classroom curriculum. Hands-on technology activities are an important part of the course. Students begin to develop their teaching portfolios. (same as ITAPP 160)

ED 212 (IAI: ECE 913)
EXCEPTIONAL CHILD
Prerequisite: ED 101
3 lectures per week: 3 hrs credit
This course provides an overview of children with exceptional cognitive, physical, social, and emotional characteristics. It includes an analysis of developmental and emotional needs imposed by exceptionality. Students consider identification protocols, intervention strategies, and teaching methods and programs designed to meet the needs of exceptional children (including but not limited to children with learning disabilities). Applicable federal and state laws and requirements are covered including the Individuals with Disabilities Education Act, Americans with Disabilities Act, Individualized Family Service Plan, Individualized Education Plan and inclusive programs. This course fulfills the requirements of School Code, Article 21-2a. A clinical component of 15 hours is required.

ED 220
CHILDREN’S LITERATURE
Prerequisite: ENG 101 with a C or better
3 lectures per week: 3 hrs credit
This course focuses on the importance of children’s literature from preschool to adolescence and its enjoyment at home and in the classroom. Through reading a varied selection of books, students learn to evaluate, select, discuss, and use literature for children. It is recommended for teachers, aides, librarians and parents. (same as ENG 220)

EDUCATION – PARAPROFESSIONAL

EDU 106
ART FOR TEACHERS
Prerequisite: None
3 lectures per week: 3 hrs credit
This course focuses on the developmental stages in children’s creative growth with respect to their use of art materials, and their ability to express thoughts and emotions through visual language. Use and care of art media are stressed with emphasis on providing an environment conducive to creative exploration, discovery, and self-expression. (same as ECED 106)
EDU 111
MATHEMATICS FOR PARAPROFESSIONALS
Prerequisite: MATH 085 or placement into MATH 090
3 lectures per week: 3 hrs credit
This course is designed for the elementary school paraprofessional. This course strongly emphasizes hands-on learning; thus, manipulatives are used extensively. Topics covered include problem solving, sets, number theory, statistics, probability, geometry, and measurement. Students seeking general education mathematics credit for transfer are advised to register for the MATH 200/206 sequence. (same as MATH 111)

EDU 120 (IAI: ECE 915)
CHILD, FAMILY, AND COMMUNITY
Prerequisite: None
3 lectures per week: 3 hrs credit
This course examines how the structure, values, and resources of family and community affect children. It explores the relationships between the child, family, community, and educators including parent education and involvement, lifestyles, child abuse, and current family life issues. (same as ECED 120)

EDU 130
CLASSROOM MANAGEMENT
Prerequisite: None
3 lectures per week: 3 hrs credit
This course studies different approaches to classroom management with the aim of analyzing and modifying classroom behavior to facilitate the learning of diverse and exceptional students. (same as ECED 130)

EDU 205
LANGUAGE ARTS FOR CHILDREN
Prerequisite: None
3 lectures per week: 3 hrs credit
This course deals with techniques and methods of encouraging the development of language in the young child. Methods for stimulating speech, discussion, and increasing vocabulary are included. (same as ECED 205)

EDU 213
MULTICULTURAL EDUCATION
Prerequisite: None
3 lab hrs per week: 3 hrs credit
Multicultural education examines social factors that affect education decision-making and student achievement in United States schools. It addresses the need for intercultural competence, culturally informed instructional strategies, promotion of social justice, and reduction of racism in order to create democratic classrooms. (same as ECED 213)

EDU 215
MUSIC AND MOVEMENT FOR CHILDREN
Prerequisite: None
3 lectures per week: 3 hrs credit
This course focuses on the relationship of music and movement with development of the child. (same as ECED 215)

EDU 216
TEACHING MATHEMATICS TO THE YOUNG CHILD
Prerequisite: MATH 090
3 lectures per week: 3 hrs credit
This is a methods course in the teaching of mathematics to children through grade 3. Topics covered include the study of math concept development in young children, hands-on activities, development of problem-solving skills, and methods for encouraging exploration. (same as ECED 216)

EDU 221
CLINICAL EXPERIENCE
Prerequisite: Consent of program coordinator
5 lab hrs: 1 hr credit
This course provides documented clinical experiences involving observation of the interaction between children and practitioners according to specified guidelines, within the appropriate subject matter and age category. Clinical sites are arranged in a variety of educational settings, including those with diverse student populations. Student work is planned, guided, and evaluated by a mentor or supervisor.

ELECTRICIAN

ELECT 100
ELECTRIC WIRING I
Prerequisite: None
2 lectures per week: 2 hrs credit
This course is a beginning course in residential wiring and assumes no previous electrical background. The course is designed to help develop an understanding of the electrical principles involved as well as the physical wiring practices.

ELECT 101
FUNDAMENTALS OF ELECTRICITY I
Prerequisite: None
2 lectures per week: 2 hrs credit
This is an introductory course in direct current electricity. Student analyze series, parallel, and combination circuits using Kirchhoff’s current and voltage laws, electrical measuring instruments, and measurement techniques. Students verify basic principles of electricity in the laboratory.

ELECT 102
FUNDAMENTALS OF ELECTRICITY II
Prerequisite: ELECT 101
2 lectures per week: 2 hrs credit
This course is a more in-depth look at the fundamentals of electricity. Fundamental electric laws and relationships are studied. Electrical calculations and measurements are emphasized. Series, parallel, and combination circuits are analyzed.

ELECT 103
ALTERNATING CURRENT
Prerequisite: None
2 lectures per week: 2 hrs credit
This is a fundamental course in alternating current theory and analysis. Students analyze circuits that include series and parallel configuration of resistance, inductance, and capacitance. The analysis includes vector operations, complex impedance, phase angles, single- and three-phase representations, Delta circuits, and Wye circuits.
DEGREES, CERTIFICATES, COURSES

COURSE DESCRIPTIONS

ELECT 105
POWER, TRANSFORMERS, POLYPHASE CIRCUITS
Prerequisite: ELECT 101 or equivalent
2 lectures per week: 2 hrs credit
This course includes the study of the principles of transformer operation including on load conditions, efficiency, and testing. Polyphase principles are studied including calculation techniques, measurement, and power relationships.

ELECT 106
DC MOTORS AND GENERATORS
Prerequisite: ELECT 101
2 lectures per week: 2 hrs credit
This course is a study of DC generators and motors. Topics covered include the construction, basic principles, speed-voltage characteristics, and regulation of DC generators. Also covered are basic principles, speed-torque characteristics, types of field excitation, and starting procedures of motors.

ELECT 107
AC MOTORS AND GENERATORS
Prerequisite: ELECT 103 or ELECT 104
2 lectures per week: 2 hrs credit
This course is a study of AC generators and motors. The topics covered include the construction, basic principles, speed-voltage characteristics, and regulation of AC generators. Also covered are basic principles, speed-torque characteristics, types of field excitation, and starting procedures of motors. Single- and poly-phase generators, motors, and switching equipment are covered.

ELECT 108
ELECTRICAL CONTROL FOR MACHINES I
Prerequisite: ELECT 101 or equivalent
2 lectures per week: 2 hrs credit
This is a course in industrial controls which are frequently used in industry to control motors. Single- and three-phase systems are covered. Industry standards and codes are presented throughout for promoting an understanding of safety and preventive maintenance. Practical experiences include wiring relays, motor starters, and controlling these with different control devices and sensors.

ELECT 109
ELECTRICAL CONTROL FOR MACHINES II
Prerequisite: ELECT 101 or equivalent
2 lectures per week: 2 hrs credit
This course is a continuation of ELECT 108. Industry controls which are frequently used in industry to control motors are analyzed. Single- and three-phase systems are covered. Industry standards and codes are presented throughout for promoting an understanding of safety and preventive maintenance. Practical experiences include wiring motor starters, control transformers reversing and motor sequencing, and controlling these with various control devices and sensors.

ELECT 110
DC CRANE CONTROL
Prerequisite: ELECT 101 or equivalent
2 lectures per week: 2 hrs credit
This course is designed to train and aid in the maintenance of overhead cranes powered by direct current motors. Servicing and troubleshooting techniques are taught by referring to the electrical diagrams provided by crane control manufacturers.

ELECT 111
ELECTRONIC PRINCIPLES I
Prerequisite: None
2 lectures per week: 2 hrs credit
This is a course in electronic devices covering the principles of how electronic devices work and how they are connected into basic electronic circuits. The content includes introductory analysis of device parameters and circuit application. The diode and transistor family of devices are covered.

ELECT 112
ELECTRONIC PRINCIPLES II
Prerequisite: ELECT 111
2 lectures per week: 2 hrs credit
This is a course in electronic devices covering the bipolar and field effect basic theory, transistor biasing, and amplification. The SCR is also studied. The course includes introductory analysis of device parameters and circuit applications. Load lines, models and parameter calculations and measurements are emphasized.

ELECT 113
BLUEPRINT READING FOR ELECTRICIANS
Prerequisite: None
2 lectures per week: 2 hrs credit
This course provides students with a background in reading and interpreting blueprints and wiring diagrams pertaining to single-family dwellings, commercial locations, industrial locations, special and hazardous locations. Students are exposed to the National Electrical code and the use of electrical tables.

ELECT 114
NATIONAL ELECTRICAL CODE
Prerequisite: None
2 lectures per week: 2 hrs credit
This course is a review of the National Electrical Code, and the areas to which it is most frequently applied are covered in detail. Topics covered include: maximum current for each wire size, overcurrent protection, wiring methods and materials, motor controllers, transformers, switchboards, and emergency systems.

ELECT 120
ELECTRICAL SAFETY
Prerequisite: None
2 lectures per week: 2 hrs credit
This course covers the basic electrical dangers and safety precautions that should be observed when working with electricity or electrical circuits. Safety procedures are emphasized along with the purpose of fuses, circuit breakers, disconnect boxes, insulation, and grounding.
ELECT 141
CONDUIT BENDING - THINWALL
Prerequisite: None
2 lectures per week: 2 hrs credit
This course teaches how to calculate and bend one-inch and 3/4-inch EMT conduit for electrical use.

ELECT 142
CONDUIT BENDING AND THREADING
Prerequisite: None
2 lectures per week: 2 hrs credit
This course teaches how to calculate and bend and thread rigid conduit and how to thread thickwall conduit for electrical use.

ELECT 150
PREVENTIVE MAINTENANCE - ELECTRICAL
Prerequisite: None
2 lectures per week: 2 hrs credit
This course in methods of preventive maintenance of electrical equipment includes insulation testing and evaluation, electronic testing, AC generator and motor checking, overcurrent protection, and system distribution problems.

ELECT 160
ELECTRICAL WIRING II
Prerequisite: ELECT 100
2 lectures per week: 2 hrs credit
This is a continuation of Electric Wiring I. It focuses on the technical skills required to perform electrical installations, including calculating conductor sizes and voltage drops, determining circuit requirements, sizing service, and grounding procedures.

ELECT 170
ELECTRICITY NON-ELECTRICAL TRADES
Prerequisite: None
2 lectures per week: 2 hrs credit
Electrical circuits, equipment, devices, practices, fundamentals and safety are the topics of this course. Students explore electrical circuits, measuring equipment and more as a wide range of electrical topics are studied for both single- and three-phase circuitry. Electrical safety is addressed, especially lock-out/tag-out.

ELECT 201
DIGITAL FUNDAMENTALS I
Prerequisite: None
2 lectures per week: 2 hrs credit
This course in digital systems is an introduction to number systems and codes, logic gate representation, and combinatorial logic circuits.

ELECT 202
DIGITAL FUNDAMENTALS II
Prerequisite: ELECT 201 or equivalent recommended
2 lectures per week: 2 hrs credit
This course in digital systems is a continuation of ELECT 201 advancing into the study of counters, registers, integrated circuit logic, logic families, interfacing, and memory devices.

ELECT 203
INDUSTRIAL ELECTRONICS I
Prerequisite: ELECT 101
2 lectures per week: 2 hrs credit
This course is a study of the underlying concepts and operation of electronic devices, circuits, and systems used in industrial control. Concepts instead of design topics are emphasized.

ELECT 204
INDUSTRIAL ELECTRONICS II
Prerequisite: ELECT 101
2 lectures per week: 2 hrs credit
This course is a continuation of the study of underlying concepts and operation of electronic devices, circuits, and systems used in industrial control. Concepts instead of design topics are emphasized.

ELECT 206
INSTRUMENTATION FUNDAMENTALS I
Prerequisite: ELECT 101
2 lectures per week: 2 hrs credit
This course is a study of electronic instrumentation with applications to the control of the industrial processes. Topics covered include an introduction to process control, transducers, controller principles, and control elements.

ELECT 207
INSTRUMENTATION FUNDAMENTALS II
Prerequisite: ELECT 206
2 lectures per week: 2 hrs credit
This course is a continuation of ELECT 206 and covers instrumentation applications to the process control.

ELECT 208
PROGRAMMABLE LOGIC CONTROLLERS I
Prerequisite: None
2 lectures per week: 2 hrs credit
This is a course that studies programmable controller operations as used in industry. This course is based on the principle that the technician must understand programmable controller terminology as well as relationships of the input/output, processor section, programmable devices, memory, and interfacing sections of the programmable controller. The use of ladder diagrams and programming techniques are explained along with the programmable controller versatility to control integrated processes.

ELECT 209
PROGRAMMABLE LOGIC CONTROLLERS II
Prerequisite: ELECT 208 or equivalent
2 lectures per week: 2 hrs credit
This course is a continuation of Programmable Logic Controllers I. Students continue to learn more programming techniques as well as manipulation of data, such as data comparison, connection of peripheral devices, and controller logic and hardware troubleshooting. Certain brand-name programmable controllers are identified and used. Practical wiring, troubleshooting, and programming of a particular model programmable controller are emphasized.
**ELECT 210**  
**COMPUTER USE AND APPLICATION**  
*Prerequisite: None*  
2 lectures per week: 2 hrs credit  
This course is designed to study computer interfacing, application and usage with little computer background necessary. Students use PCs to do a variety of tasks using both interfacing hardware and software for collecting and analyzing scientific data. Students also work within the PC in order to be able to change motherboards, driver cards, memories, drive units, and connect peripheral devices.

**ELECT 220**  
**PROGRAMMABLE LOGIC CONTROLLERS**  
*Prerequisite: None*  
4 lectures per week: 4 hrs credit  
This course studies programmable controller operations as used in industry. The use of ladder diagrams and programming techniques is explained along with programmable versatility to control integrated processes. Students develop expertise in connection of peripheral devices, controller logic and hardware, troubleshooting, and practical wiring procedures. (equivalent to ELECT 208 and 209 combined)

**ELECT 290**  
**SPECIAL TOPICS IN ELECTRICITY**  
*Prerequisite: Consent of program coordinator*  
3 lectures per week: 3 hrs credit (variable credit offered; may be repeated for credit 3 times with different topics)  
Topics pertaining to current and emerging technology in electricity are covered. Content and format of this course is variable and may be initiated by company training needs, updates in technology in the electrical field, and the need to adhere to rules such as the revisions that occur in the National Electrical Code. Subject matter is indicated in the class schedule.

**ELECT 298**  
**ELECTRICAL SEMINAR**  
*Prerequisite: Completion of 24 credits of ELECT courses and the consent of program coordinator*  
1 lecture per week: 1 hr credit  
This seminar is taken in conjunction with ELECT 299. Internship. The content of the seminar relates to the internship work which is correlated with students' fields of study.

**ELECT 299**  
**ELECTRICAL INTERNSHIP**  
*Prerequisite: Completion of 24 credits of ELECT courses and the consent of program coordinator*  
10 lab hrs per week: 2 hrs credit  
Student interns are assigned to an approved training site. This is scheduled by joint agreement of the student, the site supervisor, and the program coordinator. Students must also register for ELECT 298 - Electrical Seminar.

**EMERGENCY MEDICAL SERVICES**  
(including First Responder)

**EMS 101**  
**EMERGENCY MEDICAL TECHNICIAN**  
*Prerequisite: 18 years of age and COMPASS reading score of 78 or better or placement in ENG 101. Immunizations, CPR certification. Obtain information packet from Prairie State College Nursing department prior to start of course.*  
6 lectures, 2 lab hrs per week: 7 hrs credit  
Care, handling, and extrication of the critically ill and injured is taught. Emphasis is on the development of student skills in recognition of symptoms of illnesses and injuries, and proper emergency care and procedures. Subjects covered include the human body, cardiac arrest, resuscitation, fractures, injuries, childbirth, lifting and moving patients, and extrication from automobiles.

**EMS 200**  
**PARAMEDICINE I**  
*Prerequisite: BIOL 221, 222 with C or better; concurrent enrollment in EMS 205, EMS 210, and EMS 215; consent of instructor*  
12 lectures per week: 12 hrs credit  
This course introduces the field of paramedicine. Students study the roles and responsibilities of the pre-hospital care provider, medical/legal issues, ethics, principles of pathophysiology, pharmacology, medication administration, airway management and ventilation, patient assessment, trauma, and gynecological and obstetrical emergencies. Skill acquisition is integrated into the course of study.

**EMS 205**  
**PARAMEDICINE: FIELD PRACTICUM I**  
*Prerequisite: Concurrent enrollment in EMS 200, EMS 210, and EMS 215*  
8 lab hrs per week: 2 hrs credit  
This course allows students opportunities to perform or observe assessments and procedures learned in the classroom in a pre-hospital setting under the supervision of a licensed paramedic. Students focus on trauma, acute/chronic illness, and life threatening emergencies of various etiologies. They function as team members while riding with the assign ALS unit.

**EMS 210**  
**PARAMEDICINE: HOSPITAL PRACTICUM**  
*Prerequisite: Concurrent enrollment in EMS 200, EMS 205, and EMS 215*  
8 lab hrs per week: 2 hrs credit  
This course allows students opportunities to perform or observe assessments and procedures learned in the classroom in various departments within a hospital setting. Students focus on trauma, acute/chronic illness, and obstetrics. They function as team members in the respective hospital units. Upon successful completion of the required activities and skill sets, students are able to advance to the Paramedicine II course and the final program practicums.
EMS 225
PARAMEDICINE: FIELD PRACTICUM II
Prerequisite: Concurrent enrollment in EMS 200, EMS 230, and EMS 235
8 lab hrs per week: 2 hrs credit
This course is a continuation of Field Practicum I. Students perform or observe assessments and procedures learned in the classroom in a pre-hospital setting under the supervision of a licensed Paramedic. This practicum focuses more heavily on care of the cardiac client and the standard medical orders related to the treatment of cardiac conditions. Related to treatment of cardiac conditions, students function as team members while riding with the assigned advanced life support (ALS) unit. This course must be completed successfully in order to be eligible to write the state licensure exam.

EMS 230
PARAMEDICINE: LEADERSHIP PRACTICUM
Prerequisite: Concurrent enrollment in EMS 220, EMS 225, and EMS 235
8 lab hrs per week: 2 hrs credit
This course focuses on the management and leadership responsibilities of a professional paramedic. Students have a project-based experience that introduces the paramedic to the role of instructor, EMS coordinator, quality assurance manager, and the like. Students are assigned to observe and assist various individuals who function in a management or leadership role in emergency pre-hospital care or the education of prehospital care providers. Assignments reflect hands-on experience related to the preceptor’s daily responsibilities. This experience also includes observational and hands-on experience with end-of-life and pastoral care.

EMS 235
PARAMEDICINE: SEMINAR II
Prerequisites: Concurrent enrollment in EMS 220, EMS 225, and EMS 235
1 lecture hour per week: 1 hour credit
This course is designed to provide students with an opportunity to discuss field and hospital-based experiences they encounter during the final semester of their core curriculum. It provides a forum to help insure the successful transition to the work world. Previously determined topics are discussed that go beyond the scope of the core curriculum. Students present group projects to the class that deal with leadership or staff development topics. This presentation requires the use of several instructional methodologies that match the topic being presented.

ENG 097
FUNDAMENTAL ENGLISH I
Prerequisite: Qualifying score on English Placement Test
4 lectures per week: 4 hrs non-degree, non-transfer credit (may be repeated two times)
This course provides basic writing skills for students who need individualized instruction. The emphasis is on grammar and sentence structure.

ENG 098
FUNDAMENTAL ENGLISH II
Prerequisite: ENG 097 with a C or better or qualifying score on English Placement Test
4 lectures per week: 4 hrs non-degree, non-transfer credit (may be repeated two times)
This course provides a review of basic writing and grammar. Emphasis is placed on sentence structure, grammatical and mechanical problems, and spelling. Through the writing of short essays, students learn to combine clear correct sentences into a coherent, organized whole.

ENG 099
FUNDAMENTAL ENGLISH III
Prerequisite: ENG 098 and RDG 098 with a C or better or qualifying score on English Placement Test
6 lectures per week: 6 hrs non-degree, non-transfer credit (may be repeated two times)
This course is designed to equip students with the critical inquiry and writing skills necessary to succeed in college-level courses. Through prewriting and rewriting of essays and a research paper, students learn to combine clear, correct sentences into a coherent, organized whole, reflecting critical understanding of assigned texts. Note: All students must complete the English 099 Exit Test with a passing grade in order to pass English 099.
DEGREES, CERTIFICATES, COURSES

COURSE DESCRIPTIONS

ENG 101 (IAI: C1 900)
COMPOSITION I
Prerequisite: ENG 099 with a C or better or qualifying score on English Placement Test
3 lectures per week: 3 hrs credit
This is the first course in the composition sequence. It develops the ability to write clear, correct, effective personal, expository, and argumentative prose. It emphasizes critical reading skills, collaborative peer work, and use of library resources. Students write a minimum of five essays with extensive revisions. Review of grammar and mechanics is included. Note: All students must complete the English 101 Exit Test with a passing grade in order to pass English 101.

ENG 102 (IAI: C1 901R)
COMPOSITION II
Prerequisite: ENG 101 with a C or better
3 lectures per week: 3 hrs credit
This is the second course in the composition sequence. Emphasis is on the writing process with special attention to the research paper. Writing activities include both short and longer forms of traditional academic writing including critical essays and a documented investigative paper.

ENG 110 (IAI: EGL 922)
CREATIVE WRITING: POETRY
Prerequisite: ENG 101 with a C or better or consent of instructor
3 lectures per week: 3 hrs credit
Students write poetry in a variety of genres, learn the structure and elements of poetry and the writing process, and demonstrate an understanding of the critical terminology of the creative writer.

ENG 111 (IAI: EGL 924)
CREATIVE WRITING: NONFICTION PROSE
Prerequisite: ENG 101 Composition I (3) with C or better
3 lectures per week: 3 hrs credit
Students study the elements of nonfiction and the critical terminology of the creative writer, and produce fully developed works of nonfiction. Students explore themselves, their identity, and their world through writing autobiography, family history, and observations on culture, places, and time periods.

ENG 211 (IAI: H3 914; EGL 911)
AMERICAN LITERATURE I
Prerequisite: ENG 101 with a C or better
3 lectures per week: 3 hrs credit
This course studies American literature from the pre-colonial period to the Civil War and includes the style, techniques, and themes of the major writers responsible for shaping the traditions of American literature. Emphasis is on understanding major literary movements in their intellectual, social, and political contexts.

ENG 212 (IAI: H3 915; EGL 912)
AMERICAN LITERATURE II
Prerequisite: ENG 101 with a C or better
3 lectures per week: 3 hrs credit
This course is a study of American literature from the Civil War to the present. Emphasis is placed on the peculiarly American as well as universal themes which recur throughout poetry, drama, short stories, and novels of major American writers. Major literary movements are studied in relation to intellectual, social, and political contexts.

ENG 215 (IAI: H3 910D)
AFRICAN-AMERICAN LITERATURE
Prerequisite: ENG 101 with a C or better
3 lectures per week: 3 hrs credit
This survey course examines the varieties of the Black experience in America as it is found in poetry, the novel, the short story, and drama. Particular emphasis is placed on trends and themes as revealed in changes in style and content.

ENG 220
CHILDREN’S LITERATURE
Prerequisite: ENG 101 with a C or better
3 lectures per week: 3 hrs credit
This course focuses on the importance of children’s literature from preschool to adolescence and its enjoyment at home and in the classroom. Through reading a varied selection of books, students learn to evaluate, select, discuss, and use literature for children. It is recommended for teachers, aides, librarians, and parents. (same as ED 220)

ENG 221 (IAI: H3 903)
INTRODUCTION TO POETRY
Prerequisite: ENG 101 with a C or better
3 lectures per week: 3 hrs credit
Students read and enjoy poetry of various types and periods. Through close reading of selected poems, students learn to appreciate the beauty and art of poetry and its relevance to their own lives and emotions.

ENG 231 (IAI: H3 912; EGL 913)
BRITISH LITERATURE I
Prerequisite: ENG 101 with a C or better
3 lectures per week: 3 hrs credit
This course surveys British literature from its Anglo-Saxon beginnings through 18th-century Neoclassicism. Writers and their works are studied in relation to their intellectual, social, and political contexts.

ENG 232 (IAI: H3 913; EGL 914)
BRITISH LITERATURE II
Prerequisite: ENG 101 with a C or better
3 lectures per week: 3 hrs credit
This course surveys British literature from 1800 to the present with an emphasis on major literary movements understood in relation to their intellectual, social, and political contexts.

ENG 240 (IAI: H3 901; EGL 917)
INTRODUCTION TO FICTION
Prerequisite: ENG 101 with a C or better
3 lectures per week: 3 hrs credit
This course is an introduction to fiction with special emphasis on understanding and appreciation of the short story. The primary focus is on developing students’ ability to read critically, to learn about the principal literary elements of fiction, and to improve writing skills through the use of literature as subject matter.

ENG 243 (IAI: H3 908N; EGL 916)
NON-WESTERN LITERATURE IN ENGLISH
Prerequisite: ENG 101 with a C or better
3 lectures per week: 3 hrs credit
This course examines non-Western literature written during the twentieth century. Emphasis is placed on understanding the works both as part of local and global aesthetic traditions and within their intellectual, political, social, and historical contexts.
ENG 252 (IAI: H3 902)
INTRODUCTION TO DRAMA
Prerequisite: ENG 101 with a C or better
3 lectures per week: 3 hrs credit
This course emphasizes drama as literature and studies plays of various genres from a variety of literary periods. Eight to ten plays are analyzed in terms of meaning, form, and value.

ENG 256
FILM AND LITERATURE
Prerequisite: ENG 101 with a C or better
3 lectures per week: 3 hrs credit
This course examines the formal, thematic, and historical relationships between literature and film, and includes an examination of the adaptations and influences that demonstrate the strengths of each artistic medium.

ENG 261 (IAI: H3 906)
WESTERN/WORLD LITERATURE I
Prerequisite: ENG 101 with a C or better
3 lectures per week: 3 hrs credit
This course surveys masterpieces of Western/World literature from the beginnings in the ancient world through the 16th century. Themes of major writers are explored through consideration of their lives and work in the context of their times.

ENG 262 (IAI: H3 907)
WESTERN/WORLD LITERATURE II
Prerequisite: ENG 101 with a C or better
3 lectures per week: 3 hrs credit
This course surveys masterpieces of Western/World literature from the 17th, 18th, 19th, 20th, and early 21st centuries. Writers and their works are discussed within the context of their times.

ENG 271 (IAI: H3 905)
INTRODUCTION TO SHAKESPEARE
Prerequisite: ENG 101 with a C or better
3 lectures per week: 3 hrs credit
This course includes selected sonnets of Shakespeare and 6-8 of his plays: representative selections from the comedies, tragedies, historical dramas, and romances. Emphasis is on the dramatic and literary qualities of the works, but attention also is given to film versions of the plays.

FST 102
FIRE PREVENTION PRINCIPLES I
Prerequisite: FST 101
3 lectures per week: 3 hrs credit
The emphasis of this course is on objectives and techniques of fire prevention programs. Included among the topics are building and electrical codes, zoning controls and other prevention standards, evaluation of fire hazards, and techniques for inspecting various types of buildings. Basic blueprint reading and sketching are also covered.

FST 104
FIRE TACTICS AND STRATEGY I
Prerequisite: FST 101
3 lectures per week: 3 hrs credit
This course is an introduction to the basic principles and methods associated with fireground tactics and strategy as required by the company officer. It emphasizes size-up, fireground operations, prefire planning, and basic engine and truck company operations. Included are a survey of fire apparatus and equipment, its operation, the distribution of equipment and personnel, and preplanning of fireground operations.

FST 105
CONSTRUCTION AND FIRE SYSTEMS
Prerequisite: None
3 lectures per week: 3 hrs credit
This course is an analysis of various methods of building design, construction, and materials. Fire-resistant features of materials, life safety methods of construction, and an introduction to building codes are included. An in-depth study of automatic extinguishing and detection systems with emphasis on automatic sprinkler equipment is covered. Also included are water spray, foam, carbon dioxide, and dry chemicals, stand pipe systems, and protection systems for special hazards.

FST 106
HAZARDOUS MATERIALS OPERATIONS
Prerequisite: None
3 lectures per week: 3 hrs credit
This course identifies the competencies required of the first responder at the operational level responding to hazardous materials incidents. Included are the skills and techniques required to reduce and prevent the possibility of accidents, injuries, disabilities, and fatalities during response to hazardous materials.

FST 119
FIREFIGHTER II
Prerequisite: 18 years of age and COMPASS reading score of 78 or better or placement into ENG 101; FST 101; or documented affiliation with a fire department
6 lectures, 2 lab hrs per week: 7 hrs credit
This course equips students with basic knowledge and skills in areas such as fire behavior, equipment use, firefighter safety, rescue, and prevention. After successful completion of this course, students are eligible to write the State Fire Marshal Certification Exam. This program meets National Fire Protection Association (NFPA) standards.
FST 121
INTRODUCTION TO HOMELAND SECURITY
Prerequisite: None
3 lectures per week: 3 hrs credit
This course examines the programs and activities that have been implemented to improve the safety of our country. Special emphasis is placed on the threat of terrorism and strategies to address that threat. (same as CJ 120)

FST 201
ARSON INVESTIGATION
Prerequisite: FST 101
3 lectures per week: 3 hrs credit
This course acquaints students with basic investigative techniques used in examining an arson case from its origin to a successful conclusion in the court system. It covers such topics as motives for arson, determining origin, scientific aids in investigation, interviews, statements, reports, interrogation, and presentation of the case in court. The course is of particular significance for firefighters, police, and insurance investigators.

FST 202
VEHICLE AND MACHINERY OPERATIONS
Prerequisite: None
2 lectures, 2 lab hrs per week: 3 hrs credit
This course provides information on extrication and rescue of victims from vehicles involved in accidents. Emphasis is placed on equipment and techniques used in hazardous rescue operations.

FST 204
FIRE TACTICS AND STRATEGY II
Prerequisite: FST 104
3 lectures per week: 3 hrs credit
This course covers advanced principles and methods associated with the fire ground strategies, and tactics required of the multi-company officer or chief officer. It emphasizes multi-company alarm assignments, handling disasters, and major fire incidents by occupancy classification.

FST 205
HAZARDOUS MATERIALS TECHNICIAN A
Prerequisite: FST 106
3 lectures per week: 3 hrs credit
Methods of developing preplans for use by local departments are covered. Identification of hazards in communities and the designing of functional highway, rail, and industrial preplans to fit community needs are discussed.

FST 207
FIRE DEPARTMENT MANAGEMENT I
Prerequisite: FST 101
3 lectures per week: 3 hrs credit
This course covers responsibilities of fire service of various ranks. Included are qualifications and sources of authority, role of the company officer, and basic management theories, practices, and functions. This is one of two management courses required of eligible candidates pursuing Illinois State Fire Marshal certification as a Fire Officer I.

FST 208
FIRE DEPARTMENT MANAGEMENT II
Prerequisite: FST 207
3 lectures per week: 3 hrs credit
This course is an introduction to the elements of management as they apply to fire department administration. Included are principles of management, communication, and group dynamics as they relate to the company officer. This is the second of two management courses required of eligible candidates pursuing Illinois State Fire Marshal certification as a Fire Officer I.

FST 209
FIRE PREVENTION PRINCIPLES II
Prerequisite: FST 102
3 lectures per week: 3 hrs credit
The emphasis of this course is on public relations and inspection techniques and procedures. The course covers evaluation of fire hazards, inspection techniques, procedures for conducting inspection, record-keeping procedures, arson investigation, and on-site field inspections.

FST 210
FIRE APPARATUS ENGINEER
Prerequisite: FST 101
3 lectures per week: 3 hrs credit
This course is designed to train Illinois fire service personnel to the Certified Fire Apparatus Engineer level. Based on State Fire Marshal standards, this course emphasizes terminology, preventive maintenance, pumps, pump controls, water supply, calculations, operations, supply and support of sprinklers and standpipe systems, foam and specialized equipment, pumping apparatus tests, and troubleshooting problems that occur during pump operations.

FST 212
FIRE SERVICE - INSTRUCTOR I
Prerequisite: Firefighter II certification and three years documented cumulative fire service experience in a fire department and/or FST 101
3 lectures per week: 3 hrs credit
This course is designed to meet the needs of firefighters wishing to expand their fire science knowledge in the area of instruction. It provides basic information about human relations in the teaching-learning environment, instructional methodologies, and techniques used in developing lesson plans.

FST 213
FIRE SERVICE - INSTRUCTOR II
Prerequisite: FST 212
3 lectures per week: 3 hrs credit
This course is a continuation of Fire Service - Instructor I. It provides basic information on program management, program development, lesson plan development, instructional development, and techniques used to create evaluation instruments.
FST 218
FIRE DEPARTMENT MANAGEMENT III
Prerequisite: FST 208
3 lectures per week: 3 hrs credit
This course covers principles and techniques used by mid-level managers and chief officers in fire service. Principles of time management, decision-making, motivation, and delegation are emphasized. This is one of two management courses required of eligible candidates pursuing Illinois certification as a Fire Officer II.

FST 219
FIRE DEPARTMENT MANAGEMENT IV
Prerequisite: FST 218
3 lectures per week: 3 hrs credit
This course covers the techniques used by mid-level managers and chief officers in fire service. Principles of time management, decision-making, motivation, and delegation are emphasized. This is the second of two management courses required of eligible candidates pursuing Illinois certification as a Fire Officer II.

FIRST RESPONDER
(See Emergency Medical Services)

GEOGRAPHY

GEOG 101 (IAI: S4 900N)
CULTURAL GEOGRAPHY
Prerequisite: Placement into ENG 099 or higher
3 lectures per week: 3 hrs credit
This course provides a basic study of the cultural systems and practices of man as these developed in particular regions of the earth, and the interrelationships which developed through time. It is a study of the broad elements of human interaction, the systems of developmental growth, the systems of cultural transfer between groups, and the increasing levels of conceptual growth by which particular cultural groups may perceive their environments during different time periods. It provides a study of institutionalized human systems and their distribution over the surface of the earth.

GEOG 105 (IAI: P1 909)
INTRODUCTION TO PHYSICAL GEOGRAPHY
Prerequisite: Placement into ENG 099 or higher
3 lectures per week: 3 hrs credit
This course introduces the study of the Earth's environment. Topics surveyed include weather, climate, water, and geologic processes. The distribution of geographic features around the world is studied. Emphasis is on the relationships between human society and the physical environment.

GEOLO 101 (IAI: P1 907L)
PHYSICAL GEOLOGY
Prerequisite: Placement into ENG 099 or higher
3 lectures, 2 lab hrs per week: 4 hrs credit
Physical geology is a general education course which introduces basic geologic principles. It examines processes that have shaped the Earth including plate tectonics, earthquakes, volcanoes, mountain building, minerals, rocks, water, and glaciers. Laboratory work and field trips emphasize these topics and the scientific method.

GRAPHIC COMMUNICATIONS
(See also Art and Photographic Studies)

GC 115
INTRODUCTION TO COMPUTER ART
Prerequisite: None
6 lab hrs per week: 3 hrs credit
This studio course introduces students to the history and use of computer applications in the visual arts. Students learn to generate, combine, and manipulate traditional and contemporary visual ideas using both raster paint/photo retouching programs and professional quality vector drawing programs. (same as ART 115)

GC 151 (IAI: ART 918)
PRINCIPLES OF GRAPHIC DESIGN
Prerequisite: GC 115 or ART 115 or concurrent registration
6 lab hrs per week: 3 hrs credit
Students are introduced to theoretical and practical aspects of visual communication. Techniques, processes, and terminology of graphic design are covered.

GC 154
TYPOGRAPHY
Prerequisite: GC 151
1 lecture, 2 lab hrs per week: 2 hrs credit
This course investigates the effective use of type in visual design. Students experiment with the creation of original fonts using digital applications along with some traditional methods.

GC 156
DESIGN SOFTWARE WORKSHOP: SPECIAL TOPICS
Prerequisite: None
1 lecture, 2 lab hrs per week: 2 hrs credit
(may be repeated 3 times)
This course provides orientation, concentration, and practical application of a specific computer imaging software program. Each workshop features one of six leading software packages identified by graphic design professionals.
GC 160  
**DESIGN FOR PUBLISHING**  
Prerequisite: GC 115 or ART 115  
1 lecture, 4 lab hrs per week: 3 hrs credit  
This course focuses on design opportunities in publishing and teaches students how to develop newsletters, ads, catalogs, and presentations.

GC 162  
**INTRODUCTION TO WEB SITE DEVELOPMENT**  
Prerequisite: None  
1 lecture, 4 lab hrs per week: 3 hrs credit  
This course introduces professional Web site creation and management using basic features of Web design software. Students apply basic principles of mass communication; translate copy, sound, and still and moving images into the Web environment; use design principles to develop story boards, site maps, and navigation structures; and upload and maintain a Web site. Web-related legal and ethical issues are covered. Successful completion prepares students to pass exams leading to various Certified Internet Webmaster (CIW) credentials. *(same as ITWEB 103)*

GC 171  
**ILLUSTRATION**  
Prerequisite: GC 151 (recommended)  
1 lecture, 4 lab hrs per week: 3 hrs credit  
Offered fall term only  
In this studio environment students learn to draw controlled illustrations with confidence. Emphasis is placed on perception and rendering ability, with a variety of techniques and media. Digital and traditional media are used.

GC 175  
**ANIMATION TECHNIQUES**  
Prerequisite: GC 115 or ART 115  
1 lecture, 4 lab hrs per week: 3 hrs credit  
This course introduces the concepts, processes, and history of animation and covers both traditional and two-dimensional computer-based animation techniques. It incorporates the use of drawn, vector and bit-mapped formats as a means of generating animated sequences.

GC 182  
**DIGITAL VIDEO**  
Prerequisite: GC 115 or ART 115  
1 lecture, 2 lab hrs per week: 2 hrs credit  
This course covers the theory and practical techniques required to create and produce digital video. Computer software and production tools are used.

GC 185  
**DIGITAL SOUND**  
Prerequisite: GC 115 or ART 115  
1 lecture, 2 lab hrs per week: 2 hrs credit  
Students use digitized sounds, traditional foley effects, general midi music and dubbed effects to develop sound tracks for film, video, and multimedia. The use of professional sound and editing techniques is emphasized. This is a studio course in which the primary emphasis is development of a student’s portfolio.

GC 262  
**FLASH/INTERFACE DESIGN**  
Prerequisite: GC 151; ITWEB 103; or GC 162 recommended  
1 lecture, 4 lab hrs per week: 3 hrs credit  
This studio course develops students’ understanding of interactive Web and interface design with an understanding of graphic design and interface design principles. Students develop an integrated and consistent interface for a Web site using graphic programs including, but not limited to, Dreamweaver, Flash, and Photoshop. Students practice extensive use of scripting and programming with an emphasis on using professional design techniques and standards. Sound, video, animation, and interactivity are combined in interactive work. The primary emphasis of this course is development of students’ portfolios. Writing appropriate to the profession is required. *(same as ITWEB 203)*

GC 265  
**INTERACTIVE DESIGN PROJECT**  
Prerequisite: GC 162  
1 lecture, 4 lab hrs per week: 3 hrs credit  
This course develops students’ ability to work as part of a creative team. Students develop a group multimedia project using professional management techniques and standards. Sound, video, animation, and interactivity are used to create an interactive work. This is a studio course in which the primary emphasis is development of a student’s portfolio.

GC 287  
**PROFESSIONAL DESIGN**  
Prerequisite: GC 160  
1 lecture, 4 lab hrs per week: 3 hrs credit  
This course concentrates on advanced projects in computer image manipulation and design with emphasis on quality print output, film recording, and other methods of production. Use of flatbed and film scanner techniques are also covered.

GC 298  
**INDEPENDENT VISUAL STUDY**  
Prerequisite: GC 151; consent of instructor  
1 lecture, 4 lab hrs per week: 3 hrs credit  
This course is an investigation of independent visual problems as they relate to student-generated projects which require advanced research and development.

GC 299  
**INTERNSHIP/SEMINAR**  
Prerequisite: Minimum 12 credit hrs in ART, GC; consent of instructor  
1 lecture, 15 lab hrs per week: 4 hrs credit (variable credit)  
This internship and seminar provides an opportunity for students to earn credit while working in a graphic design related area. Formalized student-employer agreements identify objectives, work plan, and guidelines for evaluation.
HEALTH

HLTH 100
ORIENTATION TO HEALTH CAREERS
Prerequisite: None
3 lectures per week: 3 hrs credit
Students will learn about health care systems and the various
health care careers available as well as qualities needed to be a
health care worker. Medical terminology, anatomy and physiology, health promotion, and disease prevention are stressed.

HLTH 101
HEALTH AND WELLNESS
Prerequisite: None
2 lectures per week: 2 hrs credit
This course offers a study of the physical and mental workings
of the body in sickness and in health. It provides information
on topics related to mental and physical health such as holistic
health, stress management, fitness, nutrition, lifestyle choices,
diseases, and related issues.

HLTH 102
WORKPLACE ISSUES FOR ALLIED HEALTH
Prerequisite: None
1 lecture per week: 1 hr credit
Workplace issues in Allied Health are examined. Emphasis is on
communication, stress management, negotiating within
organizational structures, power, and dealing with life/death
situations.

HLTH 105
GENERAL MEDICAL TERMINOLOGY
Prerequisite: None
1 lecture per week: 1 hour credit
This course provides a foundation in the structure of common
medical terms, relating word elements to specific organs of the
body, and identifying commonly used medical abbreviations. It
is designed for students seeking admission to health career
programs or working in medical settings. Applicants for surgi-
cal technology and paramedicine programs should take SRT 100.

HEATING, VENTILATION, AIR-CONDITIONING, AND REFRIGERATION

HVACR 101
FUNDAMENTALS OF REFRIGERATION
Prerequisite: None
2 lectures per week: 2 hrs credit
This course covers the basic principles and theory of refrigeration.
Topics include refrigeration cycle, compressors, condensers, evaporators, and metering devices. Safe and efficient
use of tools and brazing techniques in the installation of copper tubeing and piping are also introduced.

HVACR 102
ADVANCED REFRIGERATION
Prerequisite: HVACR 101
2 lectures per week: 2 hrs credit
This course focuses on the basic refrigeration cycle, system components, and applications. Special emphasis is given to tem-
perature controls, installation techniques, testing, servicing,
charging, and location of refrigeration troubles.

HVACR 103
AIR CONDITIONING
Prerequisite: HVACR 102, 107, 108
2 lectures per week: 2 hrs credit
Topics covered in this course include basic air conditioning theory and principle, air conditioning systems, psychrometric
properties of air, process and human comfort load analysis,
load calculation, and equipment selection.

HVACR 104
ADVANCED AIR CONDITIONING
Prerequisite: HVACR 103, 108
2 lectures per week: 2 hrs credit
This course provides an in-depth understanding of the air con-
ditioning system, components and their applications. Special
emphasis is given to maximizing system operations which
includes mechanical and electrical installation, service repair,
and troubleshooting.

HVACR 105
HEATING SYSTEM APPLICATIONS
Prerequisite: HVACR 104, 108
2 lectures per week: 2 hrs credit
This course is an introduction to gas heating equipment which
includes theory of gas combustion, venting, operation and effi-
ciency of heating units; servicing and repairing mechanical and
electrical components; and proper installation of units.

HVACR 107
ELECTRICAL CONTROL APPLICATIONS
Prerequisite: None
2 lectures per week: 2 hrs credit
This course covers the practical study of electricity as it applies
to the servicing and installation of refrigeration, air condition-
ing, and heating equipment, with emphasis on electrical safety,
meters, and circuits.

HVACR 108
ADVANCED CONTROLS
Prerequisite: HVACR 107
2 lectures per week: 2 hrs credit
This course covers the installation, diagnosis and servicing of
the electrical systems used in split residential and small com-
mercial air conditioning, heating and refrigeration systems.
Emphasis is placed on the advanced control system needed to
achieve total comfort and safety.

HVACR 109
INSTALLATION AND SERVICE OF HVACR SYSTEMS
Prerequisite: HVACR 104, 105, 108
2 lectures per week: 2 hrs credit
This course covers the practical study of electricity as it applies
to the servicing and installation of refrigeration, air condition-
ing, and heating equipment, with emphasis on electrical safety,
meters, and circuits.

HEATING, VENTILATION, AIR-CONDITIONING, AND REFRIGERATION
HVACR 110
TROUBLESHOOTING HVACR SYSTEMS
Prerequisite: HVACR 104, 105, 108
2 lectures per week: 2 hrs credit
This course covers the systematic evaluation of air conditioning, heating, and refrigeration systems. Troubleshooting topics include system pressures, temperature, compressor efficiency, mechanical, and electrical components.

HVACR 112
SHEET METAL LAYOUT AND FABRICATION
Prerequisite: None
2 lectures per week: 2 hrs credit
This course covers the introduction to heating, ventilation, and air conditioning sheet metal duct systems. Basic fitting layout is covered. Emphasis is placed on various types of seams, edges, elbows, and ducts. Drawing and actual fabrication are done.

HVACR 114
SPECIAL TOPICS IN HVACR
Prerequisite: Instructor consent
2 lectures per week: 2 hrs credit (may be repeated for credit 3 times with different topics)
Topics pertaining to current and emerging technology in the heating, ventilation, air conditioning, and refrigeration industry are covered. Content and format of this course is variable and may be initiated by updates in technology in the HVACR field.

HISTORY

HIST 111 (IAI: S2 912N; HST 915)
WORLD HISTORY: ORIGINS TO 1714
Prerequisite: Placement into ENG 099 or higher
3 lectures per week: 3 hrs credit
This course covers the political, social, and economic history of the world to 1714, including the origins and developments of its peoples and societies. Equal emphasis is placed on the development of Western and non-Western civilizations.

HIST 112 (IAI: S2 913 N; HST 916)
WORLD HISTORY: 1714 TO PRESENT
Prerequisite: Placement into ENG 099 or higher
3 lectures per week: 3 hrs credit
This course covers the political, social, economic, and cultural history of the world including the origins and development of its peoples and societies from 1714 to the present. Equal emphasis is placed on the development of Western and non-Western civilizations.

HIST 115 (IAI: S2 906N)
AFRICAN CIVILIZATIONS I
Prerequisite: Placement into ENG 099 or higher
3 lectures per week: 3 hrs credit
This course examines the roots of African civilizations, with a focus on the development of major African societies prior to the period of European imperialism.

HIST 116 (IAI: S2 907N)
AFRICAN CIVILIZATIONS II
Prerequisite: Placement into ENG 099 or higher
3 lectures per week: 3 hrs credit
A continuation of HIST 115 with major emphasis on the development of modern African societies as they react to the twin forces of imperialism and nationalism.

HIST 140 (IAI: S2 910N)
HISTORY OF LATIN AMERICA
Prerequisite: Placement into ENG 099 or higher
3 lectures per week: 3 hrs credit
Students study the growth and development of Hispanic America from the Age of Discovery to the present day. Special emphasis is placed on the success and failure of democratic procedures, and the relationship between Latin America and the United States. The influences of the Roman Catholic Church, the military, and the business community on the development of society and government are also described.

HIST 151 (IAI: S2 902; HST 913)
HISTORY OF WESTERN CIVILIZATION I
Prerequisite: Placement into ENG 099 or higher
3 lectures per week: 3 hrs credit
This course examines the political, social, and economic history of the Western world, including the origins and development of cultures from human origins to the Age of Exploration.

HIST 152 (IAI: S2 903; HST 914)
HISTORY OF WESTERN CIVILIZATION II
Prerequisite: Placement into ENG 099 or higher
3 lectures per week: 3 hrs credit
This course explores the political, social, cultural, and economic history of the Western world from the Age of Exploration to modern times.

HIST 201 (IAI: S2 900; HST 911)
U.S. HISTORY: 1492 TO 1877
Prerequisite: Placement into ENG 099 or higher
3 lectures per week: 3 hrs credit
This course is a study of the political, economic, and social factors in the growth of the United States from the Age of Discovery through the Civil War and Reconstruction.

HIST 202 (IAI: S2 901; HST 912)
U.S. HISTORY: 1877 TO PRESENT
Prerequisite: Placement into ENG 099 or higher
3 lectures per week: 3 hrs credit
This course looks at the political, social, and economic history of the United States from 1877 to the present, including the development and origins of its peoples and society.

HIST 230
AFRICAN AMERICAN HISTORY
Prerequisite: None
3 lectures per week: 3 hrs credit
Designed to acquaint students with the African roots of the African American with emphasis on the transition of Blacks from African warrior to American slave.
HUMANITIES
(See also Philosophy)

HUMAN 101 (IAI: H5 904N)
COMPARATIVE RELIGIONS
Prerequisite: Placement into ENG 099 or higher
3 lectures per week: 3 hrs credit
The goal of the course is to enhance the understanding of what
religion is through a study of some of the forms it takes.

HUMAN 102 (IAI: H5 901)
FOUNDATIONAL RELIGIOUS TEXTS
Prerequisite: Placement into ENG 099 or higher
3 lectures per week: 3 hrs credit
This is a humanistic study of one or more of the foundational
documents of the world’s religions such as the Hebrew Bible,
the New Testament, the Qur’an or the Vedas.

HUMAN 201 (IAI: H9 900)
HUMANITIES THEMES: MYTH, REASON AND GOD
Prerequisite: Placement into ENG 099 or higher
3 lectures per week: 3 hrs credit
This course deepens students’ understanding of their own
moral, political, and religious beliefs through examining the
major humanities themes in Greek and Hebrew texts basic to
Western culture. Literary, historical, and philosophical perspec-
tives are explored in readings which include Homer, Plato, and
the Bible.

HUMAN 202 (IAI: HF 900)
FORM AND STRUCTURE IN THE ARTS
Prerequisite: Placement into ENG 099 or higher
3 lectures per week: 3 hrs credit
Coursework is divided among literature, painting, and music.
Emphasis is on formal structure of these works, and on analysis
rather than appreciation.

HYDRAULICS

HYDR 101
FUNDAMENTALS OF HYDRAULICS
Prerequisite: None
2 lectures per week: 2 hrs credit
This is a general course covering the basic components of
hydraulic systems, and the basic laws and formulas involved in
simple fluid power calculations. Topics include pumps, control
valves, actuators, the use of ASAIS symbols, and maintenance
procedures.

HYDR 102
HYDRAULIC PUMPS
Prerequisite: HYDR 101
2 lectures per week: 2 hrs credit
This is a study of various fluid power pumps and their princi-
pies of operation, construction, and maintenance. Fixed gear,
vane, axial, and radial piston, and variable delivery pumps are
covered in addition to combination pumps and self-contained
power units.

HYDR 103
HYDRAULIC CONTROLS
Prerequisite: HYDR 101
2 lectures per week: 2 hrs credit
This course provides a study of the various controls used in
fluid power. Topics covered: pressure and volume theory,
operation and construction of valves, and circuit applications.
Also covered are valves and their assemblies, the relief, pres-
sure reducing sequence, counterbalance, brake, volume and
control and directional, in addition to various types of valve
controls.

HYDR 104
BASIC HYDRAULIC CIRCUITS
Prerequisite: HYDR 103
2 lectures per week: 2 hrs credit
This is a study of fluid power circuit fundamentals, calculations
and design. Circuits studied: pump-unloading, speed, pressure,
volume, deceleration, sequence, servo, oil conditioning, and
transfer line.

HYDR 106
PNEUMATICS
Prerequisite: AMATH 101
2 lectures per week: 2 hrs credit
This course offers a study of fundamental pneumatic principles,
gas laws, calculations, ASAIS symbols and terminology. Also
considered are the way air is compressed, the compressed air
system, controlling pneumatic power, and the introduction of flu-
ids.

INDUSTRIAL ELECTRICIAN
(see Electrician)

INFORMATION TECHNOLOGY

Course prefixes indicate the content emphasis of each course.
Courses applied for completion of current degrees or certifi-
cates must have been completed within the past five years.

APPLICATIONS - ITAPP

ITAPP 100
BASIC COMPUTING SKILLS
Prerequisite: None
1 lecture per week: 1 hour credit
This course is designed for students who have little or no com-
puter experience. Topics covered include using e-mail, search-
ing for and evaluating Internet sites, creating basic documents
using Word, creating basic presentations using PowerPoint,
using basic operating system functions, using textbook supple-
mental materials such as CDs and online resources, and using
WebAdvisor and Blackboard.
ITAPP 101 (IAI: BUS 902; CS 910)
INTRODUCTION TO COMPUTERS
Prerequisite: Keyboarding (recommended)
3 lectures per week: 3 hrs credit
A general introduction to the concepts of computers and data processing as it relates to the business organization. This course is a survey of many aspects of computers today and includes units on history of computers; hands-on experience with business software such as spreadsheets, database and word processing packages; telecommunications and current topics. No mathematics or data processing background is required.

ITAPP 109
INTRODUCTION TO THE INTERNET
Prerequisite: None
2 lab hrs per week: 1 hr credit
This is a comprehensive study of the Internet through online experience. All the basic Internet applications are covered, including e-mail, www, gopher, search strategies, USENET news groups, FTP, Telnet, Web page construction, encryption on the Internet, Internet service providers, and social issues.

ITAPP 121
WORD PROCESSING APPLICATIONS - LEVEL 1
Prerequisite: ITOFS 100
2 lectures, 2 lab hrs per week: 3 hrs credit (may be repeated three times)
This course prepares students to work with the latest word processing software in a career setting or for personal use. Students develop a mastery-level competence in word processing by creating and editing business documents.

ITAPP 122
WORD PROCESSING APPLICATIONS - LEVEL 2
Prerequisite: ITAPP 121
2 lectures, 2 labs per week: 3 hrs credit (may be repeated three times)
This course is a continuation of hands-on skill development using the latest word processing software. Topics covered include creating and modifying styles, creating templates, preparing reference documents, and customizing documents.

ITAPP 125
SPREADSHEET APPLICATIONS - LEVEL 1
Prerequisite: Keyboarding (recommended)
1 lecture, 2 lab hrs per week: 2 hrs credit
This course prepares students to work with the latest spreadsheet software. Topics covered include creating and editing worksheets, using range commands, using copy and move commands, creating formulas and functions, developing queries, and designing macros.

ITAPP 126
SPREADSHEET APPLICATIONS - LEVEL 2
Prerequisite: ITAPP 125
1 lecture, 2 lab hrs per week: 2 hrs credit
This course provides further hands-on study into the capabilities of the current commercial spreadsheet software. Topics covered include macros, advanced functions, file operations, and sophisticated applications.

ITAPP 128
DATABASE APPLICATIONS - LEVEL 1
Prerequisite: Keyboarding (recommended)
1 lecture, 2 lab hrs per week: 2 hrs credit
Hands-on experience with the most current and widely used database software. Topics covered include creating and editing a database file, queries, forms, grouping data for reports, indexing, labels, SQL commands, menu structures, and macros.

ITAPP 129
DATABASE APPLICATIONS - LEVEL 2
Prerequisite: ITAPP 128 or equivalent
1 lecture, 2 lab hrs per week: 2 hrs credit
Further hands-on study into the capabilities of the current commercial database software. Topics covered include operations, multiple files, relational database operations, SQL, command file creation and program flow, and applications.

ITAPP 130
SOFTWARE INTEGRATION AND APPLICATION
Prerequisite: ITAPP 121, 125, 128
1 lecture, 2 lab hrs per week: 2 hrs credit
This course explores the powerful merging capabilities of word processing, database and spreadsheet software packages. Students import data and graphics, explore mail merge, write macros, and create integrated software systems for business applications.

ITAPP 132
DESKTOP PUBLISHING
Prerequisite: ITOFS 100
2 lectures, 2 lab hrs per week: 3 hrs credit
This desktop publishing course utilizes a personal computer to create high-quality publications by using an advanced page layout software package to combine text and graphics to produce master copy. Text and graphics can be combined to produce brochures, newsletters, magazines, technical documents, and books. Students completing this course are expected to demonstrate their knowledge of desktop publishing by producing assigned and personal projects.

ITAPP 133
BUSINESS PRESENTATIONS
Prerequisite: None
1 lecture, 2 lab hrs per week: 2 hrs credit
This course teaches students to use current desktop presentation software to plan, construct, and produce effective desktop presentations. Students complete assigned projects using special predefined layout features in the software to produce slide presentations.

ITAPP 150
SOFTWARE SUITE APPLICATIONS-WORD PROCESSING
Prerequisite: None
1 lecture per week: 1 hr credit
This course teaches the basics of the word-processing module of the software suite. Learn to efficiently create professional looking documents such as announcements, letters, resumes, and reports and to revise them easily.
ITAPP 151
SOFTWARE SUITE APPLICATIONS-SPREADSHEETS
Prerequisite: None
1 lecture per week: 1 hr credit
This course teaches the basics of the spreadsheet module of the software suite. Students create spreadsheets, develop formulas, format and visually present data in chart format, build worksheets, and link together for visual presentation.

ITAPP 152
SOFTWARE SUITE APPLICATIONS-DATABASE
Prerequisite: None
1 lecture per week: 1 hr credit
This course teaches the basics of the database module of the software suite. Students create a database table, edit, copy and restructure tables, query tables to extract information, and print reports from tables.

ITAPP 153
SOFTWARE SUITE APPLICATIONS-PRESENTATIONS
Prerequisite: None
1 lecture per week: 1 hr credit
This course teaches the basics of the presentation module of the software suite. Students develop various types of presentations using a projection device and slides.

ITAPP 155
INTEGRATED SOFTWARE SUITE APPLICATIONS
Prerequisite: ITAPP 150, 151, 152 and 153
1 lecture per week: 1 hr credit
The software suite integrates applications so that they work together easily. The applications look alike and work alike, thus increasing productivity. This course teaches the user how to share data, documents and graphics across applications.

ITAPP 160
TECHNOLOGY FOR TEACHERS
Prerequisite: None
3 lectures per week: 3 hrs credit
This course introduces educators to the use of the computer as an educational tool. The course focuses on a solid understanding of educational technology, and how to integrate computers into the classroom curriculum. Hands-on technology activities are an important part of the course. Students begin to develop their teaching portfolios. (same as ED 160)

ITNET 160
COMPUTER REPAIR
Prerequisite: ITPRG 140
2 lectures, 4 lab hrs per week: 4 hrs credit
This course is an introduction to personal computer upgrades, maintenance, and repair. Topics include computer hardware, software, operating systems, troubleshooting, and how to fix, upgrade, and build a computer. This course covers the latest technologies and objectives of the CompTIA A+ certification exams.

ITNET 165
INTRODUCTION TO NETWORKING
Prerequisite: ITNET 160 (recommended)
2 lectures, 2 lab hrs per week: 3 hrs credit
This course covers the skills and concepts needed to configure and operate a variety of networking products, including a wide range of vendor and product neutral networking technologies. Topics include networking theory, protocols, connectivity devices, Internet addressing, internetworking servers, security, and troubleshooting. Successful completion prepares students to pass CompTIA’s entry-level networking certification exam.

ITNET 250
INTRODUCTION TO LAN ADMINISTRATION
Prerequisite: ITPRG 140
2 lectures, 2 lab hrs per week: 3 hrs credit
Topics include local area network (LAN) terminology, hardware and software components required in a networked environment, and administration of common network operating systems. Hands-on activities include creating and managing user accounts, file sharing, printing, and other tasks related to network administration.

ITNET 260
NETWORK SECURITY FUNDAMENTALS
Prerequisite: ITNET 165 or Network+ certification
2 lectures, 2 lab hrs per week: 3 hrs credit
This course covers the fundamentals of network security including communication security, infrastructure security, cryptography, access control, authentication, external attack, and operational and organization security. Successful completion prepares students for the CompTIA Security+ certification exam.

ITNET 270
COMPUTER FORENSICS
Prerequisite: CJ 101 or ITPRG 140
2 lectures, 2 lab hrs per week: 3 hrs credit
This course provides an introduction to computer forensics, preparing students to acquire and analyze digital crime evidence. Students learn tools and techniques for conducting digital investigations, preserving evidence, and preparing expert witness testimony. Topics include file structures, data recovery, forensic analysis, e-mail and network investigations, and ethics. (same as CJ 270)
ITNET 280
ETHICAL HACKING
Prerequisite: ITNET 260
2 lectures, 2 lab hrs per week: 3 hrs credit
This course introduces students to the art of ethical hacking and network defense, preparing students to be efficient security professionals. Topics include computer ethics, penetration testing, network and computer attacks, social engineering, operating system vulnerabilities, cryptography, and network intrusion issues regarding Web servers and wireless networks.

ITNET 299
INTERNSHIP
Prerequisite: 12 credit hours in IT and consent of instructor
10 lab hrs per week: 2 hrs credit
Student interns will be employed at an approved training site. This is scheduled by joint agreement of the student, the site coordinator, and the program coordinator.

OFFICE SKILLS- ITOFS

ITOFS 100
KEYBOARDING
Prerequisite: None
2 lab hrs per week: 1 hr credit
Keyboarding is inputting information through the use of the computer keyboard. The purpose of this course is to teach students to develop basic touch keyboarding skills on a computer.

ITOFS 111
BEGINNING KEYBOARDING APPLICATIONS
Prerequisite: ITOFS 100
1 lecture, 2 lab hrs per week: 2 hrs credit
This course is a continuation of skill development in touch keyboarding. The purpose of this course is to enable students to develop keyboarding skill at a minimum of 30 wpm within four errors. Students create business applications such as letters, memorandums, tables, and manuscripts.

ITOFS 112
INTERMEDIATE KEYBOARDING APPLICATIONS
Prerequisite: ITOFS 111, ITAPP 121
1 lecture, 2 lab hrs per week: 2 hrs credit
This course is a continuation of skill development in touch keyboarding. The purpose of this course is to enable a person to develop a keyboarding skill at a minimum of 50 wpm within three errors. Students produce a variety of letter forms, memorandums, tables, manuscripts, and business forms.

ITOFS 117
KEYBOARDING SKILL DEVELOPMENT
Prerequisite: ITOFS 100
2 lab hrs per week: 1 hr credit
This course is designed to improve keyboarding speed and accuracy skills. Students analyze his/her own error patterns and then practice specific drills to correct those particular weaknesses. Anyone who can use the touch method of keyboarding and is interested in improving that skill will benefit from the course.

ITOFS 119
OFFICE PROCEDURES
Prerequisite: ITOFS 111 recommended
3 lectures per week: 3 hrs credit
The many techniques, skills, routines, and procedures which are relevant to and identified with general office work are included in this course. Topics include the high-tech workplace, success behaviors, office communication, and mail records and management.

ITOFS 122
TRANSCRIPTION SKILLS
Prerequisite: ITOFS 111, ITAPP 121
2 lecture, 2 lab hrs per week: 3 hrs credit
The skills and techniques for transcription from voice processing machines are covered. Emphasis is on correct spelling, punctuation, formatting, and English mechanics as well as equipment operation.

ITOFS 199
OFFICE ASSISTANT PRACTICUM
Prerequisite: Completion of 15 credit hours required IT courses and consent of coordinator
2 lab hrs per week: 1 hour credit
This practicum provides an opportunity for students to work within a simulated office environment and to perform duties relevant to office support personnel.

ITOFS 219
OFFICE MANAGEMENT
Prerequisite: ITOFS 112, 119, or equivalent
3 lectures per week: 3 hrs credit
Offered spring term only
The social and professional competence required of people working and relating together in the office is explored with special emphasis on the secretarial role in the office. Skills, techniques, and procedures basic to the modern office are developed. The development of acceptable office behavior and attitudes with secretarial decision-making is stressed.

ITOFS 221
ADVANCED KEYBOARDING APPLICATIONS
Prerequisite: ITAPP 121, 122
1 lecture, 2 lab hrs per week: 2 hrs credit
This course is a continuation of skill development using word processing software. The technique and topics learned in Word Processing Applications-Levels 1 and 2 are applied using realistic projects. Cooperative learning, critical thinking, and problem solving are stressed.

ITOFS 299
INTERNSHIP
Prerequisite: Must be taken concurrently with ITOFS 298, consent of instructor
10 lab hrs per week: 2 hrs credit
Student interns will be employed at an approved training site. This is scheduled by joint agreement of the student, the site supervisor, and the program coordinator.
PROGRAMMING - ITPRG

ITPRG 103
INTRODUCTION TO PROGRAMMING
Prerequisite: None
2 lectures, 2 lab hrs per week: 3 hrs credit
This course introduces structured programming logic and includes reports, control breaks, extracts, tables, input validation, updates, and file handling concepts. Standard logic charts include flowcharting, pseudo-code, and other charting methods. Solutions to programming projects are in QuickBasic and Visual Basic.

ITPRG 106
MATHEMATICS FOR COMPUTERS
Prerequisite: MATH 090 or qualifying score on Math Placement Test
3 lectures per week: 3 hrs credit
This course is designed to provide an understanding of the numerical concepts required for data processing. Included in the course are the following topics: binary, octal and hexadecimal number systems, set theory, logic, floating and fixed point numbers, problem solving, and algebra as it relates to data processing.

ITPRG 140
INTRODUCTION TO OPERATING SYSTEMS
Prerequisite: Keyboarding (recommended)
2 lecture, 2 lab hrs per week: 3 hrs credit
This course describes the purpose of operating systems and how they work from a business, personal, and PC support perspective. This course provides hands-on experience in file maintenance, configurations, Windows customization, file systems, basic trouble-shooting, and running applications with Windows operating systems. Other operating systems (command prompt, Linux, and networking) are reviewed, compared and discussed.

ITPRG 142
INTRODUCTION TO VISUAL BASIC PROGRAMMING
Prerequisite: Keyboarding and ITPRG 103 (recommended)
2 lectures, 2 lab hrs per week: 3 hrs credit
In this introduction to the Visual Basic programming language, object-oriented and event-driven programming essentials, techniques, and applications are stressed. Topics include control objects, decisions and conditions, menus, procedures, looping structures, and array manipulations.

ITPRG 144
INTRODUCTION TO C++ PROGRAMMING
Prerequisite: ITPRG 103, 140, or equivalent (recommended)
2 lectures, 2 lab hrs per week: 3 hrs credit
This course provides an introduction to the capabilities of the C++ programming language. Topics covered include variables, operators, control structures, input and output, functions, simple data types, arrays, and strings.

ITPRG 147
INTRODUCTION TO JAVA PROGRAMMING
Prerequisite: ITPRG 103, 140, or equivalent (recommended)
2 lecture, 2 lab hrs per week: 3 hrs credit
This course provides JAVA programming basics, Object-oriented programming fundamentals are covered as they apply to stand-alone JAVA programs.

ITPRG 154
C#.NET PROGRAMMING
Prerequisite: ITPRG 103, 140 or equivalent (recommended)
2 lectures, 2 lab hrs per week: 3 hrs credit
This course covers C#.NET programming concepts. C#.NET was introduced as part of the .NET platform designed to accommodate Internet and Windows applications. Topics covered include writing C#.NET programs using OOP, declaring variables, manipulating data types, creating methods, performing procedures, creating graphical user interfaces, using XML Web Services, developing standalone class libraries, and programming event-driven applications.

ITPRG 157
JAVASCRIPT PROGRAMMING
Prerequisite: ITPRG 140 (recommended)
2 lectures, 2 lab hrs per week: 3 hrs credit
This introductory course in JavaScript programming provides basic programming concepts for designing, developing and integrating scripts into Web pages. The focus includes the use of tags, HTML, objects, event-handling, writing JavaScript functions, and calling JavaScript functions. JavaScript prepares students with a universally accepted scripting language, used for creating dynamic and interactive Web pages.

ITPRG 171
GAME DESIGN I
Prerequisite: Placement into ENG 099 or higher
2 lectures, 2 lab hrs per week: 3 hrs credit
This course introduces students to basic game theory (including game play and strategy) as well as the historical development of all types of games. Games used for education, training, and entertainment are explored. Strong focus is on the design process, from developing a basic concept, to selling the proposal, to production and marketing.

ITPRG 173
DIGITAL STORYTELLING
Prerequisite: Placement into ENG 101 or higher.
2 lectures, 2 lab hrs per week: 3 hrs credit
This course focuses on the planning, storyboard design, and scripting of interactive digital productions, such as text, audio, and still and moving images, with a focus on video games. Narrative scripts and design are developed with an emphasis on scene design, characterization, plotting, target audience, messages, and script format. Topics include the advantages and limitations of multimedia as conduit for mediated messages, and the nuances between writing for multimedia and stand-alone text, audio, and video.
ITPRG 201
SYSTEMS DESIGN AND DEVELOPMENT
Prerequisite: ITAPP 101, ITPRG 103, and at least one programming course or equivalent
2 lectures, 2 lab hrs per week: 3 hrs credit
This course provides an analysis of the information flow within the business organization. The systems development life cycle is studied with both physical and logical design considerations. Case studies are used to illustrate the steps of a system study.

ITPRG 205
ETHICS IN INFORMATION TECHNOLOGY
Prerequisite: None
This course explores the legal, ethical, and societal issues in the information technology (IT) world. Students examine various ethical situations that arise in IT and formulate ideas for addressing these issues. Topics include computer and Internet crime, privacy rights, freedom of expression, intellectual property, and employer/employee issues.

ITPRG 240
LINUX OPERATING SYSTEM
Prerequisite: ITPRG 140
2 lectures, 2 lab hrs per week: 3 hrs credit
This course provides an in-depth study of basic system administration. The major essential command-line commands, as well as use of the graphical user interface are covered. This course provides theoretical and practical concepts including file systems, elementary shell scripting, and other end-use knowledge necessary to move to the next level of basic system administration. Basic administrative tasks that are necessary for maintaining a working system are explored.

ITPRG 242
ADVANCED VISUAL BASIC PROGRAMMING
Prerequisite: ITPRG 142 or equivalent
2 lectures, 2 lab hrs per week: 3 hrs credit
This is a continuation of ITPRG 142. Advanced topics in Visual Basic are explored including arrays, multiple forms, data files, and databases, grids, SQL, graphics, OLE, DLL’s, and custom objects. Emphasis is on finding creative solutions to application problems. During the last several weeks of the semester, the class works on a group project for an outside company.

ITPRG 244
ADVANCED C++ PROGRAMMING
Prerequisite: ITPRG 144 recommended
2 lectures, 2 lab hrs per week: 3 hrs credit
This course is a continuation of the C++ introduction. After a review of the introductory topics, study focuses on pointers, arrays, structs, linked lists, recursion, operator overloading, inheritance, and polymorphism.

ITPRG 247
ADVANCED JAVA PROGRAMMING
Prerequisite: ITPRG 147 or equivalent
2 lectures, 2 lab hrs per week: 3 hrs credit
This course is a continuation of ITPRG 147 and provides broader JAVA programming concepts. Object oriented programming concepts are covered as they apply to building event-driven JAVA applets, stand-alone JAVA programs, and GUI programming.

ITPRG 248
INTRODUCTION TO COBOL PROGRAMMING
Prerequisite: ITPRG 103
2 lectures, 2 lab hrs per week: 3 hrs credit
Offered fall term only
The most widely used language today is COBOL, and this course introduces students to COBOL’s programming essentials and techniques. Structured design is stressed, and lab assignments give students experience in the applications of creating and editing business reports, calculations and comparisons, logic techniques, input/output techniques, data validation and testing, and table handling.

ITPRG 249
ADVANCED COBOL PROGRAMMING
Prerequisite: ITPRG 248
2 lectures, 2 lab hrs per week: 3 hrs credit
Offered spring term only
This course is a continuation of ITPRG 248. Emphasis is placed on learning and applying more advanced COBOL programming techniques and language conventions. Topics covered include subscripted and indexed tables, matching records logic, VSAM file creation and update, the COBOL sort, subprograms, and COPY and CALL statements.

ITPRG 299
INTERNSHIP
Prerequisite: ITPRG 298 (taken concurrently), 12 credit hrs IT courses successfully completed with C or better, and consent of instructor
10 lab hrs per week: 2 hrs credit
Student interns will be employed at an approved training site. This is scheduled by joint agreement of the student, the site coordinator, and the program coordinator. Students must enroll in ITPRG 298 in the same semester as their internship. Student interns meet with the program coordinator in a class or individually for an hour per week.

WEB DEVELOPMENT - ITWEB

ITWEB 101
WEB PAGE AUTHORING
Prerequisite: None
2 lectures, 2 lab hrs per week: 3 hrs credit
This course is for students interested in developing specific Internet skills as a Web designer, developer or administrator. Topics include Internet fundamentals, Web page authoring with XHTML and CSS, and networking concepts. Successful completion prepares students to pass exams leading to various Certified Internet Webmaster (CIW) credentials.

ITWEB 103
INTRODUCTION TO WEB SITE DEVELOPMENT
Prerequisite: None
1 lecture, 4 lab hrs per week: 3 hrs credit
This course introduces professional Web site creation and management using basic features of Web design software. Students apply basic principles of mass communication; translate copy, sound, and still and moving images into the Web environment; use design principles to develop storyboards, site maps, and navigation structures; and upload and maintain a Web site. Web-related legal and ethical issues are covered. Successful completion prepares students to pass exams leading to various Certified Internet Webmaster (CIW) credentials. (same as GC 162)
ITWEB 105
MULTIMEDIA WRITING
Prerequisite: Placement into ENG 101
3 lectures per week: 3 hrs credit
This course provides an introduction to basic writing skills necessary to create messages for the multimedia environment such as Web sites, graphics, animations, and digital audio. Upon successful completion, students will be able to write multimedia scripts; demonstrate an understanding of the nuances between writing for multimedia and writing for standalone text, audio and video; describe the advantages and limitations of multimedia as a conduit for mediated messages; and integrate standard expectations of writing including style, grammar, spelling, and punctuation.

ITWEB 201
TECHNOLOGY OF E-COMMERCE
Prerequisite: ITWEB 101 and ITWEB 103
2 lecture, 2 lab hrs per week: 3 hrs credit
This course teaches students how to conduct business online and how to manage the technological issues associated with constructing an e-commerce Web site. Students implement a genuine transaction-enabled business-to-consumer Web site, examine strategies and products available for building E-commerce sites, examine how such sites are managed, and explore how they can complement an existing business infrastructure. Successful completion prepares students to pass exams leading to various Certified Internet Webmaster (CIW) credentials.

ITWEB 203
FLASH/INTERFACE DESIGN
Prerequisite: GC 151 and ITWEB 103 or GC 162 recommended
1 lecture, 4 lab hrs per week: 3 hrs credit
This studio course develops students’ understanding of interactive Web and interface design with an understanding of graphic design and interface design principles. Students develop an integrated and consistent interface for a Web site using graphic programs including, but not limited to, Dreamweaver, Flash and Photoshop. Students practice extensive use of scripting and programming with an emphasis on using professional design techniques and standards. Sound, video, animation, and interactivity are combined in interactive work. The primary emphasis of this course is development of students’ portfolios. Writing appropriate to the profession is required. (same as GC 262)

ITWEB 205
WEB LANGUAGES
Prerequisite: ITWEB 101
2 lectures, 2 lab hrs per week: 3 hrs credit
This course teaches students to use advanced Web programming languages to create interactive Web sites. Topics include form processing, file access and manipulation, and database connectivity. Both client and server side programming techniques are emphasized. Upon successful completion, students are prepared to take various Certified Internet Webmaster (CIW) exams.

ITWEB 225
WEB WORKSHOP: ADVANCED TOPICS
Prerequisite: None
1 lecture, 2 lab hrs per week: 2 hrs credit
This course provides orientation, application, and hands-on experience with a particular Web development language or software application. Emphasis is placed on techniques used by Web development professionals and practical application of Web programming concepts to real-world scenarios.

ITWEB 299
INTERNSHIP
Prerequisite: 12 credit hours in IT and consent of instructor
10 lab hrs per week: 2 hrs credit
Student interns will; be employed at an approved training site. This is scheduled by joint agreement of the student, the site coordinator, and the program coordinator.

JOURNALISM

JRNLM 101 (IAI: MC 919)
INTRODUCTION TO JOURNALISM
Prerequisite: ENG 101 with C or better
3 lectures per week: 3 hrs credit
This course introduces students to the journalism industry and its practices, including techniques of news gathering, reporting, and interviewing. Students learn to use the library and do online database research. Students write basic stories under real-time constraints.

LANGUAGES
(See Spanish)

LITERATURE
(See English)
MANUFACTURING TECHNOLOGY

MT 101
METAL WORKING PROCESSES I
Prerequisite: None
2 lectures, 2 lab hrs per week: 3 hrs credit
This course introduces students to machine tool processes and operation by giving consideration to the efficient use of tooling, speeds, feeds, and fixtures in production processes; to metal processing; to precision measurement; and to the use and operation of lathes, drill presses, mills, saws, and grinders.

MT 102
METAL WORKING PROCESSES II
Prerequisite: MT 101
2 lectures, 2 lab hrs per week: 3 hrs credit
This course continues development of the skills and knowledge attained in MT 101 by additional training in thread calculation and chasing, tool bit geometry and sharpening, basic CNC machine tool operation, foundry processes and machining of castings.

MT 105
METAL WORKING PROCESSES III
Prerequisite: MT 102
2 lectures, 2 lab hrs per week: 3 hrs credit
This course provides students with information on horizontal milling, boring, drilling machines, and their operations. Coursework consists of lectures and demonstrations on the construction of the different types of horizontal machines, the type of work done, the workpiece setup, the tools used and safety practices.

MT 120
INDUSTRIAL SAFETY
Prerequisite: None
2 lectures per week: 2 hrs credit
This course provides safety training for those in industrial plant situations. Topics include tool and machine safety, lock out/tag out procedures, fire protection, eye safety, basic electrical safety, ladder safety, and government safety regulations as well as general safety practices.

MT 210
CNC PROGRAMMING I
Prerequisite: MT 102
2 lectures, 2 lab hrs per week: 3 hrs credit
This is an introductory course in computer numerical control programming. It covers CNC system operations; machine tool setup and tooling; G-code and M-code utilization; and 2 and 3-axis linear and circular interpolation programming. Emphasis is placed on part programming and machine tool operation for CNC vertical milling and lathe work.

MT 211
CNC PROGRAMMING II
Prerequisite: MT 210
2 lecture, 2 lab hrs per week: 3 hrs credit
This course is a continuation of MT 210. It covers such topics as cutter compensation, fixed and variable canned cycles, subroutine programming, and the calculation of machining process. Part programs are written for the lathe, the vertical mill, and the horizontal mill.

MT 212
INTRODUCTION TO ROBOTICS
Prerequisite: None
2 lectures, 2 lab hrs per week: 3 hrs credit
This course introduces students to the use of robotic devices in various manufacturing environments. It covers topics ranging from the development of robotics, to robotic systems and the operation and programming of robotic devices. Students receive hands-on instruction in the use of the teach-pendant and computer-based robotic language programming.

MT 214
CAD/CAM SYSTEMS
Prerequisite: MT 210; CADMD 243 recommended
2 lectures, 2 lab hrs per week: 3 hrs credit
This course introduces students to the relationship, use, and operations of CAD and CAM systems to generate CNC programs. Students learn to create CAD files for use with a CAM system; to use a CAM system to create geometry, tooling, and post-processor files; and to transmit CAM-generated programs to CNC equipment.

MT 215
MANUFACTURING SYSTEMS
Prerequisite: MT 210 and 212
3 lectures, 2 lab hrs per week: 4 hrs credit
This course covers the identification, operation, and application of both basic industrial processes and various systems that can be integrated into a computer integrated manufacturing system (CIM). These include CNC, CAD, CAM, and robotics. Students design, program, and implement workcells that include material handling, manufacturing and assembly operations. Emphasis is placed on fully automated production system design and operation.

MT 220
METALLURGY – FERROUS
Prerequisite: MT 102 and TECH 221
2 lectures per week: 2 hrs credit
A review of types of metals and their applications studied in the prerequisite course MT 102. Iron, steel and their alloys, standard classification systems, properties, and methods of testing are considered. Study of heat treatment processes includes laboratory demonstrations, and experiments related to critical temperatures, crystalline structure changes and standard physical tests. Nonferrous alloys, their classification and properties also are considered. Also covered are aluminum, magnesium and copper bearing metals, die casting, powder metallurgy, surface treatment, new metals and application, and welding metallurgy.

MT 221
METALLURGY – NONFERROUS
Prerequisite: None
2 lectures per week: 2 hrs credit
This course studies types of nonferrous metals and their applications. Standard classification systems, properties, and methods of testing properties are discussed. In addition, development of new nonferrous metals and their applications are studied.
APPLIED MATHEMATICS

AMATH 100
BASIC MATHEMATICS FOR THE SKILLED TRADES
Prerequisite: Recommended for students in apprenticeship programs
2 lectures per week: 2 hrs credit
This course is for those apprentice students who have little or no skill in the operations of numbers. It includes topics on whole numbers, fractions, decimals, percents, powers, and square roots, measurement systems, and commonly used formulas.

AMATH 101
ALGEBRA FOR THE SKILLED TRADES
Prerequisite: AMATH 100 or equivalent
2 lectures per week: 2 hrs credit
This course is for those students who have a knowledge of the arithmetic operations but have little or no background in algebra. It includes basic algebraic operations, factoring, solving equations, ratio and proportion, exponents, and radicals.

AMATH 103
GEOMETRY FOR THE SKILLED TRADES
Prerequisite: AMATH 101
2 lectures per week: 2 hrs credit
An introduction to geometry which includes definitions and descriptions of geometric terms, axioms and theorems; explanations regarding dispositions dealing with straight lines, triangles, and circles; and application to practical shop problems.

AMATH 106
APPLIED TRIGONOMETRY FOR THE SKILLED TRADES
Prerequisite: AMATH 103
2 lectures per week: 2 hrs credit
Topics in this course include definitions of trigonometric functions, fundamental trigonometric identities, solution of triangle problems and applications of trigonometry to practical shop problems.

AMATH 107
TRIGONOMETRY AND SHOP APPLICATIONS I
Prerequisite: AMATH 106
2 lectures per week: 2 hrs credit
This course covers the solution of oblique triangles by use of altitude construction method, law of sines and cosines, cotangents, t/2 angle formula, and tangent law. Emphasis is placed upon standardized types of shop and drafting problems using above methods.

AMATH 108
COMPOUND ANGLES FOR THE SKILLED TRADES
Prerequisite: AMATH 107
2 lectures per week: 2 hrs credit
The principles of trigonometry are used to determine plane, base and base angles in solid figures for the purpose of classifying the solid geometric figures into basic types for analysis and recognition. Practice in solving shop problems is emphasized and includes determining angles of tilt and rotation for mounting paste on adjustable plates and methods of checking angular tapered dovetails.

AMATH 110
GEARING AND CAMS FOR THE SKILLED TRADES
Prerequisite: AMATH 106
2 lectures per week: 2 hrs credit
This course covers the mathematics of standard screw threads such as American National, United States v. Acme and Worm. Standard notations and formulas for spur gears, bevel gears, worm, and worm wheels and helical gears. Replacement of spur gears with helical gears and use of an idler gear, and the calculations for plain and differential indexing. Charts, gear models, and gears are used as aids in visualizing the problems.

DEVELOPMENTAL MATHEMATICS

MATH 080
COMPUTATIONAL SKILLS I
Prerequisite: Qualifying score on Math Placement Test
4 lectures per week: 4 hrs non-degree, non-transfer credit (may be repeated three times)
This course provides a background in mathematics for students who do not feel confident in the mastery of arithmetic skills. Topics covered include operations on whole numbers, fractions and decimals, percents, and ratio and proportions.

MATH 085
COMPUTATIONAL SKILLS II
Prerequisite: MATH 080 with a C or better or qualifying score on Math Placement Test
4 lectures per week: 4 hrs non-degree, non-transfer credit (variable credit; may be repeated three times)
This course provides a background in mathematics for students who do not feel confident in the mastery of skills at the pre-algebra level. Topics covered include operations on integers, fractions, and decimals; percents; ratio and proportion; graphs; and measurement. Emphasis is placed on the development of algebraic skills.

MATH 090
ELEMENTARY ALGEBRA
Prerequisite: MATH 085 with a C or better or qualifying score on the Math Placement Test
5 lectures per week: 4 hrs non-degree, non-transfer credit
This is a course in elementary algebra. Topics covered include linear equations and inequalities, graphs of linear equations, polynomials, factoring, rational expressions, and rational equations. Problem solving is emphasized throughout the course.

MATH 095
INTERMEDIATE ALGEBRA
Prerequisite: MATH 090 with a C or better or qualifying score on the Math Placement Test
4 lectures per week: 4 hrs non-degree, non-transfer credit
This is a course in intermediate algebra. It is a prerequisite for transferable college mathematics courses. Topics covered include functions and graphs, systems of linear equations, one- and two-variable inequalities, roots and radicals, complex numbers, and quadratic equations. Emphasis is placed on the development of algebraic skills.
MATH 096
GEOMETRY
Prerequisite: MATH 090 with C or better or qualifying score on placement test
3 lectures per week: 3 hrs non-degree, non-transfer credit
This is a course covering the fundamental concepts of geometry. It is intended for students who lack credit in one year of high school geometry or need review in the subject matter. Emphasis is placed on learning geometric facts as well as the development of deductive reasoning. Topics covered include plane and solid geometry, properties of congruence, similarity, area, perimeter, and volume.

COLLEGE-LEVEL MATHEMATICS
Prerequisites for MATH 112, 115, 151, and 200 may be met by one of the following options:
Option 1 – MATH 095 and MATH 096, both with at least a C
Option 2 – MATH 095 and one year of high school geometry, both with at least a C
Option 3 – A qualifying score on the Math Placement Test

MATH 111
MATHEMATICS FOR PARAPROFESSIONALS
Prerequisite: MATH 085 or placement into MATH 090
3 lectures per week: 3 hrs credit
This course is designed for the elementary school paraprofessional. This course strongly emphasizes hands-on learning; thus, manipulatives are used extensively. Topics covered include problem solving, sets, number theory, statistics, probability, geometry, and measurement. Students seeking general education mathematics credit for transfer are advised to register for the MATH 200/206 sequence. (same as EDU 111)

MATH 112 (IA: M1 904)
GENERAL EDUCATION MATHEMATICS
Prerequisite: Option 1, 2, or 3 above
3 lectures per week: 3 hrs credit
This course is designed for the liberal arts student who is not a mathematics, science, or business major. The course focuses on mathematical reasoning and the solving of real-life problems. The following topics are studied in depth: set theory and logic, the mathematics of finance, probability, and statistics. The use of calculators or computers is a component of the course.

MATH 115 (IA: M1 902)
GENERAL EDUCATION STATISTICS
Prerequisite: Option 1, 2, or 3 above
3 lectures per week: 3 hrs credit
The general education statistics course provides students with an opportunity to acquire a reasonable level of statistical literacy and thus expand their base for understanding a variety of work-related, societal and personal problems, and statistical approaches to the solution of these problems. The main objective of the course is statistical reasoning. Detailed techniques of statistical analysis and the mathematical development of statistical analysis of statistical procedures are not emphasized. The course is intended to meet the general education requirement. It is not intended to be a prerequisite to nor a replacement for courses in statistical methods for business, social science or mathematical statistics. Students who complete this course cannot also receive credit for BUS 240 or MATH 153.

MATH 151
COLLEGE ALGEBRA
Prerequisite: Option 1, 2, or 3 as noted at beginning of section
4 lectures per week: 4 hrs credit
This course extends on the concepts previously studied in Intermediate Algebra. Course material is approached both algebraically and graphically. The graphing calculator is used extensively. Topics covered include linear, quadratic, polynomial, rational, exponential, and logarithmic functions and their applications. Matrices, matrix operation, and matrix equations are also introduced.

MATH 153 (IA: MI 902)
PROBABILITY AND STATISTICS
Prerequisite: MATH 151 or qualifying score on the Math Placement Test
4 lectures per week: 4 hrs credit
This course is an introductory course in probability and statistics. Topics covered include frequency distribution, percentiles, measures of central tendency, measures of dispersion, standard deviation, correlation, elementary probability, line of regression, statistical inference, the binomial distribution, the normal distribution, student t-distribution, and the chi-square distribution. Computer software such as MINITAB is used. A comprehensive project is assigned. Students who complete this course cannot also receive credit for BUS 240 or MATH 115. (same as BUS 240)

MATH 155 (IA: MI 906)
FINITE MATHEMATICS
Prerequisite: MATH 151 with a C or better or qualifying score on Math Placement Test
4 lectures per week: 4 hrs credit
This course is an introduction to finite mathematics to meet the needs of business, social science, and liberal arts students. Topics covered include compound interest, annuities, systems of equations and inequalities, matrices, linear programming and its applications, probability, game theory, and logic. Throughout the course, emphasis is placed on concepts and applications.

MATH 157 (IA: MI 900-B)
CALCULUS FOR BUSINESS AND SOCIAL SCIENCE
Prerequisite: MATH 151 with a C or better or qualifying score on Math Placement Test
4 lectures per week: 4 hrs credit
This is a one-semester calculus course for business and social science majors. Topics covered include equations of lines, limits, differentiation and integration of algebraic, exponential and logarithmic functions. Throughout the course, emphasis is placed on the applications of the basic concepts of calculus. This course does not count for credit toward a mathematics major or minor.

MATH 165
PRE-CALCULUS
Prerequisite: MATH 151 with a C or better
5 lectures per week: 5 hrs credit
This pre-calculus course covers trigonometry, polar and parametric equations, conic sections, sequences, and series. It is a preparatory course designed to provide students with the essential skills needed for success in the sequence of courses covering calculus for scientists and engineers.
MATH 171 (IAI: M1 900-1; EGR 901; MTH 901)
CALCULUS WITH ANALYTIC GEOMETRY I
Prerequisite: MATH 165 with a C or better, or qualifying score on the Math Placement Test
5 lectures per week: 5 hrs credit
This is the first course in a three semester sequence of courses covering calculus for scientists and engineers. Topics covered include lines, derivatives, applications of derivatives, antiderivatives and definite integrals, and applications of integrals.

MATH 172 (IAI: M1 900-2; EGR 902; MTH 902)
CALCULUS WITH ANALYTIC GEOMETRY II
Prerequisite: MATH 171
5 lectures per week: 5 hrs credit
This is the second course in the three-semester sequence of courses covering calculus for scientists and engineers. Topics covered include applications of integrals, transcendental functions, integration techniques, L'Hôpital's rules, improper integrals, infinite sequences and series, and polar coordinates.

MATH 173 (IAI: M1 900-3; EGR 903; MTH 903)
CALCULUS WITH ANALYTIC GEOMETRY III
Prerequisite: MATH 172
5 lectures per week: 5 hrs credit
This is the final course in the three-semester sequence of courses covering calculus for scientists and engineers. Topics covered include basic operations on vectors, vector-valued functions, functions of several variables, partial derivatives, multiple integrals, and vector calculus.

MATH 200
MATHEMATICS FOR ELEMENTARY TEACHING I
Prerequisite: Option 1, 2 or, 3 as noted at beginning of section
4 lectures per week: 4 hrs credit
This course covers the fundamental ideas and theories of mathematics beginning with arithmetic. It is designed for prospective and present elementary school teachers. Topics include sets, functions, whole numbers, integers, rational numbers, and irrational numbers to complete the real number system. This course is recommended to meet the requirements for teacher certification in Illinois. This is not a methods course in teaching mathematics.

MATH 201 (IAI: MTH 922)
ENGINEERING COMPUTER PROGRAMMING
Prerequisite: MATH 171
3 lectures per week: 3 hrs credit
This course is designed to use the computer in the study of problems in engineering, mathematics, or physical sciences. The emphasis is on problem analysis and problem solving.

MATH 206 (IAI: M1 903)
MATHEMATICS FOR ELEMENTARY TEACHING II
Prerequisite: MATH 200 with a C or better
4 lectures per week: 4 hrs credit
This course is a continuation of Mathematics for Elementary Teaching I. The topics studied include geometry, probability, statistics, and measurement. Mathematical reasoning and problem solving are emphasized. This course is the second in a two course sequence recommended to meet the requirements for teacher certification in Illinois. It is not a methods course in teaching mathematics. This course provides general education credit for elementary education majors only.

MATH 210 (IAI: M1 905; CS 915)
DISCRETE MATHEMATICS
Prerequisite: MATH 151 with a C or better or qualifying score on the Math Placement Test
3 lectures per week: 3 hrs credit
This beginning course in the mathematics of computer science introduces mathematical analysis of finite collections and mathematical analysis of sequential machines, computer system design, data structures, and algorithms. Topics include sets, counting, recursion, graph theory, trees, networks, Boolean algebra, and formal grammars.

MATH 216 (IAI: EGR 904; MTH 912)
DIFFERENTIAL EQUATIONS
Prerequisite: MATH 172
3 lectures per week: 3 hrs credit
Offered spring semester only
This is a first course in ordinary differential equations with applications to the physical sciences. Topics covered include recognition, classification and solution of differential equations, as well as the expression of applied problems as differential equations. This course is designed to prepare students for more advanced study in mathematics, science, and engineering.

MATH 220
LINEAR ALGEBRA
Prerequisite: MATH 172
3 lectures per week: 3 hrs credit
This course is intended as a transition between the calculus sequence and upper level courses in mathematics. Topics covered include vectors, vector spaces, matrices, determinants, matrix algebra, linear independence, linear transformations, eigenvalues, and eigenvectors. A significant portion of the course is devoted to theory and proof construction.

MECHANICAL DESIGN TECHNOLOGY
(See CAD/Mechanical Design Technology)

METEOROLOGY

METEO 150 (IAI: PI 905)
INTRODUCTION TO METEOROLOGY
Prerequisite: Placement into ENG 099 or higher
3 lectures per week: 3 hrs credit
This is a non-lab physical science course surveying topics related to weather, climate, and the atmosphere. Studies include air masses and fronts, global circulation, severe weather, and climate. Students examine weather’s impact on humans, and humans’ impact on weather and climate.
MILLWRIGHT

MILL 101
INDUSTRIAL MAINTENANCE TECHNIQUES I
Prerequisite: None
2 lectures per week: 2 hrs credit
This course teaches reading and use of micrometers, vernier calipers, dial indicators, and other measuring tools. Other topics include hand and power tools used by the millwright, fastener identification, layout and drilling operations, as well as reaming and tapping drilled holes.

MILL 102
INDUSTRIAL MAINTENANCE TECHNIQUES II
Prerequisite: None
2 lectures per week: 2 hrs credit
This course covers the installation of machinery coupled with the principles of steel construction. Also covered are friction bearings, non-friction bearings, couplings, gearing, and reduction build-up.

MILL 103
LUBRICATION
Prerequisite: None
2 lectures per week: 2 hrs credit
This unit of study introduces students to the theories of lubrication, lubrication oils, greases, and solid lubricants, as well as the principles of lubrication, lubricating machine parts, lubrication storage, and safety. Other topics include lubricant application and its history, as well as centralized lubricating systems, system components, conductors, and connectors.

MILL 105
RIGGING
Prerequisite: None
2 lectures per week: 2 hrs credit
This course familiarizes students with the safe and accepted industry practices as applied to rigging, rigging equipment, and its proper maintenance.

MILL 106
POWER TRAIN ELEMENTS
Prerequisite: None
2 lectures per week: 2 hrs credit
This course introduces the installation and alignment of component parts found in industrial equipment and machinery. Topics include the mounting of bearings, gearings, couplings, pulley clutches, and belts. Conveyors and chain drives are also covered. Equipment and coaxial alignment are stressed.

MILL 107
MACHINE VIBRATION ANALYSIS I
Prerequisite: None
2 lectures per week: 2 hrs credit
This course provides industrial maintenance technicians with an understanding of vibration analysis, rotating machine monitoring techniques, data collection, and analysis techniques.

MILL 108
MACHINE VIBRATION ANALYSIS II
Prerequisite: MILL 107
2 lectures per week: 2 hrs credit
This course provides industrial maintenance technicians with enhanced vibration diagnostics for rotating machines. Topics covered include selecting instrumentation, natural frequency, phase analysis, journal bearing problems, and anti-friction bearing problems using vibration signature analysis.

MUSIC

MUSIC 100
FUNDAMENTALS OF MUSIC THEORY
Prerequisite: None
3 lectures per week: 3 hrs credit
This course introduces the basic principles of interpreting and understanding the language of music. It includes the study of notation, rhythm, scales, intervals, basic forms, musical terms, and introduction to the keyboard.

MUSIC 101
MUSICIANSHIP I
Prerequisite: MUSIC 100 (or equivalent)
4 lecture hrs per week: 4 hrs credit
This course is the first in a sequence of four that provides extensive training in the fundamentals of music theory and ear training. It deals with the notational and aural aspects of Western music including clefs, scales, key signatures, intervals, meter, rhythm, melody, and chords, and uses 4-part chorale writing for a basis for study of chord progressions. It provides training in sight-singing and melodic and rhythm dictation. It is required for all music majors and minors.

MUSIC 102
MUSICIANSHIP II
Prerequisite: MUSIC 101
4 lecture hrs per week: 4 hrs credit
This course is the second in a sequence of four that provides extensive training in the fundamentals of music theory and ear training. It deals with the notational and aural aspects of Western music including scales, intervals, meter, rhythm, melody, and chords, using 4-part chorale writing for a basis for the study of chord progressions. It provides training in sight-singing, melodic and rhythmic dictation, and chord recognition. It is required for all music majors and minors.

MUSIC 110
COMMUNITY CHORUS
Prerequisite: None
2 lab hrs per week: 1 hr credit
(May be repeated three times)
Open to all students interested in choral activities. This ensemble provides an opportunity for singers to participate in a large chorus.
MUSIC 115
ORCHESTRAL STRING ENSEMBLE
Prerequisite: None
2 lab hrs per week: 1 hr credit
This ensemble provides an opportunity for musicians who play traditional orchestral string instruments (violin, viola, cello, double bass) to study and perform significant string ensemble literature. Students must know how to read music and have at least an intermediate playing ability to participate.

MUSIC 120 (IAI: MUS 908)
WIND ENSEMBLE
Prerequisite: Consent of instructor
2 lab hrs per week: 1 hr credit (May be repeated three times)
This course provides the opportunity for students to study and perform significant concert band literature in an ensemble.

MUSIC 130 (IAI: F1 900)
MUSIC APPRECIATION
Prerequisite: Placement into ENG 099 or higher
3 lectures per week: 3 hrs credit
This course introduces representative masterpieces and focuses on helping students develop listening skills and the ability to identify, analyze, and appreciate different kinds of music. Emphasis will be placed on the elements of music, various musical forms and periods, and great composers and performers.

MUSIC 132 (IAI: F1 904)
AMERICAN MUSIC
Prerequisite: Placement into ENG 099 or higher
3 lectures per week: 3 hrs credit
This is an historical survey of the development and major cultural contributions of American music and composers including symphonic, jazz, and popular forms within the context of American culture and society.

MUSIC 143
CLASS_VOICE I
Prerequisite: None
1 lecture, 2 lab hrs per week: 2 hrs credit
Group instruction in fundamentals of singing, voice production, breathing, diction, vocalizing, and technical exercises; elementary song literature is introduced as progress is made.

MUSIC 144
CLASS_VOICE II
Prerequisite: MUSIC 143
1 lecture, 2 lab hrs per week: 2 hrs credit
A continuation of MUSIC 143, this course provides group instruction at a more advanced level. In addition to correct vocal production, breathing, diction, and technical exercises, learning of songs is emphasized.

MUSIC 152 (IAI: MUS 908)
JAZZ ENSEMBLE I
Prerequisite: Consent of instructor
1 lecture, 2 lab hrs per week: 1 hr credit
Instrumental ensemble performance. Open to intermediate level or higher students of piano and band or orchestral instruments.

MUSIC 153 (IAI: MUS 908)
JAZZ ENSEMBLE II
Prerequisite: MUSIC 152
1 lecture, 2 lab hrs per week: 1 hr credit
This course is a continuation of MUSIC 152. It provides instrumental ensemble experience with an emphasis on improvisation.

MUSIC 162 (IAI: MUS 908)
VOCAL JAZZ ENSEMBLE I
Prerequisite: Consent of instructor
1 lecture, 2 lab hrs per week: 1 hr credit
This course provides rehearsal and performance experience in a vocal jazz ensemble.

MUSIC 163 (IAI: MUS 908)
VOCAL JAZZ ENSEMBLE II
Prerequisite: MUSIC 162
1 lecture, 2 lab hrs per week: 1 hr credit
This course provides continuing rehearsal and performance experience in a vocal jazz ensemble.

MUSIC 171
DIGITAL KEYBOARD TECHNIQUES
Prerequisite: None
1 lecture, 2 lab hrs per week: 2 hrs credit
This course develops basic piano keyboarding skills and teaches the foundations of MIDI (musical instrument digital interface) technology. It is a required course for students in music technology or production.

MUSIC 172
MUSIC IN FILM AND TELEVISION
Prerequisite: MUSIC 130 or 132
3 lectures per week: 3 hrs credit
This course examines the uses of music in film and television and provides an overview of the industry. The breadth of music is explored through critical analysis of significant works and consideration of aesthetic, technical, historical, psychological and social tools, and trends.

MUSIC 174
COMPUTER-ASSISTED MUSIC PRODUCTION
Prerequisite: None
4 lectures per week: 4 hrs credit
Students learn the basics of Musical Instrument Digital Interface (MIDI), computer sequencing, and multitrack recording using software applications and tools. Through a series of projects, each student will produce an audio CD using Sonar 6.

MUSIC 176
SOUND RECORDING TECHNIQUES
Prerequisite: Physics 101 Conceptual Physics (3) or concurrent enrollment
2 lectures, 2 lab hrs per week: 3 hrs credit
This course provides students hands-on training in recording audio of music and sound. Microphone types and set-up, mixing board set-up and management, room acoustics evaluation, sound isolation, and post-production techniques are covered.
MUSIC 181
PRIVATE LESSONS I
Prerequisite: None
1 lecture per week: 1 hr credit (may be repeated 3 times)
Private instruction in voice or an instrument is provided for students who are not music majors. Students meet weekly with the instructor for a half-hour lesson emphasizing technique, reading skills and repertoires. Instruction is offered in voice, piano, brass, woodwinds, strings, percussion, organ, bass, or guitar.

MUSIC 182
PRIVATE LESSONS II
Prerequisite: MUSIC 181
1 lecture per week: 1 hr credit (may be repeated 3 times)
Continued private instruction in voice or an instrument is provided for students who are not music majors. Students meet weekly with the instructor for a half-hour lesson emphasizing technique, reading skills and repertoires. Instruction is offered in voice, piano, brass, woodwinds, strings, percussion, organ, bass, or guitar.

MUSIC 191 (IAI: MUS 909)
PRIVATE APPLIED MUSIC I
Prerequisite: Consent of instructor
2 lectures per week: 2 hrs credit (may be repeated 3 times)
Private instruction is provided in voice or an instrument, emphasizing techniques, performance, and pedagogical fundamentals. Students who plan to transfer to an upper-division program as music majors are required to enroll each semester in a selected area of performance concentration. Instruction is offered in voice, piano, brass, woodwinds, strings, percussion, organ, bass, or guitar.

MUSIC 192 (IAI: MUS 909)
PRIVATE APPLIED MUSIC II
Prerequisite: MUSIC 191
2 lectures per week: 2 hrs credit (may be repeated 3 times)
Continued private instruction in voice or an instrument, emphasizing techniques, performance, and pedagogical fundamentals. Students who plan to transfer to an upper-division program as music majors are required to enroll each semester in a selected area of performance concentration.

MUSIC 201 (IAI: MUS 903)
MUSICIANSHIP III
Prerequisite: MUSIC 102
4 lectures hrs per week: 4 hrs credit
This course is the third in a sequence of four that provides extensive training in the fundamentals of music theory and ear training. It deals with the notational and aural aspects of Western music including scales, intervals, meter, rhythm, melody, and chords, and provides an introduction to polyphony and common musical forms including binary, ABA, and sonata-allegro. It continues a study of chord progressions and training in sight-singing, melodic, and rhythmic dictation, and chord recognition, and introduces two-part singing and harmonic dictation.

MUSIC 202 (IAI: MUS 904)
MUSICIANSHIP IV
Prerequisite: MUSIC 201
4 lectures hrs per week: 4 hrs credit
This course is the fourth in a sequence of four that provides extensive training in music theory and ear training. It deals with the notational and aural aspects of Western music, with an introduction to non-Western scales and tonality. It continues a study of form and focuses on 20th century theory and compositional developments. It continues a study of chord progressions and training in sight-singing; melodic, rhythmic, and harmonic dictation; and part singing.

MUSIC 252 (IAI: MUS 908)
JAZZ ENSEMBLE III
Prerequisite: Consent of instructor
1 lecture, 2 lab hrs per week: 1 hr credit
This course is a continuation of MUSIC 153. It provides instrumental ensemble experience with an emphasis on improvisation.

MUSIC 253 (IAI: MUS 908)
JAZZ ENSEMBLE IV
Prerequisite: Consent of instructor
1 lecture, 2 lab hrs per week: 1 hr credit
This course is a continuation of MUSIC 252. It provides instrumental ensemble experience with an emphasis on improvisation.

MUSIC 262 (IAI: MUS 908)
VOCAL JAZZ ENSEMBLE III
Prerequisite: MUSIC 163
1 lecture, 2 lab hrs per week: 1 hr credit
This course provides continuing rehearsal and performance experience in a vocal jazz ensemble.

MUSIC 263 (IAI: MUS 908)
VOCAL JAZZ ENSEMBLE IV
Prerequisite: MUSIC 262
1 lecture, 2 lab hrs per week: 1 hr credit
This course provides continuing rehearsal and performance experience in a vocal jazz ensemble.

MUSIC 274
DIGITAL COMPOSITION FOR VIDEO
Prerequisite: MUSIC 174
4 lectures per week: 4 hrs credit
This course teaches the creative and technical aspects of composing and synchronizing music for video using computer-assisted digital technology (Sonar 6), and existing visual media (Quick Time video clips).

MUSIC 281
PRIVATE LESSONS III
Prerequisite: MUSIC 182
1 lecture per week: 1 hr credit (may be repeated 3 times)
Continued private instruction in voice or an instrument is provided for students who are not music majors. Students meet weekly with the instructor for a half-hour lesson emphasizing technique, reading skills, and repertoires.
MUSIC 282
PRIVATE LESSONS IV
Prerequisite: MUSIC 281
1 lecture per week: 1 hr credit (may be repeated 3 times)
Continued private instruction in voice or an instrument is provided for students who are not music majors. Students meet weekly with the instructor for a half-hour lesson emphasizing technique, reading skills, and repertoires. Instruction is offered in voice, piano, brass, woodwinds, strings, percussion, organ, bass, or guitar.

MUSIC 291 (IAI: MUS 909)
PRIVATE APPLIED MUSIC III
Prerequisite: MUSIC 192
2 lectures per week: 2 hrs credit (may be repeated 3 times)
Continued private instruction in voice or an instrument, emphasizing techniques, performance, and pedagogical fundamentals. Students who plan to transfer to an upper-division program as music majors are required to enroll each semester in a selected area of performance concentration. Instruction is offered in voice, piano, brass, woodwinds, strings, percussion, organ, bass, or guitar.

MUSIC 292 (IAI: MUS 909)
PRIVATE APPLIED MUSIC IV
Prerequisite: MUSIC 192
2 lectures per week: 2 hrs credit (may be repeated 3 times)
Continued private instruction in voice or an instrument, emphasizing techniques, performance, and pedagogical fundamentals. Students who plan to transfer to an upper-division program as music majors are required to enroll each semester in a selected area of performance concentration.

MUSIC 299
MUSIC PRODUCTION INTERNSHIP
Prerequisite: MUSIC 172, 176, 274; consent of instructor
10 lab hrs per week: 2 hrs credit
This course provides workplace experience for students in the field of music technology and production.

NURSING
(See also Registered Nursing)

Financial Aid recipients should check with the Office of Financial Aid/Veterans Affairs prior to enrolling in Nursing 100. Some financial aid programs will not pay for this course.

NURS 100
NURSE ASSISTANT TRAINING
Prerequisite: COMPASS reading score of 60 or above
6 lectures, 3 lab hrs per week: 7 hrs credit
This course teaches the basic nursing skills necessary to become a nursing assistant. Students are led from the integrated roles of the health care team to the specific duties of the nursing assistant and the skills necessary to give basic patient care and to deal with families.

NURS 101 (IAI: NUR 916)
BASIC CARE NEEDS
Prerequisite: Registration in the Nursing program
4 lectures, 6 lab hrs per week: 6 hrs credit
A course designed to assist students in recognizing the basic needs of clients. The communication process introduces the basic psychosocial needs of people, incorporating specific needs of clients and the dynamics of interpersonal relationships along with group process. Emphasis is placed upon the needs of the individual client made dependent through illness, including principles related to activities of daily living, administration of medications, and nursing observation. The approach to nursing care utilizes the principles of the nursing process.

NURS 102 (IAI: NUR 916)
ACUTE CARE NEEDS
Prerequisite: NURS 101 and BIOL 222
5 lectures, 6 lab hrs per week: 7 hrs credit
This course is designed to introduce students to concepts related to the care and teaching of clients with acute care needs. The nursing process is instrumental in allowing students to explore and apply standards of care in meeting the needs of culturally diverse clients throughout the life span.

NURS 110
SEMINAR IN NURSING PRACTICE
NURS 102
1 lecture, 2 lab hrs per week: 2 hrs credit
The focus of this course is to enhance freshman nursing students’ competence in decision making skills, critical thinking, and clinical judgments/practice.

NURS 111 (IAI: NUR 916)
NURSING AS A PROFESSION
Prerequisite: Registration in the Nursing program
1 lecture per week: 1 hr credit
A course designed to introduce students to the theories and concepts of nursing and health. Students explore how these concepts affect the study they are undertaking. Historical developments are presented as a basis for the current exploration of theories and concepts of emerging care and responsibilities. The conceptual framework of their program is discussed, and the legalities involving care they will administer are identified.

NURS 201 (IAI: NUR 916)
FAMILY CARE NEEDS
Prerequisite: NURS 102
6 lectures, 14 lab hrs per week: 11 hrs credit
This course is designed to present theories and concepts which deal with communication problems and the expanding family, including children with compromised basic human needs. This will enable students to use the nursing process to advocate for the needs of these clients with acute variations along the life span.
NURS 202 (IAI: NUR 916)  
**ADVANCED CARE NEEDS**  
*Prerequisite: NURS 201*  
6 lectures, 14 lab hrs per week: 11 hrs credit  
This course is designed to present theories and concepts concerning clients presenting with variations of advanced care needs. Students continue to use the nursing process to manage the care of client groups.

NURS 211 (IAI: NUR 916)  
**PREPARATION FOR PROFESSIONAL NURSING**  
*Prerequisite: None*  
2 lectures per week: 2 hrs credit  
This course presents advanced concepts and theories in nursing which assist students in accepting the challenge of the adjustment to the role of the graduate nurse. Roles, functions, and legal implications for the graduate nurse are discussed along with recent developments and realities as they affect the everyday practice of nursing.

**OFFICE ADMINISTRATION AND TECHNOLOGY**  
(See Information Technology)

**PHILOSOPHY**

PHILO 201 (IAI: H4 900)  
**INTRODUCTION TO PHILOSOPHY**  
*Prerequisite: Placement into ENG 099 or higher*  
3 lectures per week: 3 hrs credit  
In this course students learn to think and write philosophically. They are introduced to major philosophers and schools of thought.

PHILO 202 (IAI: H4 904)  
**ETHICS**  
*Prerequisite: Placement into ENG 099 or higher*  
3 lectures per week: 3 hrs credit  
In this course students examine the role of reason in ethical decision-making. Traditional types of ethical reasoning are studied, compared, and applied to topics of current concern.

PHILO 203 (IAI: H4 906)  
**INTRODUCTION TO LOGIC**  
*Prerequisite: Placement into ENG 099 or higher*  
3 lectures per week: 3 hrs credit  
This course introduces formal reasoning, including the nature and evaluation of deductive and inductive references, language and meaning, symbolization, formal and informal fallacies, and evidence and its nature and role in critical thinking.

PHILO 204 (IAI: H4 905)  
**PHILOSOPHY OF RELIGION**  
*Prerequisite: Placement into ENG 099 or higher*  
3 lectures per week: 3 hrs credit  
This course covers religious concepts and theories such as the existence and nature of a deity, the nature of good and evil, reason and faith, ethics, and the after-life. It may also include an examination of the nature of religious language and experience.

PHILO 205 (IAI: H4 903N)  
**EASTERN PHILOSOPHY**  
*Prerequisite: Placement into ENG 099 or higher*  
3 lectures per week: 3 hrs credit  
This course presents the thoughts of great philosophers of the Eastern Tradition, including the ideas of Siddhartha Gautama, Lao-Tzu, Kahlil Gibran and others.

**PHOTOGRAPHIC STUDIES**  
(See also Art and Graphic Communications)

PHOTO 170  
**DIGITAL CAMERA SKILLS**  
*Prerequisite: None*  
1 lecture per week: 1 hr credit  
This course deals with basics of digital camera operation. Students explore solutions to visual problems posed during group field trips. (Digital cameras are provided)

PHOTO 171 (IAI: ART 917)  
**INTRODUCTION TO BLACK AND WHITE PHOTOGRAPHY**  
*Prerequisite: None*  
6 lab hrs per week: 3 hrs credit  
This course investigates the principles of photography using black and white light-sensitive materials. Students learn camera controls and apply the methods of film and print processing techniques. The course explores the medium through a series of visual problems and emphasizes photography as a means of personal expression.

PHOTO 174  
**DIGITAL DARKROOM TECHNIQUES**  
*Prerequisite: PHOTO 171 recommended*  
1 lecture, 2 lab hrs per week: 2 hrs credit  
This course provides the introduction to and practical application of computer hardware and software used to produce, scan, edit, transfer, record, archive, and print photographs.

PHOTO 175  
**BASIC LIGHTING SKILLS**  
*Prerequisite: PHOTO 174 or concurrent enrollment*  
1 lecture, 2 lab hrs per week: 2 hrs credit  
Students in this course are introduced to the mechanics of continuous sources of photographic lighting. Application and practice of proper metering, studio set up, lighting adjustment, storage of equipment, and use of various accessories are featured. Digital cameras are supplied for in-class use.
PHOTO 176
ELECTRONIC FLASH TECHNIQUES
Prerequisite: PHOTO 171 and PHOTO 175
1 lecture, 2 lab hrs per week: 2 hrs credit
This course covers the fundamental methods of flash photography using built-in, on-camera, and portable professional equipment. Students also gain a working knowledge of flash meter measurement and exposure calculation using multi-strobe studio systems.

PHOTO 180
PHOTOSHOP I
Prerequisite: PHOTO 174 or instructor consent
1 lecture, 2 lab hrs per week: 2 hrs credit
This is a detailed introduction to Adobe Photoshop tools and techniques used in the digital conversion and adjustment of photographic images. Students learn to correct, composite, retouch, and manipulate photographs in RGB color space. Digital printing, film scanning, and proper storage of images on disk are also covered.

PHOTO 196
CAREERS IN PHOTOGRAPHY
Prerequisite: PHOTO 171
1 lecture per week: 1 hr credit
This course surveys the structure, working conditions, and specific job responsibilities within the field of photography. Classroom presentations, guest lectures, and AV materials provide students with an understanding of production methods as well as employment potential for each occupation and career covered.

PHOTO 273
PHOTOGRAPHIC METHODS
Prerequisite: PHOTO 171, 174, or concurrent enrollment
1 lecture, 4 lab hrs per week: 3 hrs credit
This intermediate course is designed to deepen students' understanding of the visual process and production of photographs. Participants experience a variety of camera formats while creating images using both digital and film based methods.

PHOTO 275
PHOTOGRAPHIC DESIGN
Prerequisite: PHOTO 171, 174, or concurrent enrollment
1 lecture, 4 lab hrs per week: 3 hrs credit
This course concentrates on the visual methods and skills of designing photographs. The emphasis of class projects is on the improvement of picture analysis, evaluation of composition, style, and development of individual photographic vision. Digital cameras are used and supplied by the program.

PHOTO 276
COMMERCIAL TECHNIQUES
Prerequisite: PHOTO 171, 175 PHOTO 273, or consent of instructor
2 lectures, 4 lab hrs per week: 4 hrs credit
This course concentrates on camera and lighting techniques used in the creation of product photography. Areas include medium- and large-format camera skills, use of high-res digital camera equipment, table-top setups, and specific studio lighting for the production of catalog, advertising, and special effects photography.

PHOTO 280
PHOTOSHOP II
Prerequisite: PHOTO 180
1 lecture, 2 lab hrs per week: 2 hrs credit
Students in this course explore advanced color correction, layering, and editing methods in Photoshop through a series of visual assignments using original photographs. Extensive use of film scanning and direct digital capture is encouraged. Final portfolio images are printed on standard, large, and wide format inkjet printers.

PHOTO 281
DIGITAL APPLICATIONS
Prerequisite: PHOTO 174 and 180
2 lectures, 4 lab hrs per week: 4 hrs credit
This course concentrates on advanced digital image production techniques available to photographers. Students explore the application of several imaging software programs that are used to solve unique visual problems.

PHOTO 282
EXPERIMENTAL TECHNIQUES
Prerequisite: PHOTO 171, 174, or concurrent enrollment
1 lecture, 4 lab hrs per week: 3 hrs credit
This course explores various experimental cameras, darkroom and digital techniques. Projects include multiple composite, infrared film, digital filtration, optical distortion, Polaroid emulsion/ image transfers, cliche verre (enlargements, scans) and hand-coloring techniques.

PHOTO 283
PORTRAITURE
Prerequisite: PHOTO 175 or consent of instructor
1 lecture, 4 lab hrs per week: 3 hrs credit
This course is an introduction to creating studio and available light portraits featuring tungsten and electronic strobe applications. Emphasis is placed on correct use of diffused, reflective and spot lighting techniques, proper metering, and posing of the sitter. Projects are completed using digital cameras and color inkjet production.

PHOTO 285
DIGITAL COLOR PRODUCTION
Prerequisite: PHOTO 174, 180, or consent of instructor
2 lectures, 2 lab hrs per week: 3 hrs credit
This course investigates color light theory and the digital controls of color reproduction currently available in photography. Students work with software designed to develop and maintain color management of photographic output by calibrating displays, profiling scanners, cameras, and small to wide format inkjet printers.

PHOTO 286
INDEPENDENT PHOTO PROJECT
Prerequisite: PHOTO 275
6 lab hrs per week: 3 hrs credit
This course encourages individual exploration of a personal visual direction or idea with emphasis on the fine art approach to photography. A proposal outline and complete portfolio are required of each participant.
PHOTO 287
INDEPENDENT PHOTO STUDIO
Prerequisite: PHOTO 276 or 283
6 lab hrs per week: 3 hrs credit
Students in this course propose advanced photographic exploration with emphasis in portrait, fashion or commercial product photography. Each participant must have completed prior course work in their chosen area of concentration.

PHOTO 290
COLOR SLIDE PHOTOGRAPHY
Prerequisite: PHOTO 180, 285, or consent of instructor
2 lectures, 4 lab hrs per week: 4 hrs credit
This course investigates visual problems using color positive materials and methods. Areas covered include proper film exposure, positive color light theory, film scanning, basic color management techniques and digital print production.

PHOTO 291
SURVEY OF CONTEMPORARY PHOTOGRAPHY
Prerequisite: None
3 lectures per week: 3 hrs credit
This course provides a unique experience while learning about current trends in photography. Visits to major museums and galleries combined with attending lectures by photographers highlight the activities of the class. Students are required to write several reviews of exhibits they see and present a topic for class discussion.

PHOTO 292
PHOTO WORKSHOP: SPECIAL TOPICS
Prerequisite: PHOTO 171, 174, 6 additional hours in PHOTO
2 lectures, 4 lab hrs per week: 4 hrs credit (may be repeated 3 times for credit with different topics)
This advanced course explores a single subject in photography. Topics for concentrated study may be selected from fashion photography, photojournalism, architecture, landscape, or other specific areas of specialization.

PHOTO 293
ADVANCED PORTRAITURE
Prerequisite: PHOTO 283, 285
2 lectures, 4 lab hrs per week: 4 hrs credit
This course features the use of sophisticated studio strobe systems in making professional portraits. Students work on multi-light sets to produce photographs of individuals, couples, families, and groups. Radio transmitter operation, color burst background techniques and location lighting methods are also covered.

PHOTO 297
PROFESSIONAL PORTFOLIO
Prerequisite: PHOTO 275, 285, or consent of instructor
2 lectures, 2 lab hrs per week: 3 hrs credit
This course helps students understand the process of preparing a portfolio of creative commercial photographs for career readiness. Class activities include career planning, creation of portfolio content and assembly, resume organization, and personal presentation. Individual peer and/or professional critiques are conducted each week for career potential feedback.

PHOTO 298
SEMINAR
Prerequisite: Concurrent enrollment in PHOTO 299
1 lecture per week: 1 hr credit
Students meet with program coordinator one hour per week to discuss various problems and issues encountered in the internship.

PHOTO 299
INTERNSHIP
Prerequisite: 12 credit hrs in PHOTO and consent of program coordinator
15 lab hrs per week: 3 hrs credit (variable credit)
The student internship program allows students to earn college credit while working in an approved photography-related business. This course is scheduled by joint agreement of the student, the site supervisor and the program coordinator.

PHYSICAL EDUCATION

Only four credits of physical education may be counted for an A.A. or A.S. degree, except for students transferring as physical education majors.

PE 101
PHYSICAL FITNESS I
Prerequisite: None
2 lab hrs per week: 1 hr credit
This course is designed to assist individuals in establishing a foundation for personal fitness. Students are administered basic fitness assessment and engage in a structured exercise program utilizing flexibility, strength, and cardiovascular efficiency. May be repeated three more times for credit.

PE 102
PHYSICAL FITNESS II
Prerequisite: PE 101
2 lab hrs per week: 1 hr credit
A continuation of PE 101, this course is designed to assist students in achieving an intermediate level of fitness. Students are administered fitness assessments to determine progress in the areas of flexibility, strength and cardiovascular efficiency.

PE 103
PHYSICAL FITNESS III
Prerequisite: PE 102
2 lab hrs per week: 1 hr credit
A continuation of PE 102, this course is designed to assist students in achieving a high level of fitness. Special emphasis is placed on maintaining target heart rate levels in order to determine further personal cardiovascular efficiency. Students are administered fitness assessments to determine personal progress.

PE 104
PHYSICAL FITNESS IV
Prerequisite: PE 103
2 lab hrs per week: 1 hr credit
A continuation of PE 103, this course is designed to assist students in maintaining a high level of fitness. Students achieve a basic understanding of the impact of increased duration, frequency, and intensity levels in regard to enhancing physiological performance.
PE 105
AEROBICS I
Prerequisite: None
2 lab hrs per week: 1 hr credit (may be repeated 3 times)
This course assists individuals to improve strengthening, toning, and cardiovascular system through walking, pilates or yoga.

PE 106
AEROBICS II
Prerequisite: None
2 lab hrs per week: 1 hr credit (may be repeated 3 times)
This course assists individuals to improve cardiovascular conditioning through step aerobics, kickboxing or low-impact aerobics. Strengthening and toning exercises are also introduced.

PE 107
AEROBICS III
Prerequisite: None
2 lab hrs per week: 1 hr credit (may be repeated 3 times)
This course assists individuals to improve their cardiovascular conditioning through aqua aerobics. Strengthening and toning exercises are also introduced in the swimming pool environment.

PE 108
AEROBICS IV
Prerequisite: None
2 lab hrs per week: 1 hr credit (may be repeated 3 times)
This course assists individuals desiring a higher level of intensity. This is accomplished through “Funk Aerobics”, boot camp style aerobics, or indoor cycling.

PE 112
CULTURAL DANCE I
Prerequisite: None
2 lectures per week: 2 hrs credit
This course introduces students to specific dance techniques, rhythmic patterns, instrumentation, and appropriate musical forms associated with African, Afro Brazilian, Latin and/or Caribbean dance styles. This is accomplished through lecture and activity.

PE 130
INTRODUCTION TO PHYSICAL EDUCATION
Prerequisite: None
2 lecture hrs per week: 2 hrs credit
This course provides introductory materials for pre-physical education majors. Emphasis is on pre-professional exposure to a variety of physical education related careers. The history of physical education, athletics, and related leisure activities are explored.

PE 151
BASKETBALL
Prerequisite: None
2 lab hrs per week: 1 hr credit
This course teaches the basic rules of basketball, playing court dimensions, and equipment needed. Fundamentals of passing, dribbling, shooting, rebounding, individual offense, and defense are emphasized.

PE 161
SOCCER
Prerequisite: None
2 lab hrs per week: 1 hr credit
Learn the basic rules and fundamentals of soccer. Course instruction includes kicking, passing, trapping, heading, tackling, the throw-in, and goal keeping. Basic offensive and defensive strategies and tactics are also discussed.

PE 162
VOLLEYBALL
Prerequisite: None
2 lab hrs per week: 1 hr credit
This course teaches students the basic skills and rules associated with the game of volleyball. Skills covering overhead passing, forearm passing, serving, spiking, and blocking are explored. Practice games are conducted to emphasize each skill.

PE 163
GOLF
Prerequisite: None
2 lab hrs per week: 1 hr credit
Examine rules and various skills associated with the game of golf. Techniques and skills such as proper grip, stance, swing, pitch, chip, sand shots, putting, and a variety of golf exercises are explored.

PE 164
TENNIS
Prerequisite: None
2 lab hrs per week: 1 hr credit
This course teaches students basic rules of play and scoring procedures in tennis. Students are taught appropriate grip and techniques for a variety of tennis strokes.

PE 165
SOFTBALL
Prerequisite: None
2 lab hrs per week: 1 hr credit
This course teaches students the basic rules of play and the basic skills associated with softball. Hitting, catching, fielding, throwing, and running bases are explored.

PE 200
OFFICIATING SPORTS
Prerequisite: None
3 lectures per week: 3 hrs credit
Instruction is provided in the fundamental techniques, rules, procedures, and professional attitude required of officials in flag football, softball, volleyball, and basketball.

PE 215
GROUP FITNESS INSTRUCTOR TRAINING
Prerequisite: Consent of program coordinator
2 lectures, 2 lab hrs per week: 3 hrs credit
This course provides the methods, techniques, and skills that enable students to provide safe aerobic activities as instructors.
PE 220
FITNESS ASSESSMENT/EXERCISE PROGRAM DESIGN I
Prerequisite: Consent of program coordinator
2 lectures, 2 lab hrs per week: 3 hrs credit
This course introduces students to the skills, organization, and methods of fitness testing. Students also learn exercise program design.

PE 225
WEIGHT TRAINING: THEORY & APPLICATION
Prerequisite: Consent of program coordinator
2 lectures per hr: 2 hrs credit
This course emphasizes the instructional techniques and skill development in progressive resistance strength training. Anatomical, physiological and biomechanical principles are studied and applied to design effective programs for individuals and groups.

PE 230
NUTRITION FOR SPORTS AND EXERCISE
Prerequisite: Consent of program coordinator
3 lectures per week: 3 hrs credit
This course provides an overview of the basic principles of nutrition and weight management with particular application to exercise and sport.

PE 235
ATHLETIC TRAINING TECHNIQUES
Prerequisite: Consent of program coordinator
3 lectures per week: 3 hrs credit
This course is a study of the basic concepts and techniques in prevention, recognition and management of common sport and exercise injuries, including methods in conditioning for injury prevention, evaluation, taping safety, and emergency procedures.

PE 250
INTRODUCTION TO BIOMECHANICS
Prerequisite: BIOL 108 or BIOL 221 and 222, and consent of program coordinator
3 lecture hrs per week: 3 hrs credit
This course introduces the concepts of identifying and analyzing the neuromuscular and skeletal systems from a mechanical perspective.

PE 255
SPECIAL POPULATIONS
Prerequisite: BIOL 108 or BIOL 221 and 222, PE 220, and consent of program coordinator
3 lectures per week: 3 hrs credit
This course emphasizes safe and effective fitness programming by addressing physiological difference, and techniques and tools for motivating special populations.

PE 260
FITNESS/EXERCISE FACILITY MANAGEMENT
Prerequisite: Consent of program coordinator
3 lectures per week: 3 hrs credit
This course introduces students to fitness/exercise/recreation facilities and their operational procedures. The management process regarding facility design, personnel management, marketing, budgeting, and insurance issues are discussed.

PE 265
PHYSIOLOGY OF EXERCISE
Prerequisite: Consent of program coordinator
3 lectures per week: 3 hrs credit
This course is designed to teach the basic physiological principles of exercise.

PE 298
INTERNSHIP SEMINAR
Prerequisite: Concurrent enrollment in PE 299 and consent of program coordinator
1 lecture per week: 1 hr credit
This seminar is designed to provide direction on building a successful personal training business.

PE 299
INTERNSHIP FOR PERSONAL TRAINERS
Prerequisite: Concurrent enrollment in PE 298 and consent of program coordinator
15 lab hrs per week: 3 hrs credit
This course is designed to provide real-world experience. Students are supervised in Fitness Center arranged by the program coordinator.
(Note: for COL 104 Leadership Development, see College Skills, page 127).

PHYSICAL SCIENCE

PHYSIC 111 (IAI: P9 900L)
PHYSICAL SCIENCE
Prerequisite: Placement into ENG 099 or higher
3 lectures, 2 lab hrs per week: 4 hrs credit
This is an introductory lab course focusing on everyday experiences in physics, chemistry, and astronomy. Basic ideas of motion, matter, and energy are explored and related to astronomy and the importance of scientific discoveries to our society.

PHYSIC 112 (IAI: P1 905L)
EARTH SCIENCE
Prerequisite: Placement into ENG 099 or higher
3 lectures, 2 lab hrs per week: 4 hrs credit
Earth Science is an introductory lab course which surveys topics in geology, meteorology, and environmental science. The geology portion includes rocks, streams, glaciers, earthquakes, plate tectonics, volcanism, and mountain building. The meteorology portion focuses on the atmosphere, weather and climate. Human influence on the environment is emphasized.

APPLIED PHYSICS

APHYS 100
APPLIED PHYSICS
Prerequisite: AMATH 100 or MATH 090
2 lectures per week: 2 hrs credit
This course surveys the physical principles of mechanics and is intended for students in apprentice certificate programs. Topics include metric system measurements, motion, Newton’s laws, forces and equilibrium, simple machine elements, conservation laws, rotational motion, matter, and heat.
PHYSICS

PHYSI 101 (IAI: P1 901L)
CONCEPTUAL PHYSICS
Prerequisite: Placement into ENG 099 or higher
3 lectures, 2 lab hrs per week: 4 hrs credit
This course provides a non-mathematical introduction to the basic concepts of physics. This lab course is designed for those with little or no knowledge of physics. Topics include motion, energy, fluids, sound, heat, light, electricity and magnetism, and an overview of concepts like relativity.

PHYSI 120 (IAI: P1 900L)
COLLEGE PHYSICS I
Prerequisite: MATH 151 or equivalent
3 lectures, 2 lab hrs per week: 4 hrs credit
This introductory course in a two-semester, algebra-based sequence is designed to meet the needs of liberal arts, life and health science, and pre-professional students. Topics include kinematics, Newton’s laws of motion, conservation laws, rotational motion, wave phenomena, fluids, and heat. Students may not receive credit for both PHYSI 120 and 210.

PHYSI 130
COLLEGE PHYSICS II
Prerequisite: PHYSI 120 or equivalent
3 lectures, 2 lab hrs per week: 4 hrs credit
This continuation of PHYSI 120 is designed to meet the needs of students in the liberal arts, science majors, and pre-professional students. Topics include light, optics, electricity, magnetism, and modern physics.

PHYSI 210 (IAI: P2 900L; BIO 903; EGR 911; MTH 921)
UNIVERSITY PHYSICS I
Prerequisite: MATH 171 and high school physics
3 lectures, 3 lab hrs per week: 4 hrs credit
This calculus-based course is designed for physical science, pre-engineering, and mathematics majors and introduces the major topics of mechanics, including kinematics, dynamics, momentum, energy, gravitation, harmonic motion, and fluids. Microcomputers are used for data gathering and simulation. Students cannot receive credit for both PHYSI 120 and 210.

PHYSI 220 (IAI: BIO 904; EGR 912)
UNIVERSITY PHYSICS II
Prerequisite: MATH 171
3 lectures, 3 lab hrs per week: 4 hrs credit
This is the second course in the introductory sequence for physical science, pre-engineering, and mathematics majors. Topics covered include heat, thermodynamics, electric and magnetic fields, law of electricity and magnetism, DC and AC circuits, and electromagnetism.

PHYSI 230 (IAI: EGR 914)
UNIVERSITY PHYSICS III
Prerequisite: MATH 171
3 lectures, 3 lab hrs per week: 4 hrs credit
This is the third course in a three-semester sequence for physical science, pre-engineering, and mathematics majors. Topics include properties and equations of waves, sound optics, and modern physics.

PLUMBING, PIPEFITTER/STEAMFITTER

PLUMB 101
FUNDAMENTALS OF PLUMBING
Prerequisite: None
2 lectures per week: 2 hrs credit
This course covers the specifications, applications and maintenance of pipes, fittings and valves; simple pipe calculations and template development; tools used in piping; proper valve installation and maintenance; and consideration of safe working pressures of pipes and valves are covered.

PLUMB 102
DRAINS, WASTES AND VENTS
Prerequisite: None
2 lectures per week: 2 hrs credit
This course is designed to acquaint students with the proper materials for sewer, soil, vent, and waste pipes; principles of drainage flow and proper venting; traps and installation of unit sanitation equipment, and joints and fittings used on drainage systems.

PLUMB 103
PLUMBING AND PIPEFITTING HEATING
Prerequisite: None
2 lectures per week: 2 hrs credit
This course covers the principles of steam and hydronic heating, various types of steam systems in use, and proper sizing and tapping of steam units. The study of hydronics includes one-pipe, two-pipe, high temperature and pressure systems, heat loss calculations, and the design of hydronic systems.

PLUMB 104
PLUMBING AND PIPEFITTING CODE
Prerequisite: None
2 lectures per week: 2 hrs credit
This course covers current plumbing rules and regulations governing installation of plumbing systems, rules and regulations pertaining to joints, traps, cleanouts, water distribution, fixtures, and drainage.

POLITICAL SCIENCE

POLSC 101 (IAI: S5 903)
PRINCIPLES OF POLITICAL SCIENCE
Prerequisite: Placement into ENG 099 or higher
3 lectures per week: 3 hrs credit
This course provides an introduction to the core concepts of political science. Students explore the questions political scientists ask, the means by which they answer those questions, and the types of answers that have emerged in response to contemporary problems.

POLSC 140 (IAI: S5 900; PLS 911)
INTRODUCTION TO U.S. GOVERNMENT AND POLITICS
Prerequisite: Placement into ENG 099 or higher
3 lectures per week: 3 hrs credit
This course introduces students to the core concepts in political science that allow for a better understanding of the principles and organization of government and politics in the United States at the national, state and local levels.
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**COURSE DESCRIPTIONS**

**PSYCH 101** (IAI: S6 900; SPE 912)
INTRODUCTION TO PSYCHOLOGY
Prerequisite: Placement into ENG 099 or higher
3 lectures per week; 3 hrs credit
This course introduces psychology as a scientific approach to understanding human behavior. The history of the field, its methods, and research tools are covered. Topics include physiology, sensation, perception, motivation, learning and memory, maturation and development, personality, individual differences, social behavior, and abnormal behavior and its therapies.

**PSYCH 102** (IAI: S6 902; EED 903; PSY 904; SED 903)
HUMAN GROWTH AND DEVELOPMENT: LIFE SPAN
Prerequisite: PSYCH 101
3 lectures per week; 3 hrs credit
This course surveys the normal biological cognitive, social, emotional and personality development characteristics of life phases from conception through adulthood to death.

**PSYCH 202** (IAI: SED 902)
EDUCATIONAL PSYCHOLOGY
Prerequisite: PSYCH 101
3 lectures per week; 3 hrs credit
This course focuses on the psychological principles, theories and current research related to the roles and functions of teachers and learners in educational settings. From the perspective of students, special emphasis is placed upon theories of motivation, creativity, learning theories, individual learning differences, and cultural and gender diversity. From the teacher’s perspective, special emphasis is placed upon classroom management principles, effective instructional approaches, measurement and assessment techniques, and aligning instruction with the growth of students’ social, cognitive and personal development.

**PSYCH 203** (IAI: PSY 905)
ABNORMAL PSYCHOLOGY
Prerequisite: PSYCH 101
3 lectures per week; 3 hrs credit
This course covers theories and techniques applied to the labeling of “abnormal” behavior as defined by the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR). Topics include research methods; definition, assessment, and categorization of abnormal behavior; diagnosis, treatment, and prevention.

**PSYCH 204** (IAI: PSY 906)
INDUSTRIAL/ORGANIZATIONAL PSYCHOLOGY
Prerequisite: PSYCH 101
3 lectures per week; 3 hrs credit
This course studies the behavior of men, and women as they adjust to the people, objects, and surroundings encountered in the workplace. Emphasis is on applying data gathered to maximize the economic and psychological well-being of all employees and constituencies. Topics include research methods; personnel selection, placement, and training; job analysis and performance appraisal; job satisfaction and motivation; leadership; organizational decision making; and organizational development.

**PSYCH 212** (IAI: PSY 907)
THEORIES OF PERSONALITY
Prerequisite: PSYCH 101
3 lectures per week; 3 hrs credit
This course studies the development and structure of human personality. Students consider a variety of theoretical approaches to understanding human personality: psychoanalytical, humanistic, behavioral/social, cognitive and traits. Readings include works by Freud, Adler, Horney, Sullivan, Fromm, Rogers, Jung, Maslow, Jourard, and others. Emphasis is on the application of personality theories to the understanding of self.

**PSYCH 215** (IAI: S8 900; PSY 908)
SOCIAL PSYCHOLOGY
Prerequisite: PSYCH 101
3 lectures per week; 3 hrs credit
As an introduction to social psychology, this course is organized around five broader perspectives of social behavior: cultural differences, the life span, the individual, the situation, and the social group. Topics include attitudes, social perceptions, the establishment of norms, conformity, leadership, group dynamics, and research methods, with emphasis on their effects on the individual.
PSYCH 217
HUMAN SEXUALITY
Prerequisite: None
3 lectures per week: 3 hrs credit
Principles, theories, and points of view concerning human sexuality with emphasis on the psychological and social aspects of human sexuality. The primary aim of this course is to provide a framework for and encourage responsible decision making with respect to the sexual aspect of our total being.

READING

RDG 097
FUNDAMENTAL READING I
Prerequisite: Qualifying score on Reading Placement Test
4 lectures per week: 4 hrs non-degree, non-transfer credit (may be repeated two times)
This course provides individualized instruction for students who need review of word analysis, vocabulary, and comprehension skills.

RDG 098
FUNDAMENTAL READING II
Prerequisite: RDG 097 or qualifying score on Reading Placement Test
4 lectures per week: 4 hrs non-degree, non-transfer credit (may be repeated two times)
This course is designed for students who have mastered basic reading techniques. Its purpose is to increase students’ vocabulary and comprehension skills for effective reading and clear thinking.

REGISTERED NURSING
(See also Nursing)

RN 100
R.N. FIRST ASSISTANT
Prerequisite: Professional registered nurse, current license, current CNOR and 2 years surgical nursing experience, or eligible for CNOR at end of courses; sponsoring surgeon and letter of recommendation from employer. Consent of instructor.
3 lectures per week: 3 hrs credit
This course provides prospective RN first assistants with advanced knowledge of anatomy/physiology and techniques related to operative procedures. It focuses on collaboration of the RN First Assistant and surgeon in delivery of optimal perioperative care and its impact on professional nursing. The course provides theoretical knowledge of asepsis/infection control, hemostasis, retracting/wound exposure, tissue handling, proper instrument usage, clamping, ligation, and suturing. It also provides a theoretical foundation based on extensive scientific knowledge and includes nursing concepts and clinical judgment for advanced nursing practice.

RN 101
R.N. FIRST ASSISTANT INTERNSHIP
Prerequisite: RN 100
6 lab hrs per week: 3 hrs credit
This course provides theoretical instruction and practical skills attainment for the role and responsibility of a registered nurse first assistant.

RN 120
PERIOPERATIVE NURSING
Prerequisite: Current RN, PPD, CPR and immunizations, and health insurance coverage.
3 lecture, 4 lab hrs per week: 5 hrs credit
This course provides instruction to a licensed registered nurse seeking didactic and clinical experience in perioperative nursing. This course instructs students on operating room asepsis and sterile technique, scrubbing, gowning, gloving, instrumentation, positioning, prepping and documentation, and legal aspects. Surgical specialties to be covered: general and gynecologic.

SOCIAL WORK

SWK 201
INTRODUCTION TO SOCIAL WORK
Prerequisite: Placement into ENG 099 or higher
3 lectures per week: 3 hrs credit
This course introduces students to the historical background and nature of social work theory, agencies and policy. It provides insight into social service organizations and agencies. Students examine the human concerns of various at-risk populations. This course also presents the knowledge bases and skills of social work practice, and enables students to evaluate their interests and capacities for entering the profession of social work. (same as SOCIO 201)

SOCIOLOGY

SOCIO 101 (IAI: S7 900)
INTRODUCTION TO SOCIOLOGY
Prerequisite: Placement into ENG 099 or higher
3 lectures per week: 3 hrs credit
This course explores the major concepts, theories, and research methods within the field of sociology. Students examine how their behavior is shaped by the groups they belong to and the society in which they live. Topics for discussion include culture, socialization, social institutions, deviant behaviors, social stratification, and social inequalities, particularly classism, racism, and sexism.
DEGREES, CERTIFICATES, COURSES

SOCIO 111 (IAI: S7 901; SOC 911)
CONTEMPORARY SOCIAL ISSUES
Prerequisite: Placement into ENG 099 or higher
3 lectures per week: 3 hrs credit
This course provides an analysis of the major social problems facing the world today. Students examine issues of contemporary interest from a sociological perspective. Topics for discussion may include crime and violence, technology, the role of the media, problems of the family, educational and workplace issues, and the environment. Also included are issues of social class, race and ethnicity, gender, age, and sexual orientation.

SOCIO 201
INTRODUCTION TO SOCIAL WORK
Prerequisite: Placement into ENG 099 or higher
3 lectures per week: 3 hrs credit
This course introduces students to the historical background and nature of social work theory, agencies, and policy. It provides insight into social service organizations and agencies. Students examine the human concerns of various at-risk populations. This course also presents the knowledge bases and skills of social work practice, and enables students to evaluate their interests and capacities for entering the profession of social work. (same as SWK 201)

SOCIO 210 (IAI: S7 902; SOC 912)
MARRIAGE AND THE FAMILY
Prerequisite: Placement into ENG 099 or higher
3 lectures per week: 3 hrs credit
This course provides an understanding of sociological concepts, theories, and research methods in relation to marriage and family issues. It focuses on the ever-changing dynamics of relationships and the influence of contemporary society on family life. Special emphasis is placed on communication in relationships, dating and mate selection, love, parenting, balancing work and family, violence in relationships, and divorce.

SOCIO 215 (IAI: S7 904D)
SEX, GENDER AND POWER
Prerequisite: Placement into ENG 099 or higher
3 lectures per week: 3 hrs credit
This course explores the origins of gender inequities. It examines the development of gender roles, the consequences of dividing society along gender lines, and the effects of changing cultural definitions of masculinity and femininity.

SOCIO 220 (IAI: S7 903D; SOC 913)
RACE RELATIONS: A MULTICULTURAL PERSPECTIVE
Prerequisite: Placement into ENG 099 or higher
3 lectures per week: 3 hrs credit
This course focuses on the analysis of racial, religious, ethnic, and other groups. It examines the persistence of group identity, inter-group relations, social movements, government policy, and related social problems. Groups studied include African-Americans, Latinos, European-Americans, Asian-Americans, and Native-Americans.

SPANISH

SPAN 101
SPANISH I
Prerequisite: Placement into ENG 099 or higher
4 lectures per week: 4 hrs credit
This course introduces students to the basic skills of understanding, speaking, reading, and writing the Spanish language. The workbook and homework complement class work. Classes are conducted mainly in Spanish.

SPAN 102
SPANISH II
Prerequisite: SPAN 101
4 lectures per week: 4 hrs credit
This is a beginning course designed to continue development of the basic skills of understanding, speaking, reading and writing the Spanish language. The workbook and homework complement class work. Classes are conducted mainly in Spanish.

SPAN 201
SPANISH III
Prerequisite: SPAN 101 and 102 or two years of high school Spanish or placement test
4 lectures per week: 4 hrs credit
This course provides a review of basic phonetic elements and syntax as an aid to improvement and expansion of good pronunciation and composition. It introduces Hispanic cultures. Classes are conducted in Spanish.

SPAN 202 (IAI: H1 900)
SPANISH IV
Prerequisite: SPAN 201
4 lectures per week: 4 hrs credit
This is a literature-based course designed to increase students’ knowledge of the Spanish language and Hispanic cultures. It includes a review of grammar, composition, conversation, reading and comprehension.

SPEECH
(See Communication)

SURGICAL TECHNOLOGY

SRT 100
MEDICAL TERMINOLOGY
Prerequisite: Consent of instructor
2 lectures per week: 2 hrs credit
This course provides instruction in medical terminology needed by health care workers including surgical technologists, emergency medical technicians, paramedics, nursing assistants, students, nurses, and medical transcriptionists. This course is taught as a blended course: online with scheduled face-to-face meetings.
SRT 102
PATIENT CARE I
Prerequisite: Acceptance into Surgical Technology program
2 lecture hrs per week: 2 hrs credit
Students learn to assess patient needs and response to illness and hospitalization. Emphasis is on routine care and procedures for surgical patients. Students also learn patient rights and care of specimens. Basics of medical terminology are incorporated.

SRT 103
PATIENT CARE II
Prerequisite: SRT 102
1 lecture per week: 1 hr credit
Concepts of documentation, emergency procedures and thermoregulatory devices are covered. The basics of pharmacology and anesthesia are incorporated.

SRT 110
INTRODUCTION TO SURGICAL TECHNOLOGY
Prerequisite: Acceptance into Surgical Technology program
5 lecture, 4 lab hrs per week: 7 hrs credit
The basic concepts and principles for developing skill competencies required to assist in surgery are covered beginning with the health care system and continuing with specifics of the surgical area. Microbiology and asepsis are stressed.

SRT 120
SURGICAL PROCEDURES I
Prerequisite: SRT 110
3 lecture hrs per week: 3 hrs credit
Basic surgical procedures including the pre-operative, intraoperative, and post-operative phases commonly performed in the operating room setting are covered. Emphasis is on general/rectal surgery, obstetrical/gynecological surgery, and genito-urinary surgery.

SRT 122
APPLIED SURGICAL PROCEDURES I
Prerequisite: Concurrent registration in SRT 120
10 lab hrs per week: 2 hrs credit
Students learn to apply concepts and skills learned in SRT 120 in clinical settings arranged by program coordinator.

SRT 130
SURGICAL PROCEDURES II
Prerequisite: SRT 120
3 lectures per week: 3 hrs credit
This course continues the study of basic surgical procedures, emphasizing the following surgical specialties: ophthalmic surgery; ear, nose and throat surgery; head and neck surgery; oral and maxillofacial surgery; plastic surgery; orthopedic surgery; hand surgery; and endoscopic surgery.

SRT 132
APPLIED SURGICAL PROCEDURES II
Prerequisite: Concurrent registration in SRT 130
15 lab hrs per week: 3 hrs credit
Students learn to apply concepts and skills learned in SRT 130 in clinical settings arranged by program coordinator.

SRT 140
SURGICAL PROCEDURES III
Prerequisite: SRT 130
3 lectures per week: 3 hrs credit
This course continues the study of basic surgical procedures, emphasizing these surgical specialties: neurosurgery, thoracic surgery, cardiac surgery, vascular surgery, and general pediatric surgery.

SRT 142
APPLIED SURGICAL PROCEDURES III
Prerequisite: Concurrent registration in SRT 140
15 lab hrs per week: 3 hrs credit
Students learn to apply concepts and skills learned in SRT 140 in clinical settings arranged by program coordinator.

SRT 298
SURGICAL TECHNOLOGY SEMINAR
Prerequisite: Concurrent registration in SRT 299
1 lecture per week: 1 hr credit
This seminar is designed to provide direction and feedback on workplace issues for students enrolled in the Surgical Technology Internship. Additionally, accreditation, certification, resume preparation, interviewing, and employee attributes are discussed.

SRT 299
APPLIED SURGICAL PROCEDURES IV
Prerequisite: SRT 142 and concurrent registration in SRT 298
15 lab hrs per week: 3 hrs credit
This course is designed to provide real-world experience for students in Surgical Technology programs. Students are supervised in clinical settings arranged by the program coordinator.

TECHNOLOGY OF MATHEMATICS AND SCIENCE

TECH 109
TECHNICAL MATHEMATICS I
Prerequisite: High school algebra with a C or better
4 lectures per week: 4 hrs credit
This course is a study of beginning to intermediate algebra with right angle trigonometry. Topics for study are based upon application to technical subjects. Some the topics are algebraic operations, factoring, functions, systems of equations, quadratics, and vectors.

TECH 110
TECHNICAL MATHEMATICS II
Prerequisite: TECH 109
4 lectures per week: 4 hrs credit
This course is a continuation of TECH 109 in algebra and trigonometry. The topics include complex numbers, logarithmic functions, equations of higher degree, and inequalities. Additional topics in trigonometry are included.
**TECH 221**
**TECHNICAL PHYSICS I**
*Prerequisite: TECH 109*
3 lectures, 2 lab hrs per week: 4 hrs credit
This course is an introduction to mechanics. Topics include review of vectors, motion, equilibrium, Newton’s Laws, work simple machines, momentum, rotational motion, and properties of materials. Each topic includes application problems for the various technology career programs.

**TECH 222**
**TECHNICAL PHYSICS II**
*Prerequisite: TECH 109*
3 lectures, 2 lab hrs per week: 4 hrs credit
This course covers the study of heat, light, sound and electricity. Topics include harmonic motion, temperature effects in matter, heat energy, first and second laws of thermodynamics, heat transfer, sound waves, light waves, reflection, refraction, lenses, electrostatics, circuits, magnetism, and alternating current. Each topic includes application problems for the various technology career programs.

**THEATRE**

**THTRE 101** *(IAI: F1 907)*
**UNDERSTANDING THEATRE**
*Prerequisite: Placement into ENG 099 or higher*
3 lectures per week: 3 hrs credit
This course is a survey of theatre arts including a study of aesthetic and dramatic principles in selected plays, analysis of representative theatrical forms for cultural and social significance, critiques of theatre performances, and an overview of stage formats and technology.

**THTRE 111** *(IAI: TA 914)*
**FUNDAMENTALS OF ACTING**
*Prerequisite: None*
3 lectures per week: 3 hrs credit
This is a beginning course in acting. A proper balance of theory and actual practice is maintained to develop both inner and outer acting techniques. An attempt is made to relate acting to good plays and to play production.

**THTRE 112** *(IAI: TA 918)*
**THEATRE PRACTICUM/ACTING**
*Prerequisite: None*
6 lab hrs per week: 3 hrs credit
This course provides practical experience in acting in a pre-approved theatre production. Audition required.

**TOOL AND DIE MAKING**

**TOOL 101**
**TOOL AND DIE PROCESSES**
*Prerequisite: None*
2 lectures per week: 2 hrs credit
This course introduces students to tool, die and stamping fundamentals. Topics specifically covered include bending, forming, stretching, drawing, and coining operations of sheet metal. Additionally, sheet metal stamping processes and their components are discussed.

**TOOL 102**
**TOOL AND DIE MAINTENANCE**
*Prerequisite: None*
2 lectures per week: 2 hrs credit
This course introduces students to tool, die, and stamping maintenance fundamentals. Topics specifically covered include troubleshooting techniques, analytical methods, and process optimization for stamping machinery and the associated dies.

**TRANSPORTATION, WAREHOUSING AND LOGISTICS**

**TWL 100**
**TRANSPORTATION AND PHYSICAL DISTRIBUTION**
*Prerequisite: None*
3 lectures per week: 3 hrs credit
This course studies the fundamental roles and importance of transportation in companies and society. The course evaluates the complex environment in which transportation services are provided and discusses how to adapt to a fast-paced and rapidly changing industry. Topics covered include an overview of transportation, the supply chain, the economy, traditional modes of transportation, special carriers, global transportation, the economics and operating characteristics of each mode, costing, pricing, carrier strategy, and information management.

**TWL 110**
**INTRODUCTION TO SUPPLY CHAIN MANAGEMENT**
*Prerequisite: None*
3 lectures per week: 3 hrs credit
This course covers the basics of supply chain management which includes all activities in the flow of materials from the supplier to the consumer. Such activities include the supply chain concept, inventory and warehouse management, physical distribution, order management, materials handling, capacity management, just-in-time manufacturing, and total quality management.

**TWL 120**
**INTRODUCTION TO IMPORT/EXPORT**
*Prerequisite: None*
3 lectures per week: 3 hrs credit
This course provides an understanding of the major factors affecting the global marketplace as well as the concepts and terminology of international trade. It is designed to build exporting and importing skills and to provide an understanding of the methods and procedures of importing and exporting products.
TWL 130
PRINCIPLES OF OPERATIONS MANAGEMENT
Prerequisite: None
3 lectures per week: 3 hrs credit
This course provides a detailed study of operations management and emphasizes attainment of high levels of customer service and quality. Topics covered include integrated product development, integrated supply chain management, process and capacity planning and control, inventory planning, forecasting, just-in-time philosophy, push vs pull program, total quality management, and enterprise resource planning.

TWL 140
TRANSPORTATION AND CARGO SECURITY
Prerequisite: None
2 lectures per week: 2 hrs credit
This course examines relevant facets of maritime, land, pipeline and air transportation security-related systems, and associated issues. It covers applicable legislation and the agencies tasked to oversee each mode of transportation. It also describes how to implement an appropriate program to enhance the security of a particular mode of transportation.

WELDING

WELD 101
PRINCIPLES OF FLAT WELDING
Prerequisite: None
2 lectures per week: 2 hrs credit
This course covers basic welding fundamentals related to arc and oxy-acetylene welding theory and practice, AC and DC welding equipment, and applications that position welding techniques, arc welding electrodes, and ferrous metal identification.

WELD 102
HORIZONTAL WELDING AND BRAZING
Prerequisite: WELD 101
2 lectures per week: 2 hrs credit
This course expands arc and oxyacetylene skills. Topics include oxyacetylene cutting equipment and applications, arc and carbon arc cutting, soldering, brazing, inspection and testing of welding, metal identification and welding in flat and horizontal positions.

WELD 103
METAL INERT AND VERTICAL WELDING
Prerequisite: WELD 102
2 lectures per week: 2 hrs credit
Students develop an understanding of and manipulative skills needed with gas metal arc welding (GMAW) equipment. Topics include GMAW welding equipment, MIG, special welding processes, mechanical testing of welds and welding in flat, horizontal and vertical positions (SMAW Shielded Metal Arc Welding).

WELD 104
TUNGSTEN INERT AND OVERHEAD WELDING
Prerequisite: WELD 103
2 lectures per week: 2 hrs credit
This course increases students’ welding background by acquainting them with gas tungsten arc welding, automatic welding and cutting equipment, special cutting processes.

WELD 105
AWS STRUCTURAL CERTIFICATION
Prerequisite: WELD 104
2 lectures per week: 2 hrs credit
This course is designed for persons experienced in all-position welding who wish to become certified to weld stress structures. All welding test procedures conform to American Welding Society standards. Though test specimens are prepared in class, passing of the course is not contingent upon whether or not the specimens are sent to a materials testing laboratory for analysis or the results of the analysis. However, if the student requests certification and pays the required fee, test specimens can be sent to a local materials testing laboratory where the mechanical tests will be performed and from where the welder certification papers may be issued.

WELD 106
PIPE AND PRESSURE VESSEL CERTIFICATION
Prerequisite: WELD 105
2 lectures per week: 2 hrs credit
This course prepares students for certification in the most advanced stage of welding. Emphasis is placed on welding a vessel or pipe which will be used for a high pressure application.

WELD 201
ADVANCED GAS METAL ARC WELDING
Prerequisite: WELD 103
2 lectures per week: 2 hrs credit (may be repeated 3 times)
Advanced gas metal arc welding techniques are taught. Topics include metal transfer, types of equipment and supplies, equipment set-up, and troubleshooting.

WELD 202
ADVANCED GAS TUNGSTEN ARC WELDING
Prerequisite: WELD 104
2 lectures per week: 2 hrs credit (may be repeated 3 times)
Advanced gas tungsten arc welding techniques are taught. Topics include types of equipment and supplies, equipment set-up, and open-root welding on plate and pipe.