

**RICHLAND COMMUNITY
COLLEGE
1994-96 COLLEGE CATALOG**

- **Catalog conversion notes**



CollegeSource[®]
by Career Guidance Foundation

TABLE OF CONTENTS

RICHLAND COMMUNITY COLLEGE	5
COLLEGE CALENDAR	6
WELCOME TO RICHLAND COMMUNITY COLLEGE	9
INTRODUCTION TO RICHLAND	10
GOVERNANCE	11
STATEMENT OF PURPOSE AND MISSION	13
THE TENETS OF COMMUNITY	14
FACILITIES	16
ADMISSION TO THE COLLEGE	18
TRANSFER OF COLLEGE CREDIT	20
ADMISSION OF HIGH SCHOOL AND “GIFTED” HIGH SCHOOL STUDENTS	21
REGISTRATION	22
CREDIT EVALUATION PROGRAMS	23
COURSE PLACEMENT	26
FINANCIAL INFORMATION	27
FINANCIAL AID	30
STUDENT EMPLOYMENT	32
LOANS	33
STANDARDS OF ACADEMIC PROGRESS FOR FINANCIAL AID RECIPIENTS	34
REFUNDS TO AID RECIPIENTS	37
VETERANS BENEFITS	38
STUDENT SERVICES	39
STUDENT LIFE	42
STUDENT RIGHTS AND RESPONSIBILITIES	45
CONTINUING & COMMUNITY EDUCATION	49
ACADEMIC INFORMATION & REGULATIONS	52
INSTRUCTIONAL PROGRAMS	59
BACCALAUREATE/TRANSFER PROGRAMS	60
OCCUPATIONAL PROGRAMS	65
COURSE DESCRIPTIONS	106
ACCOUNTING	111
AFRICAN-AMERICAN STUDIES	113
AGRICULTURE	114
ANTHROPOLOGY	117
ART	118
AUTOMOTIVE	122
BIOLOGY	125

BUILDING CONSTRUCTION	127
BUSINESS	128
CHEMISTRY	132
CHILD CARE AND EDUCATION	134
COMPUTER INFORMATION SYSTEMS	137
COMPUTER INTEGRATED MANUFACTURING	142
DRAFTING	144
DRAMA	147
EARTH SCIENCE	148
ECONOMICS	149
EDUCATION	150
ELECTRONIC SYSTEMS TECHNOLOGY/ELECTRONICS	151
ENGINEERING	156
ENGLISH	157
FIRE SCIENCE	161
FRENCH	164
GERMAN	165
HEALTH	166
HEALTH EDUCATION	169
HISTORY	170
HOME ECONOMICS	172
HORTICULTURE	173
HUMANITIES	175
INDUSTRIAL SAFETY	176
JAPANESE	177
JOURNALISM	178
LAW ENFORCEMENT	179
LEADERSHIP	181
MACHINING	182
MANUFACTURING	183
MATERIALS MANAGEMENT	184
MATHEMATICS	186
MECHANICAL SYSTEMS	193
MUSIC	195
NURSING	197
OFFICE TECHNOLOGY	200
PERSONAL DEVELOPMENT	204
PERSONNEL RELATIONS	205
PHILOSOPHY	206
PHYSICAL EDUCATION	208
PHYSICAL SCIENCE	209
PHYSICS	210
PLANT/BUILDING MAINTENANCE	212
POLITICAL SCIENCE	213
PRODUCTION CONTROL	215
PSYCHOLOGY	216
REAL ESTATE	219
RECREATION	221

ROBOTICS	222
SOCIOLOGY	223
SPANISH	225
SPEECH	226
THEATRE	228
WELDING	229
ADULT EDUCATION COURSES	231
ENGLISH AS A SECOND LANGUAGE	234
GENERAL STUDIES COURSES	236
ADMINISTRATION, FACULTY & STAFF	237

RICHLAND COMMUNITY COLLEGE
1994-96

Community College District 537
One College Park, Decatur, Illinois 62521
Telephone: 217/875-7200
(Campus tours available)

COLLEGE CALENDAR

Fall 1994

August

Aug. 15-16	M-T	Registration
Aug. 17	W	New Student Orientation
Aug. 18	Th	Staff Development Workshops (College Closed)
Aug. 18	Th	Adjunct Faculty Workshop & Division Meetings (Evening)
Aug. 19	F	New Student Orientation
Aug. 22	M	Classes Begin
Aug. 22	M	Drop-Add Registration

September

Sept. 5	M	Labor Day (College Closed)
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October

Oct. 10	M	Columbus Day (College Closed)
Oct. 14	F	Midterm of Semester
Oct. 24-Dec. 14		Spring 1995 Early Registration

November

Nov. 11	F	Veterans' Day (College Closed)
Nov. 24-27	Th-Su	Thanksgiving Vacation (No Classes after 5:10 p.m. Wed., Nov. 23; College Closed Nov. 24, 25, 26, 27)

December

Dec. 9	F	Last Day for Withdrawal with "W"
Dec. 12-15	M-Th	Final Examinations
Dec. 14	W	New Student Orientation
Dec. 19	M	Final Grades Due by 11:00 a.m.
Dec. 24-Jan. 2		Christmas Vacation

Spring 1995

January

Jan. 9-10	M-T	Scheduled Registration
Jan. 11	W	New Student Orientation
Jan. 12	Th	Staff Development Workshops (College Closed)
Jan. 12	Th	Adjunct Faculty Workshop and Division Meetings (Evening)
Jan. 13	F	New Student Orientation
Jan. 16	M	Martin Luther King's Birthday (College Closed)
Jan. 17	T	Classes Begin
Jan. 17	T	Drop-Add Registration

February

Feb. 10	F	Lincoln's Birthday (College Closed)
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March

Mar. 10	F	Midterm of Semester
Mar. 13-19	M-Su	Spring Break (No Classes Mon., Mar. 13, through Sun., Mar. 19)

April

Apr. 3-May 26		Summer and Fall 1995 Early Registration
Apr. 14-17	F-M	Easter Break (No Classes after 5:10 p.m. Thurs., Apr. 13, through Mon., Apr. 17; College Closed on Good Friday, Apr. 14)

May

May 12	F	Last Day for Withdrawal with "W"
May 15-18	M-Th	Final Examinations
May 21	Su	Graduation
May 22	M	Final Grades due by 11:00 a.m.

Summer 1995

June

June 6	T	Scheduled Registration
June 12	M	Classes Begin
June 12	M	Drop-Add Registration
June 19-July 28		Fall 1995 Early Registration

July

July 4	T	Independence Day (College Closed)
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July 6	Th	Midterm of Semester
August		
Aug. 1	T	Last Day for Withdrawal with "W"
Aug. 2-3	W-Th	Final Examinations
Aug. 7	M	Final Grades Due by 11:00 a.m.
Fall 1995		
August		
Aug. 14-15	M-T	Registration
Aug. 16	W	New Student Orientation
Aug. 17	Th	Staff Development Workshops (College Closed)
Aug. 17	Th	Adjunct Faculty Workshop & Division Meetings (Evening)
Aug. 18	F	New Student Orientation
Aug. 21	M	Classes Begin
Aug. 21	M	Drop-Add Registration
September		
Sept. 4	M	Labor Day (College Closed)
October		
Oct. 9	M	Columbus Day (College Closed)
Oct. 13	F	Midterm of Semester
Oct. 23-Dec. 13		Spring 1996 Early Registration
November		
Nov. 10	F	Veterans' Day (College Closed)
Nov. 23-26	Th-Su	Thanksgiving Vacation (No Classes after 5:10 p.m. Wed., Nov. 22; College Closed Nov. 23, 24, 25, 26)
December		
Dec. 8	F	Last Day for Withdrawal with "W"
Dec. 11-14	M-Th	Final Examinations
Dec. 13	W	New Student Orientation
Dec. 18	M	Final Grades Due by 11:00 a.m.
Dec. 25-Jan. 2		Christmas Vacation
Spring 1996		
January		
Jan. 8-9	M-T	Scheduled Registration
Jan. 10	W	New Student Orientation
Jan. 11	Th	Staff Development Workshop (College Closed)
Jan. 11	Th	Adjunct Faculty Workshop and Division Meetings (Evening)
Jan. 12	F	New Student Orientation
Jan. 15	M	Martin Luther King's Birthday (College Closed)
Jan. 16	T	Classes Begin
Jan. 16	T	Drop-Add Registration
February		
Feb. 9	F	Lincoln's Birthday (College Closed)
March		
Mar. 8	F	Midterm of Semester
Mar. 11-17	M-Su	Spring Break (No Classes Mon., Mar. 11, through Sun., Mar. 17)
April		
Apr. 1-May 24		Summer and Fall 1996 Early Registration
Apr. 5-8	F-M	Easter Break (No Classes after 5:10 p.m. Thurs., Apr. 4, through Mon., Apr. 8; College Closed on Good Friday, Apr. 5)
May		
May 10	F	Last Day for Withdrawal with "W"
May 13-16	M-Th	Final Examinations
May 19	Su	Graduation
May 20	M	Final Grades due by 11:00 a.m.
Summer 1996		
June 4	T	Scheduled Registration
June 10	M	Classes Begin

RICHLAND COMMUNITY COLLEGE

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June 10	M	Drop-Add Registration
June		
June 17-July 26		Fall 1996 Early Registration
July		
July 1	M	Midterm of Semester
July 4	Th	Independence Day (College Closed)
July 30	T	Last Day for Withdrawal with "W"
July 31-Aug. 1	W-Th	Final Examinations
August		
Aug. 5	M	Final Grades Due by 11:00 a.m.

WELCOME TO RICHLAND COMMUNITY COLLEGE

This Bulletin will answer many of your questions about the programs, services, and opportunities at Richland Community College. More than 10,000 people use Richland each year as a source for college courses, cultural events, GED classes, workshops, seminars, and other enriching experiences.

As you look through the Bulletin, you may notice much that's new. New programs, like Associate Degree in Nursing and Computer Integrated Manufacturing, meet the needs of those who want a satisfying career in Central Illinois. Revised A.A. and A.S. program standards will help transfer students prepare for other colleges and universities.

Whether you have recently completed high school or have not attended school for many years, the faculty and staff at Richland are dedicated to your success. We believe every individual who wishes to benefit should have the opportunity to become involved in higher education, to learn, and to grow toward a better life. As you work to succeed, we will work to ensure that your experiences here are of the highest quality.

We look forward to helping you in every way possible as you learn and grow with us. If you have any questions or concerns, don't hesitate to ask.

Sincerely,
Charles R. Novak
President

INTRODUCTION TO RICHLAND

Richland Community College was founded in 1971. At that time, its mission statement identified it as a comprehensive community college, which required that it offer baccalaureate, technical, continuing education, and community service programs. During the past two decades, that is what the College has done. The people of the District have benefited and prospered from the services the College has offered.

As the College enters its third decade, its basic purpose and mission have not dramatically changed. What have changed, however, are the scope of activity and the manner in which it occurs. The world is not the same as it was in the 1970s. The 1990s place demands on Richland that are far different than they were 20 years ago. The world has moved away from the mass production economy of the past to a new economy that retains the elements of mass production but adds new standards for quality, variety, customization, convenience, and timeliness. Yesterday's community colleges measured their success by how many students they served. Tomorrow's community colleges will measure their success by how well they serve. For a college to serve well, it must commit to always improving standards of quality. It must commit to providing education, programs, and services in a multitude of ways to diverse people at ever-changing times and places.

The faculty and staff of Richland are committed to meeting the challenges of the new economies and technologies. They are committed to providing the leadership and education required to create a talented pool of people who will help Central Illinois grow and prosper in an increasingly complex world. The following statement of purpose and mission and the requisite goals that follow outline the blueprint, the plan, and the process by which Richland will meet the challenges of the next century.

GOVERNANCE

The College is governed by an eight-member Board of Trustees. Seven of the members are elected on staggered, six-year terms by the registered voters living within the District. The eighth, a student member, is elected for a one-year term by the College student body. The student trustee is non-voting but can make and second motions.

The Trustees meet on the third Tuesday of every month in the College Board Room. Special meetings are also called as required. All meetings of the Board and its committees are open to the public except for discussion of certain exempt matters including those relating to employment, land acquisition, and pending litigation. The general public is invited to attend all Board meetings, and time is set aside during these meetings for citizens to address the Board and to make their opinions known.

Board of Trustees

Ben E. Baker, Chairman
John R. Rogers, Vice-Chairman
Thomas R. England, Secretary
Sharon Alpi
Cathy Coulter
Wayne Dunning
Dr. Barbara B. Hicks
Michelle Tyus, Non-Voting Student Trustee

Administration

Dr. Charles R. Novak, President

Deans

Jane Johnson
Dean of Student Development and Services

Dr. James C. Underwood
Dean of Instruction

Patricia K. Williams
Dean of Financial Services

Associate Deans

J. Michael Beube
Student Development and Services

Nancy Cooper
Lifelong Learning

David Erlanson
Communications

Dr. William G. Grieve
Social and Natural Sciences

Dr. Lois J. Hamilton
Allied Health and Nursing

Janna Lutovsky
College Preparatory

Gary L. Morgan
Industrial Technology and Mathematics

Stuart G. Shepherd

Business

David L. Zindel
Kitty Lindsay Learning Resources Center

Past Presidents

Dr. Murray Deutsch — 1972-1979
Dr. James L. Becker — 1979-1980
Mr. John M. Kirk — 1980-1985
Dr. Howard E. Brown — 1985-1989

Past Members

Board of Trustees

Trustees

Edward B. Allen	1971-77
Robert J. Wood	1971-75
Dr. Bert C. Bach	1971-75
Donald G. Baird	1971-81 & 1983
Carl W. Brink	1971-79
Donald G. Klisares	1971-76
Ann C. Limerick	1971-78
Dr. Hal E. Gronlund	1975-85
James E. Masey	1976-77
Donald R. Gepford	1977-80
J. Thomas McNamara	1977-85
William A. Chapman	1977-83
Larry Hinton	1980-83
Joan Wolf	1978-87
Marcia H. Morey	1985-87
Truman C. Stearns	1987
Linda Dalluge	1987-88
Robert D. Garrett	1985-91
Neil E. Pistorius	1975-91

Student Trustees

Stephen Holden	1974
Richard A. Schwartz	1975
Peter D. Vercellino	1976
Donna J. Rogers	1976
Shelton L. Hinson, Jr.	1977
Jauque Schuman	1978
Thomas H. McCarthy, Jr.	1979
Greg Reiss	1980
Bobbie Brashear	1981-82
Gregory Sullivan	1983
Tina Christianson	1984
Linda Ball	1985-86
Steve Deal	1986-87
Linda Davis	1987-88
Nora Hanaver	1988
Jeffrey M. Brown	1988-89
Carrie R. Marshall	1989-90
Brett M. Turner	1990-91
Maria E. Rincones	1991

STATEMENT OF PURPOSE AND MISSION

Statement of Purpose

The primary purpose of Richland Community College is to improve the quality of life in Central Illinois by actively serving the educational needs of the people, organizations, and institutions it serves. The College pledges to provide equal access to education and training for all citizens regardless of race, age, sex, religion, national origin, ethnic background, or disability.

College Mission

The mission of Richland Community College is to offer educational programs that enable students to achieve their potential through higher education by obtaining the abilities, attitudes, and skills needed for personal and professional growth.

Richland Community College achieves its mission and purpose by offering the following programs:

1. The first two years of a baccalaureate education;
2. Technical courses, certificates, and degrees designed to provide job training, retraining, and upgrading of skills;
3. Basic educational skills designed to prepare students to engage in college-level study;
4. Continuing and community education courses and programs designed to provide and encourage opportunities for lifelong learning;
5. Student development programs and services designed to help students identify educational and career goals, set realistic career paths, and develop skills necessary to achieve intellectual and personal growth;
6. Academic programs and services that provide supplemental support to both teaching and learning;
7. Community education activities and programs that complement, enhance, and contribute to the growth and enrichment of students and the community, both inside and outside of the classroom; and
8. Community service activities and programs that promote linkages with business, industry, and governmental agencies designed to meet the changing needs of the market place and promote economic growth in Central Illinois.

The College mission is currently under review. The revised mission statement will be published prior to the distribution of the 94-96 revised Bulletin.

Ethics and Leadership

In September 1989, the staff of Richland Community College developed two statements to guide its leaders and managers. The first statement, prepared at the request of the Board of Trustees, provided a framework for good trusteeship. The second statement provided a framework for leadership and management.

The statements were adopted by the Board of Trustees in March 1990. The purpose of the statements is to establish a viewpoint, framework, and tone from which the College's leaders will lead.

THE TENETS OF COMMUNITY

College Trusteeship

The community college is an egalitarian institution committed to the principle that higher education should be available to every person who can benefit. The purpose of a comprehensive community college is to serve all who then can serve to build a better society.

The primary task of the Board of Trustees is to serve as a regenerative force, always expanding and improving the College's service to people. Given this basic condition, the activities and deliberations of the Board of Trustees will be governed by the following tenets:

About Allegiance

Trustees have but one allegiance; that is to the institution and its mission. Representing special constituencies dilutes trust and undermines institutional mission.

About Commitment

To achieve distinction requires commitment, and commitment requires the devotion of time, thought, energy, effort, and ability whenever needed.

About Distinction

The Board of Trustees has the authority and the autonomy to be original, creative, and regenerative; that is its responsibility. If the College is to become an institution of distinction, it will be because the Board demonstrates and requires distinctive service.

About Evaluation

Purpose achieved with distinction does not occur in a vacuum. It occurs because of a Board desire for distinction and willingness to measure how well it is achieved.

About Power

Power rests mostly with the Board of Trustees but also extends far beyond it. Trustee power and influence well used will result in staff power and influence well used; students will be served.

About Purpose

The purpose of an educational institution is more than a Board decision. It is a Board responsibility. Defining the institution is a critical task that requires continuing review.

About Service

All activities in which the College engages — teaching, serving, and guiding — must be evaluated by their effect upon students and community. How the College serves its community and how it serves and prepares its students are fundamental criteria by which the College must be measured.

About Teamwork

The Board consists of individuals with differing values and beliefs, and debate is expected and natural. Although there are individual expressions, there are no individual decisions. Board decisions must be team decisions.

An Administrator's Creed

The moral character of an educational organization is reflective of its leadership. Among those involved in the art and science of teaching, it is imperative that both teachers and leaders demonstrate a strong commitment to good principle and ethical behavior.

The fundamental contributions of education to society demand commitment to exemplary values. Educators influence, shape, and teach the values, attitudes, and beliefs that create tomorrow. As a consequence, they are charged with the responsibility to husband, advance, and improve upon the values and beliefs that sustain and characterize a people.

Educational leaders at Richland Community College believe and practice the following principles:

About Creativity

Experimentation and originality are integral to the process of educational achievement; they should be more than encouraged — they should be sponsored.

About Expectations

In a productive and harmonious work environment are clear standards and expectations for employees and the employer. Policies and procedures are common knowledge as is the process for changing them.

About Learning

The most important thing about education and learning is quality; the measure of quality will be found in the achievement of students.

About Objectivity

The relationship between the institution and an individual is stable and harmonious where impartiality and reason guide the belief and conduct of the institution's leaders.

About Openness

The College is founded in the public trust. Its leaders and managers have a responsibility to continually inform the students, staff, and public about not only the institution's goals but also its progress toward achieving them.

About People

People generally wish to contribute to society. They have dignity; they have worth. Where dignity and worth are valued, positive contributions will be abundant.

About Respect

All things deserve consideration, be they man-made or natural. Nothing and no one should be summarily ignored or rejected. Something is to be learned from everyone and everything.

About Risk

Leadership requires risk. Risk brings victory or defeat. Leadership requires courage to face defeat and humility to live with victory.

About Trust

Educational leaders must demonstrate faith and reliance on the integrity and ability of people. This trust is both a concept and an emotion. It requires leaders to rely on others.

About Truth

Truth is beyond quantification. It is a way of thinking that demands sincerity and integrity. It is a way of living — straight-forward, candid, and simple.

Welcome to Richland Community College

FACILITIES

Richland Community College District 537 includes all of Macon County and parts of Christian, DeWitt, Logan, Moultrie, Piatt, Sangamon, and Shelby counties, serving approximately 6,000 students annually at its main campus in Decatur, at its Clinton Extension Center, and at several satellite campuses throughout the District.

Richland offers students a more complete educational experience through the use of a variety of on-campus and off-campus facilities.

Main Campus

Richland moved into its permanent home during the fall of 1988. This 150,000 sq. ft. facility houses 44 classrooms and 25 laboratories, located on a site of 117 acres.

A 12,000 sq. ft. Agriculture/Maintenance facility was completed during the summer of 1990. Through the generous donation of Paul Weidenbacher, an 800 sq. ft. greenhouse was added to the Agriculture building during the spring of 1991.

The Shilling Community Education Center was made possible by a \$750,000 bequest from the Shilling Trust administered by the First National Bank of Decatur. Construction on the Shilling Center was completed in January 1993 and features a 325 seat auditorium, banquet room with seating for 300, and several conference rooms and classrooms available for use by students, faculty, staff, and the community. The facility is available for meetings, programs, performances, and other events.

Richland's Fitness Center, located in the Shilling Center, includes aerobic conditioning equipment, weight machines, and free weights. Richland District residents may use the Fitness Center by registering for the appropriate Physical Education class or by joining the Fitness Club.

The Kitty Lindsay Learning Resources Center, located in W140, provides a variety of resource materials, a professional staff trained to help students locate and use materials, and free instruction on how to build study and research skills. Materials available in the LRC are chosen to meet the needs of students and instructors.

The LRC has VCR and microcomputer equipment available for student use. The LRC provides a quiet place to read a wide selection of current newspapers and magazines.

The Reading/Writing Center, located in S118, offers help to students and residents of the College District in reading, study skills, and writing, as well as assistance in spelling, note-taking, concentration, and preparation of job resumés.

The Study Assistance Center, located in W142, is designed to support instruction by providing skill building and tutorial services for students at Richland. The Center provides individual student peer tutors on an appointment basis and faculty tutoring on a drop-in basis for areas of study offered by the College.

The Testing Center, located in W143, provides testing services for placement in English, mathematics, and health courses. Proctors also administer the constitution test, exams from other universities and make-up tests for Richland classes.

Follett's College Bookstore, located in the Mueller Student Center, C145, carries textbooks and materials for all Richland courses and a variety of school supplies. VISA, MasterCard, and Discover are accepted by the bookstore.

Off-campus Facilities

The Area Vocational Center (AVC), 300 E. Eldorado Street, Decatur, is used primarily during late afternoon and evening hours. Area schools also provide classrooms for off-campus courses.

Decatur Public Library provides an excellent source of information and secondary resources for Richland students.

The Young Men's Christian Association (YMCA) , 151 E. Prairie Street, provides courses in physical education through co-enrollment with Richland.

The Richland Opportunities Center , at 259 W. Grand, Decatur, serves students in the Options/Opportunities Program with classes and workshops. Child care is available at the Opportunities Center. See page 37 for more information about the Options/Opportunities Program

The Clinton Extension Center offers admissions, registration, and financial aid services. Call 935-6791 for information. Credit and Lifelong Learning classes are scheduled in Clinton and other neighboring communities by the Community Representative for those areas. Listings of these classes are shown in the schedules that are mailed to all households prior to the beginning of each semester.

Leisure Learning classes for Senior Citizens over 55 years of age are scheduled at various locations in the community as listed in the schedules.

ADMISSION TO THE COLLEGE

Richland Community College is open to all people who:

1. Have graduated from high school, or
2. Have received a High School Equivalency Certificate based on the GED test.
3. See Admission of High School and "Gifted" Students, page 20.

GED Placement Program

Students without a high school diploma will be required to participate in the Richland GED placement program and enroll in the appropriate GED course. Students will then be eligible for further study at Richland upon successful completion of the GED Test and receipt of the High School Equivalency Certificate.

Admission to a Program or Courses

Admission to the College is not the same as admission to a program of study and/or courses. Admission to a program or courses is based upon previous education, experience, and levels of achievement.

Admission to a Program of Study

Each program of study (for example, Electronics, Accounting, Associate in Arts or Science, etc.) has specific requirements for admission. These requirements are based on the student's previous education, work experience, and levels of achievement. (See "Programs of Study" beginning on page 62 for a complete list of prerequisites for each program.)

Information that may be used in admission to a program includes:

1. A transcript of the student's high school and college records. The student should request a transcript from the school(s) to be sent to Student Development and Services (SDS) at Richland. High school seniors applying for admission should also include a list of courses in progress. Transcripts of individuals who do not enroll at Richland will be kept on file for two years after receipt.
2. Test scores. Richland generally uses the American College Testing (ACT), Career Planning Program (CPP), or the ACT Assessment. Other comparable test results may be submitted if approved by a Richland counselor.
3. Application and personal interview, including related experiences since leaving high school or college.

Students may be provisionally admitted to a program, even if they fail to meet some requirements. Students provisionally admitted may be required to enroll in developmental courses, take a reduced load, complete further testing, and/or receive career counseling.

Similar procedures may also be applied to students enrolling in individual courses only.

Nursing Program Admission Requirements

Enrollment to the Associate Degree in Nursing program is limited and applicants must meet the following minimum requirements to be considered:

1. Applicants must be enrolled at Richland Community College.
2. High School or GED.
 - a. Applicants must be a high school graduate or have a GED certificate.
 - b. Applicants must have a cumulative high school grade point average of 2.5 or above.
 - c. Applicants must have completed the following high school courses with a minimum grade of "C":
 - Three years of English,
 - Three years of mathematics (including Algebra I and II and Geometry), and
 - Three years of science (including chemistry and biology).

Students who do not meet this requirement must complete a one-semester college course in each of the three areas and receive a “C” or above in each course.

A cumulative grade point average of 2.5 in college courses 100 level and above is required for applicants who do not have a cumulative high school grade point average of 2.5 or high school grade point average is not available.

3. Courses that must be completed before applying to the Program include:
 - a. High school chemistry or college chemistry taken within the past five years with a grade of “C” or above. Chemistry 100 or above is acceptable to fulfill this requirement,
 - b. Biology 101, and
 - c. Computer Information Systems (C.I.S.) 110.
4. Pre-entrance Tests
Applicants are required to have a 21 composite score and 20 in Science Reasoning on the ACT. Students who did not take the ACT must have a 2.5 grade point average in 15 semester hours of approved college courses.
5. Applicants must have a 2.5 cumulative grade point average in all biology courses. All science courses must have been taken within the last five years.

Minimum Subject Admission Requirements for Transfer Programs

The Illinois Board of Higher Education has established minimum subject requirements for baccalaureate degree programs.

These subject requirements, which will be in addition to the admissions requirements and procedures currently in place at Richland, became effective in the 1993 Fall semester. Thus, students entering high school as freshmen in 1989 need to include these required courses in their programs if their eventual goal is to receive a four-year baccalaureate degree.

Students entering a transfer program in 1993 or thereafter with subject deficiencies will be admitted provisionally and will be required to make up these deficiencies by graduation.

The minimum subject requirements are listed below:

Units	Subjects
4	English (emphasizing written and oral communications and literature)
3	Social studies (emphasizing history and government)
3	Mathematics (introductory through advanced algebra, geometry, trigonometry, or fundamentals of computer programming)
3	Science (laboratory sciences)
2	Foreign language, music, art, or voc. ed.

For further information, please contact your school counselor or the Director of Admissions, Records, and Research at Richland Community College.

TRANSFER OF COLLEGE CREDIT

Students who wish to transfer credit earned at another accredited college or university must request a transcript from the college attended. The transcript should be sent directly from the college or university to SDS at Richland. The student requesting a transfer of credit must pay any transcript fees.

Approved credit hours will be applied toward the total number of hours needed for the degree or certificate, provided the average grade for all such work is "C" or better.

Transfer credit will not be included in computing the student's grade point average at Richland. Approved credit hours will be recorded on the student's record only:

1. After the student submits an Application for Graduation, or
2. After completion of eight or more credit hours toward an associate's degree or a certificate program at the student's request.

ADMISSION OF HIGH SCHOOL AND “GIFTED” HIGH SCHOOL STUDENTS

High school students may also attend courses at Richland for credit toward either a high school diploma or a college degree. Eligibility for enrollment as a high school student is decided as follows:

1. The student is a high school junior or senior.
2. The student’s high school principal submits a letter stating that the student is a junior or senior, is taking the course(s) for high school or college credit, and has the principal’s approval.
3. A high school transcript is submitted to Richland.
4. Final approval for enrollment is then determined by Richland. College credit for classes taken by high school students will be held in “escrow” until completion of high school (as verified by an official high school transcript).

“Gifted students” (students with exceptionally high academic ability as determined by the students’ school and the College) who are below sixteen years of age may also take courses at Richland with the approval of the student’s principal and the College.

Gifted students should follow the application procedures listed above for the admission of high school students.

REGISTRATION

Registration for classes at Richland takes place at various times before the beginning of each semester. Class schedules, including a list of all courses offered and registration dates, are available to interested persons before the start of the term. A copy is sent to all households in the District.

Early registration is offered prior to each term; scheduled registration is held one week before the start of classes. Drop/Add/Late registration is held on the first day of classes and is limited to courses for which enrollment is not filled.

One other registration period occurs for courses with beginning dates later than the first week of the semester.

Students must have their class schedule and fee forms approved and signed by a counselor or academic advisor before registering. Students registering for one course only may register without seeing an advisor if that course does not have a prerequisite.

Academic advisors are available during registration periods, but students are encouraged to register early.

Under certain conditions students may register without seeing a counselor or advisor. See the current class schedule for details.

CREDIT EVALUATION PROGRAMS

College Credit for Experience Outside the Classroom

Richland realizes that many people who attend school have knowledge gained through work, military service, independent study, and other learning experiences. Richland may grant credit for this knowledge through the programs listed below.

Credit earned in this way will be recorded on the student's transcript without a grade and will not be used in computing the student's grade point average. The programs are:

1. **Advanced Placement Program (APP)**

The APP is an organized instructional and/or testing program offered in high school in cooperation with the College Entrance Examination Board. Advanced high school courses may be offered through the Program for college credit, or credit may be given for course areas not offered by the APP if the student passes an APP examination given by the high school. High school students interested in the Advanced Placement Program should contact their high school counselor.

2. **College Level Examination Program (CLEP)**

Richland participates in the College Level Examination Program (CLEP), which allows students to obtain college credit based on their learning outside the classroom. CLEP is divided into two areas: general examinations and subject examinations.

Students may earn credit in one or more of four general areas (Humanities, Mathematics, Natural Science, and Social Science/History). Credit from two to six semester hours may be given, depending on the test score. Credit through a CLEP general examination may be applied to a degree or certificate as general education or elective(s).

In addition, 30 CLEP subject examinations are offered in such areas as American government, English literature, general chemistry, or introductory accounting. Credit from two to six hours may be given depending on the student's test score.

No credit will be awarded for English 101, 102, or Speech 101 at Richland through either the CLEP general or subject exam.

Credit granted through a CLEP examination will be recorded as "Credit through CLEP" and will not be used in computing a grade point average. Credit will be recorded after completion of eight semester hours toward an associate's degree or certificate program.

Students who have enrolled in college study before attempting a CLEP examination will not be granted credit if they attempt a subject examination after they have received a grade for that specific course or for prior college study that is directly related to a general exam taken.

For more information or to register to take a CLEP examination, contact SDS.

3. **Proficiency Examination**

Students with wide varieties of educational experience may convert this experience into college credit on the basis of evaluations by Richland Community College staff and standards set by the College in those areas and courses deemed appropriate.

Students who are currently enrolled or who have completed eight semester hours of credit at Richland may apply for and receive credit through proficiency examination in certain courses by obtaining the appropriate form in Student Records, obtaining permission from the division involved, paying the required fee, and successfully passing the examination.

A proficiency examination for a given course may be taken only once. A student may not take a proficiency examination for a course in which he/she has previously enrolled, attended, and/or received a grade.

A student may enroll only on an audit basis in a course in which credit has previously been granted through proficiency.

A fee of \$15.00, or one-half the in-district or out-of-district tuition normally charged for the course, whichever is greater, must be paid before the exam. The fee is refundable only if the examination is not given.

The student must meet the standards of the particular division or program of study to earn credit by proficiency. Fees are not refundable if the student fails to pass the required examination.

Credit hours earned through proficiency examination are posted on the student's permanent record. The credit is not included in the calculation of the grade point average and may not be used to establish enrollment status.

4. Proficiency by Advanced Course

Some courses are organized in sequence so that completion of an advanced course depends on knowledge gained from a previous course. Students who satisfactorily complete the advanced course at Richland without taking the previous course may be eligible for college credit for the previous course. Course sequences in which students may apply for proficiency by advanced course are listed below, along with the minimum grade required in the advanced course to earn credit for the lower course:

Acct. 101, 102	B
Acct. 201, 202	B
Bus. 231, 232	B
C.I.S. 161, 162	B
C.I.S. 251, 252	B
C.I.S. 261, 262	B
Eltrn. 109, 113	B
Eltrn. 160, 202	B
Fren. 101, 102, 201	B
Germ. 101, 102, 201	B
Mach. 101, 102	B
Japan. 101, 102, 201	B
Math. 091, 098, 116	B
Math. (116)*, 121, 122, 221	B
Music 101, 102, 201	B
O.T. 111, 112, 211, 212	B
O.T. 121, 132	B
O.T. 131, 132	B
O.T. 242, 243	B
Span. 101, 102, 201	B
Weld. 101, 102	B

*Completion of Math. 121, 122, or 221 will give credit for both Math. 098 and 116.

Students desiring credit by advanced course must apply officially for such credit within four years following the completion of the advanced course. Exceptions to this policy may be approved only by the Associate Dean of the appropriate division.

Any student who has received a grade (including "withdrawal" or "audit") for a lower course may not receive proficiency credit for that course.

To apply for proficiency credit, obtain an "Application for Proficiency Credit Based on Satisfactory Completion of an Advanced Course in a Sequence" from SDS. A fee of \$1.00 per semester hour will be charged for consideration of the student's request and may be refunded only if the student is not eligible to receive such college credit.

5. **Independent Study**

Participation in a classroom setting is an important part of college education. However, Richland realizes that sometimes scheduling or other conflicts make attending a particular class difficult.

To request an independent study, the following conditions must be met. The course must be required for graduation or professional certification, and the requested term for independent study and the term of graduation must be the same. After completing the form, the student should discuss the request with the appropriate Associate Dean. If the request is granted, weekly meetings during the arranged term of the course are held between student and instructor. Only those courses included in the Bulletin are available for Independent Study. "Request for Independent Study" forms are available in SDS.

6. **Armed Forces Health and Physical Education**

Any veteran who has completed a minimum of six months' active duty in the armed forces and presents evidence of an honorable or general "under honorable conditions" discharge from the service is eligible for a maximum of two semester hours of credit. Such credit will be recorded as "credit from military service" and will not be used to compute a grade point average. The credit will be applied as health and/or physical education activity course credit.

Veterans may apply for credit through SDS.

7. **United States Armed Forces and Armed Services Courses**

Credit may be given for group study or correspondence work completed through the United States Armed Forces Institute (USAFI), if the course is recommended by the American Council on Education. Training courses may also be used to earn credit if they are deemed appropriate by the American Council on Education.

The courses must be within the student's field of study, and the student must provide evidence of satisfactory completion of the course(s).

Such credit granted will be recorded as "credit through USAFI" or "credit through armed services courses."

Please contact the Associate Dean of SDS for further information.

COURSE PLACEMENT

Students come to Richland with a wide variety of education, achievement, experience, and training. To help determine the student's level of learning, placement tests may be given in one or more areas. The tests are intended to help students select courses that will be most beneficial and to maintain academic standards.

Reports from other tests and transcripts also aid in placing students in the best courses for them.

English-Reading - Each student will receive an English placement report based on his/her transcripts and/or ACT test scores. The report advises in which English class (Engl. 088/089, 090/091, Engl. 101, or Bus. 119) the student is to enroll. In some cases, students may be required to take an English Placement Test to help determine their level of competence.

Students unsure about their placement into English reading/writing courses should contact a counselor in SDS or the Reading/ Writing Center.

Foreign Language - Students who have not studied a specific foreign language are to begin their college study with the course numbered 101. All persons whose most recent prior study of the language was more than five years ago should also start their college study with the course numbered 101.

Students who have studied a specific foreign language in high school within the past five years are to begin their study at Richland with the course number determined by the earned quality points:

Quality points are computed on the basis of full years of high school study and are assigned on the basis of the grade earned for each semester divided by two. (A = 4.00, B + = 3.50, B = 3.00, C + = 2.50, C = 2.00, D+ = 1.50, D = 1.00, F = 0.)

Example: A student who studied a foreign language for one year and received an "A" for both semesters would have earned four quality points, (i.e., $4.00 + 4.00 = 8.00 : 2 = 4.00$). Another student who completed one year with a "B" for one semester and an "A" for one semester would have earned three and one-half quality points (i.e., $4.00 + 3.00 = 7.00 : 2 = 3.50$).

Earned Quality Points	Start With Course
0 to 4	101
5 to 11	102
12 to 14	201
15 or more	202

Any person who wishes to register for a specific foreign language with course placement different from that shown above should consult with the Richland Communications Division regarding appropriate placement.

Math Placement - Many mathematics courses require prerequisites for enrollment. In some cases students will be required to take a placement test in arithmetic, elementary algebra, or intermediate algebra.

Students seeking clarification regarding their math placement should see a counselor in SDS.

Placement Testing

Any student may be required to complete placement testing in English, mathematics, reading, or other areas. Test results will be used to determine a student's eligibility for courses with prerequisites and/or placement in developmental courses (courses numbered 088 through 098).

FINANCIAL INFORMATION

Tuition, fees, and other charges paid by a student to Richland Community College cover a portion of the actual expenses of a student's education. The balance of the cost is paid by the public through local property taxes assessed within District 537 (or, in some cases, the student's own community), state financial support, and federal financial assistance.

The Auxiliary Fee includes the following services and privileges: use of the computer lab, both for computer-based classes and for open lab use; athletics activities and events; student activities, including student clubs and organizations, entertainment, and events; parking stickers; first transcript; and delivery of textbooks to off-campus sites.

Tuition, fees, and other charges are due and payable at the time of registration. The College reserves the right to change the rate of tuition, any fees, or any charge without notice.

Residents of Richland Community College District (and Out-of-District students with Charge-Back Authorization)

	Per Credit Hour
Tuition	\$37.00
Auxiliary Fee	\$2.50
Total	\$39.50

Out-of-District Students of Richland Community College (Without Charge-Back Authorization)

	Per Credit Hour
Tuition	\$37.00
Auxiliary Fee	\$2.50
Out-of-District	\$78.48*
Total	\$117.98

Out-of -State and International students pay \$144.68* per credit hour in addition to the normal tuition and fees listed for In-District students.

*These charges are subject to change on a yearly basis as per capita costs are determined.

Fees

<i>Registration Fee</i> (non-refundable and payable at the time of registration)	\$10.00
<i>Art Lab Fee</i> (Art 121, 122, 125, 126, 131, 225)	\$15.00
<i>Automotive Lab Fee</i> (per course except Auto. 101)	\$20.00
<i>Biology Lab Fee</i> (per course except Biol. 210)	\$20.00
<i>Chemistry Lab Fee</i> (per course)	\$20.00
<i>Drafting Lab Fee</i> (per course except Draft. 101, 102, 120, 130)	\$20.00
<i>Earth Science Lab Fee</i>	\$5.00
<i>Electronics Lab Fee</i> (per course except Eltrn. 220, 290, 295)	\$20.00
<i>Electronics 202</i> (Kit)	\$35.00-\$49.95
<i>Home Economics</i> (110 only)	\$20.00
<i>Machining</i> (per course)	\$20.00
<i>Mechanical Systems</i> (110 only)	\$15.00
<i>Physical Education</i> (Fitness Center-Super Circuit only)	\$15.00
<i>Welding Lab Fee</i> (per course)	\$20.00
<i>Graduation Fee</i> (per application)	\$15.00

All students are expected to pay tuition, fees, and other charges at the time of registration. Students needing additional time to pay the balance, may request a deferment from the Business Services Office. A Deferment Fee of \$10.00 will be assessed.

Tuition Discount For Senior Citizens

Persons 65 years or older whose annual income is less than \$14,000 may enroll in any credit course (other than credit courses designed for senior citizens) without the payment of tuition. However, all fees must be paid. Any person 65 years or older whose annual income is over \$14,000 will pay one-half of the regular tuition and all fees. For more information, call the Business Services Office, 875-7200, Ext. 227.

Proficiency Exam

The fee for a proficiency exam is \$15.00 or one-half of the tuition normally charged for a course, whichever is greater.

Transcripts

The first transcript is free. All subsequent transcripts are \$1.00 per copy.

Refund Policy

Richland Community College's refund policy is based on full payment of tuition, fees, and other charges at the time of registration. Any student who registers and then withdraws from any or all classes at the College will have a portion of his or her tuition returned according to the following schedule:

Regular Semester:

Prior to beginning of semester	100%
First week of classes (by end of fifth day of semester)	100%
After the first week of classes	0%

Summer Session:

Prior to beginning of semester	100%
First week of classes (by end of fifth day of semester)	100%
After the first week of classes	0%

For classes that do not follow a traditional semester schedule, refunds will be issued at the equivalent of the above regular semester schedule. Students participating in the Pell grant program shall receive refunds computed in accordance with Federal regulations.

The Registration Fee is non-refundable unless the class has been cancelled. Lab fees and all other fees are non-refundable after classes begin.

All withdrawals and drops must be initiated by the student and must be processed through SDS before any refund can be made.

Residency

A student is considered a resident of Richland Community College District 537 if one of the following criteria is met for at least 30 days prior to enrollment:

1. The student resides with his/her parents within the District; or
2. The student does not live with his/her parents but depends on them for support at Richland, and both the student and the parents reside within the District; or
3. The student is married and maintains a family residence within the District; or
4. The student is 18 years of age or older, is self-supporting, and maintains a residence within the District.

Charge-Back Authorization

In-District Students Planning to Attend Another Community College

A resident of Richland Community College District 537 may receive a Charge-Back to attend another Illinois community college if the student is accepted into a program not offered by Richland. Both full- and part-time attendance is allowed.

Applications for Charge-Back are reviewed and disapproved or recommended to the Board of Trustees for approval. Charge-Backs are approved only for degrees or certificates. Single courses are not eligible for Charge-Backs. Charge-Back Applications are acted upon by the Richland Community College Board of Trustees on the third Tuesday of every month.

A resident of Richland's District 537 who plans to attend another community college and wants to avoid out-of-district fees should request an Application for Charge-Back in SDS at Richland. It must be completed and returned to SDS at Richland no later than 30 days prior to the beginning of the term for which application for Charge-Back is being made.

Out-of-District or Out-of-State Students Planning to Attend Richland

A resident of another community college district who plans to attend Richland Community College and wants to avoid out-of-district fees should request an Application for Charge-Back from the community college located in the district in which he/she resides. It must be completed and returned to that college no later than 30 days prior to the beginning of the term for which application for Charge-Back is being made.

Applicants who reside in another community college district may be granted an out-of-district or out-of-state tuition waiver for work-related courses if they are employed at least 35 hours per week by an entity located in Richland's District or if they are enrolled in a course that is being provided under the terms of an agreement between the employing entity and Richland.

Cooperative Agreements

Cooperative agreements exist between Richland Community College and the community colleges listed on page 109. Under the agreements, no Charge-Backs or out-of-district fees are required of students enrolling in the designated programs of study. A cooperative agreement authorization must be completed and submitted to the college that the student plans to attend.

FINANCIAL AID

All students seeking state or federal financial assistance are required to complete the Free Application for Federal Student Aid (FAFSA) unless otherwise instructed. This application may be obtained from Student Development and Services (SDS) at Richland or from high school counselors. Early application is important.

All students receiving financial aid at Richland must be high school graduates or have received a GED Certificate.

Grants

Pell Grant

Awarded to help undergraduates pay for their education after high school. The Pell Grant, based on need, is the largest federal student aid program. For many students, these grants provide a "foundation" of financial aid to which aid from other programs may be added. Unlike loans, grants do not have to be paid back. Eligibility is determined through the FAFSA.

Supplemental Educational Opportunity Grant (SEOG)

Awarded to help pay for education after high school and available to undergraduates only. These grants are awarded to students who demonstrate exceptional need determined through the submission of the FAFSA. Because of limited funding, priority is given to students who complete files the earliest.

Illinois State Monetary Award Program (MAP)

Provides all or part of the tuition and fees of students who qualify on the basis of financial need. Full- and half-time awards are available for up to five years of undergraduate study. Eligibility is determined through the FAFSA. Application should be made prior to June 1 for full-year consideration.

SCHOLARSHIPS

Merit Recognition Scholarship

Provides \$500 scholarships to Illinois students who rank in the top 5% of their high school class at the end of the seventh semester. Initial eligibility is determined by high school counselors. Eligible students will receive an application from the Illinois Student Assistance Commission that they must complete and submit to the college they will be attending.

National Guard/ Naval Militia Program

Is available to enlistees and officers to the rank of captain in either of these services for the equivalent of eight semesters or twelve quarters of undergraduate study. The award pays tuition and some fees. Eligible students should obtain a separate application available in SDS or guard/militia units.

Policeman/Fireman Scholarship

Provides tuition and mandatory fees for children under age 25 whose parents were killed in the line of duty. Interested students should apply directly to the Illinois Student Assistance Commission, 106 Wilmot Road, Deerfield, IL 60015.

Correctional Workers' Scholarship

Provides tuition and mandatory fees for dependents of workers who were killed or were 90% disabled in the line of duty since January 1, 1960. Application should be made directly to the Illinois Student Assistance Commission, 106 Wilmot Road, Deerfield, IL 60015.

MIA/POW Scholarship

Pays the cost of tuition and fees for spouses and children of veterans who have been declared missing in action, were prisoners of war, died as a result of a service-connected disability, or have a permanent and total disability as a result of military service. The veteran must have been a resident of Illinois prior to entering military service. Eligible dependents are entitled to use the Scholarship for up to 120 semester hours. Children must begin using the Scholarship prior to their 26th birthday, and spouses must begin using the Scholarship no later than ten years from the effective date of the veterans' eligibility. The Scholarship may be used for twelve years from the initial term of study. Applications are available in SDS.

Illinois Veterans' Grant (IVG)

Pays the cost of tuition and fees for veterans who were residents of Illinois before military service and who returned to Illinois within six months after service. Anyone who served honorably in the U.S. Armed Forces may be entitled, subject to the following requirements: Any veteran who was separated after August 11, 1967, must have served at least one year or have been separated for a disability directly related to such service. There is no minimum term of service requirement for veterans separated prior to August 11, 1967. The grant may be used for a maximum of 120 semester hours. Apply in SDS.

Department of Rehabilitation Services

Provides financial assistance for postsecondary education for physically or mentally handicapped Illinois residents who have financial need. Interested individuals should apply to the local Department of Rehabilitation Services.

RCC Foundation, Private, and Institutional Scholarships

A number of RCC Foundation and institutional scholarships have been established at Richland. Some require that the student has filed the FAFSA and submitted a Student Aid Report to the College in order to be considered. Some are need-based, and some are not. Many are based on grades, achievement, and other unique criteria. Awards are made for the Fall and Spring Semesters only, and the student must be enrolled full time unless noted. Applications for Foundation and Institutional Scholarships must be submitted by March 31 for the following fall semester. Applications, inquiries, and selection procedures are processed through SDS. Call 875-7200, Ext. 267.

STUDENT EMPLOYMENT

Federal Work-Study

This financial aid program authorizes part-time, on-campus employment for eligible students. Employment does not exceed 20 hours per week. Eligibility is determined by filing the FAFSA.

Student Worker

Students who want to work on campus must fill out a yellow Student Employment Application form available in SDS.

Off-Campus Employment

SDS maintains a current list of job openings within the Richland District. Many Richland students are employed on a part-time basis by local places of business while attending college full- or part-time. See the Job Placement listings on bulletin boards throughout the College and contact the Director of Financial Aid and Job Placement in SDS.

LOANS

Richland participates in the Federal Family Education Loan Program. These loans include the Subsidized Stafford Loan, the Unsubsidized Stafford Loan, and the PLUS Loan (Parent Loan). These are low-interest loans to students made by banks, credit unions, and savings and loan institutions and guaranteed by the government. In order to receive a loan students must apply for financial aid by filling out the Free Application for Federal Student Aid and submitting their student aid report to the Financial Aid Office. Students must be in good standing academically to receive a loan. Loan counseling is required for all applicants. For more information, contact the Richland Financial Aid Office.

Transfer Students

Students transferring their financial aid from another school to Richland may obtain written procedures from SDS explaining how financial aid is transferred. Transfer students must also submit a Financial Aid Transcript(s) and academic transcript(s) from all colleges previously attended.

STANDARDS OF ACADEMIC PROGRESS FOR FINANCIAL AID RECIPIENTS

The Richland Community College Office of Financial Aid is required by federal regulations to monitor academic progress toward a degree or certificate for all financial aid recipients.

In order to receive financial aid at Richland, a student's total academic record, including transfer work, must be evaluated. The following two conditions must be met each semester in order to receive financial aid:

Condition I. Grade Point Average

The following grade point average must be maintained:

Cumulative hours attempted	GPA required
1 - 15 hours	1.70
16 - 30 hours	1.85
31+ hours	2.00

Students who do not earn the above overall grade point averages will be placed on probation for one semester. Students who have attempted 40 credit hours and do not have a 2.0 GPA will be suspended from financial aid.

Condition II. Completion of Hours

Based on the student's enrollment status at the end of the first week of classes, the following minimum hours must be completed at the end of the term and/or school year.

Initial enrollment status	Minimum hours which must be completed
Full-time (12+ hours)	8 hours per term/ 20 hours per year
3/4-time (9 to 11 hours)	6 hours per term/ 15 hours per year
1/2-time (6 to 8 hours)	3 hours per term/ 9 hours per year
Less than 1/2-time (1 to 5 hours)	Must complete all

Grades of F, W, or I do not count as passing grades. A student with an incomplete class at the end of the term that prevents him/her from complying with the above conditions will be placed on Probation or Suspension until the incomplete class is completed and a grade is posted.

Summer hours may be used to make up deficient hours for the year.

Students re-entering Richland after an absence of five or more years from any college who do not meet the Satisfactory Progress standards will be placed on probation instead of suspension.

Failure to meet Satisfactory Academic Progress conditions listed above will result in Financial Aid Probation or Suspension.

Financial Aid Probation

Students who do not meet the grade point average requirements and the completion of hours requirements as explained above will be notified in writing that they have been placed on Financial Aid Probation.

A student may continue to receive state and federal grants, scholarships, and work-study during a probationary semester.

Students may not participate in any Federal Family Education Loan Program (Stafford, PLUS) while on probation.

Students placed on probation must sign a Probation Contract.

Students must complete the classes taken during the Probation term with a 2.00 GPA and meet required completion of hours as explained above.

If the conditions of the Probation Contract are met and all other conditions for Satisfactory Progress are met, the student is returned to good standing.

Failure to meet the conditions of the Probation Contract will result in Financial Aid Suspension.

Financial Aid Suspension

Financial Aid Suspension will result in the loss of all state and federal financial aid. The following must be accomplished during one term in order to be reinstated:

1. Complete at least six credit hours, with no drops or withdrawals, at student’s expense, and
2. Earn a 2.0 GPA for the semester.

Appeals

A financial aid appeal may be filed if the student feels unusual circumstances affected his/her progress. To file an appeal, the student must fill out a Financial Aid Appeal Form, which may be obtained from the Financial Aid Office. The appeals committee will meet once a month.

Program Completion Policy

Maximum time allowed for Program Completion:

Program	Attempted Credits
Associates Degree	96
Advanced Certificate	60
Basic Certificate	40

Hours attempted include all courses enrolled in after the first week of classes. It includes grades of F, W, and I.

A student requiring remedial courses will be allowed an additional twenty-four hours attempted for remedial course work.

Students may appeal the 96 credit rule by filling out a Financial Aid Appeal Form available in the Financial Aid Office.

Other Financial Aid Policies

A student must be attending classes on a regular basis. Any student reported as not attending classes will have his/her financial aid adjusted accordingly.

A student must be enrolled in an eligible program leading to a certificate or degree. All courses taken must be applicable to that degree or certificate. The Certified Nurses Aid course and Emergency Medical Technician courses are not eligible courses.

Disbursement

The dates for disbursing Pell and/or loan checks are published prior to the beginning of each academic year. Generally, loan checks are disbursed no earlier than one month after the start of each term, and Pell checks are disbursed two weeks after mid-term.

An enrolled student’s award will be determined by his/her hours of enrollment at the time of check disbursement.

A student who withdraws from all classes or drops below half-time prior to disbursement will not be issued a Pell or loan check. However, outstanding expenses will be paid out of the financial aid award whenever possible.

Loan Policies

All loan applicants, including PLUS loan applicants, must file a FASFA and have it verified before a loan will be certified.

No Federal Family Education Loans (Stafford, PLUS) will be certified for students on Financial Aid Probation.

REFUNDS TO AID RECIPIENTS

Students receiving funds from the State of Illinois or from Federal Title IV financial aid programs that paid their tuition and fees will receive any refund due after funds representing financial aid awards are returned to the appropriate state or federal financial aid account.

New students' expenses will be pro-rated according to the pro-rata refund policies established by the federal government.

Verification

All financial aid applicants are required to submit documents that verify the financial information on their student aid report. Documents requested may include, but are not limited to, tax returns, W-2's, and proof of all untaxed income.

VETERANS BENEFITS

Veterans may be eligible for federal and state benefits to assist them in completing their GED, certificate, and/or associate's degree.

Veterans are required to meet the same academic standards of progress as other students. In addition, if a veteran withdraws from school or drops a class(es), he/she may be required to repay the Veterans' Administration all or part of the monthly payments received from the beginning of the term. (This would not apply if the Veterans' Administration determines the reason for dropping or withdrawing is beyond the student's control.) Also, veterans are required to enroll in courses that are generally acceptable to meet requirements for their educational or vocational objectives in order to receive monthly benefits.

Veterans need to enroll in and complete at least six semester hours to receive half-time monthly benefits. "Accelerated" courses, independent study courses, or televised courses may affect monthly benefits, so veterans are advised to see the Director of Financial Aid and Job Placement or the Veterans' Certification Official before enrolling in these courses.

Applications and/or information concerning the following Veterans' programs are available in SDS:

Chapter 30 - Montgomery G.I. Bill - Active Duty Educational Assistance Program

Chapter 106 - Montgomery G.I. Bill - Selected Reserve Educational Assistance Program

VEAP - Post-Vietnam Era Veterans' Educational Assistance Program

Chapter 35 - Survivors and Dependents' Educational Assistance Program

Chapter 31 - Disabled Veterans - Vocational Rehabilitation

Illinois Veterans' Grant

Refer to Scholarships, page 30.

MIA/POW Scholarship

Refer to Scholarships, page 30.

Tutorial Assistance

The Study Assistance Center offers tutoring for students who need extra help in courses. In addition, veterans enrolled on at least a half-time basis are eligible for VA benefits to pay a qualified tutor, if needed.

Credit for Military Training

Veterans may receive college credit for training they completed while in the Armed Forces.

Credit is also available for health and physical education experiences obtained in the military. Please see the Bulletin section entitled "Credit Evaluation Programs" (Page 22), and check with the Director of Admissions, Records, and Research.

STUDENT SERVICES

Orientation

New students are encouraged to participate in New Student Orientation before beginning classes. The Orientation Program helps students become familiar with the staff, school policies and regulations, social and recreational activities, and campus facilities.

The Orientation Program is provided through Student Development and Services (SDS). New students are notified of the Orientation schedule.

An orientation course for one credit hour is offered. The course covers such topics as study skills, career exploration, stress, listening, notetaking, job seeking skills, and time management.

The Student Mentor Program provides ongoing orientation services to the Richland student.

Student Mentor Program

The Student Mentor Program, established Spring Semester 1990, is an important component of the New Student Orientation Program. The Mentor Program was developed to aid new students in this transition to higher education and to expose them to the broad educational opportunities at Richland. It is students helping students.

Student Mentors may be nominated by faculty members or staff or may apply directly to the program. Mentors participate in New Student Orientation, Registration, College Day, etc., as well as provide ongoing support to new students in the areas of positive attitude development and relationship-building with faculty, staff, and peers. Student Mentors are knowledgeable and can refer students to appropriate College services and staff who provide services for students.

Students interested in becoming Mentors should contact SDS.

Career Counseling and Academic Advisement

The staff at Richland Community College knows that planning a career is an important part of most students' education. SDS offers career counseling on a one-to-one basis and has a computer-based guidance system and other inventories available to help students explore career possibilities.

The academic advisor, faculty, or counselor will assist a student in course selection and scheduling for subsequent semesters and in long-range educational and vocational planning. Students are encouraged to base their selection of an advisor on the student's field of interest and the advisor's area of expertise.

Job Placement

Job placement assistance is available through the Director of Financial Aid and Job Placement in SDS.

Job openings are posted daily in Job Books in SDS. Students interested in full- or part-time work should consult the Job Books and submit a resumé to the Director of Financial Aid and Job Placement.

Students are also encouraged to register with the local Illinois Department of Employment Security Office.

Special Populations

Richland Community College offers special services to students with disabilities by providing counseling, special equipment and materials, instructional aids, tutors, note-takers, interpreters, and testing, as well as many individualized services. For more information, students should contact the Special Populations Coordinator.

Student Appraisals

SDS provides interest and placement tests, Human Potential Seminars and career development classes, and individual counseling to help students explore and understand their aptitudes, abilities, and personal characteristics.

The goal of student appraisals is to assist students to heighten their self-awareness, assess their values, affirm their strengths, and make appropriate decisions.

Interested students should contact SDS.

Options/ Opportunities Program

The Options/Opportunities Program serves homemakers, who are widowed, divorced, or separated and need help finding a job. It helps low-income single parents, displaced homemakers, and men and women going into non-traditional careers with tuition, child care, mileage, and books. Call 875-7200, Ext. 288, for more information.

Honors Opportunities Program

Students with excellent academic skills are encouraged to apply for the Honors Opportunities Program. The Program is designed to offer students an added dimension to their studies through small class seminars, special lectures, programs, and field trips.

The Honors Opportunities Program is open to full- and part-time students who plan to complete any associate degree at Richland. Seventy-five percent of all tuition is waived for Honors Program participants.

To be admitted to the program:

1. Recent high school graduates must have an ACT composite score of 27 with no individual score lower than 22 (or equivalent scores on any national testing program).
2. Presently enrolled students or transfer students must have a cumulative grade point average of 3.5 or better on a 4.0 scale for 12 or more semester hours in courses equivalent to Richland courses numbered 100 or above.
3. All students must agree to complete the requirements of the program as outlined in the Honors Opportunities Program Brochure available from SDS or from Division offices.

A new student in the top 10% of his/her graduating class whose ACT composite score is 25 or better with no score lower than 20 will be permitted to take an honors course. Other non-honors students may take honors courses if they have a 3.00 GPA or if they have a 3.5 in the field of the course and consent of the instructor or of the Director of the Honors Program. Non-honors students who complete honors courses with grades of "A" or "B" may have "H" added to the grades on their transcripts, but their tuition will not be waived. Call the Director of the Honors Program for more information.

Child Care Services

Licensed child care services are provided for the children of Richland students (credit and lifelong learning), staff, and faculty whenever classes are in session (except weekends).

The program accepts children ages 2 (toilet trained) through 12. Both day and evening hours are available. The Center operates on an hourly basis at a rate of \$1.50 per hour for the first child. Additional children are \$1.00 per hour per child.

Children may attend for a maximum of five hours per day provided that they leave the Center within those five hours for a half-hour break. Children may return to the Center after 4:00 p.m. for an additional five hours during the evening provided that they leave the Center within those five hours for a half-hour break.

Pre-school activities are available to combine play with learning. These activities include art, music, science, math, motor development skills, and language skills. School-age children are offered table games, art, and science activities. Computer software is available for all ages.

The Child Care Learning Center is licensed by the Illinois Department of Children and Family Services and is supported by Richland student activity funds, user funds, and fundraising activities.

The Center is open from 7:30 a.m. to 9:30 p.m., Monday through Thursday, 7:30 a.m. to 5:00 p.m. on Fridays.

Parking

Parking stickers may be obtained at the Business Office.

Handicapped parking stickers/licenses are only issued by the Secretary of State's Office; contact the Driver's License Facility.

STUDENT LIFE

MULTICULTURAL STUDENT ENRICHMENT PROGRAM

The Multicultural Student Enrichment Center promotes the educational experiences of students through the development of, exposure to, and participation in social, cultural, intellectual, recreational, and governance programs. The MSEC also monitors scholastic standing of groups and individual students and recommends programs or services for improvement. Through various communications, students are informed about institutional policies and procedures and how these are related to their lives and activities.

Clubs and organizations are structured to meet the needs of a changing student population, including creating more diverse programs and services to meet the needs of ethnic populations, older and disabled students, and other student groups with unique interests.

We invite you to become involved in MSEC campus activities, organizations, and clubs to enrich your college life.

Clubs

A variety of professional, honorary, and social clubs are based at Richland Community College.

The **Art Club** sponsors trips to major museums such as the Art Institute of Chicago and the St. Louis Museum. The club's main purpose is to provide access to the great examples of visual arts in outlying museum facilities.

BIT/SWSN provides assistance and support to students with disabilities in the areas of adaptive equipment and support services. The continuing goal of the club is to increase the awareness of the campus and community in regards to individuals with disabilities.

The **Black Student Association** creates unity among African-American students by promoting political, social and economic awareness in Black students at Richland and within the Black community.

The **Christian Fellowship Club** presents Christian morals and values to students through charitable activities, workshops, and student discussion.

Collegiate Secretaries International assists career-oriented business students in developing a better understanding of office professions and the business world.

The **Creative Writing Club** helps students develop their prose and poetry. Each year the Club publishes *IMAGES*, which is a collection of student writing.

The **Data Processing Management Association** is a nationally known organization for C.I.S. majors. Richland's student chapter is also known as the Computer Club.

The **Early Childhood Professionals Club** provides educational opportunities for child care students through promoting issues that directly affect child care workers.

The **Ebony Club** seeks to heighten unity, cooperation, and dignity of African-American students, as well as foster better understanding between African-American students and all faculty, staff, administration, and students.

The **Engineering, Math, Science Club** promotes interest in engineering through visits to college campuses, sponsoring academic competition, and involvement with JETS.

The **Film Club** promotes appreciation of movies among students by viewing and discussing films and participating in other activities relating to the enjoyment of movies.

The **Honors Club** encourages academically talented students to pursue knowledge and strive to achieve their maximum potential. This club provides special programs of instruction, recognition for academic excellence, and opportunities for interaction with students and faculty members.

The **Horticulture Club** strives to heighten awareness of the Horticulture program at the College and in the community. This club enriches a student's education by attending and organizing educational seminars and by selling plants grown in the greenhouse.

Le Cercle Francais promotes interest in French and in Francophone cultures around the world.

The **Music Appreciation Club** promotes awareness and personal development among students through listening and playing different styles of music. The club sponsors guest artists and organized student-based programs.

The **Nursing and Health Careers Club** provides a forum in which to explore the education and vocation of nursing. Health care professionals and advanced nursing students extend current knowledge in the field of nursing to new students.

Richland's chapter of **Phi Theta Kappa**, a national two-year college honor society, initiates new members at a spring banquet. Students with a 3.25 grade point average in twelve hours of transferable credit during a specific semester are eligible to join.

The **Spanish Club** promotes interest in Hispanic and international cultures and languages. Members are provided with culturally diverse activities including trips to ethnic localities.

Theatre Engage promotes personal development and enjoyment through drama and theatre. Members assist in all aspects of theatre production and also assist other local theatre groups.

Contact the Director of the Multicultural Student Enrichment Center or the club's current faculty advisor for more information.

Organizations

Licensed **Child Care Services** are provided for the children of Richland students, staff, and faculty whenever regular classes are in session (except weekends). Pre-school activities are available to combine play with learning. These activities include art, music, science, math, motor development skills, and language skills. Children ages 2 to 12 years of age are accepted. School-age children may attend on days when public schools are not in session if there is available space.

The *Communicatur* is the **Student Newspaper** and is staffed by student reporters, photographers, and students from Richland's journalism classes. The newspaper is published nine times each semester and is available at various locations on and off campus. The *Communicatur* office is located in The Multicultural Student Enrichment Center, Room C135.

Limited scholarships are available to members of the *Communicatur* editorial board. Story and picture ideas and letters to the editor are always welcome.

The **Forensics (Speech) Team** competes in intercollegiate competition and performs in the community. The team allows students co-curricular experience in public speaking, oral interpretation, and acting. Past members have achieved National Championships, increased self-perception, improved communication skills, and acquired a sense of collegiate achievement.

The **Program Board** consists of students and faculty who plan and arrange College-wide events. Unique learning opportunities are provided through seminars, lectures, professional entertainment, tours, and displays. Involvement in the Program Board brings hands-on experience in the areas of time management, delegation, and budgeting, as well as developing skills in leadership, decision-making, and stress tolerance.

The **Student Mentor Program** helps new students in their transition to higher education and exposes them to the broad educational opportunities and services at Richland. Besides participating in the New Student Orientation Program, student mentors provide ongoing support to new students in the areas of positive attitude development and relationship-building with faculty, staff, and peers. Student mentors are knowledgeable and can refer students to appropriate College services and staff.

The **Student Senate** represents the students of Richland through effective communications by promoting unity and fellowship with all members of the College community. The Student Senate strives to represent and interpret adequately student opinion as related to campus policy and to distribute the auxiliary fees to provide a variety of educational and social opportunities for students. Through College-wide elections six senators are elected each Fall and Spring Semester.

The **Student Trustee** is elected each spring semester by the student body to serve as a non-voting member of the Board of Trustees. The Student Trustee may make and second motions during Board meetings and also serves on the twelve-member Student Senate.

STUDENT RIGHTS AND RESPONSIBILITIES

Student Records and Confidential Information

The following is a condensed version of the College's policy regarding student records:

All information received by the College becomes a part of the student's education record except for information from a physician, psychiatrist, psychologist, or other recognized professional or paraprofessional. Student education records are classified as follows:

1. **Directory Information** — Name, address, telephone number; date and place of birth; program in which enrolled; participation in officially recognized institutional or extracurricular activities; dates of attendance; certificates and degrees received; last educational institution attended.
2. **Confidential Information**— All information other than directory information is considered confidential. Examples of confidential items include:
 - (1) Student's academic record, grade reports, high school and college transcripts, and test results;
 - (2) Correspondence, including letters of recommendation and comments from counselors and faculty; and
 - (3) Application information for financial aid, Illinois Veterans' Scholarship, and G.I. Bill benefits.

Directory information may be released by the College to any person or organization without the student's consent. If a student does not want directory information released, a form must be filed with SDS each term.

Access to Confidential Information By Students

Students may have access to the confidential information in their own records by submitting the proper form to SDS.

Financial information submitted by the student's parents in support of a financial aid application or letters of recommendation and other confidential correspondence placed in the student's education record before January 1, 1975, may be waived without prejudice.

On request, the College will provide students with a list of the types of education records kept, including directory and confidential information.

Richland will provide copies of education records to students at the students' expense and will respond to reasonable requests for explanations and interpretations of their records. Copies of transcripts from high schools or other colleges that are on file cannot be provided. Students also have the right to a hearing to challenge any portion of their education records. Requests for a hearing should be directed to the Dean of Student Development and Services.

Access to Confidential Information By Others

Confidential information contained in a student's records will not be released to other parties without the student's consent. Exceptions are listed below, and information is given only with the understanding that such information may not be passed on to a third party without the student's written consent.

The College will maintain a record of all persons other than College personnel who have obtained access to a student's records. The College record will include the legitimate reason that the outside party has for reviewing the student's education record.

Persons and agencies who may review students' records are:

1. College personnel having a legitimate need for information as a result of their College duties;
2. Colleges, universities, and other academic institutions at which the student wishes to enroll;
3. Agencies and their representatives requesting financial aid information in connection with a student's application for or receipt of financial aid;
4. State and local officials to whom the College must release information as required by a state statute or administrative regulation adopted before November 19, 1974;

5. State and federal officials auditing and evaluating federally-supported education programs or enforcing legal requirements related to these programs;
6. Organizations conducting studies for the College, including the development, validation, or administration of predictive tests, administration of student aid programs, and improvement of instruction;
7. Judicial order or subpoena, providing the College notifies the student before complying; and
8. Appropriate persons (within narrow limits) if the knowledge of confidential information is necessary to protect the health or safety of the student or other persons.

Withholding Student Information

The College has the right to withhold grade reports, transcripts, certificates and degrees, and other student information if the student has unmet obligations, including financial obligations, to the College.

Academic Dishonesty Policy

Each student is expected to be honest in his/her class work or in the submission of information to the College. Richland regards dishonesty in classroom and laboratories, on assignments and examinations, and the submission of false and misleading information to the College as a serious offense.

A student who cheats, plagiarizes, or furnishes false, misleading information to the College is subject to disciplinary action up to and including failure of a class or suspension/expulsion from the College.

Discipline Policy

Students enrolled at Richland Community College are considered by the College to have reached the age of responsible citizenship and are expected to conduct themselves in a responsible manner while on campus. The College has the responsibility to maintain a campus-wide environment in which there is the freedom to learn. This responsibility requires that appropriate conditions and opportunities be consistently maintained in classrooms, throughout the College, and upon its grounds.

By the act of registration for classes at Richland, students obligate themselves to adhere to the rules and regulations that the institution formulates and publishes in the College Bulletin, Student Handbook, and/or other official documents. Accordingly, students are expected to assume primary responsibility for their own conduct.

Students may be disciplined up to and including temporary or permanent removal from the College for acts of gross misconduct or disobedience or any and all other actions or unlawful conduct that would tend to interfere with the educational process, disrupt the normal activities of the institution, or infringe upon the rights of others. Additionally, the responsibility for complying with all federal, state, and local laws rests entirely with the students.

Smoking Policy

The policy of Richland Community College is to respect the rights of both the non-smoker and the smoker in Richland buildings and facilities. When these rights conflict, Richland administrators, faculty, staff, and students should endeavor to find a reasonable accommodation. When such an accommodation is not possible, the rights of the non-smoker should prevail.

Smoking and the use of smoking materials are allowed only in designated areas in the buildings. All remaining areas are non-smoking areas.

Rules and regulations to enforce this policy are determined by an appropriate College committee and communicated to students and staff on a regular basis.

Chronic Communicable Disease Policy

A student with chronic communicable diseases may attend school in the regular classroom setting whenever, through reasonable accommodation, the risk of transmission of the disease or the risk of further injury to the student is sufficiently remote in such a setting.

Each student with a chronic communicable disease shall be evaluated by a placement committee that will consist of the President, as chairperson, and other appropriate College personnel, a physician or other consultants selected by the President or his designee, the student's physician, public health personnel, the student, and the student's parents or guardians.

The student's placement shall be determined in accordance with the above standards and upon the following factors: the risk of transmission of disease to others; the health risk to the particular student; and reasonable accommodations that can be made without undue hardship to reduce the health risk to the student and others. The vote of a majority of the committee shall determine the student's placement.

The student shall be periodically reevaluated, at least once a year, by the placement committee to determine whether the student's placement continues to be appropriate. The student's medical condition shall be disclosed only to the extent necessary to minimize the health risks to the student and others. The College President may establish additional rules and regulations designed to implement this policy.

If the student is handicapped, special arrangements may be made as required by Section 504 of the U.S. Rehabilitation Act of 1973.

Numerous pamphlets are available throughout the College dealing with chronic communicable diseases. Counselors available in SDS can make referrals for psychological counseling through the Decatur Mental Health Center.

Substance Abuse—Intoxicant Use Policies

Drug-Substance Abuse

A student shall not possess or use any illegal or controlled drug or substance in either refined or crude form on College property except under the direction of a licensed physician. Any student who violates any provision of federal or state law pertaining to the manufacture, possession, purchase, sale, or use of drugs on College property will be referred to the appropriate civil authority. Irresponsible behavior attributable to any such drug or substance will not be tolerated and will be subject to College disciplinary action, which may include expulsion from the College.

Intoxicant Use Possession and use of intoxicants on College property is prohibited. Irresponsible behavior attributable to any such intoxicants will not be tolerated and will be subject to College disciplinary action, which may include expulsion from the College.

Pamphlets, Counseling

Numerous pamphlets are available throughout the College dealing with drug, substance, and alcohol use and addiction. Counselors in SDS will make referrals to appropriate agencies.

Sexual Harassment Policy

Employees and students are prohibited from sexually harassing other employees or students.

In the case of sexual harassment of a student by an employee, sexual harassment means:

1. Any sexual advance by an employee toward a student.
2. Any request by an employee of a sexual advance or request for sexual favors from a student.
3. Any conduct of a sexual nature by an employee directed toward a student when
 - a. the student's submission to or rejection of such conduct is either explicitly or implicitly a term or condition of the student's grade or the student's participation in any school-sponsored activity, or
 - b. such conduct has the purpose or effect on a student of reasonable sensibilities of creating an intimidating, hostile, or offensive school environment for the student.

In the case of sexual harassment of a student or employee by a student, sexual harassment means:

1. Any sexual advance by a student toward an employee.

2. Any request by a student to an employee for sexual favors from the employee.
3. Any conduct of a sexual nature by a student directed toward an employee when such conduct has the purpose or effect on an employee of reasonable sensibilities
 - a. of creating an intimidating, hostile, or offensive school environment for the employee, or
 - b. of influencing either the student's grade or participation in any school-sponsored activity.
4. Sexual harassment prohibited by this policy includes verbal or physical conduct. The terms intimidating, hostile, or offensive as used above include conduct that has the effect of humiliation, embarrassment, or discomfort.

Complaints alleging a violation of this policy must be brought to the attention of appropriate school officials. In the case of a student complaint, the appropriate official is the Dean of Student Development and Services.

Complaints must be filed with the appropriate school official within 30 days of the date of the alleged harassment.

CONTINUING & COMMUNITY EDUCATION

Adult Basic Education/ Adult Secondary Education (GED)

As part of the community education offerings, General Studies courses are conducted by the College each semester to help individuals review areas of reading, English expression, and general mathematics in preparation for taking the GED test. The passage of this test leads to awarding of a High School Equivalency Certificate by the Superintendent of the Regional Office of Education.

Persons interested in enrolling in the classes must first attend a GED orientation. Orientation is held at Richland every Wednesday morning at 10:20 a.m. in the GED Center or at other times by special appointment. From this orientation, individuals can be properly placed in a GED class that meets their needs. The session is free and lasts about an hour. All classes and textbooks for the program are free.

Individuals interested in enrolling in GED classes must be 18 years of age or older, and must have graduated the class with which they began high school.

English as a Second Language

English as a Second Language (ESL) courses are for individuals who are native speakers of another language and who need to improve their English speaking skills for academic or employment purposes. Courses are offered at the pre-beginning, beginning, intermediate, and advanced levels. Persons interested in enrolling in these classes should contact the GED office for further information. All classes and textbooks for this program are free.

Lifelong Learning Program

The Continuing Education Program promotes access to lifelong learning by providing programs in convenient locations as well as on campus. Credit, general studies, and lifelong learning classes are held in locations throughout the Richland District. Programs are based on a continuous assessment of community needs.

Richland Community College considers the extension of its resources into the community through cooperation with other groups as a high priority in helping to serve the needs of the District's varied population.

A listing of the Continuing Education classes to be offered can be found in the Lifelong Learning Class Schedule, published prior to the beginning of each semester and the Summer Term. The schedule will indicate the days, times, and locations of the classes and the expense to the student. There are seven major areas of focus:

1. Professional/Technical/
Career Development
2. Leisure Learning (seniors)
3. Personal Interest
4. General Studies/
Vocational Skills Credit
5. Community Services/
Cultural Programs
6. Youth Programming
7. Entrepreneurial Activities

1. Professional/Technical/ Career Development

- a. Continuing Education for Professionals — Programs designed to update knowledge and theory to fulfill job responsibilities where continuing education units are required or suggested.
- b. Courses for persons who want to enter the job market, find a new career, or upgrade their position within their present occupational field. Classes are available in a variety of areas.

2. **Leisure Learning** — Richland Community College enables men and women 65 years of age and older to enrich the quality of their lives through participation in intellectual, social, and recreational activities with their peers. Senior citizens who are residents of the Richland

District receive a senior citizens' discount and are assessed only one-half the regular tuition for any course or class.

Any person 65 years or older whose annual household income is less than \$14,000 may enroll in any credit or lifelong learning course without the payment of tuition under the following conditions:

- a. Available classroom space exists in the course;
- b. Tuition-paying students enrolled constitute the minimum number required for the course;
- c. A certification statement is signed by the student verifying senior citizen status and income level; and
- d. All fees, including the registration fee, are paid in full.

3. **Personal Interest** — Richland encourages adults of all ages and educational backgrounds to turn leisure time into creative, productive opportunities. Adults can sample various kinds of exercise, games, sports, hobbies, crafts, art, music, and dance. Qualified experts create informal classrooms in which participants may express themselves.

Self-improvement courses enable individuals and groups, young and old, to benefit from new skills. Many classes enhance the students' opportunities to learn for profit as well as pleasure.

4. **General Studies/Vocational Skills Credit** — Registration for General Studies and vocational skills credit courses is conducted at the same time and locations as registration for other credit courses prior to the beginning of each semester. The refund policy for General Studies and vocational skills courses is the same as for all credit courses; refer to the Tuition, Fees, and Charges section (page 26).
5. **Community Services/Cultural Programs** — Community services include the sharing of the educational resources and specialized knowledge of Richland's faculty and staff with area organizations through lectures, conferences, institutes, general advisory services, reference bureaus, and cultural programs. They are designed to complement and enhance existing community projects and special college-community programs either initiated by the College or as a joint effort with community organizations.

Arrangements can be made for seminars, workshops, conferences, and cultural events expressly tailored to meet the needs of professional organizations, business and industrial associations, or groups of private citizens. Such activities can be designed for small or large groups sharing a common interest or concern.

6. **Youth Programming** — Richland encourages young people to attend classes at the College offered for pre-schoolers to teens, including College for Young Learners classes offered each summer.
7. **Entrepreneurial Activities** — The Lifelong Learning Division can also assist entrepreneurs with information and resources to help them with the basic processes of starting a small business.

For more information about these offerings, contact the Lifelong Learning Division, 875-7200, Ext. 260.

The Center for Business and Community Development

The purpose of the Center for Business and Community Development is to operate a creative and innovative program promoting Richland's involvement with business, industry, and the community to meet the needs of today and the challenges of the future.

The Center provides seminars, workshops, and classes for professional and personal development; cultural and public affairs programs; and economic enrichment assistance for rural communities in the District.

Richland Foundation

The Richland Community College Foundation was formally established in 1985 and became active in 1987 to encourage and receive monetary and in-kind contributions and support for the College. Foundation funds are designated for scholarships, facilities, and equipment for the campus, technological innovations, educational and developmental programs, and community service projects. For information, call 875-7200, Ext. 206.

Alumni and Friends Association

The Richland Alumni and Friends Association was founded in 1985 to provide a link between alumni, friends, and the Richland community, and because of its similar goals and purpose, it is a part of the Richland Foundation. Former students, staff members, friends of Richland — even those who have never attended classes — are invited to join and to participate in the work of the Association.

Purposes and goals of the Association include advancing the growth and development of the College; promoting the personal, educational, and professional development of alumni; and establishing and encouraging a mutually beneficial relationship between the College and its alumni and friends. The membership dues are \$25 per school year and are tax deductible. For information call 217/ 875-7200, Ext. 206.

ACADEMIC INFORMATION & REGULATIONS

Student Status and Classification

First-time enrollee — one who has never attended a college or university.

Transfer student — one who has attended another college before enrolling at Richland.

Re-entering student — one who has attended classes at Richland but not registered for one or more terms (including the most recent) and has not attended another college since that time. Re-entering students must reapply by completing an application for admission in order to activate their files.

Freshman — one who has earned fewer than 30 semester hours (or 45 quarter hours) toward a degree or certificate at Richland.

Sophomore — one who has earned more than 30 semester hours (or 45 quarter hours) toward completion of a program at Richland.

Unclassified student — one who has reached junior standing at a college or university or who has earned a degree and is enrolled in selected courses rather than a program of instruction.

High-school student — one attending high school but who has enrolled in courses at Richland.

Full-Time Academic Load

An academic load of 12-17 semester hours is considered normal for a full-time student during regular semesters. During the summer session, 6-8 semester hours is considered a full load.

Part-time students are those students enrolled for less than the normal full load. Students with jobs or other outside commitments should limit their credit loads accordingly.

Students planning an overload of courses (more than 17 semester hours) must have at least a “B” average for 12 or more hours during the previous semester. All such overloads must be approved by an advisor or counselor before registration.

Study Time Required

Two hours or more of outside study for each class hour of lecture/discussion is usually needed for satisfactory performance, although this amount may vary from student to student.

Two-hour laboratories giving one credit hour usually demand an hour of outside work to complete assignments. If three hours or more of laboratory work are required for one credit hour, students should be able to complete assignments during the laboratory period.

Students who plan to work at outside jobs while attending Richland should take study time into consideration when planning their schedules.

Academic Standards

Graduation

A cumulative grade point average (GPA) of at least 2.00, or a “C” average, is required to receive an associate’s degree or certificate.

Probation

A student may be placed on academic probation for failure to achieve the minimum cumulative GPA required for good standing as shown below:

Cumulative hours attempted	GPA required
1 - 15 hours	1.70
16 - 30 hours	1.85
31+ hours	2.00

A student on academic probation is encouraged to meet with a counselor to discuss career and educational goals. The student may wish to utilize the Reading/Writing Center or the Study Assistance Center for tutorial assistance. The counselor may suggest a reduced number of courses to improve chances for success, a different program of study, or repeating courses previously taken with a grade of "D" or "F."

The student must achieve at least a 2.00 GPA during the following semesters after being placed on academic probation until being placed on good standing as illustrated in the previous chart. Failure to achieve a 2.00 GPA will result in dismissal from the College for one or more semesters, excluding the Summer Term.

An appeals procedure is available through the Academic Policies and Appeals Committee. Appeals should be started through SDS.

Grading Policy

The following letter grades are used at Richland to represent the student's level of performance in courses numbered 080 or above in this catalog:

A	Superior or excellent
B	Very good or above average
C	Good or average
D	Barely passing or below average
F	Failure or unsatisfactory
AU	Audit (For more information, see "Auditing a Course" in this section.)
I	Incomplete. All coursework must be finished by the end of each term, unless the instructor agrees in writing to a specified grace period no longer than 60 days after the end of the term. Failure to complete coursework within the 60-day grace period will result in a grade of "F."
W	Withdrawn from the College or dropped the course before the beginning of the final examination period. Performance in courses numbered 079 or below or most General Studies courses will be rated according to the following letter grades:
CR	Completed course requirements
X	Did not complete course requirements
I	Incomplete
W	Withdrawn from the course

Grade Point Average Calculation

A grade point average (GPA) for each student who has received a grade of A, B, C, D, or F will be calculated by term and by cumulative total.

Each grade listed above is assigned a quality point value (A = 4, B = 3, C = 2, D = 1, and F = 0). The grades AU, I, W, CR, and X do not have point values and are not used to calculate a GPA.

The point value of the grade received is multiplied by the number of credit hours given for the course. The results for each course during a term are totaled, and that sum is divided by the number of semester hours attempted.

If, for example, a student received an A for a 3-hour course and a B for a second 3-hour course, the grade point average would be figured as follows:

$$A = 4 \text{ quality points and } 4 \times 3 \text{ hrs.} = 12$$

$$B = 3 \text{ quality points and } 3 \times 3 \text{ hrs.} = 9$$

$$9 + 12 = 21 \text{ total points}$$

$$21 \text{ divided by } 6 \text{ attempted credit hrs.} = 3.5, \text{ the grade point average for that term.}$$

Semester Academic Honors

The Semester Academic Honors List includes the names of students who have:

1. Completed 12 or more cumulative semester hours; and
2. Completed 6 or more semester hours for the current term; and
3. Attained at least a 3.50 GPA for the current term.

Appealing a Grade

A student who feels he/she has received an unfair or inaccurate grade may appeal through the Academic Policies and Appeals Committee.

A student wishing to appeal should take the following steps:

1. Contact the instructor to try to resolve the problem.
2. If the problem is not resolved, contact the instructor's Associate Dean, who will act as a mediator.
3. If this action fails to settle the matter, contact the Dean of Instruction, who will also act as mediator between the student and the faculty member.
4. Contact the Dean of Student Development and Services, who will ask that a meeting of the Academic Policies and Appeals Committee be convened.
5. The committee's decision is final.

In each step of the process, the instructor and the student have the right to appear before the committee to explain their actions.

All other types of appeal should be started by contacting the Dean of Student Development and Services.

Auditing a Course

Any credit class offered by Richland, except those offered through the YMCA and other community agencies, may be taken on an audit (non-credit) basis if space in the course is available.

Students wishing to audit a class must fill out an audit form at the time registration occurs, and that status may not be changed after classes have begun. A grade of AU will be assigned at the completion of the course, and no credit will be awarded.

Dropping a Course

A student may drop a course through the last day of class before final exam week of any term. A grade of "W" will be recorded for the course dropped.

"Change of Schedule" forms may be obtained in SDS and MUST be signed by the class instructor.

Students withdrawing from two or more courses for two consecutive terms will be advised to see a counselor to establish a reasonable academic load for the next term of attendance.

Class Attendance, Administrative Drop

Regular attendance is necessary for satisfactory college work. Richland faculty will take roll daily, at least through the midterm of the semester.

If a student is absent for one week plus one day (or less, if specified by the instructor in the course outline), his/her name may be sent to SDS. Students with unsatisfactory attendance will be sent a "stopped attending" letter. At midterm, the College will administratively drop students who have failed to meet the attendance standard as certified by the instructor. This procedure is in accordance with Illinois Community College Board policy.

Students who fail to attend the first two classes of a course may also be dropped from the class.

The College may also drop any student who has unsatisfactory attendance during the period from the midterm through the last regular week of classes before finals. Faculty certification is required for such action.

Students are not to assume they will be automatically dropped and must complete a "Change of Schedule" form, available from SDS, if they wish to stop attending a class.

Students who stop attending a class without dropping a class or who are not dropped by the College may receive a grade of “F” for the course.

Students who miss a class are responsible for work assigned during their absence. Instructors may, at their option, accept late work, but such work may receive a lower grade.

Removal from the College or Class by Richland

The College reserves the right to remove any student from the College who is interfering with or disrupting the normal activities of the institution or the rights of others. Students removed from the College must apply for readmission through the Dean of Student Development and Services.

Students may also be required to withdraw from a course or the College if they cannot make satisfactory academic progress despite special assistance, advising, and counseling.

Withdrawing from the College

Students withdrawing from the College are required to settle all obligations, including money owed to the College, and must see an SDS counselor as part of the withdrawal process.

Students are asked to withdraw in person unless it is physically impossible. In such a case, the student may either write a letter requesting the withdrawal or telephone an SDS counselor at 875-7200, Ext. 267.

Students may withdraw through the last day of class before final exam week of any term. A grade of “W” will be given for all current courses, if the courses are officially dropped.

“Change of Schedule” slips are available from SDS.

Repeating a Course

Students may repeat any course taken at Richland Community College with the understanding that the earlier grade and credit hours will be replaced by the most recent, even if the most recent grade and credit hours are lower. Students should be cautioned that some colleges include all grades earned in computing grade point averages even if the course has been repeated.

Changing Program of Study

All program changes must be processed through SDS. Students who want to change their courses of study are encouraged to discuss their plans with an SDS counselor and/or other staff member such as an instructor in the new program and use the various resources in the Career Center.

Graduation Day

Public commencement ceremonies for students who have earned a degree or certificate from Richland are held once a year at the end of the spring semester.

Students who have completed the graduation requirements and received the certificate or degree in the fall semester or summer session are invited to participate in the graduation ceremony.

Applying for Graduation

When a student feels that he/she is nearing completion of the requirements for graduation from a program of study, the student is to follow the procedure outlined below to apply for graduation:

1. The student should review the requirements for graduation for the program of study, including courses taken or in progress, grade point average, and other requirements. The student may contact an SDS counselor or his/her academic advisor to assist with the review.
2. The student must fill out an “Application for Graduation,” which may be obtained in SDS. The form is to be filed during the term immediately preceding the term in which the student expects to graduate.
3. The completed application must be filed with the Business Office along with the \$15.00 graduation fee. (A \$15.00 fee is required for each new certificate or degree that a student applies for.) The application will be reviewed and either approved subject to satisfactory

completion of courses in progress or disapproved due to unmet requirements. A copy of the reviewed application will be returned to the student.

4. The student is encouraged to review the returned copy with an SDS counselor, his/her academic advisor, or the Associate Dean of SDS to discuss completion of any unmet requirements.
5. If the student is unable to complete the requirements before the expected graduation date, another "Application for Graduation" must be submitted before the new term of expected graduation. The \$15.00 application fee submitted earlier will apply if the new application is for the same certificate or degree.

The Associate Dean of SDS or any counselor in SDS can answer questions regarding the application for graduation process.

Constitution Requirement

Illinois law requires anyone graduating from Richland with an associate's degree to pass an examination covering American patriotism and the principles of representative government, as well as the proper use and display of the American flag.

The test also covers the Declaration of Independence, the U.S. Constitution, and the Illinois Constitution.

The requirement may be satisfied in one of two ways:

1. If the required examination was taken and passed in high school, the student's high school transcript must verify that the requirement has been met. (Holders of an Illinois GED certificate may submit an official copy of their test scores or verification from the Superintendent of the Regional Office of Education through which the GED certificate was issued); or
2. Students may obtain study material from the LRC and take the examination through the Testing Center.

Graduating With Two Certificates or Degrees

Richland students may work toward completion of more than one program of study if they so desire.

Students may receive all certificates for which they have completed the requirements. Only the highest award will be announced at the commencement ceremony.

In order to receive a second associate's degree, a student must

1. Complete a second area of concentration;
2. Complete all group requirements for the second degree; and
3. Earn at least ten hours beyond the first degree. (These may be made up of hours in the area of concentration, group requirements, or electives.)

A separate "Application for Graduation" must be submitted for each certificate or associate's degree.

Graduating Transfer Students

Many students enter Richland after completing courses at other institutions. In order to give these students credit for previous college work and, at the same time, maintain Richland's standards for graduation, the following requirements must be met by transfer students in order to be given a degree or certificate:

At least 15 semester hours of an associate's degree or certificate program must be completed at Richland.

If a transfer student completes a course at Richland that is substantially the same as a course for which the student received transfer credit, the hours of transfer credit will be replaced by the hours

earned at Richland. Transfer credit will be posted to the student's transcript upon evaluation but will not apply toward a certificate or degree until at least eight hours have been earned at Richland.

Earning Graduation Honors

When a student applies for graduation, all work done toward graduation will be evaluated for graduation academic honors. Students must have earned in class at Richland at least one-half or 12 hours, whichever is greater, of the credits needed for a degree or certificate in order to be considered for such honors.

Graduation academic honors are based on the student's cumulative grade point average, as follows:

Cumulative GPA

3.50—3.74	Honors
3.75—3.99	High Honors
4.00	Highest Honors

Graduation academic honors are noted on a student's transcript and at graduation.

Effect of Changes in Program on Graduation

From time to time, Richland strengthens and updates the courses in its programs. Students should graduate under the program structure listed in the Bulletin for the year in which they complete their certificate or degree. In some cases, however, some students are nearly finished with work toward a degree when program changes are made, and graduation under the new program may be impractical if requirements have changed.

Therefore, any student may graduate under either the requirements of the current program or those of either of the two preceding Bulletins during the time the student was enrolled.

If a student wishes to graduate under program provisions more than two Bulletins old, the Associate Dean of SDS reviewing the student's Application for Graduation will consult with the appropriate Associate Dean regarding clearance for graduation.

Effect of Previous Quarter System on Graduation

Up to the end of the summer session 1977, Richland used a quarter system and awarded quarter hours of credit instead of the current method of semesters and semester hours of credit.

Students who attended class at Richland before the Fall Semester 1977 should contact an SDS counselor or the Associate Dean of SDS for an evaluation of the quarter hours earned.

Transfer of Richland Credits to Other Colleges

Many Richland students continue their education at a senior college or university. In fact, the academic records of Richland transfer students at other institutions are, in most cases, as good as the academic records of students who began at the senior school.

Illinois senior colleges and universities have cooperated with Richland in making the transfer of Richland students, and credit hours earned, smooth and easy.

Most Illinois institutions (with the exception of the University of Illinois) have made a "General Education Compact," which states that community college students who have earned an Associate in Arts (A.A.) or Associate in Science (A.S.) Degree will:

1. Meet all lower-division (freshman-sophomore) general education requirements at DePaul University, Millikin University, and Southern Illinois University at Edwardsville.
2. Meet all general education requirements for the baccalaureate degree at Chicago State University, Eastern Illinois University, Governor's State University, Greenville College, Illinois State University, MacMurray College, Northern Illinois University, Sangamon State University, Southern Illinois University at Carbondale, and Western Illinois University.

Thus, Richland students are guaranteed that their A.A. or A.S. Degree will receive full recognition from the schools that have subscribed to the agreement. (Some “compacts” are under review and that departmental requirements at the senior college or university level may affect some courses that the student transfers in.)

For those colleges without such an agreement, Richland students should follow the guidelines for transfer credits listed in Richland’s *Student Transfer Handbook* and in that senior college’s transfer guide or handbook. For example, the University of Illinois publishes a “Transfer Handbook for Community College Students,” which is available in SDS at Richland.

Richland recommends that students planning to transfer should consult Richland’s *Student Transfer Handbook* available in the Transfer Center and meet with an SDS counselor for up-to-date information on transferring Richland credits. Students who plan to transfer to out-of-state schools or schools not covered by the General Education Compact should also contact an advisor at the transfer school.

Transfer Center

Students planning to transfer to other colleges or universities should register with the Transfer Center. The Transfer Center provides a wide range of services to assist students in the transfer process, including preparation of a Transfer Academic Plan, to ensure that Richland courses completed transfer to the college or university of the student’s choice. The staff also provides information on the transfer process, including admission requirements, financial aid, and housing.

Guarantee of Transfer of Credit

Richland Community College guarantees to those earning the Associate in Arts degree or the Associate in Science degree beginning May, 1993, that their courses will transfer to Illinois state colleges or universities as identified and defined in the Student Transfer Handbook in effect at the time of graduation. If a Richland course is taken and successfully completed in compliance with the Student Transfer Handbook and is not accepted in transfer, Richland will reimburse the student in the amount of the tuition paid at the time of taking the course. The graduate, under the agreement to enact this guarantee, will still be responsible for all costs other than the tuition specified.

Qualifying Conditions for the Guarantee:

1. Transfer of a course means the acceptance of credits for entrance at a senior institution.
2. Classes must have been taken at Richland Community College no earlier than two years before the attempt to transfer.
3. Any refund request must be made no later than two years after Richland Community College graduation.

INSTRUCTIONAL PROGRAMS

Programs of Study

Richland Community College's "Open Door" policy allows anyone who believes he/she may benefit from study at the College to enroll. Once students enroll, they have two possible routes.

First, students with diversified needs and interests who are not seeking degrees may take courses in a variety of areas. While these courses may also be part of particular programs, students may select courses that best fit their goals.

Another direction for students is a program of study. A program of study leads to the awarding of appropriate degrees or certificates. Admission to a program of study requires that a student has earned a high school diploma or a High School Equivalency Certificate based on the GED Test. A student enrolling in a program of study would have several options:

The Associate in Arts (A.A.) (see page 63) and Associate in Science (A.S.) (see page 64). degree programs are designed for students planning to continue their formal education at a four-year university or upper-division college to obtain a baccalaureate degree. Those planning to major in natural sciences or mathematics usually follow the A.S. program, while those in humanities or fine arts will generally seek the A.A. degree. Those planning to major in social science may select the A.A. or A.S. curriculum.

If the freshman and sophomore requirements cannot be satisfied within the framework of the A.A. or A.S. degree (for example, pre-engineering), Richland will consider the individual's eligibility for the appropriate associate's degree subject to approval of the program of studies based upon the first two years of the four-year college's curriculum.

Other programs are based on vocational/occupational offerings and lead to Basic or Advanced Certificates in those fields or the Associate in Applied Science (A.A.S) Degree (see page 73).

General Studies programs are individually structured by each student to meet specific interests or needs and lead to the awarding of a Basic Certificate in a particular field or the Associate in Liberal Studies (A.L.S.) Degree (see page 112).

All programs are designed to stimulate personal growth as the student achieves occupational, social, and personal goals by offering a basic and/or advanced understanding of the concepts essential to competence in a particular field.

All programs are designed to provide a broad education by making students aware of the world around them, by opening and stimulating students' minds to initiate and welcome new ideas and techniques, and by providing a solid introduction to a marketable skill. To achieve these goals, all programs include courses of general interest as well as courses in an area of concentration.

In compliance with Public Act 87-581 of the Illinois Revised Statutes, the course content for general education courses in Social Science and Humanities promotes the improvement of human relations as related to race, ethnicity, gender, and other issues. These courses are required for all students satisfying the requirements for the Associate in Arts and the Associate in Science degrees, as well as for those students satisfying group requirements for the Associate of Applied Science degree in those areas.

BACCALAUREATE/TRANSFER PROGRAMS

Associate in Arts

(Designed to provide two academic years of college study for transfer to a four-year university or upper-division college toward a Bachelor of Arts degree. See the *Student Transfer Handbook* for additional advice.)

1. **Group Requirements** (Area of concentration courses may be counted toward satisfaction of group requirements.):

a.	Communications Skills	9 semester hours
b.	Humanities* (selected from 2 or more areas)	12 semester hours
c.	Social Science* (selected from 2 or more areas)	9 semester hours
d.	Natural Science	6 semester hours
e.	Mathematics	3 semester hours

2. **Area of Concentration:**
 - a. Two or more courses completing one or more sequences in a specified subject area such as accounting, English, French, history, psychology, physical education, OR
 - b. Four or more courses in a broad field such as business, humanities, or social science for the student who does not desire to pursue a specific subject area.

3. **General Education** — 39 semester hours (Courses in the student's area of concentration do not count toward those requirements.)

4. **Constitution Requirement** (See page 56.)

5. **Total Credits Required** — 60 semester hours in courses numbered 100 and above. (Students transferring credit to Richland should see regulations concerning transfer students.)

6. **Cumulative Grade Point Average** — 2.00 ("C") or better for all work applicable toward the degree that was completed at Richland. (See page 53.)

*Course content designed to improve human relations.

Associate in Science

(Designed to provide two academic years of college study for transfer to a four-year university or upper-division college toward a Bachelor of Science degree. See the *Student Transfer Handbook* for additional advice.)

1. **Group Requirements** (Area of concentration courses may be counted toward satisfaction of group requirements.):

a.	Communications Skills	9 semester hours
b.	Humanities* (selected from 2 or more areas)	8 semester hours
c.	Social Science* (selected from 2 or more areas)	8 semester hours
d.	Natural Science	8 semester hours
e.	Mathematics	8 semester hours

2. **Area of Concentration:**
 - a. Two or more courses completing one or more sequences in a specified subject area such as accounting, geography, psychology, physical education, physics, or any other specific subject area except those listed in "b" and "c" below; OR
 - b. Four or more courses, completing one or more sequences, in the specific subject areas of biology, chemistry, or mathematics; OR
 - c. Four or more courses in a broad field, other than those listed in "b" above, such as business, general science, or social science for the student who does not desire to pursue a specific subject area.

3. **General Education** — 42 semester hours (Courses in the student's area of concentration do not count toward those requirements.)
4. **Constitution Requirement** (See page 56.)
5. **Total Credits Required** — 60 semester hours in courses numbered 100 and above. (Students transferring credit to Richland should see regulations concerning transfer students.)
6. **Cumulative Grade Point Average** — 2.00 ("C") or better for all work applicable toward the degree that was completed at Richland. (See page 53.)

*Course content designed to improve human relations.

Area of Concentration Suggestions for Baccalaureate/Transfer Programs

Students planning to pursue a bachelor's degree with a major in one of the areas listed are offered the following suggestions regarding courses to be included during their first two years of study. These suggestions are designed for students who have not yet selected a four-year college.

In all cases, any student who has chosen the college or university to which he/she intends to transfer should consult that institution's catalog or transfer handbook in planning a program.

For each area of concentration the customary associate's degree is designated.

Accounting (A.A. or A.S.)

Area of Concentration: Acct. 101, 102; Econ. 231, 232.

Other suggested courses: Math. 160, 170, 171, 190, C.I.S. 110.

African-American Studies (A.A. or A.S.)

Area of Concentration: Af. Am. St. 101, 102.

Agriculture (A.S.)

Area of Concentration: Agric. 120, 130, 210.

Anthropology (A.A. or A.S.)

Area of Concentration: Anthr. 110, 120, 130.

Art (A.A.)

Area of Concentration: Art 101, 102, 111, 112, and at least two courses from those listed below.

Other suggested courses: Art 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 131, 225.

Biology (A.S.)

Area of Concentration: Biol. 101, 102, 202, and 210 or 220.

Other suggested courses: Chem. 131, 132.

Business (A.A. or A.S.)

Area of Concentration: Acct. 101, 102; Bus. 231; Econ. 231, 232.

Other suggested courses: C.I.S. 105 or 110; Math. 116, 160, 170, 190, and above; psychology.

Business Teacher Education

See Teacher Education.

Chemistry (A.S.)

Area of Concentration: Chem. 131, 132, 201, 202.

Other suggested courses: Math. 121, 122.

Computer Science (A.S.)

Area of Concentration: Math. 125, 141; C.I.S. 105, 161, 280.

Other suggested courses: Math. 121, 122, 131, 170; C.I.S. 110, 162.

Dentistry

See Pre-Dentistry.

Earth Science (A.S.)

Area of Concentration: Ea. Sci. 210, 220, 230.

Economics (A.A. or A.S.)

Area of Concentration: Econ. 231, 232.

Other suggested courses: Econ. 200, Math. 160, 170, 190, plus courses in sociology and political science.

Since a limited amount of study in economics is generally offered during the first two years of a bachelor's degree program, persons desiring a B.A. or B.S. in economics will be considered for graduation from Richland based upon a broad field of study as their area of concentration such as business, social science, etc.

Education

See Teacher Education.

Engineering (A.S.)

Area of Concentration: Math. 121, 122, 141, 221. (Students should follow the program outlined in "A Coordinated Degree Program between Richland Community College and the University of Illinois," or "Engineering Programs at Richland Community College and Southern Illinois University at Carbondale." These brochures are available in SDS.)

Other suggested courses: Chem. 131, 132; Econ. 231, 232; Engr. 110; Phys. 210, 211, 212; Spch. 101; humanities electives.

English (A.A.)

Area of Concentration: Engl. 115, 150, 124, 126, or 128; or 201, 202; or 231, 232; or 251, 252.

Other suggested courses: Hist. 101, 102; foreign language.

Foreign Language (A.A.)

Area of Concentration: two years of study in the chosen language.

Other suggested courses: one sequence in United States or ancient or European history and literature courses.

General Science (A.S.)

Area of Concentration: Biol. 101, 102 or Chem. 131, 132 or Phys. 101, 102 or Phys. 210, 211, 212, plus three or more science courses in addition to one of the one-year sequences listed above, selected from the fields of biology, chemistry, or physics.

History (A.A.)

Area of Concentration: Hist. 101, 102, 105, and either Hist. 111, 112; or Hist. 201, 202; or Hist. 250, 251.

Other suggested courses: courses in economics, foreign language, literature, or political science.

Journalism (A.A.)

Area of Concentration: Journ. 101, 102, 110.

Mathematics (A.S.)

Area of Concentration: Math. 121, 122, 221, plus one additional mathematics course.

Other suggested courses: Chem. 131, 132, or Phys. 210, 211, 212.

Medicine

See Pre-Medicine.

Music

Music 101, 102, 103, 104, 190, 201, 202

Philosophy (A.A.)

Area of Concentration: Phil. 100, 110, 120, 200, 210, 215, 220.

Other suggested courses: humanities and/or history courses.

Physical Education (A.A. or A.S.)

Area of Concentration: P. Ed. 150

Other suggested courses: Biol. 101, 102, 201.

The student is encouraged to pursue a wide variety of physical education activities under P. Ed. 110.

Physics (A.S.)

Area of Concentration: Phys. 210, 211, 212.

Other suggested courses: Chem. 131, 132; Math. 121, 122, 221, 230.

Political Science/Pre-Law (A.A. or A.S.)

Area of Concentration: Pol. S. 100, 110, 120, 230.

Other suggested courses: Econ. 231, 232; Hist. 101, 102; Phil. 110, 130; Pol. S. 100.

Pre-Dentistry (A.S.)

Students planning to enter dentistry school should consult the entrance requirements of the school they plan to attend.

Pre-Engineering

See Engineering.

Pre-Forestry (A.S.)

Area of Concentration: General Science, including Biol. 101, 102, 210; Chem. 131, 132.

Other suggested courses: Math. 117; Phys. 101; and courses in accounting, business, and economics.

Since the study of special forestry courses generally comes during the third and fourth years of a bachelor's degree program, students desiring a B.S. in forestry should select General Science as their area of concentration at Richland.

Pre-Medicine (A.S.)

Students planning to enter medical school should consult the entrance requirements of the institution they plan to enter.

Pre-Veterinary (A.S.)

For purposes of identifying an area of concentration at Richland, biology is recommended as an area of concentration.

Other suggested courses: Chem. 131, 132.

Psychology (A.A. or A.S.)

Area of Concentration: Psych. 110, plus two or more from the following: Psych. 130, 150, 200, 210, 250, 280.

Other suggested courses: Math. 160, 170, or 190 and other social science.

Sociology (A.A. or A.S.)

Area of Concentration: Socio. 110, plus three or more from the following: Socio. 125, 130, 135, 141, 142, 150, 160, 200.

Other suggested courses: Econ. 200, Math. 170.

Speech and Drama (A.A.)

Area of Concentration: Three or more courses from Drama 150, 160, 170; Spch. 110, 210, 230.

Teacher Education (A.A. or A.S.)**Elementary Education**

Area of Concentration: To be selected on the basis of individual interest. Students intending to teach in elementary schools must meet state certification requirements in history, mathematics, political science, psychology, science, and speech. Courses that can help satisfy these requirements are Biol. 101, 102; Chem. 100; Ed. 100, 200; Hist. 101, 102; Math. 111, 112; Phys. S. 105; Pol. S. 110; Psych. 110, 150, 200; Spch. 101.

Secondary Education

Students intending to teach in high school should select for their area of concentration the specific area or broad field of study they are interested in teaching. Students should also complete Ed. 100 and 200.

Business Teacher Education

Area of Concentration: Acct. 101, 102; Bus. 120, 231; C.I.S. 110; O.T. 132, 150, 212, 250, or as many courses as indicated appropriate in the bulletin of the four-year college at which the student expects to complete the bachelor's degree.

Other Areas of Baccalaureate Study

The suggested baccalaureate majors listed above represent the more popular areas of probable study by community college students. Some students will desire to pursue a bachelor's degree with a major not listed. They are encouraged to determine whether Richland can provide the appropriate initial study toward their selected baccalaureate major.

Articulated 2+2 Degree Programs

Articulated 2+2 programs are designed for Richland students who intend to transfer to another institution to complete a four-year degree after earning an Associate in Arts or Associate in Science degree at Richland.

The *Student Transfer Handbook*, which is available in the Transfer Center and in the Student Development and Services office, provides extensive transfer information including suggested Richland Associate Degree Transfer Curriculum (2+2) for the following programs:

- Eastern Illinois University - Business
- Eastern Illinois University - Elementary Education
- Eastern Illinois University - Industrial Technology
- Eastern Illinois University - Special Education
- Illinois State University - Business
- Illinois State University - Elementary Education
- Mennonite College of Nursing
- Millikin University - Business
- Millikin University - Nursing
- St. John's College, Department of Nursing
- St. Louis College of Pharmacy
- Sangamon State University - Business
- Southern Illinois University - Business
- University of Illinois - Engineering
- Western Illinois University - Business
- Western Illinois University - Elementary Education
- Western Illinois University - Law Enforcement

OCCUPATIONAL PROGRAMS

Richland's approach to occupational programs is based on assessments of both student interest and employment needs.

Many full-time students enrolled in occupational programs will want to concentrate on knowledge and skills directly related to employment. Others will want a broader educational program leading to an associate's degree.

Also, many persons will develop skills for initial employment in a new field of work or prepare for advancement in their present field through college study as part-time students.

In order to serve that variety of needs, Richland has developed the following programs:

Basic Certificate

This program is designed to increase the knowledge and skills of persons whose current or previous employment in the occupational activity is based primarily on practical experience as well as of persons desiring an understanding of the fundamental concepts of that area as preparation for initial employment.

Advanced Certificate

This program is designed to provide an opportunity for persons currently or previously employed in the occupational activity and for persons preparing for initial employment in the occupational field to gain knowledge and skills beyond those available through the Basic Certificate program.

Associate in Applied Science

This program is designed to develop initial employment competencies for persons with no previous educational preparation or employment experience in the occupational field. It also serves those persons already employed in the field who desire to improve their competencies and achieve an associate's degree.

Required courses within an A.A.S. degree may also be used toward completion of that degree's group requirements, if applicable. For example, Psychology 100 is required for an A.A.S. degree in Electronics, but it also may be used as 3 hours in Social Science toward the total of 15 hours needed in the group requirements. This course still only counts as 3 hours toward the total of 64 hours needed for graduation in Electronics, but it does allow the student to choose a different elective rather than taking an additional 15 hours of group requirements.

Capstone Options for Occupational Programs

Some occupational programs and/or courses transfer to senior institutions although they are not designed specifically for transfer. Southern Illinois University at Carbondale offers, for example, the Capstone Option allowing students who have earned two-year occupational degrees the option of pursuing a bachelor's degree without losing credits already earned. Students planning to transfer should consult a Richland counselor or advisor for additional information.

Graduation Requirements

Graduation requirements for the Basic Certificate or the Advanced Certificate in any occupational-oriented program are the completion of:

1. The program as outlined in this Bulletin. (Students transferring credit to Richland should see regulations under Admissions, page 19.)
2. Constitution Requirement. (See page 56.)
3. Cumulative Grade Point Average—2.00 ("C") or better for all work applicable toward the certificate or degree that was pursued at the College. (See page 53.)

Course Prerequisites

Many of the following programs are designed to serve students with no previous study or experience in the program area.

In order that students who have acquired knowledge in occupational program fields through high schools or whose work experience may benefit from that knowledge, the College recognizes such

education through credit evaluation programs. (See "Credit Evaluation Programs," page 20.) Transfer of college credit to Richland is explained under Admissions.

If any student pursuing an occupational-oriented program has a background that makes any listed course(s) inappropriate, two options are recommended:

1. He or she should earn credit for the course(s) through proficiency examination(s) or advanced placement in an approved sequence, if such proficiency credit will shorten the total time required to complete the program.
2. If a student needs to complete a sequence of courses so that proficiency credit for one or more courses will not reduce the total time required to complete the program, he or she is encouraged to earn proficiency credit and enroll in other courses that would increase his or her competencies beyond the minimum requirements for the program.

Course Sequences

All students enrolled in one of the certificate programs and part-time students in the A.A.S. curriculum are encouraged to pursue their respective programs by taking general and related courses along with their special interest courses rather than taking all courses in the order listed. Obviously, the appropriate prerequisite experiences should be completed prior to enrolling in a course having prerequisites.

Acknowledgments

The majority of the career information in this bulletin is taken from the following sources:

Horizons, Occupational Information, 1985 edition, Illinois Occupational Information Coordinating Committee, Springfield, Illinois.

Occupational Outlook Handbook, 1984-85 edition, U.S. Department of Labor, Bureau of Labor Statistics, Washington, D.C.

Illinois Supply-Demand Report, April 1985.

Group Requirements for Occupational Certificates and A.A.S. Degrees

Several programs require some study in courses that satisfy certain Group Requirements. These are subdivided into:

- Business
- Communications
- Humanities
- Mathematics
- Natural Science
- Social Science

The following courses satisfy these Group Requirements:

Business

- Acct. 100, 101, 102, 130, 201, 202, 211
- Agric. 120
- Bus. 100, 105, 106, 110, 119, 120, 124, 125, 140, 145, 146, 205, 206, 227, 231, 232, 245, 246, 290
- C.I.S. 105, 110, 115, 120, 130, 135, 145, 161, 162, 210, 220, 221, 222, 225, 245, 251, 252, 255, 261, 262, 270, 275, 280, 285
- C.I.M. 100
- O.T. 100, 108, 111, 112, 121, 131, 132, 150, 160, 210, 211, 212, 250

Communications

- Engl. 101, 102, 102H, 110, 114, 220, 222
- Spch. 101, 101H, 110, 120, 140, 210, 230

Humanities*

Af. Am. St. 101, 102
 Art 100, 210, 220, 230
 Drama 150
 Engl. 115, 124, 126, 128, 140, 150, 201, 202, 231, 232, 251, 252
 Fren. 101, 102, 201, 202
 Germ. 101, 102, 201, 202
 Hist. 111, 112, 201, 202
 Human. 100, 201H
 Japan. 101, 102, 201
 Music 100, 103, 104, 190
 Phil. 100, 110, 120, 130, 200, 210, 215, 220
 Span. 101, 102, 201, 202

Mathematics

Math. 104, 106, 108, 110, 111, 112, 113, 116, 117, 121, 122, 125, 131,
 132, 141, 142, 160, 170, 171, 190, 221, 230, 231

Natural Science

Agric. 104, 105, 130
 Biol. 101, 102, 201, 202, 210, 220
 Chem. 100, 109, 110, 131, 132, 201, 202
 Ea. Sci. 210, 220, 230
 Eltrn. 110
 H. Ec. 110 (C.C. & E. only)
 H. Ec. 200 (Allied Health and Nursing only)
 Hort. 190
 Phy. S. 105, 220
 Phys. 100, 101, 102, 115, 120, 210, 211, 212

Social Science*

Af. Am. St. 101, 102
 Anthr. 110, 120, 130
 Econ. 140, 200, 231, 232
 Ed. 100, 200
 Hist. 101, 102, 105, 120, 250, 251
 P. Rel. 100, 110, 120, 200
 Pol. S. 100, 110, 120, 130, 230, 280, 290
 Psych. 100, 110, 130, 145, 150, 200, 210, 220, 230, 240, 250, 280
 Socio. 100, 110, 125, 130, 135, 141, 142, 150, 160, 200

*Course content designed to improve human relations.

Occupational Program Degree Requirements

Accounting (Cert., A.A.S.)	Page 79
Agricultural Products and Processing	
Agri/Industrial Processing Technology (A.A.S.)	Page 74
Farm Management and Production (Basic Cert., A.A.S.)	Page 75
Grain Elevator Management (A.A.S.)	Page 76
Automotive Technician (A.A.S.)	Page 77
Banking and Finance (A.A.S.)	Page 78
Business (A.A.S., page 79; Cert., Page 81)	
Accounting	
Management/Leadership	
Marketing	
Materials Management	
Business (Cert.)	Page 82
Business-Real Estate (Cert.)	Page 83
Child Care (Basic Cert., Adv. Cert., A.A.S.)	Page 83
Computer Information Systems-Programming (A.A.S.)	Page 85
Computer Information Systems-Microcomputer Applications (Cert.)	Page 85
Microcomputer Specialist (A.A.S.)	Page 85

Microcomputer Programming (A.A.S.)	Page 85
Network Management (A.A.S.)	Page 85
Computer Integrated Manufacturing (Basic Cert., A.A.S.)	Page 88
Electronic Systems Technology (A.A.S.)	Page 90
Electronics (Basic Cert., Advanced Cert., A.A.S.)	Page 91
Biomedical Option (A.A.S.)	Page 93
Fire Science (A.A.S.)	Page 94
Horticulture (A.A.S.)	Page 95
Turf Grass Management (Adv. Cert.)	Page 95
Industrial Drafting (Adv. Cert., A.A.S.)	Page 96
Industrial Engineering Technology (A.A.S.)	Page 98
Industrial Maintenance (Basic Cert.)	Page 99
Industrial Production Technology (Basic Cert., Adv. Cert., A.A.S.)	Page 100
Law Enforcement (Basic Cert., A.A.S.)	Page 101
Machine Tool Processes (Basic Cert., Adv. Cert., A.A.S.)	Page 102
Management (Cert., A.A.S.)	Page 79
Marketing (Cert., A.A.S.)	Page 79
Materials Management (Cert., A.A.S.)	Page 79
Nursing (A.D.N.)	Page 104
Office Technology (Cert., A.A.S.)	Page 105
Production Control (Basic Cert.)	Page 107
Supervision of Personnel (Cert.)	Page 79
Welding (Basic Cert.)	Page 108

Accounting (See page 79.)

AGRICULTURAL PRODUCTS AND PROCESSING AGRI/INDUSTRIAL PROCESSING TECHNOLOGY

General Description : The Food Processing Technology program is designed to prepare students to be employed in the agricultural food processing industry. An understanding of agriculture production and marketing issues will be helpful for students seeking employment in this field. Graduates will be working mainly inside. All organizations require leadership skills, good management skills, and good supervisory skills. Employers will include local food processing industries.

Aptitudes : An interest in working with people and industrial machinery is necessary. Also needed are physical stamina, a mechanical aptitude, and good mathematical ability.

Outlook : Job opportunities locally are excellent. This is an expanding industry in our area.

Associate in Applied Science Degree—Agri/Industrial Processing Technology (65/66 Credit Hours) (ICCB Code: AAS 0062)

Required Courses:	Cr. Hrs.
Bus. 100: Introduction to Business (F, S)	3
Chem. 131: General Chemistry 1 (F, S)	4
Chem. 132: General Chemistry 2 (F, S)	4
C.I.S. 110: Business Applications on Microcomputers (F, S)	3
Draft. 101: Fundamentals of Drafting (F)	4
Econ. 231: Principles of Economics 1 (F, S)	3
Econ. 232: Principles of Economics 2 (F, S)	3
Eltrn. 108: Industrial Electronics (or Eltrn. 110) (or Eltrn. 111) (F)	3/2/3
Eltrn. 109: Industrial Controls (F)	4
Eltrn. 111: Circuit Analysis (F)	3
Engr. 110: Engineering Graphics (S)	3
Engl. 101: Composition 1 (F, S)	3
Engl. 102: Composition 2 (F, S)	3
Engl. 110: Report Writing (F, S)	3
Ind. S. 100: Industrial Safety and Health (F)	3
Math. 098: Intermediate Algebra (F, S)	4
Mec. S. 112: Pneumatics and Hydraulics (A)	3

P. Rel. 100: Human Relations (or Spch. 110) (F, S)	3
P. Rel. 110: Supervisory Techniques and Personnel Development (S)	3
Phys. 115: Technical Physics (F, S)	4

NOTE: Required courses can be used to meet the General Education Group Requirements.

Suggested full-time Agri/Industrial Processing A.A.S. sequence:

(Your schedule may differ.)

Fall	Spring	Fall	Spring
First Semester :	Second Semester:	Third Semester:	Fourth Semester:
Engl. 101	Engl. 102	Eltrn. 108 or 110	P. Rel. 110
Econ. 231	Econ. 232	Eltrn. 111	Engl. 110
Math. 098	Engr. 110	Eltrn. 109	Chem. 132
Draft. 101	Bus. 100	Phys. 115	C.I.S. 110
Mec. S. 112	P. Rel. 100	Chem. 131	Ind. S. 100
	or Spch. 110		

AGRICULTURAL PRODUCTS AND PROCESSING FARM MANAGEMENT AND PRODUCTION

General Description : The Farm Management and Production Program is designed to prepare students to be employed in the area of farming. It will also update farmers' knowledge in new farm technology. Farmers work outside and inside and are subject to long hours and all weather conditions. Many farmers are self-employed.

Aptitudes : An interest in working outdoors is necessary. Also needed are physical stamina, a mechanical aptitude, and good mathematical ability.

Outlook : Job opportunities will depend on the many economic conditions that affect farming. In general, however, employment for farmers is expected to decline.

**Basic Certificate—Farm Management and Production
(27 Credit Hours) (ICCB Code: BC 003C)**

Required Courses:	Cr. Hrs.
Agric. 101: Care & Adjustment of Agricultural Equipment (A)	3
Agric. 102: Fundamentals of Soil Management (A)	3
Agric. 103: Fundamentals of Farm Welding (A)	3
Agric. 104: Fundamentals of Crop Production (A)	3
Agric. 220: Farm Accounting (A)	3
Agric. 250: Fundamentals of Farm Management (A)	3
Agric. 260: Marketing Agricultural Products (A)	3
Bus. 110: Business Mathematics (F, S)	3
Spch. 101: Principles of Speech (F, S)	3

**Associate in Applied Science Degree
(61 Credit Hours) (ICCB Code: AAS 0005)**

Required Courses:	Cr. Hrs.
Agric. 101: Care & Adjustment of Agricultural Equipment (A)	3
Agric. 102: Fundamentals of Soil Management (A)	3
Agric. 103: Fundamentals of Farm Welding (A)	3
Agric. 104: Fundamentals of Crop Production (A)	3
Agric 120: Introduction to Agricultural Economics (A)	3
Agric. 187: Off-Highway Equipment Air Conditioning and Heating (A)	1
Agric. 200: Weed and Pest Control (A)	4
Agric. 220: Farm Accounting (A)	3
Agric. 250: Fundamentals of Farm Management (A)	3
Agric. 260: Marketing Agricultural Products (A)	3
Agric. 290: Work Experience Practicum and Seminar (F)	5
Agric. 291: Adv. Work Exper. Practicum and Seminar (S)	5
Bus. 125: Small Business Management (F, S)	3
Engl. 110: Report Writing (F, S)	3

O.T. 160: Office Accounting (F, S)	4
P. Rel. 100: Human Relations (or P. Rel. 110) (F, S)	3
Spch. 101: Principles of Speech (F, S)	3

A.A.S. Group Requirements/Electives

The A.A.S. degree requires that 6 more semester hours of courses numbered 100 or above be selected from the areas of Communications, Mathematics and/or Natural Science, and Humanities and/or Social Science with at least 3 hours in Mathematics and/or Natural Science. (See Page 72.) Phil. 100 should be considered as the Humanities elective.

NOTE: Required courses can be used to meet the General Education Group Requirements.

Suggested full-time Farm Management and Production A.A.S. sequence:

(Your schedule may differ.)

Fall	Spring	Fall	Spring
First Semester:	Second Semester:	Third Semester:	Fourth Semester:
Agric. 101	O.T. 160	Agric. 120	Agric. 200
Agric. 102	Agric. 103	Agric. 260	Agric. 291
Agric. 187	Agric. 104	Agric. 290	P. Rel. 100
Agric. 220	Agric. 250	Bus. 125	GR/Elec.
Engl. 110	Spch. 101	GR/Elec.	

AGRICULTURAL PRODUCTS AND PROCESSING GRAIN ELEVATOR MANAGEMENT

General Description : The Grain Elevator Management program is designed to prepare students to be employed as grain elevator managers. A working knowledge of issues in agriculture will be helpful to prospective employees. Graduates will be working inside and outside. Employees will be expected to work long hours during harvest season. All organizations require leadership skills, management skills, and supervisory skills. Employers will include local food processing firms, but employees may be asked to work in locations outside the Decatur area.

Aptitudes : An interest in working with people and industrial machinery is necessary. Also needed are physical stamina, a mechanical aptitude, and good mathematical ability.

Outlook : Job opportunities locally are excellent. This is an expanding industry in our area.

Associate in Applied Science Degree—Agricultural Products and Processing-Grain Elevator Management

(64/65 Credit Hours) (ICCB Code: AAS 0061)

Required Courses:	Cr. Hrs.
Acct. 101: Principles of Accounting 1 (F, S)	4
Acct. 102: Principles of Accounting 2 (F, S)	4
Agric. 104: Fundamentals of Crop Production (A)	3
Agric. 120: Introduction to Agricultural Economics (A)	3
Agric. 130: Introductory Crop Science (A)	4
Agric. 260: Marketing Agricultural Products (A)	3
Agric. 290: Work Experience Practicum and Seminar (F)	5
Bus. 120: Business Communications (F, S)	3
C.I.S. 110: Business Applications on Microcomputers (F, S)	3
Eltrn. 110: Introduction to Electricity & Electronics (or Eltrn. 108) (F)	2/3
Engl. 101: Composition 1 (F, S)	3
Engl. 102: Composition 2 (F, S)	3
Ind. S. 100: Industrial Safety and Health (F)	3
Math. 098: Intermediate Algebra (F, S)	4
Phys. 115: Technical Physics (F, S)	4
P. Rel. 100: Human Relations (F, S)	3
P. Rel. 110: Supervisory Techniques and Personnel Development (S)	3
Spch. 101: Principles of Speech (F, S)	3
Weld. 101: Shielded Metal Arc Welding (F, S)	4

Suggested full-time Grain Elevator Management A.A.S. sequence:

(Your schedule may differ.)

Fall	Spring	Fall	Spring
First Semester:	Second Semester:	Third Semester:	Fourth Semester:
Acct. 101	Acct. 102	Agric. 290	Agric. 104
C.I.S. 110	Agric. 120	Ind. S. 100	Agric. 130
Eltrn. 110 or 108	Engl. 102	Phys. 115	Agric. 260
Engl. 101	P. Rel. 100	Spch. 101	Bus. 120
Math. 098	P. Rel. 110	Weld. 101	

AUTOMOTIVE TECHNICIAN

General Description: The Automotive Technician Program provides the opportunity to develop skills in automotive care and repair, including basic automotive theory; electrical systems; suspension, steering and brakes; heating and air conditioning; fuel injection (advanced, turbo, and super charging); engine repair; manual drive train and axles; automatic transmissions and transaxles, and driveability problem diagnosis. Upon completion of this course, students will also be qualified to take the ASE (Automotive Service Excellence) test to become certified automotive technicians.

Aptitudes: Students in the Automotive Technician Program need good math skills, the ability to read technical manuals, and good communication skills. They also need good hand-eye coordination, and the ability to perceive objects in two- or three-dimensional form.

Outlook: This is a large occupational field, and employment continues to grow. However, education and experience are essential to succeed in the rapidly changing technology. In addition, the ASE certification is a recognized symbol of quality throughout the automotive industry. Job prospects also increase with the size of the community.

**Basic Certificate—Automotive Technician
(41.5 Credit Hours) (ICCB Code: BC 0069)**

Required Courses:	Cr. Hrs.
Auto. 101: Basic Theory* (A) (or Auto. 100A and Auto. 100B)	3.5
Auto. 102: Electrical Systems* (A)	3.5
Auto. 201: Suspension and Steering Alignment/Brakes and ABS (A)	3.5
Auto. 202: Heating and Air Conditioning (A)	3.5
Auto. 203: Advanced Fuel Injection, Turbo and Super Charging (A)	3.5
Auto. 204: Engine Repair (A)	3.5
Auto. 205: Manual Drive Train and Axles (A)	3.5
Auto. 206: Automatic Transmissions/Transaxles (A)	3.5
Auto. 207: Advanced Electronics (A)	3.5
Auto. 208: Advanced Brakes (A)	3.5
Auto. 209: Advanced Driveability Problem Diagnosis (A)	3.5
Group Requirements/Electives(s)	3.0

**Associate in Applied Science Degree
(72.5 Credit Hours) (ICCB Code AAS 0071)**

Required Courses:	Cr. Hrs.
Auto. 101: Basic Theory* (A) (or Auto. 100A and Auto. 100B)	3.5
Auto. 102: Electrical Systems* (A)	3.5
Auto. 201: Suspension and Steering Alignment/Brakes and ABS (A)	3.5
Auto. 202: Heating and Air Conditioning (A)	3.5
Auto. 203: Advanced Fuel Injection, Turbo and Super Charging (A)	3.5
Auto. 204: Engine Repair (A)	3.5
Auto. 205: Manual Drive Train and Axles (A)	3.5
Auto. 206: Automatic Transmissions/Transaxles (A)	3.5
Auto. 207: Advanced Electronics (A)	3.5
Auto. 208: Advanced Brakes (A)	3.5
Auto. 209: Advanced Driveability Problem Diagnosis (A)	3.5
Eltrn. 110: Introduction to Electricity and Electronics(F)	2.0

Eltrn. 111: Circuit Analysis (F)	3.0
Engl. 101: Composition 1 (F,S)	3.0
Ind. S. 100: Industrial Safety and Health (F,S)	3.0
Math. 091: Basic Algebra (F,S)	4.0
Weld. 101: Shielded Metal Arc Welding (F,S)	4.0

*Auto. 101 (or Auto. 100A/B) and Auto. 102 are prerequisites to all other automotive classes.

A.A.S. Group Requirements/Electives:

The A.A.S. degree requires that 15 more semester hours of courses numbered 100 or above be selected from the areas of Communications, Humanities and/or Business, and Social Science with at least three hours in each area. (See page 72.)

NOTE: Required courses can be used to meet the General Education Group Requirements.

Suggested full-time Automotive Technician A.A.S. sequence: (Your schedule may differ.)

Fall	Spring	Fall	Spring
First Semester:	Second Semester:	Third Semester:	Fourth Semester:
Auto. 101	Auto. 201	Auto. 203	Auto. 205
Auto. 102	Auto. 202	Auto. 204	Auto. 206
Engl. 101	Auto. 207	Auto. 208	Auto. 209
Eltrn. 111	Eltrn. 110	Ind. S.100	Weld. 101
Math. 091	GR/Elec. (2)	GR/Elec.	
GR/Elec.			

BANKING AND FINANCE

General Description: This program is offered in cooperation with local banks and the American Institute of Banking. It is designed for current bank employees who wish to upgrade their skills, as well as for the entry-level worker. Typical job titles include loan officer, teller, and personal banker. Individuals will perform office-type work. Strict dress codes are the rule. Major employers are banks and private finance companies.

Aptitudes: For this type of work, students need an ability to communicate well with people. Good mathematical ability is needed along with the ability to understand and apply complex procedures.

Outlook: Growth will fluctuate with the general state of the economy. Many positions are filled by promoting from within the firm.

This program is offered in cooperation with the local chapter of the American Institute of Banking. For further details regarding the program and courses specific to banking, please contact the Business Division or Office of Instruction.

**Associate in Applied Science Degree
(64 Credit Hours) (ICCB Code: AAS 033A)**

A.A.S. Group Requirements/Electives

The A.A.S. degree requires that 15 more semester hours of courses numbered 100 or above be selected from the areas of Communications, Mathematics and/or Natural Science with at least 3 hours in each area. (See page 72.)

NOTE: Econ. 231, Math. 170/Math. 171 can be used to meet Group Requirements.

Suggested full-time Banking and Finance A.A.S. sequence:
(Your schedule may differ.)

Fall	Spring	Fall	Spring
First Semester:	Second Semester:	Third Semester:	Fourth Semester:
Prin. of Banking	Mrktg for Bankers	Banking Elec.	Banking Elec.
Accounting 1	Accounting 2	Business Elec.	Elec.
Money & Banking	Law & Banking	Banking Elec.	
Business Elec.	Banking Elec.		

Elec. Elec.

BUSINESS (Pending I.C.C.B. Approval)

General Description: The Business Instructional Area consists of an A.A.S. Degree in Business with a specialization in either Accounting, Marketing, Management/Leadership, or Materials Management. Students wishing to earn the Business A.A.S. Degree must complete Core Courses (listed below), the Required Courses for the desired specialization, and appropriate courses from the Suggested Electives. Certificates are also available in the areas of Accounting, Marketing, Management/Leadership, Materials Management, and Supervision of Personnel.

**Associate in Applied Science Degree—Business
(62-65 Credit Hours) (ICCB Code: 038C)**

Core Courses (Required for all Business Degrees)	Cr. Hrs.
Acct. 101: Principles of Accounting (or Acct. 100*) (F,S)	4/3
Bus. 100: Introduction to Business (F,S)	3
Bus. 110: Business Mathematics (or Math. 116 or Above) (F,S)	3/4
Bus. 120: Business Communication (F,S)	3
Bus. 124: Principles of Marketing (F,S)	3
Bus. 246: Fundamentals of Management (F,S)	3
Bus. 231: Business Law (F,S)	3
C.I.S. 110: Business Applications on Microcomputers (F,S)	3
Econ. 231: Principles of Economics I 4 (F,S)	3
P. Rel. 100: Human Relations 4 (F,S)	3
Spch. 120: Business & Professional Speaking 1 (or Spch. 101) (F,S)	3

*Materials Management Degree people may take Acct. 100 instead of Acct. 101.

Specializations

ACCOUNTING:

Description: Curriculum focuses on skills needed to enter the job market as payroll clerk, billing clerk, internal auditor, bookkeeper, junior accountant, accounting clerk. Also, it may prepare students for transfer to a senior institution.

Aptitudes: This field requires the ability to work with numbers, to do detailed work with data, and to be precise while working with set standards.

Outlook: This is a large occupational field in Illinois. Many openings, primarily to replace those who leave the labor force, are expected.

Required Courses:

Acct. 102: Principles of Accounting 2 (F,S)	4
Acct. 130: Tax Accounting (F)	3
Acct. 201: Intermediate Accounting 1 (F)	4
Acct. 202: Intermediate Accounting 2 (S)	4
Acct. 211: Managerial Cost Accounting 1 (F)	3
Bus. 227: International Business Mgmt. (A)	3
Bus. 232: Business Law 2 (F,S)	3
Math. 170: Introduction to Statistics 3 (S)	4
Phil. 100: Critical Thinking 2 (F,S)	3

MANAGEMENT/LEADERSHIP:

Description: Designed to provide the student with the skills required for supervisory and mid-management positions, it is intended for those who need training for future employment and those already employed who are seeking promotion.

Aptitudes: People- and task-oriented skills are required. Good math skills and the ability to communicate effectively, verbally and in writing, are necessary.

Outlook: Prospects are good. Greatest area of growth is expected in the services sector of the economy.

Required Courses:

Acct. 102: Principles of Accounting 2 (F,S)	4
Bus. 227: International Business Mgmt. (A)	3
Bus. 232: Business Law 2 (F,S)	3
Eng1. 110: Report Writing 1 (A)	3
P. Rel. 110: Supervisory Techniques & Personnel Development 4 (S)	3
P. Rel. 120: Labor Management Relations 4 (S)	3

Suggested Electives

Bus. 290: Work Experience Practicum & Seminar (F,S)	1-5
C.I.M. 100: Introduction to Computer Integrated Manufacturing (F)	3
Ea. Sci. 210: Physical Geography 3 (F,S)	4
Hum. 100: Introduction to the Arts 2 (A)	3
P. Rel. 200: Personnel Administration 4 (F)	3
Phil. 100: Critical Thinking 2 (F,S)	3
Phy. S. 105: Physics and Astronomy 3 (F,S)	4
Soc. 110: Introduction to Sociology 4 (F,S)	3

MARKETING:

Description: The program is designed to study activities involved in directing products from the producer to the consumer. Student prepares to work in areas such as retail and industrial marketing, sales, market research, advertising, and buying.

Aptitudes: Ongoing and enthusiastic manner with leadership ability is important, along with being well organized and having good math skills.

Outlook: Above average growth is projected for sales personnel, and prospects will be best for those with an education in marketing.

Required Courses:

Acct. 102: Principles of Accounting 2 (F,S)	4
Bus. 125: Small Business Management (F,S)	3
Bus. 145: Fundamentals of Retailing (F)	3
Bus. 146: Fundamentals of Sales (S)	3
Bus. 227: International Business Management (A)	3
Bus. 232: Business Law 2 (F,S)	3
Bus. 245: Fundamentals of Advertising and Sales Promotion (S)	3
Engl. 110: Report Writing 1 (A)	3

Suggested Electives:

Bus. 290: Work Experience Practicum & Seminar (F,S)	1-5
Hum. 100: Introduction to the Arts 2 (A)	3
Phil. 100: Critical Thinking 2 (F,S)	3
Soc. 110: Introduction to Sociology 4 (F,S)	3

MATERIALS MANAGEMENT:

Description: The program is an integrated approach to planning, acquisition, conversion, flow and distribution of production materials from the raw material state to the finished product state. Materials Management concept advocates the assignment of all major activities that contribute to materials' cost to a single materials management department. Companies may include the functions of purchasing, inventory management, traffic, receiving, warehousing, surplus and salvage, production planning and control, customer service, scheduling, shipping, materials handling, and physical distribution in their definition of materials management.

Aptitudes: Individuals need a varied background that includes the basics of accounting, cost accounting, financial planning, economics, marketing, statistics, communications skills, and electronic data processing.

Outlook: An estimated 70 percent of all American industrial firms have adopted this concept. Current surveys are finding that acceptance of the materials management concept is growing steadily.

Required Courses:

Bus. 227: International Business Mgmt. (A)	3
C.I.M. 100: Introduction to Computer Integrated Manufacturing (F)	3
Matls. 110: Fundamentals of Materials Management (A)	3
Matls. 120: Purchasing and Procurement Sys. (A)	3
Matls. 140: Inventory Management and Control (A)	3
Matls. 160: Production Control Concepts (A)	3
Matls. 210: Material Requirements Planning (A)	3
Matls. 250: Master Planning (A)	3
Phil. 100: Critical Thinking 2 (F,S)	3

Business Certificates:

There are five Business Certificates (Accounting, Marketing, Management/Leadership, Materials Management, and Supervision of Personnel). A Basic Core of Courses is common for each of these certificates, and with specific required courses for each area. These are listed below.

Core Courses (Required for all Business Certificates)

Bus. 100: Introduction to Business (F,S)	3
Bus. 110: Business Mathematics (F,S)	3
C.I.S. 110: Business Application on Microcomputers (F,S)	3

Required Courses:

Accounting (34 Credit Hours)

Acct. 101: Principles of Accounting 1 (F,S)	4
Acct. 102: Principles of Accounting 2 (F,S)	4
Acct. 201: Intermediate Accounting 1 (F)	4
Acct. 202: Intermediate Accounting 2 (S)	4
Bus. 125: Small Business Management (F,S)	3
Bus. 231: Business Law 1 (F,S)	3
Bus. 227: International Business Management (A)	3

Management/Leadership (33 Credit Hours)

Acct. 101: Principles of Accounting 1 (or Acct. 100) (F,S)	4/3
Bus. 120: Business Communications (F,S)	3
Bus. 124: Principles of Marketing (F,S)	3
Bus. 227: International Business Management (A)	3
Bus. 231: Business Law 1 (F,S)	3
Bus. 246: Fundamentals of Management (F,S)	3
P.Rel. 100: Human Relations (F,S)	3
P. Rel. 120: Labor Management Relations (S)	3

Marketing (33 Credit Hours)

Acct. 100: Introduction to Accounting (or Acct. 101) (F,S)	3/4
Bus. 120: Business Communications (F,S)	3
Bus. 124: Principles of Marketing (F,S)	3
Bus. 145: Fundamentals of Retailing (F)	3
Bus. 146: Fundamentals of Sales (S)	3
Bus. 227: International Business Management (A)	3
Bus. 245: Fundamentals of Advertising and Sales Promotion (S)	3
P.Rel. 100: Human Relations (F,S)	3

Materials Management (33 Credit Hours)

Bus. 227: International Bus. Management (A)	3
Bus. 231: Business Law 1 (F,S)	3
Bus. 246: Fundamentals of Management (F, S)	3
Matls. 110: Fundamentals of Materials Management (A)	3

Matls. 140: Inventory Management and Control (A)	3
Matls. 160: Production Control Concepts (A)	3
Matls. 210: Materials Requirements Planning (A)	3
Matls. 250: Master Planning (A)	3

Supervision of Personnel (33 Credit Hours)

P. Rel. 100: Human Relations (F,S)	3
P. Rel. 110: Supervisor Techniques and Personnel Development (F,S)	3
P. Rel. 120: Labor Management Relations (F,S)	3
Econ. 231: Principles of Economics 1 (F,S) [or Econ. 140 (F)]	3
Engl. 110: Report Writing (A)	3
Ind. S. 100: Industrial Safety & Health (F,S)	3
Phil. 100: Critical Thinking (F,S)	3
Spch. 120: Business and Professional Speaking (or Spch. 101) (F,S)	3

BUSINESS

General Description: This Certificate in Business is designed to introduce students to the basic skills that are needed to enter the business field. For advanced work leading to an associate's degree see: Accounting; Banking and Finance; Management/Leadership; Marketing; Materials Management.

Certificate—Business (22 Credit Hours)

(ICCB Code: BC 0036)

Required Courses:

Cr. Hrs.

Acct. 101: Principles of Accounting 1 (F, S)	4
Bus. 100: Introduction to Business (F, S)	3
Bus. 110: Business Mathematics (F, S)	3
Bus. 120: Business Correspondence (F, S)	3
C.I.S. 110: Business Applications on Microcomputers (F, S)	3
Group Requirements/Elective(s)	3

BUSINESS-REAL ESTATE

General Description: The Business-Real Estate Certificate is designed to meet the needs of persons desiring to enter real estate sales occupations and presently employed sales persons working to meet the requirements necessary to take the Real Estate Broker's License examinations. No special qualifications are required for enrollment in the program. Individuals usually work more than 50 hours a week, including evenings and weekends. Sales people usually must furnish their own cars.

Aptitudes: Self-motivation, persistence, tact and patience in dealing with people, and an ability to work with numbers and clerical details are needed.

Outlook: The outlook depends entirely on economic conditions, which vary greatly from community to community within Illinois.

Individuals seeking to sit for the salesman license must:

1. be at least 21 years of age.
2. be a United States citizen.
3. be a high school graduate or equivalent.
4. be sponsored by a Real Estate Broker.
5. satisfactorily pass Real Estate 101.

Individuals seeking to sit for the Real Estate Broker's license must:

1. meet all qualifications for a Real Estate Broker's license.
2. satisfactorily pass Real Estate 102 and 103.

3. satisfactorily pass two courses from Real Estate 110, 112, 114, 116, 117, 118, or 120.

**Certificate—Business-Real Estate
(7 Credit Hours) (ICCB Code: BC 0060)**

Required Courses:	Cr. Hrs.
R. Est. 101: Real Estate Transactions (F, S)	2
R. Est. 102: Advanced Real Estate Principles (F, S)	1
R. Est. 103: Contract Conveyancing (F, S)	1

Directed Electives:

(Select 3 credit hours)

R. Est. 110: Real Estate Appraisal (F, S)	1
R. Est. 112: Real Estate Financing (F, S)	1
R. Est. 114: Real Estate Sales and Brokerage (A)	1
R. Est. 116: Property Management (A)	1
R. Est. 118: Farm Property Management (A)	1
R. Est. 120: Illinois Property Insurance (A)	1

CHILD CARE

General Description: The Child Care Program is designed to prepare students for employment in elementary schools, day care centers, or nursery schools, working with children 6 weeks old to 12 years old. A.A.S. graduates meet state licensing standards to be a teacher in or director of a child care center for pre-school or school-age children. Thirty semester hours enable the student to be a teacher's aide in the public schools. Work is indoors and outdoors, teaching children. Many child care centers operate 9 or 10 hours a day, 5 days a week, requiring some split shifts. Major employers are day care centers, nursery schools, recreation programs, church-related programs, and school and employer-sponsored centers.

Aptitudes: The most important aptitude is the ability to work with children and to enjoy them. Patience, emotional stability, and good health are also necessary.

Outlook: The outlook depends on private and public funding. Currently, the demand for workers is constant because turnover is high and because new child care centers are opening with many opportunities for part-time work.

**Basic Certificate—Child Care and Education
(30 Credit Hours) (ICCB Code: BC 0009)**

Required Courses:	Cr. Hrs.
C.C.&E. 101: Introduction to Child Care and Education (F, S)	3
C.C.&E. 111: Creative Activities—Children's Literature (A)	3
C.C.&E. 112: Creative Activities—Math and Science (A)	3
C.C.&E. 113: Creative Activities—Art, Music, and Drama (A)	3
C.C.&E. 114: Creative Activities—Recreation (A)	3
C.C.&E. 115: Creative Activities for Infants and Toddlers (A)	3
C.C.&E. 210: Fundamentals of Childhood Education (F)	3
Engl. 101: Composition 1 (or Engl. 091) (F, S)	3
Psych. 110: Introduction to Psychology (or Psych. 100) (F, S)	3
Psych. 150: Developmental Psychology (F, S)	3

**Advanced Certificate
(44 Credit Hours) (ICCB Code: AC 0010)**

Required Courses:	Cr. Hrs.
C.C.&E. 101: Introduction to Child Care and Education (F, S)	3
C.C.&E. 111: Creative Activities—Children's Literature (A)	3
C.C.&E. 112: Creative Activities—Math and Science (A)	3
C.C.&E. 113: Creative Activities—Art, Music, and Drama (A)	3
C.C.&E. 114: Creative Activities—Recreation (A)	3
C.C.&E. 115: Creative Activities for Infants and Toddlers (A)	3
C.C.&E. 210: Fundamentals of Childhood Education (F)	3
C.C.&E. 220: The Exceptional Child (F, S)	3

C.C.&E. 290: Work Experience Practicum and Seminar (A)	2
Engl. 101: Composition 1 (or Engl. 091) (F, S)	3
H. Ec. 110: Health, Nutrition, and Safety for Young Children (A)	3
Psych. 110: Introduction to Psychology (F, S)	3
Psych. 150: Developmental Psychology (F, S)	3
Socio. 200: Marriage and the Family (or Socio. 160) (A)	3
Spch. 101: Principles of Speech (F, S)	3

**Associate in Applied Science Degree
(60 Credit Hours) (ICCB Code: AAS 0011)**

The A.A.S. is earned by taking all courses required for the Adv. Cert. plus C.C.&E. 230.

A.A.S. Group Requirements/Electives

The A.A.S. degree requires 9 to 13 more semester hours of courses numbered 100 or above. A Humanities and/or Business course is required in addition to the program courses. (See page 72.)

NOTE: Required courses can be used to meet the General Education Group Requirements. C.C.&E. 230 is required for the Associate Degree.

Suggested full-time Child Care & Education A.A.S. sequence:

(Your schedule may differ.)

Fall	Spring	Fall	Spring
First Semester:	Second Semester:	Third Semester:	Fourth Semester:
Engl. 101	C.C.&E. 112	C.C.&E. 114	C.C.&E. 220
C.C.&E. 101	C.C.&E. 113	C.C.&E. 115	C.C.&E. 230
C.C.&E. 111	H. Ec. 110	C.C.&E. 210	C.C.&E. 290
Psych. 110	Psych. 150	Socio. 200 or 160	GR/Elec.
Spch. 101		GR/Humanities or Business Elec.	

COMPUTER INFORMATION SYSTEMS

Computer Information Systems: Programming

General Description : This A.A.S. program is designed to teach students to write, debug, and test business applications programs according to specifications. Typical job titles include computer programmer, computer operator, and systems analyst.

Aptitudes: The ability to organize ideas and data and draw conclusions, to be creative, to work with detail, to be persistent, to meet challenges and overcome obstacles, and to meet deadlines is necessary. Also important are above-average numerical and verbal abilities and the ability to make decisions and to work accurately.

Work Setting: Work is usually done in offices with some work done in computer rooms. Some night and weekend work may be necessary when new programs are tested or quick changes are being made. Major employers are wholesale and retail businesses, banking and insurance firms, governmental agencies, electronics and other manufacturers, and colleges and public schools.

Outlook: Employment for computer programmers is expected to grow much faster than average for all occupations. Increasing use of computers in business, government, medicine, and education requires programmers to write industry-specific programs. Therefore, employers prefer applicants who have some training in the field related to their application, such as business administration or accounting. Many employers also prefer previous work experience in Computer Information Systems. Opportunities increase with the size of the city. Competition is increasing as colleges and universities turn out large numbers of beginning programmers.

Computer Information Systems:

Microcomputer Applications

General Description : This A.A.S. degree curriculum is designed to prepare students for positions involving direct use of microcomputers for business administration, decision support, and financial applications. Workers in this field are trained to identify and implement the use of application

packages for business and managerial functions. Substantial “hands-on” work with IBM/compatible microcomputers and the IBM Token-Ring Network is provided. Students who complete this sequence will be qualified to enter careers in which they function as end-users, application developers, or network managers for microcomputer systems. Typical job titles include information specialist, application developer, microcomputer specialist, PC specialist, microcomputer manager, network management, LAN manager/administrator, microcomputer coordinator, and computer consultant.

Aptitudes: The ability to work with numbers, to do detailed work with data, to organize ideas, to be creative, and to work accurately is necessary.

Work Setting: Certificate and degree graduates will be prepared to enter employment in offices of all sizes using microcomputers for business. Persons who operate microcomputers for the processing of business transactions and financial reporting applications are successors to traditional bookkeepers. Major employers are wholesale and retail businesses, banking and insurance firms, governmental agencies, and manufacturing companies.

Outlook: Employment for information specialists is a growing field that should see thousands of new job opportunities created every year. Now, microcomputers and standard application packages are eclipsing and making the earlier techniques obsolete. In turn, new jobs are being generated at a rapid pace.

Certificates/Degrees

Certificate: The Certificate in Computer Information Systems: Microcomputer Applications is designed to introduce students to the basic skills that are needed to enter the Computer Information Systems field. This certificate is also designed to increase the knowledge and skills of persons whose current or previous employment in data processing is based primarily on practical experience.

Associate in Applied Science (A.A.S.): The Associate in Applied Science Degrees in Computer Information Systems and Computer Information Systems: Microcomputer Applications are designed to develop initial employment competencies for persons with no previous educational preparation or employment experience in the Computer Information Systems field. It also serves those persons already employed in the field who desire to improve their competencies and achieve an associate’s degree.

Associate in Applied Science Degree— Computer Information Systems: Programming (66 Credit Hours) (ICCB Code: AAS 0098)

Required Courses:	Cr. Hrs
Acct. 101: Principles of Accounting I (F,S)	4
Acct. 102: Principles of Accounting 2 (F,S)	4
Bus. 100: Introduction to Business (F,S)	3
Bus. 290: Work Experience Practicum and Seminar (F,S)	3
C.I.S. 105: Introduction to Business Computer Systems (F,S)	3
C.I.S. 110: Business Applications on Microcomputers (F,S)	3
C.I.S. 161: COBOL Programming 1 (F,S)	3
C.I.S. 162: COBOL Programming 2 (F,S)	3
C.I.S. 245: Microcomputer Operating Systems and Utilities (F,S)	3
C.I.S. 255: Data Communications (F)	3
C.I.S. 261: Introduction to CICS (F)	3
C.I.S. 270: IBM JCL and Utilities Programming (A)	2
C.I.S. 275: Data Base with SQL (F)	3
C.I.S. 285: Systems Analysis Methods (A)	3
Engl. 101: Composition 1 (F,S) [or Engl. 110 (A)] 1	3
Math. 116: College Algebra (or Math. 098) 3 (F,S)	4
Phil. 200: Symbolic Logic 2 (F,S)	3
P.Rel. 100: Human Relations 4 (F,S)	3
Spch. 101: Principles of Speech (or Spch. 120) 2 (F,S)	3

A.A.S. Directed Electives:

(7 directed elective hours to be selected)

Bus. 227: International Business Management (A)	3
C.I.S. 220: Local Networks (F,S)	3
C.I.S. 225: Pascal Programming (S)	4
C.I.S. 251: C Programming (S)	3
C.I.S. 262: Advanced CICS (A)	3
C.I.S. 280: Basic Assembler Language (S)	3
Econ. 140: American Economy (F)	3
Math. 125: Pascal Programming 3 (S)	4
Math. 131: Introduction to Computer Programming—BASIC 3 (F,S)	3

Suggested full-time C.I.S.: Programming A.A.S. sequence:

(Your schedule may differ.)

Fall	Spring	Fall	Spring
First Semester:	Second Semester:	Third Semester:	Fourth Semester:
Acct. 101	Acct. 102	C.I.S. 161	Bus. 290
Bus. 100	C.I.S. 105	C.I.S. 261	C.I.S. 162
C.I.S. 110	C.I.S. 245	C.I.S. 255	C.I.S. 270
Engl. 110	P.Rel. 100	C.I.S. 275	C.I.S. 285
Math. 098	Spch. 120	Dir. Elec.	Phil. 200
		Dir. Elec.	

**Certificate—Computer Information Systems: Microcomputer Applications
(31 Credit Hours) (ICCB Code: C 0109)**

Required Courses:	Cr. Hrs
Acct. 101: Principles of Accounting 1 or Acct. 100 (F,S)	4/3
Bus. 100: Introduction to Business (F,S)	3
Bus. 110: Business Mathematics (F,S)	3
C.I.S. 105: Introduction to Business Computer Systems (F,S)	3
C.I.S. 110: Business Applications on Microcomputers (F,S)	3
C.I.S. 120: Spreadsheet Applications (F,S)	3
C.I.S. 130: Word Processors (F,S)	3
C.I.S. 221: Microcomputer Data Base Systems (F,S)	3
C.I.S. 245: Microcomputer Operating Systems and Utilities (F,S)	3
C.I.S. 285: Systems Analysis Methods (A)	3

**Associate in Applied Science Degree— Computer Information Systems:
Microcomputer Applications**

(63 Credit Hours) (ICCB Code: AAS 0111)

Required Courses:	Cr. Hrs
Acct. 101: Principles of Accounting 1 (F,S)	4
Bus. 100: Introduction to Business (F,S)	3
Bus. 290: Work Experience Practicum and Seminar (F,S)	3
C.I.S. 105: Introduction to Business Computer Systems (F,S)	3
C.I.S. 110: Business Applications on Microcomputers (F,S)	3
C.I.S. 120: Spreadsheet Applications (F,S)	3
C.I.S. 130: Word Processors (F,S)	3
C.I.S. 220: Local Networks (F,S)	3
C.I.S. 221: Microcomputer Data Base Systems (F,S)	3
C.I.S. 245: Microcomputer Operating Systems and Utilities (F,S)	3
C.I.S. 285: Systems Analysis Methods (A)	3
Econ. 231: Principles of Economics I 4 (F,S)	3
Engl. 101: Composition 1 (F,S) [or Engl. 110 (A)] [or Spch. 101 (F,S)] 1	3
Math. 116: College Algebra (or Math. 098) 3 (F,S)	4
P.Rel. 100: Human Relations 4 (F,S)	3
Phil. 200: Symbolic Logic (S) [or Hum. 100 (A)] 2	3

Directed Elective Options:

One of the three following options must be followed in selecting directed elective courses. This A.A.S. degree requires that 13 directed elective credit hours be selected from the courses listed within that option.

Specialist Directed Electives: (Take 13 hours)

Bus. 227: International Business Management (A)	3
Bus. 231: Business Law 1 (F, S)	3
C.I.S. 115: Introduction to Windows (F, S)	3
C.I.S. 135: Microcomputer Accounting Systems (S)	3
C.I.S. 210: Business Graphics (F)	3
C.I.S. 222: Advanced Microcomputer Database Systems (F)	3

Programming Directed Electives: (Take 13 hours)

Bus. 227: International Business Management (A)	3
Bus. 231: Business Law 1 (F, S)	3
C.I.S. 225: Pascal Programming (S)	3
C.I.S. 251: C Programming (S)	3
C.I.S. 252: Advanced C Programming (F)	3
Math. 131: Introduction to Computer Programming - Basic (F,S)	3
C.I.M. 100: Introduction to Computer Integrated Manufacturing (F)	3

Network Management Directed Electives: (Take 13 hours)

Bus. 227: International Business Management (A)	3
Bus. 231: Business Law 1 (F,S)	3
C.I.M. 100: Introduction to Computer Integrated Manufacturing (F)	3
C.I.S. 222: Advanced Microcomputer Database Systems (F)	3
C.I.S. 251: C Programming (S)	3
C.I.S. 255: Data Communications (F)	3

Suggested full-time C.I.S.: Microcomputer Applications A.A.S. sequence:

(Your schedule may differ.)

Fall	Spring	Fall	Spring
First Semester:	Second Semester:	Third Semester:	Fourth Semester:
Bus. 100	Acct. 101	C.I.S. 220	C.I.S. 245
C.I.S. 110	C.I.S. 105	C.I.S. 222	C.I.S. 285
Math. 116 or 098	C.I.S. 120	Econ. 231	Bus. 290
GR/Elec.	C.I.S. 130	Dir. Elec.	Dir. Elec.
GR/Elec.	P.Rel. 100	Dir. Elec.	Dir. Elec.

COMPUTER INTEGRATED MANUFACTURING

General Description: The Computer Integrated Manufacturing (CIM) program permits the student to develop and upgrade skills in basic computer control of manufacturing machines, systems, and processes including the use of CNC machines, robots, programmable controllers, computer aided design (CAD), computer aided manufacturing (CAM), and material handling systems. Some of the related occupations for which this program can prepare students are manufacturing technician, manufacturing cell or center operator, engineering technician, quality control technician, and CNC machine operator. Manufacturing is usually in a controlled environment area with controls on air purity, hazardous chemical controls, and mechanical safety standards on all processes. Risk of injury is higher than in an office area but is minimized by numerous company and government standards. Major employers are manufacturing firms, engineering firms, and specialty firms.

Aptitudes: The ability to acquire good computer skills is important as well as an ability to visualize objects in two- or three-dimensions, good math skills, and an aptitude for hands-on machine operation.

Outlook: This is a growing occupation in Illinois, and the degree of automation in plants is just starting to rise to the levels enjoyed in many foreign countries. The number of job openings will depend upon the nation's economy and the willingness to invest in automation equipment.

**Basic Certificate—Computer Integrated Manufacturing
(24 Credit Hours) (ICCB Code: BC 0016)**

Required Courses:

	Cr. Hrs.
C.I.M. 100: Introduction to Computer Integrated Manufacturing (F)	3
C.I.M. 101: Computer Aided Manufacturing Fundamentals (S)	2
C.I.M. 102: CNC Programming (F)	3
C.I.M. 110: Introduction to Automated Manufacturing (F)	3
Draft. 210: Introduction to Computer Aided Drafting (F)	3
Mfg. 130: Manufacturing Metallurgy and Processes (A)	3
Math. 104: Technical Mathematics (F, S)	4
Robot. 101: Introduction to Robotics (A)	3

**Associate in Applied Science Degree
(68 Credit Hours) (ICCB Code: AAS 0115)**

Required Courses:

	Cr. Hrs.
C.I.S. 145: DOS for Technicians (F, S)	3
C.I.S. 251: C Programming (S)	3
C.I.S. 255: Data Communications (F)	3
C.I.M. 100: Introduction to Computer Integrated Manufacturing (F)	3
C.I.M. 101: Computer Aided Manufacturing Fundamentals (S)	2
C.I.M. 102: CNC Programming (F)	3
C.I.M. 110: Introduction to Automated Manufacturing (F)	3
C.I.M. 120: Production and Inventory Control (S)	3
C.I.M. 130: Automated Manufacturing (S)	3
Draft. 210: Introduction to Computer Aided Drafting (F)	3
Eltrn. 109: Industrial Controls (F)	4
Eltrn. 110: Introduction to Electricity and Electronics (F, S)	2
Eltrn. 111: Circuit Analysis (F, S)	3
Eltrn. 160: Digital Electronics (S)	3
Engl. 101: Composition 1 (F, S)	3
Mfg. 130: Manufacturing Metallurgy and Processes (F)	3
Math. 104: Technical Mathematics (F, S)	4
Mec. S. 112: Pneumatics and Hydraulics (F)	3
Phys. 115: Technical Physics (F)	4
Prod. C. 130: Inspection and Quality Control (F, S)	3
Robot. 101: Introduction to Robotics (A)	3
Group Requirements/Elective(s)	6

NOTE: Required courses can be used to meet the General Education Group Requirements.

Suggested full-time C.I.M. A.A.S. sequence:

(Your schedule may differ.)

Fall	Spring	Fall	Spring
First Semester:	Second Semester:	Third Semester:	Fourth Semester:
C.I.S. 255	C.I.S. 145	C.I.M. 102	C.I.M. 120
C.I.M. 100	C.I.S. 251	C.I.M. 110	C.I.M. 130
Draft. 210	C.I.M. 101	Eltrn. 109	Eltrn. 160
Eltrn. 110/111	Math. 104	Phys. 115	Prod. C. 130
Engl. 101	Mec. S. 112	Robot. 101	GR/Elec.
Mfg. 130	GR/Elec.		

ELECTRONIC SYSTEMS TECHNOLOGY

General Description: The industry is rapidly moving toward automated industrial systems. The age of robotics and automated industrial plants is not futuristic but current. We are now experiencing a revolution in automation of production and processing systems through electrical and electronic computer-controlled equipment. This program is designed to meet the need with extensive training in electricity, electronics, industrial controls, and programmable controllers. Industrial technicians work both in the field and at the service bench. Jobs can range from troubleshooting an industrial robot to working with 5-volt integrated circuit chips on a printed circuit

board. Major employers are automated industrial plants, field service centers, technical sales, and training centers.

Aptitudes: Above-average skills in mathematics are necessary in challenging work that requires great attention to details and keeping up with a rapidly advancing technology. The program is designed for individuals who like hands-on training and are willing to work toward an interesting and rewarding career.

Outlook: Job prospects are excellent in this field and are expected to expand into new areas each year. Salaries of graduates will range between \$20,000 and \$35,000 annually.

**Associate in Applied Science Degree—Electronic Systems Technology
(64 Credit Hours) (ICCB Code: AAS 014A)**

Required Courses:	Cr. Hrs.
C.I.S. 145: DOS for Technicians (F, S)	3
Eltrn. 109: Industrial Controls (F)	4
Eltrn. 110: Introduction to Electricity and Electronics (F, S)	2
Eltrn. 111: Circuit Analysis (F, S)	3
Eltrn. 112: Electronic Devices and Circuits (S)	5
Eltrn. 113: Industrial Controls 2 (S)	4
Eltrn. 160: Digital Electronics (S)	3
Eltrn. 202: Advanced Digital Electronics (S)	3
Eltrn. 203: Programmable Controllers (F)	3
Eltrn. 240: Introduction to Microprocessors (S)	3
Math. 091: Basic Algebra* (or Math. 098 or 116) (F, S)	4
Math. 104: Technical Mathematics** (or Math. 117) (F, S)	4
Mec. S. 110: Fundamentals of Hydraulics (or Mec. S. 112) (F)	3

*Students who intend to pursue a Bachelor’s Degree should take Math. 088 and Math. 117 in place of Math. 091 and Math. 104.

A.A.S. Group Requirements/Electives

The A.A.S. degree requires 20 more semester hours of courses numbered 100 or above with 15 of these hours selected from the areas of Communications, Humanities and/or Business, and Social Science with at least 3 hours in each area. (See page 72.)

Suggested Group Requirements:

- Communications — Engl. 101: Composition 1
- Humanities — Phil. 200: Symbolic Logic
- Social Science — Econ. 140: American Economy
- Social Science — P. Rel. 100: Human Relations

Suggested Electives:

- Eltrn. 210: Advanced Electronics Devices and Circuits
- Eltrn. 204: Programmable Controllers 2
- Draft. 241: Computer Aided Drafting—Electronic
- Phys. 115: Technical Physics
- Mfg. 120: Manufacturing Processes

Eltrn. 290: Work Experience Practicum can be used as elective credit in fulfillment of the requirements for this degree.

NOTE: Required courses can be used to meet the General Education Group Requirements.

Suggested full-time Electronic Systems Technology A.A.S. sequence:

(Your schedule may differ.)

Fall	Spring	Fall	Spring
First Semester:	Second Semester:	Third Semester:	Fourth Semester:
Eltrn. 109	Eltrn. 112	Eltrn. 203	Eltrn. 202

Eltrn. 110	Eltrn. 113	Mec. S. 110	Eltrn. 240
Eltrn. 111	Eltrn. 160	GR/Elec.	GR/Elec.
Math. 091 or 098 or 116	Math. 104 or 117		
C.I.S. 145			

ELECTRONICS

General Description: Graduates of the A.A.S. Program in Electronics are highly skilled technicians capable of finding interesting and challenging employment in a wide variety of technical fields. The following job titles are typical of the positions in which graduates recently have been placed: computer and telecommunications field engineer, broadcast engineer, consumer electronics service technician, and radar and aviation electronics specialist. Electronics technicians work both in the field and at the service bench. Major employers include computer and business machine companies, telecommunications firms, manufacturing companies, electronic service centers, railroads, and governmental agencies.

Aptitudes: Prospective electronics technicians need above-average skills in mathematics. They should expect challenging work that requires great attention to details and keeping up with a rapidly advancing technology. The ability to communicate ideas clearly and to follow instructions to the letter is also needed.

Outlook: Point-of-sale equipment, consumer electronics, and new computer applications are also expanding at a rapid pace. All of these new markets generate even more demand for electronics technicians. Salaries of recent graduates range up to \$36,000 annually. Demand for electronics technicians continues to grow faster than the supply. Most technicians receive additional specialized training through their employers on a continuing basis.

**Basic Certificate—Electronics
(22 Credit Hours) (ICCB Code: BC 0012)**

Required Courses:	Cr. Hrs.
Eltrn. 110: Introduction to Electricity and Electronics (F)	2
Eltrn. 111: Circuit Analysis (F)	3
Eltrn. 112: Electronic Devices and Circuits (S)	5
Eltrn. 120: Fundamentals of Servicing (S)	2
Eltrn. 160: Digital Electronics (S)	3
Math. 098: Intermediate Algebra (or Math. 116) (F, S)	4
Elective	3

Advanced Certificate (44 Credit Hours) (ICCB Code: AC 0013)

Required Courses:	Cr. Hrs.
Eltrn. 110: Introduction to Electricity and Electronics (F)	2
Eltrn. 111: Circuit Analysis (F)	3
Eltrn. 112: Electronic Devices and Circuits (S)	5
Eltrn. 120: Fundamentals of Servicing (S)	2
Eltrn. 160: Digital Electronics (S)	3
Eltrn. 210: Advanced Electronic Devices and Circuits (F)	3
Eltrn. 211: Pulse, Digital, and Switching Circuits (F)	5
Eltrn. 212: Communications Systems (S)	5
Eltrn. 240: Introduction to Microprocessors (S)	3
Engl. 101: Composition 1 (F, S)	3
Math. 098: Intermediate Algebra (or Math. 116) (F, S)	4
Math. 117: Trigonometry (S)	3

Advanced Certificate Electives

The Advanced Certificate requires 3 elective hours numbered 100 or above. Eltrn. 220: FCC License Preparation is recommended for students planning a career in the Communications field.

**Associate in Applied Science Degree—Electronics
(64 Credit Hours) (ICCB Code: AAS 0014)**

The A.A.S. is earned by taking all courses required for the Adv. Cert. plus the courses below.

A.A.S. Group Requirements/Electives

The A.A.S. degree requires 23 more semester hours of courses numbered 100 or above with 15 of these hours selected from the areas of Communications, Humanities and/or Business, and Social Science with at least 3 hours in each area. (See page 72.)

Suggested Group Requirements:

- Communications—Spch. 110: Discussion and Group Conference
- Humanities—Phil. 200: Symbolic Logic
- Social Science—Econ. 140: American Economy
- Business—C.I.S. 145: DOS for Technicians

Suggested Electives:

- Eltrn. 202: Advanced Digital Electronics
- Eltrn. 222: Advanced Electronic Servicing
- Eltrn. 295: Electronics Internship
- Math. 116: College Algebra
- Eltrn. 220: FCC License Preparation is recommended for students planning a career in the Communications field.

Eltrn. 295: Electronics Internship can be used as elective credit in fulfillment of the requirements for this degree.

Suggested full-time Electronics A.A.S. sequence: (Your schedule may differ.)

Fall	Spring	Fall	Spring
First Semester:	Second Semester:	Third Semester:	Fourth Semester:
Eltrn. 110	Eltrn. 112	Eltrn. 210	Eltrn. 212
Eltrn. 111	Eltrn. 120	Eltrn. 211	Eltrn. 240
Engl. 101	Eltrn. 160	GR/Elec.	GR/Elec.
Math. 098	Math. 117	GR/Elec.	GR/Elec.
GR/Elec.	GR/Elec.		

Electronics - (Biomedical Option)

General Description: The biomedical electronics option is a specialized program offered to prepare the student for a variety of positions working with medical equipment. Upon completion of the curriculum and intensive hospital internship, the student will be well prepared to perform and document preventive and corrective maintenance on a variety of medical devices. This program will also help prepare the student for the BMET certification exam of the International Certification Commission for Clinical Engineering and Biomedical Technology (ICC).

Aptitudes: Prospective biomedical electronics technicians need above-average skills in mathematics. They should expect challenging work that requires great attention to details and keeping up with a rapidly advancing technology. The ability to communicate ideas clearly and to follow instructions to the letter is also needed.

Outlook: Career opportunities exist in hospital clinical engineering departments with medical equipment manufacturers and with other organizations in the rapidly expanding medical equipment service market. According to the *Journal of Clinical Engineering*'s most recent salary survey, the average biomedical equipment technician (BMET) in a hospital is earning over \$31,000 per year with experienced specialists making up to \$67,000.

**Associate in Applied Science Degree—Electronics (Biomedical Option)
(67 Credit Hours) (ICCB Code: AAS 0015)**

Required Courses:	Cr. Hrs.
Biol. 101: Concepts of Biology 1 (F, S)	4
Biol. 201: Human Anatomy and Physiology 1 (F, S)	4
Biol. 202: Human Anatomy and Physiology 2 (F, S)	4
Eltrn. 110: Introduction to Electricity and Electronics (F)	2
Eltrn. 111: Circuit Analysis (F)	3

Eltrn. 112: Electronic Devices and Circuits (S)	5
Eltrn. 120: Fundamentals of Servicing (S)	2
Eltrn. 160: Digital Electronics (S)	3
Eltrn. 210: Advanced Electronic Devices and Circuits (F)	3
Eltrn. 211: Pulse, Digital, and Switching Circuits (F)	5
Eltrn. 212: Communications Systems (S)	5
Eltrn. 240: Introduction to Microprocessors (S)	3
Engl. 101: Composition 1 (F, S)	3
Math. 098: Intermediate Algebra (or Math. 116) (F, S)	4
Math. 117: Trigonometry (F, S)	3

A.A.S. Group Requirements/Electives

The A.A.S. degree with a Biomedical Option requires 14 more semester hours of courses numbered 100 or above with 9 of these hours selected from the areas of Communications, Humanities and/or Business, and Social Science with at least 3 hours in each area. (See page 72.)

Suggested Group Requirements:

- Communications—Spch. 110: Discussion and Group Conference
- Humanities—Phil. 200: Symbolic Logic
- Social Science—Econ. 140: American Economy

Suggested Electives:

- Eltrn. 295: Electronics Internship

Suggested full-time Electronics (Biomedical) A.A.S. sequence: (Your schedule may differ.)

Fall	Spring	Fall	Spring
First Semester:	Second Semester:	Third Semester:	Fourth Semester:
Biol. 101	Biol. 201	Biol. 202	Eltrn. 212
Eltrn. 110	Eltrn. 112	Eltrn. 210	Eltrn. 240
Eltrn. 111	Eltrn. 120	Eltrn. 211	Eltrn. 295
Engl. 101	Eltrn. 160	GR/Elec.	GR/Elec.
Math. 098	Math. 117		

FIRE SCIENCE

General Description: This program offers an in-depth study of fire science and safety with opportunities to specialize. It is designed for the pre-employment student, the employed firefighter, or the volunteer firefighter who is seeking to augment present job skills. The broad educational background prepares students for employment as highly specialized and thoroughly schooled fire science and safety technicians. In addition to the required fire science courses, students are able to select a field of specialization including fire science education, fire investigation, and emergency rescue technician. Jobs require performing heavy work indoors and outdoors for prolonged periods under dangerous conditions.

Aptitudes: Excellent health, physical stamina, agility, good vision, stability, mental alertness, and a mechanical aptitude are all needed. An ability to work well with others and to follow orders is important.

Outlook: Competition is keen for firefighter positions, but many applicants are unqualified. Prospects are fairly good for applicants who are able to pass the performance tests and who have an educational background in fire protection. Little change in employment size is expected in Illinois.

Associate in Applied Science Degree—Fire Science (62 Credit Hours) (ICCB Code: AAS 0017)

Required Courses:	Cr. Hrs.
Engl. 101: Composition 1 (or Engl. 110 or Bus. 120) (F, S)	3
Fire 110: Introduction to Fire Science (Module A) (A)	3
Fire 111: Techniques of Firefighting 1 (Module B) (A)	3
Fire 112: Techniques of Firefighting 2 (Module C) (A)	3

Fire 120: Fire Prevention Principles 1 (A)	3
Fire 130: Building Construction for Fire Science (A)	3
Fire 150: Fire Protection Systems (A)	3
Fire 200: Tactics and Strategy (A)	3
Fire 210: Firefighter Safety (A)	3
Fire 230: Fire Apparatus Engineer (A)	3
Fire 250: Hazardous Materials (A)	3
Fire 270: Management 1 (A)	3
Fire 280: Management 2 (A)	3
Math. 091: Basic Algebra (or Math. 098) (F, S)	4
Math. 104: Technical Mathematics (or Math. 117) (F, S)	4
Phys. 115: Technical Physics (F, S)	4
Psych. 100: Practical Psychology (F, S)	3
Socio. 110: Introduction to Sociology (or Socio. 100) (F, S)	3
Spch. 101: Principles of Speech (F, S)	3

Directed Electives:

(Select 3 credit hours)

Fire 140: Fire Science Instructor—Basic	3
Fire 170: Extrication Specialist	3
Fire 260: Fire Investigation	3

NOTE: Required courses can be used to meet the General Education Group Requirements.

Suggested full-time Fire Science A.A.S. sequence: (Your schedule may differ.)

Fall	Spring	Fall	Spring
Fall Semester:	Second Semester:	Third Semester:	Fourth Semester:
Fire 110	Fire 111	Fire 112	Fire 230
Fire 130	Fire 120	Fire 270	Fire 200
Fire 210	Fire 150	Phys. 115	Fire 250
Engl. 101	Math. 104	Socio. 110	Fire 280
Math. 091	Psych. 100	Dir. Elec.	Spch. 101

HORTICULTURE

General Description: The Horticulture Program is designed to prepare students for occupations in career areas such as landscaping, groundskeeping, and plantscaping. Typical jobs would include work in lawn and garden centers, turf management, and both the sales and management of these activities. The work setting may vary according to job interest and classification. A significant time would be spent outdoors, dealing with customers and their needs relating to lawn and garden design, plantscaping, and maintenance activities. Major employers are nurseries, professional landscape firms, golf courses, and related small businesses.

Aptitudes: This field requires the ability to enjoy working outdoors and to work well with people in business. Important, too, would be an appreciation of aesthetic applications to enhance the environment through efficient and complementary landscaping design techniques.

Outlook: The outlook is excellent for trained individuals. The demand for plantscaping remains high, and a shortage of qualified people exists in most other areas of horticulture. For management positions, the two-year degree is essential.

**Advanced Certificate—Turf Grass Management
(47 Credit Hrs.) (ICCB Code: 0016)**

Required Courses:

Agric. 210: Introductory Soil Science (F)	4
Agric. 290: Work Experience Practicum and Seminar (F)	5
Chem. 100: Concepts of Chemistry (F, S)	4
C.I.S. 110: Business Applications on Microcomputers (F, S)	3
Engl. 110: Report Writing (F, S)	3
Hort. 101: Turf Management (F)	3
Hort. 103: Landscape Layout and Design (S)	3

Hort. 104: Turf Management 2 (S)	3
Hort. 105: Turf Equipment Operation and Maintenance (F)	3
Hort. 111: Plant Pests (F)	3
Hort. 160: Building and Grounds Maintenance (S)	3
Hort. 190: Introduction to Horticulture (F, S)	4
O.T. 160: Office Accounting (F, S)	3
P. Rel. 110: Supervisory Techniques and Personnel Development (F, S)	3

Suggested full-time Turf Grass Management Adv. Cert. sequence:

(Your schedule may differ.)

Fall	Spring	Fall	Spring
First Semester:	Second Semester:	Third Semester:	Fourth Semester:
Chem. 100	Engl. 110	Agric. 210	Hort. 160
C.I.S. 110	Hort. 103	Agric. 290	P. Rel. 110
Hort. 101	Hort. 104	Hort. 105	
Hort. 190	O.T. 160	Hort. 111	

**Associate in Applied Science Degree—Horticulture
(62 Credit Hrs.) (ICCB Code: 0108)**

Required Courses:

Agric. 290: Work Experience Practicum and Seminar (F)	5
Bus. 110: Business Mathematics (F, S)	3
Bus. 125: Small Business Management (F, S)	3
Engl. 110: Report Writing (F, S)	3
Hort. 101: Turf Management (F)	3
Hort. 102: Ornamental Plant Identification and Use (F)	3
Hort. 103: Landscape Layout and Design (S)	3
Hort. 111: Plant Pests (F)	3
Hort. 130: Electrical Controls (F)	3
Hort. 140: Plant Propagation (F)	3
Hort. 150: Greenhouse Management (S)	3
Hort. 160: Building and Grounds Maintenance (S)	3
Hort. 170: Landscaping (S)	3
Hort. 180: Utility Engines (F)	2
Hort. 190: Introduction to Horticulture (F, S)	4
Hort. 191: Landscaping Construction and Estimating (S)	3
Electives	3

Suggested full-time Horticulture A.A.S. sequence: (Your schedule may differ.)

Fall	Spring	Fall	Spring
First Semester:	Second Semester:	Third Semester:	Fourth Semester:
Bus. 110	Engl. 110	Agric. 290	Bus. 125
Hort. 101	Hort. 103	Hort. 111	Hort. 150
Hort. 102	Hort. 191	Hort. 130	Hort. 160
Hort. 190	GR/Elect.	Hort. 140	Hort. 170
GR/Elect.		GR/Elect.	Hort. 180
			GR/Elect.

INDUSTRIAL DRAFTING

General Description: The Industrial Drafting program introduces students to fundamentals of drafting, working drawing production, various media used in the drafting room, manufacturing processes, and other specialties that will enhance employment opportunities. It is designed both for persons currently employed in industry and for those desiring initial employment as an industrial drafter. The work is done indoors at all kinds of manufacturing firms.

Aptitudes: Drafters must be precise and accurate workers and be self-directed. They need good math skills, including geometry, and the ability to visualize objects in two- and three-dimensions.

Outlook: The outlook for industrial drafters depends on the growth or decline of manufacturing industries. In Illinois a decline is anticipated, but growth is expected in other parts of the country.

**Advanced Certificate—Industrial Drafting
(33 Credit Hours) (ICCB Code: AC 0112)**

Required Courses:

	Cr. Hrs.
Draft. 101: Fundamentals of Drafting (F)	4
Draft. 102: Industrial Drafting (S)	4
Draft. 120: Technical Graphics (F)	2
Draft. 210: Introduction to Computer Aided Drafting (or Draft. 215) (F)	3
Draft. 220: Intermediate Computer Aided Drafting (F)	3
Engr. 110: Engineering Graphics (S)	3
Math. 098: Intermediate Algebra (F, S)	4
Math. 117: Trigonometry (for transfer students) (or Math. 104) (F, S)	3

Directed Electives:

(Select a minimum of 7 credit hours)

Draft. 230: Advanced Computer Aided Drafting (A)	3
Draft. 240: Computer Aided Drafting—Piping Systems (A)	3
Draft. 241: Computer Aided Drafting—Electronic (A)	3
Draft. 242: Computer Aided Drafting—Electrical (A)	4
Draft. 243: Computer Aided Drafting—Structural Steel Detailing (A)	3
Draft. 244: Computer Aided Drafting—Concrete Detailing (A)	3
Draft. 245: Computer Aided Drafting—Architectural (A)	3

**Associate in Applied Science Degree—Industrial Drafting
(67 Credit Hours) (ICCB Code: AAS 0113)**

Required Courses:

	Cr. Hrs.
C.I.S. 145: DOS for Technicians (F, S)	3
Draft. 101: Fundamentals of Drafting (F)	4
Draft. 102: Industrial Drafting (S)	4
Draft. 110: Technical Design (S)	3
Draft. 120: Technical Graphics (F)	2
Draft. 130: Fundamentals of Tool Design Drafting (S)	4
Draft. 210: Introduction to Computer Aided Drafting (or Draft. 215) (F)	3
Draft. 220: Intermediate Computer Aided Drafting (F)	3
Draft. 230: Advanced Computer Aided Drafting (A)	3
Engl. 101: Composition 1 (F, S)	3
Engl. 110: Report Writing (F, S)	3
Engr. 110: Engineering Graphics (S)	3
Math. 098: Intermediate Algebra (F, S)	4
Math. 117: Trigonometry (for transfer students) (or Math. 104) (F, S)	3
Phys. 115: Technical Physics (F, S)	4
Spch. 101: Principles of Speech (F, S)	3

Directed Electives:

(Select a minimum of 6 credit hours)

Draft. 240: Computer Aided Drafting—Piping Systems (A)	3
Draft. 241: Computer Aided Drafting—Electronic (A)	3
Draft. 242: Computer Aided Drafting—Electrical (A)	4
Draft. 243: Computer Aided Drafting—Structural Steel Detailing (A)	3
Draft. 244: Computer Aided Drafting—Concrete Detailing (A)	3
Draft. 245: Computer Aided Drafting—Architectural (A)	3

A.A.S. Group Requirements/Electives

The A.A.S. degree requires that 9 more semester hours of courses numbered 100 or above be selected from areas of Communications, Mathematics and/or Natural Science, and Humanities and/or Social Science with at least 3 hours in Humanities and/or Social Science. (See page 72.)

NOTE: Required courses can be used to meet the General Education Group Requirements.

Suggested full-time Industrial Drafting A.A.S. sequence: (Your schedule may differ.)

Fall	Spring	Fall	Spring
First Semester:	Second Semester:	Third Semester:	Fourth Semester:
Draft. 101	C.I.S. 145	Draft. 120	Draft. 230
Engl. 101	Draft. 102	Draft. 220	Engr. 110
Math. 098	Draft. 110	Engl. 110	GR/Elec.
Spch. 101	Draft. 130	Math. 117 (or 104)	
GR/Elec.	Draft. 210	Phys. 115	

INDUSTRIAL ENGINEERING TECHNOLOGY

General Description: Industrial Engineering Technicians assist industrial engineers with problems involving efficient use of personnel, materials, and machines to produce goods and services. Typical job titles include planning releaser, inventory control analyst, quality assurance planner, assembly planner, time and motion analyst, production scheduler, and plant engineering technician. Industrial Engineering Technicians work indoors, but settings vary greatly depending on the manufacturing plant. Physically, the work is light. Major employers include manufacturing firms, hospitals, governmental agencies and public utilities, and construction and mining companies.

Aptitudes: Technicians must be able to make decisions, like to work with factual information, and have average ability to use words and numbers and to perceive objects in two- or three-dimensional form. They must be able to read blueprints and have good organizational skills.

Outlook: Nationally, employment is expected to grow faster than average through the 1990s. In Illinois, however, it is a small occupation that is not expected to grow.

Associate in Applied Science Degree—Industrial Engineering Technology (66 Credit Hours) (ICCB Code: AAS 0083)

Required Courses:	Cr. Hrs.
C.I.M. 100: Introduction to Computer Integrated Manufacturing (F)	3
Draft. 101: Fundamentals of Drafting (F)	4
Econ. 231: Principles of Economics 1 (F, S)	3
Econ. 232: Principles of Economics 2 (F, S)	3
Engl. 110: Report Writing (F, S)	3
Engr. 110: Engineering Graphics (S)	3
Ind. S. 100: Industrial Safety and Health (F)	3
Mach. 103: Introduction to Numerical Control (A)	3
Mfg. 110: Basic Metallurgy (F)	3
Mfg. 120: Manufacturing Processes (F)	3
Math. 116: College Algebra (F, S)	4
Math. 117: Trigonometry (F, S)	3
Math. 121: Calculus and Analytic Geometry 1 (F)	5
Math. 141: FORTRAN for Science and Engineering (F, S)	3
P. Rel. 100: Human Relations (F, S)	3
Phys. 101: Introduction to Physics 1 (F)	4
Phys. 102: Introduction to Physics 2 (S)	4
Prod. C. 100: Time and Motion Study (A)	3
Prod. C. 130: Inspection and Quality Control (S)	3
Spch. 101: Principles of Speech (F, S)	3

NOTE: Required courses can be used to meet the General Education Group Requirements.

Suggested full-time Industrial Engineering A.A.S. sequence: (Your schedule may differ.)

Fall	Spring	Fall	Spring
First Semester:	Second Semester:	Third Semester:	Fourth Semester:
C.I.M. 100	Econ. 232	Mach. 103	Engr. 110
Draft. 101	Engl. 110	Math. 121	Ind. S. 100
Econ. 231	Math. 117	Phys. 101	Mfg. 120

Mfg. 110
Math. 116

Math. 141
P. Rel. 100

Prod. C. 100
Spch. 101

Phys. 102
Prod. C. 130

INDUSTRIAL MAINTENANCE

General Description: Industrial Maintenance workers perform a wide variety of jobs in keeping the specialized equipment of industry in operating condition by lubricating, welding, changing parts, diagnosing malfunctions, and maintaining and overhauling the machinery and equipment necessary to the operation of a particular plant. The Basic Certificate will help factory workers update their skills and make them more versatile employees, thus increasing their chances for advancement. This work is done in sites such as factories, public buildings, or hospitals.

Aptitudes: Industrial Maintenance workers must be good at working with their hands. They also need good math skills and the ability to read technical journals and blueprints.

Outlook: The outlook for Industrial Maintenance workers is directly tied to the growth or decline of manufacturing industries. In Illinois, a continued decline is expected, but the outlook in other parts of the country is much better.

**Basic Certificate—Industrial Maintenance
(36 Credit Hours) (ICCB Code: BC 0054)**

Required Course:

	Cr. Hrs.
Eltrn. 109: Industrial Controls (F)	4
Eltrn. 110: Introduction to Electricity and Electronics (F, S)	2
Eltrn. 111: Circuit Analysis (F, S)	3
Mfg. 100: Print Reading for Industry (F)	2
Math. 091: Basic Algebra (F, S)	4
Math. 104: Technical Mathematics (F, S)	4
Phys. 115: Technical Physics (F, S)	4
Weld. 101: Shielded Metal Arc Welding (F, S)	4
Elective(s)	9

Electives must be chosen from the areas of:

Manufacturing Processes and Materials

	Cr. Hrs.
Mfg. 110: Basic Metallurgy (F)	3
Mfg. 120: Manufacturing Processes (F)	3

Machine Tool Operation

Mach. 101: Machine Tool Processes 1 (F)	3
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Welding Processes

Weld. 102: Shielded Metal Arc Welding Advanced (F, S)	4
Weld. 190: Maintenance Welding (F, S)	1.5

Drafting

Draft. 101: Fundamentals of Drafting (F, S)	4
Draft. 102: Industrial Drafting (S)	4

Industrial Safety and Health

Ind. S. 100: Industrial Safety and Health (F, S)	3
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Electricity/Electronics

Eltrn. 112: Electronic Devices and Circuits (S)	5
Eltrn. 120: Fundamentals of Servicing (S)	2

Mechanical Systems

Mec. S. 101: Mechanical Power Transmission 1 (A)	4
Mec. S. 102: Mechanical Power Transmission 2 (A)	3
Mec. S. 112: Pneumatics and Hydraulics (A)	3

Physics

Phys. 120: Basic Statics and Strength of Materials (A) 3

INDUSTRIAL PRODUCTION TECHNOLOGY

General Description: The Industrial Production Technology Program trains students in the various processes used in manufacturing including welding, casting, forging, and steel making, as well as in basic metallurgy, non-ferrous materials testing principles, production control, and industrial health and safety. Typical job titles for graduates include shift supervisor, foreman, and quality control worker. This work is done in factories.

Aptitudes: Workers must possess good math skills and be able to read technical manuals and blueprints. In addition, the ability to get along with and lead people is important.

Outlook: The outlook in this field is directly related to the growth or decline of manufacturing industries. In Illinois, a continued decline is expected, but in other parts of the nation the job outlook is much better.

**Basic Certificate—Industrial Production Technology
(28 Credit Hours) (ICCB Code: BC 0063)**

Required Courses:

Engl. 110: Report Writing (F, S)	3
Ind. S. 100: Industrial Safety and Health (F)	3
Mfg. 100: Print Reading for Industry (or Draft. 101 or Engr. 110) (F)	2
Mfg. 120: Manufacturing Processes (F)	3
Math. 091: Basic Algebra (or Math. 098 or 116) (F, S)	4
Math. 104: Technical Mathematics (or Math. 117) (F, S)	4
P. Rel. 100: Human Relations (F, S)	3
Group Requirements/Elective(s)*	6

*Basic Certificate requires 3 semester hours to be selected from Prod. C. 110, 120, 130, or 140.

**Advanced Certificate
(48 Credit Hours) (ICCB Code: AC 0064)**

Required Courses:

	Cr. Hrs.
Bus. 100: Introduction to Business (F, S)	3
C.I.S. 110: Business Applications on Microcomputers (F, S)	3
C.I.M. 100: Introduction to Computer Integrated Manufacturing (F)	3
Engl. 110: Report Writing (F, S)	3
Ind. S. 100: Industrial Safety and Health (F)	3
Mfg. 100: Print Reading for Industry (or Draft. 101 or Engr. 110) (F)	2
Mfg. 120: Manufacturing Processes (F)	3
Math. 091: Basic Algebra (or Math. 098 or 116) (F, S)	4
Math. 104: Technical Mathematics (or Math. 117) (F, S)	4
O.T. 160: Office Accounting (or Acct. 101) (F, S)	4
P. Rel. 100: Human Relations (F, S)	3
Phys. 115: Technical Physics (F, S)	4

Advanced Certificate Electives

The Advanced Certificate requires 9 semester hours selected from the following courses: Prod. C. 110, 120, 130, or 140.

**Associate in Applied Science Degree—Industrial Production Technology
(69 Credit Hours) (ICCB Code: AAS 0065)**

The A.A.S. is earned by taking all courses required for the Adv. Cert. plus the courses below.

A.A.S. Group Requirements/Electives

The A.A.S. degree requires 21 more semester hours of courses numbered 100 or above with 15 of these hours selected from the areas of Communications, Humanities and/or Business, and Social Science with at least 3 hours in each area (see page 72), and 9 directed elective hours to be selected from Prod. C. 110, 120, 130, or 140.

NOTE: Required courses can be used to meet the General Education Group Requirements.

Suggested full-time Industrial Production Technology A.A.S. sequence: (Your schedule may differ.)

Fall	Spring	Fall	Spring
First Semester:	Second Semester:	Third Semester:	Fourth Semester:
C.I.M. 100	Ind. S. 100	Bus. 100	O.T. 160
Engl. 110	Math. 104	C.I.S. 110	P. Rel. 100
Mfg. 100	GR/Elec.	Phys. 115	GR/Elec.
Mfg. 120		GR/Elec.	
Math. 091			

LAW ENFORCEMENT

General Description: Career opportunities in law enforcement, as well as upgrading skills for those currently employed in this area of specialization, are a focus of Richland’s law enforcement program. This is an occupational field that offers both a terminal degree in Law Enforcement and preparation for a bachelor’s degree in Criminal Justice Administration. The principal duties of Law Enforcement officers include protecting life and property, preventing crimes, investigating complaints and crimes, arresting violators, keeping accurate records, and testifying in court. Officers work indoors and outdoors with irregular hours including weekend and holiday duty. There is a high injury rate. The majority of jobs are in patrol, traffic, juvenile, probation, or detective work, but in small police departments officers work in several areas. There are also opportunities with private security and investigative firms.

Aptitudes: Officers need the ability to make sound judgments and rational decisions, to perform well under stress, to observe and remember details, and to communicate well both verbally and in writing. Good physical conditioning and health are required.

Outlook: Job prospects are good, and most law enforcement agencies require professional training.

**Basic Certificate—Law Enforcement
(20 Credit Hours) (ICCB Code: BC 0018)**

Required Courses	Cr. Hrs.
Law E. 110: Introduction to Law Enforcement (F)	3
Law E. 113: Fundamentals of Investigation and Investigative Reporting (S)	3
Law E. 114: Criminal Law (S)	3
Law E. 120: Motor Vehicle Laws and Traffic Control (F)	4
O.T. 106: Beginning Speed & Accuracy Development (F, S)	1.5
O.T. 107: Intermediate Speed & Accuracy Development (F, S)	1.5
Group Requirements/Elective(s)	4

Advanced Certificate (47 Credit Hours) (ICCB Code: AC 0019)

Required Courses:	Cr. Hrs.
Engl. 101: Composition 1 (F, S)	3
Engl. 102: Composition 2 (F, S)	3
Law E. 110: Introduction to Law Enforcement (F)	3
Law E. 113: Fundamentals of Investigation and Investigative Reporting (S)	3
Law E. 114: Criminal Law (S)	3
Law E. 120: Motor Vehicle Laws and Traffic Control (F)	4
Law E. 200: Youth, The Law, and Police Intervention (S)	3
Law E. 210: Law Enforcement and Community Relations (F)	3
Law E. 211: Law Enforcement Administration (F)	4
O.T. 106: Beginning Speed & Accuracy Development (F, S)	1.5
O.T. 107: Intermediate Speed & Accuracy Development (F, S)	1.5
Pol. S. 120: Politics in States and Communities (F, S)	3
Psych. 110: Introduction to Psychology (F, S)	3
Socio. 110: Introduction to Sociology (F, S)	3
Socio. 130: Criminology (F, S)	3
Spch. 101: Principles of Speech (F, S)	3

(Recommended Soc. Sci. Elective—Socio. 135: The Study of Substance Abuse or Socio. 160: Community Problems and Resources.)

**Associate in Applied Science Degree—Law Enforcement
(60 Credit Hours) (ICCB Code: AAS 0020)**

The A.A.S. is earned by taking all courses required for the Adv. Cert. plus the courses below.

A.A.S. Group Requirements/Electives

The A.A.S. degree requires that 13 more semester hours of courses numbered 100 or above be selected from the areas of Communications, Humanities and/or Business, and Mathematics and/or Natural Science with at least 3 hours in each area. (See page 72.)

NOTE: Required courses can be used to meet the General Education Group Requirements.

Suggested full-time Law Enforcement A.A.S. sequence:

(Your schedule may differ.)

Fall	Spring	Fall	Spring
First Semester:	Second Semester:	Third Semester:	Fourth Semester:
Engl. 101	Engl. 102	Law E. 210	Law E. 211
Law E. 110	Law E. 113	Law E. 200	Spch. 101
Law E. 120	Law E. 114	Pol. S. 120	Psych. 110
Socio. 110	Socio. 130	O.T. 106	O.T. 107
GR/Elec.	GR/Elec.	GR/Elec.	GR/Elec.

Students in Law Enforcement may wish to consider attending the University of Illinois Police Training Insititute in addition to obtaining their associate degree at Richland. The program lasts ten weeks and offers several advantages to those seeking employment in the law enforcement field. Information is available in the Social and Natural Sciences Division office, S119.

MACHINE TOOL PROCESSES

General Description: The Machine Tool Processes Program permits students to develop and upgrade skills in basic machining including the use of the drill press, contour saw, lathe, and vertical and horizontal milling machines as well as the layout and construction of tools, gauges, jigs, fixtures, and die components. Some of the related occupations for which this program can prepare students are machine operator, machine setup, inspector, general machinist, and toolroom operator. Machine tool work is usually indoors. Some risk of injury is possible from cutting tools, moving machinery, and abrasive dust. Major employers are manufacturing firms and fabricated metals and machine shops.

Aptitudes: Machinists need an average ability to visualize objects of two- or three-dimensions, good math skills, and good hand and wrist movement and usage.

Outlook: This is a large occupation in Illinois, but it is not expected to grow. It will be affected by technological changes, such as numerical controls. The number of job openings will depend on the amount of machinery and metal parts needed by manufacturing industries.

**Basic Certificate—Machine Tool Processes
(18 Credit Hours) (ICCB Code: BC 0021)**

Required Courses:	Cr. Hrs.
Mach. 101: Machine Tool Processes 1 (A)	3
Mach. 102: Machine Tool Processes 2 (A)	3
Mfg. 100: Print Reading for Industry (F)	2
Mfg. 120: Manufacturing Processes (F)	3
Math. 104: Technical Mathematics (F, S)	4
Group Requirements/Elective(s)	3

**Advanced Certificate
(44 Credit Hours) (ICCB Code: AC 0022)**

Required Courses:

	Cr. Hrs.
Draft. 101: Fundamentals of Drafting (F)	4
Ind. S. 100: Industrial Safety and Health (F)	3
Mach. 101: Machine Tool Processes 1 (A)	3
Mach. 102: Machine Tool Processes 2 (A)	3
Mach. 103: Introduction to Numerical Control (A)	3
Mach. 201: Machine Tool Processes 3 (A)	3
Mach. 202: Machine Tool Processes 4 (A)	3
Mfg. 100: Print Reading for Industry (F)	2
Mfg. 110: Basic Metallurgy (F)	3
Mfg. 120: Manufacturing Processes (F)	3
Math. 104: Technical Mathematics (F, S)	4
Phys. 115: Technical Physics (F, S)	4
Weld. 101: Shielded Metal Arc Welding (F, S)	4

Advanced Certificate Electives

The Advanced Certificate requires 2 semester hours numbered 100 or above be selected.

Associate in Applied Science Degree

(64 Credit Hours) (ICCB Code: AAS 0023)

The A.A.S. is earned by taking all courses required for the Adv. Cert. plus the courses below.

A.A.S. Group Requirements/Electives

The A.A.S. degree requires 21 more semester hours of courses numbered 100 or above with 15 of these hours selected from the areas of Communications, Humanities and/or Business, and Social Science with at least 3 hours in each area. (See page 72.)

NOTE: Required courses can be used to meet the General Education Group Requirements.

Suggested full-time Machine Tool Processes A.A.S. sequence:

(Your schedule may differ.)

Fall	Spring	Fall	Spring
First Semester:	Second Semester:	Third Semester:	Fourth Semester:
Draft. 101	Ind. S. 100	Mach. 103	Mach. 202
Mach. 101	Mach. 102	Mach. 201	Mfg. 110
Mfg. 100	Math. 104	Phys. 115	GR/Elec.
Mfg. 120	Weld. 101	GR/Elec.	
GR/Elec.	GR/Elec.		

Management/Leadership (See page 79.)

Marketing (See page 79.)

Materials Management (See page 79.)

NURSING

General Description: The Associate Degree Nursing (ADN) program at Richland Community College is designed to prepare competent, caring, and critically thinking graduates to provide safe nursing care to clients in a variety of health care settings. The program is a combination of nursing and selected general education courses. The nursing courses consist of classroom, laboratory, and clinical experiences providing care to clients in local health care agencies. Graduates will be able to provide direct care to clients in various stages of the life cycle and manage care for an individual client or a group of clients. Upon satisfactory completion of the program, students will (a) receive an Associate of Applied Science Degree and (b) be eligible to write the RN-National Council Licensing Examination. Students who pass the examination must apply to the Department of Professional Regulations for licensure as a Registered Nurse(RN).

Aptitude: Nursing is a demanding, challenging, and satisfying profession. It requires clinical expertise, academic knowledge, thinking skills, physical stamina, and personal integrity. Individuals preparing to enter nursing must be caring, self-disciplined, and committed to nursing as a goal and must have good time management and study skills. The nursing faculty expects prompt

attendance to all clinical and class sessions and active participation in each learning experience based on study prior to class and clinical sessions. Students must receive a minimum grade of “C” in each nursing course to remain in the program.

Outlook: There is a shortage of registered nurses in both acute and long term care agencies. Nursing offers a life-long career with many learning and work opportunities. The current and future need for nurses on a national and state level exceeds all projection of supply. The current salary for beginning registered nurses in our district ranges from \$12 to \$13 per hour.

**Associate in Applied Science Degree—Nursing
(69 Credit Hours) (ICCB Code: AAS 0050)**

Required Courses:	Cr. Hrs.
Biol. 201: Human Anatomy & Physiology 1 (F, S)	4
Biol. 202: Human Anatomy & Physiology 2 (F, S)	4
Biol. 220: Microbiology (F, S)	4
Engl. 101: Composition 1 (F, S)	3
Home Ec. 200: Nutrition (A)	3
Human. (Elective)	3
Math 106: Math for Health Careers (A)	2
Nurs. 101: Concepts Basic to Nursing Practice (F)	2
Nurs. 102: Fundamentals of Nursing (F)	6
Nurs. 151: Medical-Surgical 1 (S)	4
Nurs. 152: Psychiatric Mental Health Nursing (S)	4
Nurs. 154: Pharmacological Principles of Nursing (S)	2
Nurs. 201: Medical-Surgical Nursing 2 (F)	5
Nurs. 202: Family Health Nursing (F)	5
Nurs. 251: Long-Term/Acute Care (S)	4
Nurs. 254: Transition from Education to Practice (S)	5
Psych. 110: Introduction to Psychology (F, S)	3
Psych. 145: Growth and Development (S)	3
Socio. 110: Introduction to Sociology (F, S)	3

Suggested full-time Nursing A.A.S. sequence:

(Your schedule may differ.)

Fall	Spring	Fall	Spring
First Semester:	Second Semester:	Third Semester:	Fourth Semester:
Nurs. 101	Nurs. 151	Nurs. 201	Nurs. 251
Nurs. 102	Nurs. 152	Nurs. 202	Nurs. 254
Psych. 110	Nurs. 154	Engl. 101	Human. (Elective)
Home Ec. 200	Math. 106	Biol. 220	Socio. 110
Biol. 201	Psych. 145		
	Biol. 202		

OFFICE TECHNOLOGY

The Office Technology Instructional Area consists of an A.A.S. Degree in Office Technology with a specialization in either Medical, Legal, Word Processing, or Secretarial. Students wishing to earn the Office Technology AAS Degree must complete the Core Courses (listed below), and 15 credit hours from the appropriate Specialization area. A Certificate in Office Technology is also available (also listed below).

Office Technology - Secretarial

Description: Technicians perform a variety of administrative and clerical duties, including typing, handling office routines and telephone calls, records management, taking dictation, and the transcription of office documents. All sectors of the economy employ these office technicians. Strong shorthand and transcription skills are in demand in this area.

Aptitudes: Command of grammar, punctuation, spelling, as well as an aptitude for numbers is needed. In addition to having good organizational skills, successful workers must be excellent written and verbal communicators, have superior interpersonal skills, be capable of critical thinking,

and have a strong work ethic. Individuals with a positive attitude and professional demeanor will have a strong opportunity for success.

Outlook: This occupation employs a large number of skilled and conscientious workers in Illinois. Many opportunities for part-time as well as full-time work are expected.

Office Technology - Medical Concentration

Description: Technicians perform a variety of administrative and clerical duties including handling office routines and telephone calls, managing records, maintaining medical records, typing, and maintaining appointment calendars. Major employers are hospitals and doctors' offices.

Aptitudes: Individuals must have good command of grammar, punctuation, and spelling, as well as an aptitude for medical terms. Good organizational skills and strong interpersonal skills are necessary. A professional demeanor is required.

Outlook: Opportunities are excellent for those with above average skills, thorough knowledge of medical terms and the ability to transcribe medical terms.

Office Technology - Legal Concentration

Description: Technicians perform a variety of administrative and clerical duties including typing, handling office routines and telephone calls, managing records, preparing court and client documents and maintaining court calendars. Major employers are private law firms, government agencies, legal departments of large corporations, and banking, insurance, and real estate firms.

Aptitudes: A good command of grammar, punctuation and spelling, as well as an aptitude for legal terms and numbers, is required. Good organizational skills, strong interpersonal skills, and a very professional bearing are critical to success in this area.

Outlook: Prospects are excellent for those with above average skills and thorough knowledge of legal terms.

Office Technology - Word Processing Concentration

Description: A.A.S. Degree in this specialization is designed to provide students with a general understanding of how word processing equipment impacts modern business, in addition to providing basic skills in equipment operation.

Aptitudes: Individuals must be good typists, be logical thinkers, have interpretive and problem-solving abilities, be efficient, have excellent grammar, punctuation and spelling skills, and be perseverant. Excellent proofreading and language arts skills are required.

Outlook: Increased use of word processing equipment indicates that the demand for operators will grow.

**Certificate—Office Technology*
(30 Credit Hours) (ICCB Code: 0043)**

Required Courses:

Cr. Hrs.

*To receive this Certificate, students must demonstrate the ability to type 30 WAM on a five-minute timing with no more than one error per minute.

Bus. 100: Introduction to Business (F,S)	3
Bus. 110: Business Mathematics (F,S) or OT I60	3
Bus. 119: English for Business & Technical Careers (F,S)	3
O.T. 111: Document Formatting (F,S)	3
O.T. 112: Basic Word Processing (F,S)	3
O.T. 150: Records Management (F,S)	3
O.T. 200: Office Software Applications & Production (F,S)	3
O.T. 210: Statistical Keyboard Entry (F,S)	3
O.T. 250: Professional Office Development (F,S)	3
P.Rel. 100: Human Relations (F,S)	3

Associate of Applied Science Degree—Office Technology
(60 Credit Hours) (ICCB Code: AAS 0044)**

**To receive this A.A.S. Degree, students must demonstrate the ability to type 40 WAM on a five-minute timing with no more than one error per minute.

Core Courses:	Cr. Hrs.
Bus. 100: Introduction to Business (F,S)	3
Bus. 110: Business Mathematics (F,S)	3
Bus. 119: English for Business & Technical Careers (F,S)	3
Bus. 120: Business Communications (F,S)	3
O.T. 111: Document Formatting (F,S)	3
O.T. 112: Basic Word Processing (F,S)	3
O.T. 150: Records Management (F,S)	3
O.T. 160: Office Accounting (F,S)	3
O.T. 200: Office Software Applications & Production (F,S)***	3
O.T. 211: Advanced Word Processing (F,S)	3
O.T. 212: Word Processing/Desktop Publishing Applications (S)	3
O.T. 250: Professional Office Development (F,S)	3
P.Rel. 100: Human Relations (F,S)	3
Spch. 120: Business and Professional Speaking (or Spch. 101) (F,S)	3
Elective from Math or Natural Science Group Requirement	3
Electives from any group requirement except Business	6

***Students majoring in O.T. may substitute O.T. 200 for any course requiring C.I.S. 110 as a prerequisite.

Office Technology Specializations

Students must select 9 credit hours from those listed below. Although students may select courses from more than one of the specialization areas, focusing on one area assures stronger academic preparation for employment.

Medical		Word Processing		Legal		Secretarial	
O.T. 141 (F,S)	3	Bus. 227 (A)	3	Bus. 227 (A)	3	Bus. 227 (A)	3
O.T. 210 (F,S)	3	C.I.S. 120 (F,S)	3	Bus. 231 (F,S)	3	Bus. 231 (F,S)	3
O.T. 242 (F,S)	3	C.I.S. 221 (F,S)	3	O.T. 121 (F)	3	O.T. 108 (F, S)	3
O.T. 243 (F,S)	3	C.I.S. 245 (F,S)	3	O.T. 132 (S)	3	O.T. 121 (F)	3
O.T. 245 (A)	3	O.T. 108 (F,S)	1.5	O.T. 210 (F,S)	3	O.T. 132 (S)	3
O.T. 108 (F,S)	1.5	O.T. 210 (F,S)	3	O.T. 230 (F,S)	3	O.T. 210 (S)	3
Bus. 227 (A)	3	Bus. 290 (A)	1-3	Bus. 290 (A)	1-3	O.T. 221 (A)	3
Bus. 290 (A)	1-3	C.I.S. 210 (F)	3	C.I.S. 245 (A)	3	C.I.S. 115 (F,S)	3
C.I.S. 245 (A)	3	C.I.S. 115 (F,S)	3	C.I.S. 285 (A)	3	C.I.S. 120 (F,S)	3
C.I.S. 285 (A)	3	C.I.S. 245 (A)	3			C.I.S. 210 (F, S)	3
		C.I.S. 285 (A)	3			C.I.S. 245 (A)	3
						C.I.S. 285 (S)	3

Suggested full-time Office Technology A.A.S. sequence: (Your schedule may differ.)

Fall	Spring	Fall	Spring
First Semester:	Second Semester:	Third Semester:	Fourth Semester:
Bus. 100	Bus. 110	O.T. 211	O.T. 212
Bus. 119	Bus. 120	O.T. 250	O.T. Specialization
O.T. 150	O.T. 160	O.T. 200	O.T. Specialization
O.T. 111	O.T. 112	O.T. Specialization	Gen. Ed. Elec.
Gen. Ed.. Elec.	P.Rel. 100	Gen. Ed. Elec.	Gen. Ed. Elec.

POWER GENERATION—NUCLEAR

The Nuclear Power Generation program has been placed on an inactive status for two years. At the end of the two-year period, the College will review the program and the manpower needs associated with the program. If it sounds encouraging that there may be employment opportunities in the future, we will reinstate the program.

PRODUCTION CONTROL

General Description: Production Control involves scheduling and coordinating the flow of work within a manufacturing plant. Duties include reviewing master production schedules and work orders and revising schedules according to availability of workers, materials, and equipment. Related occupations include production clerk, material expeditor, shipping and receiving clerk, and production superintendent. Employees usually work indoors in a variety of industrial or manufacturing settings. Major employers are industrial and manufacturing businesses.

Aptitudes: Average ability, including the visualization of objects in three-dimensions, and mathematical and verbal abilities are needed.

Outlook: Growth will depend on economic conditions affecting industry. However, employment is expected to grow faster than average in Illinois through the 1990s.

**Basic Certificate—Production Control
(24 Credit Hours) (ICCB Code: BC 0027)**

Required Courses:	Cr. Hrs.
C.I.M. 100: Introduction to Computer Integrated Manufacturing (F)	3
Engl. 110: Report Writing (F, S)	3
Prod. C. 100: Time and Motion Study (A)	3
Prod. C. 110: Production Scheduling (F)	3
Prod. C. 120: Plant Layout and Materials Handling (S)	3
Prod. C. 130: Inspection and Quality Control (S)	3
Prod. C. 140: Methods and Operations Analysis (F)	3
Group Requirement/Elective	3

Supervision of Personnel (See page 79.)

WELDING

General Description: Welding is designed to provide skill development in currently-used welding processes including flat and position welding. Additional skill development may be obtained in brazing, soldering, cutting layout, and fabrication techniques. The program prepares students for certification by ASME and AWS structural code tests. The student should develop sufficient skill to pass both the pressure and structural code tests established by the ASME standards. Welders work indoors and outdoors, often welding in awkward positions. Major employers are metal shops, construction and mining industry, and machine shops.

Aptitudes: Welders need average manual dexterity and eye-hand coordination, good physical condition and eyesight, and good math aptitude.

Outlook: Nationally, employment for welders is expected to grow as fast as the average for all occupations. In Illinois this is a large occupation, but no growth is expected. Welders seeking their first jobs may face keen competition from experienced welders who are unemployed and from the increased use of robotic equipment.

**Basic Certificate—Welding
(30 Credit Hours) (ICCB Code: BC 0030)**

Required Courses:	Cr. Hrs.
Draft. 101: Fundamentals of Drafting (F)	4
Math. 104: Technical Mathematics (F, S)	4
Weld. 100: Oxy-Acetylene and Plasma Arc Cutting (F, S)	1.5
Weld. 101: Shielded Metal Arc Welding (F, S)	4
Weld. 102: Shielded Metal Arc Welding, Advanced (F, S)	4
Weld. 190: Maintenance Welding (F, S)	1.5
Weld. 201: Gas Metal Arc and Flux Core Arc Welding (F, S)	2
Weld. 202: Certification Welding (F, S)	2
Weld. 204: Shielded Metal Arc Pipe Welding (F, S)	4
Weld. 205: Gas Tungsten Arc Welding (F, S)	3

Eligibility for Engl. 101 is a requirement for this certificate.

Guarantee for Technical Competency

Any student earning an Associate in Applied Science degree or certificate beginning May, 1993, judged by an employer to be lacking in the technical job skills necessary for entry into the job for which the degree or certificate was designed shall be provided up to nine tuition-free credit hours of additional skill training. The graduate, under the agreement to enact this guarantee, will still be responsible for all costs other than the tuition specified.

Qualifying Conditions for the Guarantee

1. The graduate must have earned the Associate in Applied Science degree or certificate no earlier than one year prior to the beginning date of the employment under consideration.
2. The graduate must have completed the degree within a five-year time period beginning at the point of first employment.
3. The graduate must be employed full time in a position directly related to the program of study as certified by the Dean of Instruction.
4. The employer must certify in writing that the graduate is lacking entry-level skills within 90 days of the graduate's initial date of employment.
5. The employer, graduate, division Associate Dean, and appropriate faculty member, on the occasion of confirmed need for more training, would develop a written educational plan for retraining.
6. This guarantee does not imply that the graduate is guaranteed to pass any licensing or qualifying examination for a particular career.

Cooperative Educational Programs With Other Community Colleges

Richland Community College has Cooperative Educational Program agreements with other Illinois community colleges which allow Richland Community College District residents to enroll in a degree and/or certificate program in a vocational-technical program not available at Richland. Students are able to enroll in such a program at the cooperating college's in-district tuition rate. The colleges and programs offered are listed below. (Individuals with questions about a particular program should call Richland's Student Development and Services office at 875-7200, Ext. 267.)

Students may take all specialized courses at the cooperating college. Related technical and general education courses required in the programs may be taken either at Richland or at the cooperating college. The cooperating college issues all degrees or certificates for successful completion of the programs. Additional information is available from the Director of Admissions at the college offering the program.

Programs offered for Richland students at Danville Community College, Danville:

Commercial Floriculture — A.A.S.
Ornamental Horticulture: Floral Design — Certificate
Substance Abuse Counselor — A.A.S.

Programs offered for Danville students at Richland:

Computer Integrated Manufacturing — A.A.S., Basic Certificate

Programs offered for Richland students at Kankakee Community College, Kankakee:

Agriculture Science — A.A.S.
Air Conditioning and Refrigeration — A.A.S.
Medical Laboratory Technology — A.A.S.
Radiologic Technology — A.A.S.

Programs offered for Kankakee students at Richland:

Computer Integrated Manufacturing — A.A.S., Basic Certificate

Programs offered for Richland students at Lake Land College, Mattoon:

Agriculture Production and Management — A.A.S. (All agricultural programs)
 Cosmetology — Teacher Certificate
 Cosmetology — Student Certificate
 Dental Hygiene — A.A.S.
 Diesel and Agriculture Power Technology — A.A.S.
 Physical Therapist Assistant — A.A.S.
 Radio/TV Broadcasting — A.A.S.

Programs offered for Lake Land students at Richland:

Computer Integrated Manufacturing — A.A.S., Basic Certificate
 Fire Science — A.A.S.

Programs offered for Richland students at Lincoln Land Community College, Springfield:

Agriculture Business Management — A.A.S.
 Aviation Management/Airway Science — A.A.S.
 Any health-related program, including nurse refresher course, except for the Nursing A.A.S.
 Power Plant Technology — Certificate

Programs offered for Lincoln Land students at Richland:

Computer Integrated Manufacturing — A.A.S., Basic Certificate
 Welding — Basic Certificate

Programs offered for Richland students at Parkland College, Champaign:

Dental Assistance — Certificate
 Magnetic Resonance Imaging — Certificate
 Mass Communications: Broadcasting (Performance) — A.A.S.
 Radiation Therapy — Certificate
 Respiratory Care — A.A.S.

Programs offered for Parkland students at Richland:

Computer Integrated Manufacturing — A.A.S. (2nd year), Basic Certificate
 Industrial Technology — A.A.S. (2nd year)

(A) indicates course will be offered as needed.
 (F) indicates course will be offered Fall Semester.
 (S) indicates course will be offered Spring Semester.

** indicates course will be offered occasionally (see course descriptions).

*Pending ICCB Approval.

** If a high school student received a “B” or better in keyboarding or a “C” or above in a typing class, this course requirement may be waived.

NOTE: Required courses can be used to meet the General Education Group Requirements.

The A.A.S. is earned by taking all courses required for the Adv. Cert. plus the courses below.

Instructional Programs

Instructional Programs
 Associate in Liberal Studies

This degree is designed for students who desire up to two years of college study for personal development. The curriculum is also designed to provide students an opportunity to try various areas of interest and then choose a specific educational objective, such as a particular occupational program or baccalaureate-oriented Associate degree.

Both baccalaureate-oriented and occupational courses may be taken as a part of this program but must be numbered 100 or above.

1. Group Requirements: Credits
 - a. Communications Skills (Engl. 101, 102; Spch. 101)
 - b. Humanities
 - c. Social Science
 - d. Natural Science and Mathematics
2. General Electives, which may include occupational-oriented courses.
3. Constitution Requirement (See page 56.)
4. Total Credits Required in courses numbered 100 or above. (Students transferring credit to Richland should see regulations under Admissions, page 19.)
5. Cumulative Grade Point Average — 2.00 (“C”) or better for all work applicable toward the degree that was pursued at the College. (See page 53.)

Basic Certificate Programs

The full range of courses offered by the College is applicable to the first seven basic certificate programs. Students may develop programs that will meet their specific interests or needs.

The Basic Certificate in Personal Development is meant to serve those students who want to enroll in occupational, baccalaureate-oriented or liberal studies programs but who need additional preparation to meet their goals. Therefore, this program is more structured than the other seven basic certificate general studies programs.

Basic Certificate in Community and Civic Development

The program is meant to serve those who have an interest in improving their understanding of community and civic affairs. Persons with such an interest in community and civic activities may enroll in this program even if they do not intend to receive a Certificate.

We recommend that interested individuals plan their programs with a counselor.

Graduation requirements for this Certificate are completion of:

1. Sixteen semester hours of course work that complements the individual’s other life experiences so as to broaden his or her perspective in community and civic activities. (Students transferring credit to Richland should see regulations under Admissions, pages 19.)
2. Constitution Requirement. (See page 56.)
3. Cumulative Grade Point Average — 2.00 (“C”) or better for courses numbered 080 or above and a grade of “CR” for courses numbered 079 or below that are pursued at the College and are applicable to this Certificate. (See page 53.)

Basic Certificate in Developmental, Preparatory, or Basic Skills

The program is meant to serve those who want to develop or strengthen their abilities in the basic study skills areas, such as reading, writing, or arithmetic, which are important to daily living and/or further study. This program allows them to develop or strengthen these general skills in a less formalized program structure than is provided for the Basic Certificate in Personal Development. Persons with an interest in this area may enroll in the program even if they do not intend to receive a Certificate.

We recommend that interested individuals plan their program with a counselor.

Graduation requirements for this Certificate are completion of:

1. Sixteen semester hours of course work that complements the individual’s other life experiences so as to develop or strengthen general study skills. (Students transferring credit to Richland should see regulations under Admissions, pages 19.)
2. Constitution Requirement. (See page 56.)
3. Cumulative Grade Point Average — 2.00 (“C”) or better for courses numbered 080 or above and a grade of “CR” for courses numbered 079 or below that are pursued at the College and are applicable to this Certificate. (See page 53.)

Basic Certificate in Health, Safety, and Environment

The program is meant to serve those who have an interest in improving their understanding of matters relating to health, safety, and environment (ecology). Persons with an interest in those fields may enroll in this program even if they do not intend to receive a Certificate.

We recommend that interested individuals plan their program with a counselor.

Graduation requirements for this Certificate are completion of:

1. Sixteen semester hours of course work that complements the individual's other life experiences so as to broaden his/her perspective concerning health, safety, and environment. (Students transferring credit to Richland should see regulations under Admissions, pages 19.)
2. Constitution Requirement. (See page 56.)
3. Cumulative Grade Point Average — 2.00 ("C") or better for courses numbered 080 or above and a grade of "CR" for courses numbered 079 or below that are pursued at the College and are applicable to this Certificate. (See page 53.)

Basic Certificate in Homemaking

The program is meant to serve those who have an interest in developing or improving their homemaking capabilities. Persons with an interest in this area may enroll in the program even if they do not intend to receive a Certificate.

We recommend that interested individuals plan their program with a counselor.

Graduation requirements for this Certificate are completion of:

1. Sixteen semester hours of course work that complements the individual's other life experiences so as to develop or strengthen general study skills. (Students transferring credit to Richland should see regulations under Admissions, pages 19.)
2. Constitution Requirement. (See page 56.)
3. Cumulative Grade Point Average — 2.00 ("C") or better for courses numbered 080 or above and a grade of "CR" for courses numbered 079 or below that are pursued at the College and are applicable to this Certificate. (See page 53.)

Basic Certificate in Improving Family Circumstances

The program is meant to serve those who have an interest in improving family life. Such an interest could range from the development of skills useful in the home to the development of psychological and/or sociological understanding. Persons with an interest in this area may enroll in the program even if they do not intend to receive a Certificate.

We recommend that interested individuals plan their program with a counselor.

Graduation requirements for this Certificate are completion of:

1. Sixteen semester hours of course work that complements the individual's other life experiences so as to broaden his/her perspective to improve family life. (Students transferring credit to Richland should see regulations under Admissions, pages 19.)
2. Constitution Requirement. (See page 56.)
3. Cumulative Grade Point Average — 2.00 ("C") or better for courses numbered 080 or above and a grade of "CR" for courses numbered 079 or below that are pursued at the College and are applicable to this Certificate. (See page 53.)

Basic Certificate in Intellectual and Cultural Studies

The program is meant to serve those who have an interest in pursuing studies for their own intellectual and/or cultural development.

Richland recognizes many persons enroll for the purpose of studying in areas not previously pursued even though they may have earned one or more college degrees. Other persons may have developed their occupational skills primarily through employment experiences and now desire to take advantage of the opportunity for intellectual and/or cultural development. Such study is for personal enrichment rather than for the purpose of development of occupational competence or the pursuit of a baccalaureate-oriented curriculum.

Those interested in pursuing work for such a purpose may enroll in this program even if they do not intend to receive a Certificate.

We recommend that interested individuals plan their program with a counselor.

Graduation requirements for this Certificate are completion of:

1. Sixteen semester hours of course work that complements the individual's other life experiences and broadens his/her intellectual and/or cultural understandings. (Students transferring credit to Richland should see regulations under Admissions, pages 19.)
2. Constitution Requirement. (See page 56.)
3. Cumulative Grade Point Average — 2.00 ("C") or better for courses numbered 080 or above and a grade of "CR" for courses numbered 079 or below that are pursued at the College and are applicable to this Certificate. (See page 53.)

Basic Certificate in Personal Development

The program is meant to serve those who want to complete courses in preparation for advanced study but who need additional preparation to meet that goal.

If, after consulting with a counselor, it is decided that the student needs additional preparatory courses, the student and counselor will design a course of study under this program. This is called a contract.

Persons with an interest in this area may enroll in the program even if they do not intend to receive a Certificate.

Those interested in this program should make an appointment early with a counselor.

Graduation requirements for this Certificate are completion of:

1. Group Requirements:
 - a. Communications Skills — 4 to 6 semester hours; and
 - b. One course in at least two of three areas: Humanities, Social Science or Natural Science, and Mathematics — 4 to 6 semester hours. (See page 72.)
2. Total Credits Required — 16 semester hours including requirements in Item 1 above plus general electives. (Students transferring credits to Richland should see regulations under Admissions, page 19.)
3. Constitution Requirement. (See page 56.)
4. Cumulative Grade Point Average — 2.00 ("C") or better for work applicable to the Certificate that was taken at the College. (In the event that a course numbered 079 or below is recommended by the counselor as part of the program, a grade of "CR" would be required for such a course and a 2.00 CGPA for all other work. See page 53.)

Suggested Courses:

Communications Skills

Engl. 090 - Reading and Study Skills
 Engl. 091 - Developmental Writing
 Engl. 101 - Composition 1
 Spch. 101 - Principles of Speech

Social Science

Ed. 100 - Introduction to Public Education
 Pol. S. 100 - People and Politics
 Psych. 100 - Practical Psychology
 Socio. 100 - Man, Society, and Culture

Natural Science

Biol. 101 - Concepts of Biology
 Chem. 100 - Concepts of Chemistry

Mathematics

Math. 090 - Arithmetic
 Math. 091 - Basic Algebra
 Math. 110 - Mathematical Concepts

Humanities

Af. Am. St. 101 - The African- American Experience 1
 Af. Am. St. 102 - The African- American Experience 2
 Art 100 - Art Appreciation
 Drama 150 - Introduction to Theatre
 Music 100 - Music Appreciation

Music 190 - Introduction to American Music

Socio. 200 - Marriage and the Family

Other

P. Dev. 100 - Human Potential Seminar

In addition to the suggested courses listed for the group requirements areas, a student may well utilize one or more other courses if his/her background is appropriate to a particular area of study. Electives may include other introductory courses not listed.

COURSE DESCRIPTIONS

Course Responsibilities

The administrative responsibilities for credit courses are assigned to various Divisions within the College. Inquiries concerning courses should be directed to the Division indicated above the course prefix:

Allied Health and Nursing Division

Hlth.
Nurs.

Business Division

Acct.
Bus.
C.I.S.
Matls.
O.T.
P. Fin.
P. Rel.
R. Est.

College Preparatory Division

A.B.E.
A.S.E.
E.S.L.
G.E.D.

Communications Division

Af. Am. St.
Art
Comm.
Drama
Engl.
Fren.
Germ.
Human.
Japan.
Journ.
Leadership
Music
Phil.
Span.
Spch.

Industrial Technology and Mathematics Division

Agric.
Anthr.
B. Const.
C.I.M.
Diet.
Draft.
Ea. Sci.
Eltrn.
Engr.
Hort.
Ind. S.
Mach.
Math.
Mec. S.
Mfg.
Phy. S.

Phys.
Prod. C.
Robot.
Weld.

Lifelong Learning Division

Auto.

Social and Natural Sciences Division

Biol.
C. C. & E.
Chem.
Econ.
Ed.
Fire
H. Ec.
Hist.
Law E.
P. Ed.
Pol. S.
Psych.
Rec.
Socio.

Student Development and Services

Orien.
P. Dev.

Course Titles, Hours, and Credit

Course titles include: (1) the general area of instruction for the course, which is called the course "Prefix" (for example: Acct., Math., Hist., etc.); (2) the course number; (3) the descriptive course title (for example: Principles of Accounting 1, College Algebra, United States to 1877, etc.); and (4) the number of hours a class normally meets a week and the number of semester hours credit granted (for example: 3-0-3 would indicate 3 hours of lecture/ discussion per week and 0 hours of laboratory per week for 3 semester hours of credit; 1-4-3 would indicate 1 hour of lecture/ discussion per week and 4 hours of laboratory per week for 3 semester hours of credit, etc.)

Any course numbered 100 or above is applicable to one or more but not all Associate Degree curricula and one or more but not all Certificate programs depending upon the nature of the curriculum or program. Courses numbered 099 or under may be applicable to selected Basic Certificate programs.

Applicability of Course

Courses are offered appropriate to a wide variety of programs; consequently, not all courses are applicable to every program.

Also, several programs require some study of courses that satisfy certain Group Requirements, subdivided into Communications, Humanities, Social Science, and Mathematics and Natural Science. Occupational-oriented Associate Degree curricula require some study through Group Requirement areas, which are subdivided into Communications, Humanities and/or Business, Social Science, and Mathematics and/or Natural Science.

Following each course description is information showing the Certificate or Degree, the Group Requirement, and the Program Area of Concentration to which the course is applicable toward RCC graduation. The degrees are abbreviated: A.A.S. - Associate in Applied Science; A.L.S. - Associate in Liberal Studies; A.A., - Associate in Arts; and A.S. - Associate in Science.

Co-Enrollment Courses

Some courses are offered through co-enrollment with community agencies such as the YMCA. Enrollment in these co-enrollment courses is restricted to a credit basis.

COURSE DESCRIPTIONS

Course Responsibilities

The administrative responsibilities for credit courses are assigned to various Divisions within the College. Inquiries concerning courses should be directed to the Division indicated above the course prefix:

Allied Health and Nursing Division

Hlth.

Nurs.

Business Division

Acct.

Bus.

C.I.S.

Matls.

O.T.

P. Fin.

P. Rel.

R. Est.

College Preparatory Division

A.B.E.

A.S.E.

E.S.L.

G.E.D.

Communications Division

Af. Am. St.

Art

Comm.

Drama

Engl.

Fren.

Germ.

Human.

Japan.

Journ.

Leadership

Music

Phil.

Span.

Spch.

Industrial Technology and Mathematics Division

Agric.

Anthr.

B. Const.

C.I.M.

Diet.

Draft.

Ea. Sci.

Eltrn.

Engr.

Hort.

Ind. S.

Mach.

Math.

Mec. S.

Mfg.

Phy. S.

Phys.
Prod. C.
Robot.
Weld.

Lifelong Learning Division

Auto.

Social and Natural Sciences Division

Biol.
C. C. & E.
Chem.
Econ.
Ed.
Fire
H. Ec.
Hist.
Law E.
P. Ed.
Pol. S.
Psych.
Rec.
Socio.

Student Development and Services

Orien.
P. Dev.

Course Titles, Hours, and Credit

Course titles include: (1) the general area of instruction for the course, which is called the course "Prefix" (for example: Acct., Math., Hist., etc.); (2) the course number; (3) the descriptive course title (for example: Principles of Accounting 1, College Algebra, United States to 1877, etc.); and (4) the number of hours a class normally meets a week and the number of semester hours credit granted (for example: 3-0-3 would indicate 3 hours of lecture/ discussion per week and 0 hours of laboratory per week for 3 semester hours of credit; 1-4-3 would indicate 1 hour of lecture/ discussion per week and 4 hours of laboratory per week for 3 semester hours of credit, etc.)

Any course numbered 100 or above is applicable to one or more but not all Associate Degree curricula and one or more but not all Certificate programs depending upon the nature of the curriculum or program. Courses numbered 099 or under may be applicable to selected Basic Certificate programs.

Applicability of Course

Courses are offered appropriate to a wide variety of programs; consequently, not all courses are applicable to every program.

Also, several programs require some study of courses that satisfy certain Group Requirements, subdivided into Communications, Humanities, Social Science, and Mathematics and Natural Science. Occupational-oriented Associate Degree curricula require some study through Group Requirement areas, which are subdivided into Communications, Humanities and/or Business, Social Science, and Mathematics and/or Natural Science.

Following each course description is information showing the Certificate or Degree, the Group Requirement, and the Program Area of Concentration to which the course is applicable toward RCC graduation. The degrees are abbreviated: A.A.S. - Associate in Applied Science; A.L.S. - Associate in Liberal Studies; A.A., - Associate in Arts; and A.S. - Associate in Science.

Co-Enrollment Courses

Some courses are offered through co-enrollment with community agencies such as the YMCA. Enrollment in these co-enrollment courses is restricted to a credit basis.

Key to Course Descriptions

Below is an example of a Course Description that will serve as a Key to those descriptions that follow on pages 119-208.

<i>Course No</i>	<i>Course Title</i>	<i>Lec- ture</i>	<i>lab</i>	<i>credit hrs</i>
Acct. 100	- Fundamentals of Accounting	3	0	- 3

ACCOUNTING

Acct. 100 - Fundamentals of Accounting (Pending I.C.C.B. Approval) 3-0-3

places emphasis on financial statements, accounting cycle, special journals and ledgers, adjustments, accounts receivable and accounts payable, bank reconciliation, inventories, depreciation, and payroll. This course is recommended for non-accounting majors and as a preview for Acct. 101. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S
- Group Requirement - Business (A.A.S. only)
- Area of Concentration - Not Applicable

Acct. 101 - Principles of Accounting 1 4-0-4

serves as the introduction to financial accounting, including basic theory and practice as it applies to the accounting cycle and the communication of results through financial statements. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Business (A.A.S. only)
- Area of Concentration - Accounting, Business, Computer Information Systems

Acct. 102 - Principles of Accounting 2 4-0-4

(Prerequisite: Acct. 101.) serves as the introduction to accounting theory and practice for corporation, financial statement analysis, cost accounting, budgeting, and managerial accounting topics. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Business (A.A.S. only)
- Area of Concentration - Accounting, Business, Computer Information Systems

Acct. 130 - Tax Accounting 3-0-3

serves as an introduction to the basic concepts and procedures of Federal and State income tax as they pertain to the individual taxpayer and the small business enterprise under the latest amendments to the Internal Revenue Code. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Business (A.A.S. only)
- Area of Concentration - Not Applicable

Acct. 201 - Intermediate Accounting 1 4-0-4

(Prerequisite: Acct. 102.) examines accounting concepts, principles, and theory with an emphasis on the special problems that arise in applying these concepts for external reporting purposes - specifically covering the income statement, balance sheet and all asset topics. Offered in Fall

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Business (A.A.S. only)
- Area of Concentration - Not Applicable

Acct. 202 - Intermediate Accounting 2 4-0-4

(Prerequisite: Acct. 201) examines accounting concepts, principles and theory with an emphasis on the special problems that arise in applying these concepts for external reporting purposes - specifically covering liabilities, corporation, taxation and financial statement analysis topics. Offered in Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Business (A.A.S. only)
- Area of Concentration - Not Applicable

Acct. 211 - Managerial Cost Accounting 1 3-0-3

(Prerequisite: Acct. 102.) emphasizes the managerial uses of cost accounting information for business decision-making. Topics include analysis of three elements of cost: material, labor, and overhead. Job order, standard, and process cost will be covered. Offered in Fall

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Business (A.A.S. only)

Area of Concentration - Not Applicable

AFRICAN-AMERICAN STUDIES**Af. Am. 101 - The African-American Experience 1 4-0-4**

surveys African-American heritage from its African roots through the beginning of the civil rights movement (1954) and critically examines literature and other products of African-American culture. Offered in Fall and Spring

Application toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Humanities, Social Science

Area of Concentration - African-American Studies

Af. Am. 102 - The African-American Experience 2 4-0-4

surveys African-American history from 1877 to the present, examines the prose, poetry, and drama of African-American authors of the period, and traces African-American music from ragtime through rock and soul to the present. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Humanities, Social Science

Area of Concentration - African-American Studies

AGRICULTURE

Agric. 101 - Care and Adjustment of Agricultural Equipment 2-2-3

covers the care and calibration of the equipment used in crop production. Emphasis will be placed on fertilizer, herbicide, and pesticide applicators and planting, tillage, and harvesting equipment. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Agricultural Products and Processing

Agric. 102 - Fundamentals of Soil Management 2-2-3

covers the nature and properties of soils including origin, formation, and biological, chemical, and physical aspects. Basic principles of soil dynamics, texture, structure, moisture, organic matter, and soil reaction to fertilizers are considered. Emphasis is placed on soil losses and how they can be controlled. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not applicable

Area of Concentration - Agricultural Products and Processing

Agric. 103 - Fundamentals of Farm Welding 1-6-3

includes procedures applicable to problems encountered in farm welding. Also included is information concerning and practice with the different kinds of metals normally used in farming operations. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Agricultural Products and Processing

Agric. 104 - Fundamentals of Crop Production 2-2-3

covers production and harvesting of crops grown in this area including new varieties; common weeds, insects, and diseases; seed purity and germination; market grades of grain; and plant and seed preparation. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Natural Science (A.A.S. only)

Area of Concentration - Agricultural Products and Processing

Agric. 105 - Controlled Environment Agriculture 1-2-2

is an introduction to optimized plant growth. Vegetable and ornamental crops will be produced by the students to develop a working understanding of plant growth needs; systems of environmental control; and plant nutrition, disease control, harvesting and marketing implications of the system. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Natural Science (A.A.S. only)

Area of Concentration - Agricultural Products and Processing

Agric. 120 - Introduction to Agricultural Economics 3-0-3

establishes an understanding of economic principles and their application to agricultural problems while studying the role of agriculture in United States and world economics. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Business (A.A.S. only)

Area of Concentration - Agricultural Products and Processing

Agric. 121 - Agriculture Commodity Marketing I 1.5-0-1.5

is designed to help farmers develop marketing skills by determining production costs and understanding the cash and futures markets, to conduct a technical analysis of the markets, and to use these principles to develop a marketing plan for their own operation. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S
 Group Requirement - Not Applicable
 Area of Concentration - Agricultural Products and Processing

Agric. 130 - Introductory Crop Science 3-2-4

acquaints students with the field of agronomy. Emphasis is placed on the importance, origin, growth, and distribution of food crop plants. Consideration is given to ecological and cultural aspects. Offered as needed

Applicable toward graduation where program structure permits:
 Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
 Group Requirement - Natural Science (A.A.S. only)
 Area of Concentration - Agricultural Products and Processing

Agric. 185 - Mobile Hydraulic Systems 2-4-4

teaches the fundamentals of hydraulics and provides training in component functions and their applications and equipment. Methods of testing and repair will be practiced on farm and industrial equipment. Offered as needed

Applicable toward graduation where program structure permits:
 Certificate or Degree - All Certificates, A.A.S., A.L.S
 Group Requirement - Not Applicable
 Area of Concentration - Agricultural Products and Processing

Agric. 187 - Off-Highway Equipment Air Conditioning and Heating 0-2-1

is a study of air conditioning/heating components and their functions. Service and maintenance techniques will be developed using farm tractors, combines, and off-highway equipment. Offered as needed

Applicable toward graduation where program structure permits:
 Certificate or Degree - All Certificates, A.A.S., A.L.S
 Group Requirement - Not Applicable
 Area of Concentration - Agricultural Products and Processing

Agric. 200 - Weed and Pest Control 3-2-4

covers the safety and handling of approved agricultural pesticides. Special emphasis will be placed on herbicides for corn and soybeans. Students will develop the ability to select pesticides, formulate mixes, and apply materials in a safe and approved manner. Offered as needed

Applicable toward graduation where program structure permits:
 Certificate or Degree - All Certificates, A.A.S., A.L.S
 Group Requirement - Not Applicable
 Area of Concentration - Agricultural Products and Processing

Agric. 210 - Introductory Soil Science 3-2-4

(Prerequisite: Chem. 100 or 101.) introduces the nature, properties, and use of soil. Emphasis is given to the chemical, physical, and biological properties of soil. Offered as needed

Applicable toward graduation where program structure permits:
 Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
 Group Requirement - Not Applicable
 Area of Concentration - Agricultural Products and Processing

Agric. 220 - Farm Accounting 3-0-3

is a course for the study of systematic recordkeeping and accounting principles useful in analyzing farming and farm-related operations. Included will be inventory control, depreciation, taxes, financing, the balance sheet, cash flow, and the profit and loss statement. Offered as needed

Applicable toward graduation where program structure permits:
 Certificate or Degree - All Certificates, A.A.S., A.L.S
 Group Requirement - Not Applicable
 Area of Concentration - Agricultural Products and Processing

Agric. 230 - Computer Technology in Agriculture 2-0-2

deals with the use of microcomputers and programmable calculators on the farm or in agribusiness. Emphasis will be placed on the applications of software available for use in the area of agriculture. Students will also be exposed to the mechanics of writing computer programs. Time will be allocated for the student's use of the computer in addition to time spent during regular class hours. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Agricultural Products and Processing

Agric. 250 - Fundamentals of Farm Management 3-0-3

consists of applications of economic principles to organization and management of a farm business. Also covered are size of business, choice of enterprise, timing of production, farm labor utilization, leases, and farm business records. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Agricultural Products and Processing

Agric. 260 - Marketing Agricultural Products 3-0-3

consists of demand, supply, and distribution of farm products; nature of production; the marketing system; and marketing of farm products. Also included are problems in pricing, in choosing outlets, and in reducing the costs and increasing the efficiency of agricultural marketing. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Agricultural Products and Processing

Agric. 290 - Work Experience Practicum and Seminar 1-20-5

(Prerequisite: Sophomore standing. Must complete an application for enrollment and submit it to the Industrial Technology and Mathematics Associate Dean 30 days or more prior to the first day of registration for the semester during which the student desires to participate in this course. Applications are available in the Industrial Technology and Mathematics Division.)

affords the student in an Agricultural Products and Processing program the opportunity to apply principles learned in other courses to the work situation by employment in or observation of a business, industry, or agency. Employment or observation activities are coordinated with the student's course work. One of the requirements of this course will be a one-hour-per-week seminar to be arranged for the maximum convenience of the students. Credit is determined at enrollment based on the ratio of five or more hours per week in the employment setting for a regular-length semester for one semester hour of credit. Credit is variable, ranging from 1-5 credits. The course may be repeated for a maximum accumulation of five semester hours of credit. Offered in Fall

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Agricultural Products and Processing

Agric. 291 - Advanced Work Experience Practicum and Seminar 1-20-5

(Prerequisite: Agric. 290.) affords students in an Agricultural Products and Processing program, through involvement in the challenges and rewards of the real work environment and performance of specific work activities, to become aware of their abilities and strengths while learning an employer's procedures and expectations. Credit is variable ranging from 1-5 credits. Offered in Spring

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Agricultural Products and Processing

ANTHROPOLOGY**Anthr. 110 - Introduction to Cultural Anthropology 3-0-3**

(Prerequisite: eligibility for Engl. 101.) is an introductory anthropology course that discusses the more common lifeways that humans use to adapt to their particular physical and social environments. Examples from contemporary and past societies from around the world will be used to provide the students with a broader perspective of their own culture. Various aspects of world cultures to include religion, technology, kinship, political and economic systems, and change will be discussed to understand how and why culture works and sometimes fails. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Social Science

Area of Concentration - Anthropology

Anthr. 120 - Introduction to Physical Anthropology 3-0-3

(Prerequisite: eligibility for Engl. 101.) is an introductory physical anthropology course that deals with human physical and cultural change throughout the course of history. Archaeological data and techniques are discussed as a way of providing information on human change through time. Studies of human and non-human behavior are discussed to point out the effects and consequences of change. Offered in Fall

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Social Science

Area of Concentration - Anthropology

Anthr. 130 - Introduction to Archaeology 3-0-3

(Prerequisite: eligibility for Engl. 101.) is designed to introduce majors and non-majors to anthropology through the use of archaeological data, concepts, methods, and goals. Emphasis will be placed upon New World archaeological data. Offered in Spring

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Social Science

Area of Concentration - Anthropology

ART**Art 100 - Art Appreciation 3-0-3**

examines the various styles of painting, sculpture, and other visual media with an historical overview. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Humanities

Area of Concentration - Not Applicable

Art 101 - Introduction to Drawing 1 1-5-3

acquaints the student with the basic concepts and practice of drawing including the study of line, form, space, value, and composition. Subject matter will include still life arrangements as well as the human figure. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Not Applicable

Area of Concentration - Art

Art 102 - Introduction to Drawing 2 1-5-3

(Prerequisite: Art 101.) continues projects from still life arrangements and the figure. Black and white as well as color media are used. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Not Applicable

Area of Concentration - Art

Art 111 - Introduction to Design 1 1-5-3

offers the student orientation in the principles and practice of two-dimensional designing using various media and dealing with the elements of line, color, balance, value, and form. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

Certificates or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Not Applicable

Area of Concentration - Art

Art 112 - Introduction to Design 2 1-5-3

(Prerequisite: Art 111.) involves the study and practice of three-dimensional design and exploration of various tools, materials, and techniques. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Not Applicable

Area of Concentration - Art

Art 113 - Figure Drawing 1 0-6-3

(Prerequisite: Art 101, 102, 111, or 112 or concurrent enrollment in any one of these courses.) introduces the student to the drawing of the human figure with activities involving techniques, anatomy, and design in varied media. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Not Applicable

Area of Concentration - Art

Art 114 - Figure Drawing 2 0-6-3

(Prerequisite: Art 113.) continues activities involving techniques, anatomy, and design in various media of drawing the human figure. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Not Applicable

Area of Concentration - Art

Art 115 - Printmaking 1 0-6-3

introduces the student to creative explorations in the media of monoprint, linoleum block cut prints, and wood block prints. Offered as needed

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Not Applicable
- Area of Concentration - Art

Art 116 - Printmaking 2 0-6-3

(Prerequisite: Art 115.) introduces the student to an exploration of the silkscreen print technique.

Offered as needed

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Not Applicable
- Area of Concentration - Art

Art 117 - Painting 1 0-6-3

introduces the student to the approaches, media, and techniques of painting as a medium of expression. Offered as needed

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirements - Not Applicable
- Area of Concentration - Art

Art 118 - Painting 2 0-6-3

(Prerequisite: Art 117.) continues exploration of the approaches, media, and techniques of painting as a medium of expression. Offered as needed

Applicable toward graduation where program structure permits

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirements - Not Applicable
- Area of Concentration - Art

Art 119 - Sculpture 1 0-6-3

introduces the student to three-dimensional spatial concerns in various sculptural materials.

Various fundamental techniques are explored. Offered as needed

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Not Applicable
- Area of Concentration - Art

Art 120 - Sculpture 2 0-6-3

(Prerequisite: Art 119.) offers further work in various three-dimensional materials. Attention is given to personal and individual problem-solving. Offered as needed

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Not Applicable
- Area of Concentration - Art

Art 121 - Ceramics 1 0-6-3

is an introduction to various hand-building techniques, decorative methods, and firing processes.

Offered in Fall and Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Not Applicable
- Area of Concentration - Art

Art 122 - Ceramics 2 0-6-3

(Prerequisite: Art 121.) is a continuation of various hand-building techniques, decorative methods, and firing processes. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Not Applicable
- Area of Concentration - Art

Art 123 - Watercolor 1 0-6-3

introduces the student to approaches, techniques, and media of transparent and opaque water-soluble paints. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Not Applicable

Area of Concentration - Art

Art 124 - Watercolor 2 0-6-3

(Prerequisite: Art 123.) continues the approaches, techniques, and media of transparent and opaque water-soluble paints. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Not Applicable

Area of Concentration - Art

Art 125 - Photography 1: Black and White 0-6-3

introduces the student to photography, covering fundamentals of camera, studio, and darkroom techniques. (Students will be expected to supply their own fully manual 35mm cameras. Refer to equipment list for the class.) Offered in Fall and Spring

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Not Applicable

Area of Concentration - Art

Art 126 - Photography 2: Black and White 0-6-3

(Prerequisite: Art 125 or evaluation of portfolio.) is a continuation of Art 125. It offers further study and experimentation with camera, studio, and darkroom techniques. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Not Applicable

Area of Concentration - Art

Art 131 - Advanced Ceramics 1 0-6-3

(Prerequisite: Art 121.) is a continuation of ceramics with the emphasis on use of the potter's wheel and the building techniques, decorative methods, and firing processes of wheel-thrown work. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Not Applicable

Area of Concentration - Art

Art 210 - Art History 1: Ancient and Medieval 3-0-3

is an introductory course in art history from prehistoric times through the Egyptian, Greek, Roman, early Christian, Medieval, Romanesque, and Gothic periods. Offered in Fall

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Humanities

Area of Concentration - Art

Art 220 - Art History 2: Renaissance-Rococo 3-0-3

is an introductory course in art history from early Renaissance art and architecture through the Baroque and Rococo periods. Offered in Spring

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Humanities

Area of Concentration - Art

Art 225 - Photography 3: Color 0-6-3

(Prerequisite: Art 125 or evaluation of portfolio.) introduces the processes of making color transparencies and prints. It familiarizes the student with the mechanics of processing a color image. Various assignments stress aesthetic and technical qualities. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
Group Requirement - Not Applicable
Area of Concentration - Art

Art 230 - Art History 3: Modern Art 3-0-3

is an introductory course in art history from the early 19th through the 20th century to the present, from the Neo-Classic period through Romanticism, Impressionism, Post-Impressionism, Fauvism, Cubism, Surrealism, Abstract Expressionism, to art of the present day. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
Group Requirement - Humanities
Area of Concentration - Art

AUTOMOTIVE

Auto. 100A—Elementary Automotive Technology I 3-2-4

teaches basic automotive skills and vocabulary that will provide a foundation for the more advanced 100 and 200 level automotive training modules. Subjects include safety procedures, tools and their proper use, various engine components, electrical principles and equipment, tires, and a general overview of important systems in the automobile. Offered as needed

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Not Applicable
- Area of Concentration - Automotive Technician

Auto. 100B—Elementary Automotive Technology II 3-2-4

(Prerequisite: Auto. 100A or permission of instructor.) provides a basic overview of automotive systems, equipment, and vocabulary, including tools and their proper use, safety procedures, engine operating principles, engine repair procedures, fuels and fuel systems, computers in automobiles, and manual and automatic transmissions. Offered as needed

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Not Applicable
- Area of Concentration - Automotive Technician

Auto. 101—Basic Theory 3-1-3.5

provides an overview of basic automotive skills and terminology. Students will learn definitions of common automotive terms, proper care and use of tools, and safety precautions and procedures in the shop. In addition, the course provides a general introduction to automotive components and principles, including the engine, its parts and their functions; fuel systems; batteries and cranking systems; ignition system; suspension, steering, and brakes; manual and automatic transmissions and heating and air conditioning; electrical systems and principles. Offered as needed

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Not Applicable
- Area of Concentration - Automotive Technician

Auto. 102—Electrical 3-1-3.5

(Prerequisite: Auto. 101 or permission of instructor.) is for students with basic automotive and/or electrical knowledge. It covers operations and principles of the electrical and electronic components in the automobile. Students will also learn practical applications in the basic diagnosis and repair of automotive electrical systems. Topics include batteries, electrical and electronic devices, AC and DC charging systems, ignition systems, instruments and accessories, and troubleshooting. Offered as needed

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Not Applicable
- Area of Concentration - Automotive Technician

Auto. 201—Suspension, Steering and Brakes 3-1-3.5

(Prerequisite: Auto. 101 and Auto. 102 or permission of instructor.) introduces the more advanced automotive student to the components and functions of suspension equipment, steering equipment, and braking systems. Classroom work and practical applications provide knowledge and hands-on experience with equipment and operations such as front and rear suspension; shock absorbers; manual and power steering; wheels and tires; wheel alignment and balance; various brake types; antilock braking systems; and brake diagnosis, service, and inspection. Offered as needed

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Not Applicable
- Area of Concentration - Automotive Technician

Auto. 202—Heating and Air Conditioning 3-1-3.5

(Prerequisite: Auto. 101 and Auto. 102 or permission of instructor.) covers functions and components of automotive heating and air conditioning systems. Students will learn the

fundamental operations of cooling systems, heating and ventilating systems, and refrigeration systems. Safety precautions, diagnostic procedures, and cleaning and inspection are also covered. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Automotive Technician

Auto. 203—Advanced Fuel Injection, Turbo and Super Charging 3-1-3.5

(Prerequisite: Auto. 101 and Auto. 102 or permission of instructor.) introduces the advanced student to the functions and components of advanced fuel injection and turbo and super charging. Through classroom work and hands-on applications, students will become familiar with the following equipment and operations: turbochargers and superchargers; gasoline, diesel and propane fuels; fuel supply systems; carburetors; fuel injection systems and injectors; gasoline and diesel fuel injection components; exhaust systems; and emission controls and modifications. Students will also be introduced to diagnostic and performance testing procedures. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Automotive Technician

Auto. 204—Engine Repair 3-1-3.5

(Prerequisite: Auto. 101 and Auto. 102 or permission of instructor.) covers the diagnostic processes and actual procedures of engine repair. Students learn troubleshooting techniques, service tips, safety rules, and repair methods in the classroom and in hands-on experiences. Topics include basic engine components; engine systems, classifications, and measurements; force and pressure; energy, work and power; externally mounted parts; lubrication systems and principles; cooling systems and principles; and overall engine diagnosis and service procedures. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Automotive Technician

Auto. 205—Manual Drive Train and Axles 3-1-3.5

(Prerequisite: Auto. 101 and Auto. 102 or permission of instructor.) covers the terms and components related to manual drive trains and axles. Students will study principles and operations of manual transmissions, learning equipment, terms, and safety procedures. Course also includes information on diagnosis and service, cleaning, and inspection. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Automotive Technician

Auto. 206—Automatic Transmissions and Transaxles 3-1-3.5

(Prerequisite: Auto. 101 and Auto. 102 or permission of instructor.) introduces the student to the terms and components involved in maintenance and service of automatic transmissions. Students will study the basic parts and operation of automatic transmissions, including safety tips, service, and diagnostic procedures. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Automotive Technician

Auto. 207—Advanced Automotive Electronics 3-1-3.5

(Prerequisite: Auto. 101 and Auto. 102 or permission of instructor.) teaches the advanced diagnostic and analytical skills that are needed to service today's high tech, electronically controlled vehicles properly. Students will study electrical and electronic fundamentals, measurement devices, electron and current flow, schematic diagram reading, semiconductors, various transistors and their uses, electronic control modules, and dashboard instruments. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Automotive Technician

Auto. 208—Advanced Automotive Brakes 3-1-3.5

(Prerequisite: Auto. 101 and Auto. 102 or permission of instructor.) teaches the advanced diagnostic and analytical skills that are needed to service today's high tech, electronically controlled anti-lock brake systems properly. Topics include brake types (design and application), braking principles, hydraulic brake systems, power brakes, disc brakes, drum brakes, electric brakes, anti-lock braking systems, and testing and diagnosis of brake systems. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Automotive Technician

Auto. 209—Advanced Driveability Problem Diagnosis 3-1-3.5

(Prerequisite: Auto. 101 and Auto. 102 or permission of instructor.) teaches advanced diagnostic and analytical skills that are needed to service today's high tech, computer-controlled engine management systems properly. Students will learn intake and fuel system design and application, exhaust and emission systems, carburetors, fuel injection, ignition systems and problem diagnosis, computerized engine controls and circuits, and engine performance diagnosis and troubleshooting. Lab work includes examination, analysis, and diagnosis of various vehicles. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Automotive Technician

BIOLOGY**Biol. 101 - Concepts of Biology 1 3-2-4**

(Prerequisite: eligibility for Engl. 101.) is an introduction to basic principles of biology with emphasis on the biochemistry, structure, function, and organization of cells. Topics include scientific method, cellular respiration, photosynthesis, cellular reproduction, molecular and classical genetics, and an introduction to evolution and ecology. This course includes lecture and laboratory classes. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificate, A.A.S., A.L.S., A.A., A.S

Group Requirement - Natural Science

Area of Concentration - Biology, General Science

Biol. 102 - Concepts of Biology 2 3-2-4

(Prerequisite: successful completion ["C" or better grade] of Biol. 101.) is a continuation of Biol. 101 with emphasis on animal and plant diversity. Evolutionary trends are observed in the increasing complexity of structure and function from one-celled organisms to vertebrates and angiosperms. Laboratories include both microscope work and the dissection of representative invertebrates and vertebrates. This course includes lecture and laboratory classes. Offered in Spring

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Natural Science

Area of Concentration - Biology, General Science

Biol. 201 - Human Anatomy and Physiology 1 3-2-4

(Prerequisite: successful completion ["C" or better grade] of Biol. 101 or equivalent.) is a study of tissues, the integumentary, skeletal, nervous, and muscular systems of the human body, emphasizing the relationship between structure and function. This course includes lecture and laboratory classes. Offered in Fall and Spring

Application toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Natural Science

Area of Concentration - Biology, General Science

Biol. 202 - Human Anatomy and Physiology 2 3-2-4

(Prerequisite: successful completion ["C" or better grade] of Biol. 201.) is a continuation of Biol. 201, covering the circulatory, lymphatic, respiratory, digestive, urinary, reproductive, and endocrine systems. This course includes lecture and laboratory classes. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Natural Science

Area of Concentration - Biology, General Science

Biol. 210 - Environmental Biology 3-2-4

(Prerequisite: Biol. 101 or one year of high school Biology with "B" or better grade and eligibility for Engl. 101.) covers the basic principles of man's relationship to his environment, problems concerning this relationship, possible solutions, and/or preventive measures for these problems. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Natural Science

Area of Concentration - Biology, General Science

Biol. 220 - Microbiology 3-2-4

(Prerequisite: successful completion ["C" or better grade] of Biol. 101.) is an introductory course in the principles of microbiology and their application to medicine, agriculture, sanitation, and industry. Training in laboratory technique pertinent to the field is included. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Natural Science

Area of Concentration - Biology, General Science

BUILDING CONSTRUCTION**B. Con. 210 - Mechanical and Electrical Building Service Systems 2-2-3**

introduces the study of the materials and equipment used in the mechanical and electrical service systems of buildings. The student is provided with information on how a modern building operates. This information enables the student to make reasonable preliminary selection of necessary mechanical and electrical equipment. Topics covered include illumination, heat gain and loss, heating systems, sewage disposal, electrical sources, and materials. Students will visit buildings to observe the service systems and equipment so that they may be better able to realize the relationship of these elements to the building as a whole. Offered in Fall

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Industrial Maintenance

BUSINESS**Bus. 100 - Introduction to Business 3-0-3**

(Prerequisite: Bus. 119 or eligibility for Engl. 101 or concurrent enrollment in Bus. 119.) provides insights into the structure and organization of the enterprise system, marketing, management, legal environment, and the financial obligations and implications that a business carries with it. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Business (A.A.S. only)
- Area of Concentration - Not Applicable

Bus. 105 - Fundamentals of Financial Institutions 3-0-3

(Prerequisite: Econ. 231.) examines the financial institutions in the American economy. They are analyzed as recipients and as suppliers of funds in the financial markets. Study of the characteristics and regulatory controls of the various financial institutions is included. Offered in Fall

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Business (A.A.S. only)
- Area of Concentration - Not Applicable

Bus. 106 - Fundamentals of Financial Management 3-0-3

(Prerequisite: Econ. 231.) is concerned with the development and study of a decision framework for financial management. Included is an analysis of sources and applications of funds for organizing, controlling, and financing business operations. Offered in Fall

Applicable toward graduation where program structure permits:

- Certificate or Degree - All certificates, A.A.S., A.L.S
- Group Requirement - Business (A.A.S. only)
- Area of Concentration - Not Applicable

Bus. 110 - Business Mathematics 3-0-3

covers basic applications of mathematics in the business world. Students develop understandings of these processes as they relate to general business applications. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Business (A.A.S. only)
- Area of Concentration - Not Applicable

Bus. 119 - English for Business and Technical Careers 3-0-3

(Prerequisite: English placement score of 21st percentile.) is designed to review the principles of grammar, punctuation, capitalization, spelling, pronunciation, meaning, and choice of words frequently used in business. The ability to communicate effectively is the main requirement for obtaining, performing, and advancing in any business or technical career. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Business (A.A.S. only)
- Area of Concentration - Not Applicable

Bus. 120 - Business Communications 3-0-3

(Prerequisite: successful completion of Engl. 101 or Bus. 119) applies basic English fundamentals to the communication requirements in business. This course gives experience in actual writing and stresses development of proficiency in approach and organization for business letters and memorandums. The course gives an overview of Report Writing, Oral Business Communication, and Intercultural Business Communication. For more in-depth experience in Report Writing and/or Oral Communication, students should enroll in English 110 and/or Speech 120. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Business (A.A.S. only)
- Area of Concentration - Teacher Education and Business

Bus. 124 - Principles of Marketing 3-0-3

(Prerequisite: Bus. 119 or eligibility for Engl. 101 or concurrent enrollment in Bus. 119.) is a fundamental course describing the business activities involved in product planning, pricing, promoting, and distributing want-satisfying goods and services. Other topics include market segmentation, consumer motivation and behavior, and legal influences. Marketing cases are used to illustrate current principles and techniques and to enhance development of managerial skills. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Business (A.A.S. only)
- Area of Concentration - Not Applicable

Bus. 125 - Small Business Management 3-0-3

includes principles for successful management of a small business, such as the general functions of management, problems of initiating the business, financial and administrative control, marketing programs and policies, business operations, and legal and governmental relationships. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Business (A.A.S. only)
- Area of Concentration - Not Applicable

Bus. 140 - Keyboarding for Information Processing (on computers) 1-1-1.5

(Recommended course for Business, Computer Information Systems, Law Enforcement, O.T. students and students needing keyboard skills.) is designed to teach the touch system of keyboarding on microcomputers. Speed and accuracy are developed. Previous typing is not a requirement. Offered in Fall and Spring. *(Students may not receive credit for both Bus. 140 and O.T. 100.)*

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Not Applicable
- Area of Concentration - Not Applicable

Bus. 145 - Fundamentals of Retailing 3-0-3

covers problems of store location, layout, organization, employment, training, merchandising, management, and investment control as well as current trends in retailing. Emphasis is placed on developing solutions to actual business problems using the case study method. Offered Fall 1994 during the day. Offered Fall 1995 at night

Applicable toward graduation where program structure permits:

- Certificate or Degree - A.A.S., A.L.S
- Group Requirement - Business (A.A.S. only)
- Area of Concentration - Not Applicable

Bus. 146 - Fundamentals of Sales 3-0-3

is a practical course that deals with the sales process (prospecting, preapproach, presentation or demonstration, trial close, answering questions and meeting objections, close, follow-up), consumer motivation, ethics in selling, and selling as a career. Role playing, sales demonstrations, and critiques of sales demonstrations will be used to allow the student the opportunity to apply selling skills. Offered Spring 1994 during the day. Offered Spring 1995 at night

Applicable toward graduation where program structure permits:

- Certificate or Degree - A.A.S., A.L.S
- Group Requirement - Business (A.A.S. only)
- Area of Concentration - Not Applicable

Bus. 205 - Fundamentals of Credit Administration 3-0-3

(Prerequisite: Econ. 231.) provides an introduction to credit management and emphasizes both commercial and consumer credit. Course content includes sources of credit information, types of credit, collection methods, and credit appraisal factors. Offered in Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - A.A.S., A.L.S
- Group Requirement - Business (A.A.S. only)
- Area of Concentration - Not Applicable

Bus. 206 - Fundamentals of Investment 3-0-3

(Prerequisite: Econ. 231.) examines the economics of investment including fundamental principles of financial investment, investment media or instruments, portfolio composition, and management for individual and institutional investors. Offered in Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - A.A.S., A.L.S
- Group Requirement - Business (A.A.S. only)
- Area of Concentration - Not Applicable

Bus. 227 - International Business Management 3-0-3

introduces the student to the global business and its interrelationships in the United States economy. The objective is to expose the student to an understanding of how foreign countries work in the marketplace and how these economies impact upon our business environment. Offered as needed

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Business (A.A.S. only)
- Area of Concentration - Not Applicable

Bus. 231 - Business Law 1 3-0-3

introduces the student to the legal system. Emphasis is placed on principles and sources of law, business ethics, torts, contracts, agency, personal and real property, bailments, wills, and estates. Case analysis will be the main method of presentation. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Business (A.A.S. only)
- Area of Concentration - Business Teacher Education

Bus. 232 - Business Law 2 3-0-3

(Prerequisite: Bus. 231 or equivalent competencies.) is a continuation of Bus. 231. Topics discussed are sales, commercial paper, credit transactions, anti-trust laws and other government regulations, partnerships, and corporations. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Business (A.A.S. only)
- Area of Concentration - Not Applicable

Bus. 245 - Fundamentals of Advertising and Sales Promotion 3-0-3

will include coverage of the economic and social role of advertising, customer research, selection of advertising appeals, media decisions, and the creative process. Specific media to be studied are newspaper, magazine, radio, TV, direct mail, and outdoor advertising. Students will work on an advertising campaign during the semester. Offered Spring 1995 during the day. Offered Spring 1994 at night

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Business (A.A.S. only)
- Area of Concentration - Not Applicable

Bus. 246 - Fundamentals of Management 3-0-3

includes analysis of administrative, staff, and operating management in business. Management principles and techniques are explored. Basic factors such as objectives, policies, leadership, organizational structures, procedures, and controls are studied. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Business (A.A.S. only)
- Area of Concentration - Not Applicable

Bus. 290 - Work Experience Practicum and Seminar 1—5

(Prerequisite: Sophomore standing.) affords the student in a(n) Accounting/Business, Computer Information Systems, or Office Technology Program the opportunity to apply principles learned in other courses to the work situation by employment in or observation of activities necessary for the operation of a business, industry, or agency. Employment or observation activities are coordinated

with the student's course work. One of the requirements of this course will be a one-hour-per-week seminar to be arranged for the maximum convenience of the student. Credit is determined at enrollment based on the ratio of five or more hours per week in the employment setting for a regular-length semester for one semester hour of credit. The course may be repeated for a maximum accumulation of five semester hours of credit. Students planning to enroll in this course must complete an application for enrollment and submit it to the Business Associate Dean 30 days or more prior to the first day of registration for the semester during which the student desires to participate in this course. Applications are available in the Business Division office. Offered as needed

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S

- Group Requirement - Business (A.A.S. only)

- Area of Concentration - Not Applicable

CHEMISTRY**Chem. 100 - Concepts of Chemistry 3-2-4**

(Prerequisite: eligibility for Math. 098.) examines fundamental concepts of chemistry, both theoretical and practical. Course content includes the following: measurement, atomic structure, chemical bonding, stoichiometry solutions, and acids and bases. The topics of chemical kinetics and chemical equilibrium are also introduced. The course is designed as an introduction to chemistry. It may be used as a prerequisite for Chem. 109 or Chem. 131 or to satisfy the requirement for a one-semester laboratory science course. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Natural Science
- Area of Concentration - Not Applicable

Chem. 109 - Survey of General Chemistry 3-2-4

(Prerequisite: Math. 098 and either (1) one year of high school chemistry with "B" or better grade or (2) Chem. 100 with "C" or better grade.) is a survey of general chemistry. Topics include measurement, atomic structure, chemical bonding, stoichiometry, the three states of matter (gas, solid, liquid), solutions, acids and bases, equilibrium, and nuclear chemistry. Recommended for nursing and allied health professions. Offered in Fall

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Natural Science
- Areas of Concentration - Chemistry, General Science

Chem. 110 - Survey of Organic Chemistry 3-4-5

(Prerequisite: Chem. 109 with "C" or better grade.) is a survey course in organic chemistry. Topics include the structure and identification of simple organic molecules, functional group classifications, preparative synthetic reactions, and biochemical applications. This course is recommended for nursing and allied health professionals, and includes one 3-hour lab per week. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Natural Science
- Area of Concentration - General Science

Chem. 131 - General Chemistry 1 3-2-4

(Prerequisite: Math. 098 and either (1) one year of high school chemistry with "B" or better grade or (2) Chem. 100 with "B" or better grade or (3) Chem. 109 with "C" or better grade.) is the first part of a two-semester college-level general chemistry course. Topics include measurement, stoichiometry, thermochemistry, atomic structure, chemical bonding, molecular structure, three states of matter bonding and molecular structure, the three states of matter (gas, solid, liquid), and solutions. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Natural Science
- Area of Concentration - Chemistry, General Science

Chem. 132 - General Chemistry 2 3-4-5

(Prerequisite: Math. 116 with Math. 121 strongly recommended and Chem. 131 with "B" or better grade.) is the second part of a two-semester college-level general chemistry course. Topics include chemical kinetics, chemical equilibrium, reactions in solutions, chemical thermodynamics, electrochemistry, the descriptive chemistry of metals and non-metals, and nuclear chemistry. Offered in Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Natural Science
- Area of Concentration - Chemistry, General Science

Chem. 201 - Organic Chemistry 1 3-6-5

(Prerequisite: Chem. 132 or equivalent competencies.) is the first of a two-semester chemistry series. Topics include a review of atomic and molecular theory, the nomenclature, synthesis, and

reactions of alkanes, cycloalkanes, alkenes, alkynes, alkyl halides, alcohols, ethers, and unsaturated systems. Also, stereoisomerism, an introduction to reaction mechanisms, and synthetic techniques are included. Two 3-hour lab periods per week are conducted with an emphasis on synthesis of organic compounds. This course is recommended for chemistry and biology majors and students entering programs in medicine, chiropractic, dentistry, pharmacy, or related areas. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Natural Science

Area of Concentration - Chemistry, General Science

Chem. 202 - Organic Chemistry 2 3-6-5

(Prerequisite: Chem. 201 or equivalent competencies.) is a continuation of Chem. 201. Topics studied include nomenclature, synthesis and reactions of aromatic hydrocarbons, phenols, organometallics, amines, carbonyl compounds, carboxylic acids and derivatives, and biomolecules, with an introduction to the physical methods of structure identification. The study of reaction mechanisms and synthetic methods is continued from the first course. Two 3-hour lab periods per week are conducted with an emphasis on qualitative analysis and instrumental methods of analysis, including nuclear magnetic resonance spectroscopy, infrared spectroscopy, and gas chromatography. Chem. 202 is recommended for chemistry and biology majors and students entering programs in medicine, chiropractic, dentistry, pharmacy, or related areas. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Natural Science

Area of Concentration - Chemistry, General Science

CHILD CARE AND EDUCATION**C.C.& E. 101 - Introduction to Child Care and Education 2-2-3**

(Prerequisite: English placement test score of 21st percentile.) offers an introduction to the child care and education field with emphasis on the history of child care, the variety of operations, services, facilities, career opportunities, and basic child development principles. The laboratory includes field studies in a variety of child care centers. Reading of magazine articles is required to introduce the student to child care and the authors and publications of the profession. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Not Applicable
- Area of Concentration - Child Care and Education

C.C.& E. 102 - School-Age Child Care (Pending ICCB approval.) 2-0-2

(Prerequisite: English placement test score of 21st percentile.) is a course introducing the individual caring for children five years to twelve years of age in a before and after school setting. Basic concepts of physical, intellectual, emotional, and social development of this age group will be introduced. How this service is provided is discussed. Appropriate curriculum, environment, and activities will be explored by the students through semester projects and class activities. Offered as needed

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Not Applicable
- Area of Concentration - Child Care and Education

C.C.& E. 111 - Creative Activities-Children's Literature 2-2-3

(Prerequisite: English placement test score of 21st percentile.) explores basic concepts of reading and telling stories and suggests methods of encouraging the child's creativity in the language arts. An important part of this course concerns the selection and use of materials appropriate for the level of comprehension associated with the different stages of mental, physical, and emotional development of the individual child. Particular emphasis in this course is on language development. Offered as needed

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Not Applicable
- Area of Concentration - Child Care and Education

C.C.& E. 112 - Creative Activities-Mathematics and Science 2-2-3

(Prerequisite: English placement test score of 21st percentile.) explores basic concepts of mathematics and science and suggests methods for encouraging the child's creativity in these areas. An important part of the course concerns the identification of those concepts appropriate to the different levels of mental, physical, and emotional development of the individual child. Offered as needed

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Not Applicable
- Area of Concentration - Child Care and Education

C.C.& E. 113 - Creative Activities-Art, Music, and Drama 2-2-3

(Prerequisite: English placement test score of 21st percentile.) explores basic concepts of art, music, and drama and suggests methods for encouraging the child's participation and creativity in those areas. Included during the course are discussions of the various activities associated with different stages in the mental, physical, and emotional development of the individual child and the use of these art forms to increase the child's social abilities. Emphasis is on small motor activities. Through book reports the student is introduced to various authors and child development theories. Offered as needed

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Not Applicable
- Area of Concentration - Child Care and Education

C.C.& E. 114 - Creative Activities-Recreation 2-2-3

(Prerequisite: English placement test score of 21st percentile.) explores basic concepts of structured and unstructured play and suggests methods for encouraging the child's creativity in those areas. An important part of the course concerns appropriate play activities associated with the different levels of mental, physical, and emotional development of the individual child. Also included within the course are selection, construction, and maintenance of the equipment related to these activities. Emphasis is on large motor activities. The laboratory includes observation and designing of outdoor and indoor play areas. Offered as needed

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Not Applicable
- Area of Concentration - Child Care and Education

C.C.& E. 115 - Creative Activities for Infants and Toddlers 2-2-3

(Prerequisite: English placement test score of 21st percentile.) explores activities suitable for children under two years of age. An important part of the course concerns the identification of those concepts appropriate to the development of the individual child. Offered as needed

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Not Applicable
- Area of Concentration - Child Care and Education

C.C.&E. 120 - Organization and Administration of the Family Day Care Home 2-2-3

(Prerequisite: English placement test score of 21st percentile.) provides knowledge and skills needed to run a family day care home: setting up a day care home, business management and administrative skills, and child development principles as applicable to home day care, the community and the parents. First aid and Adult and Infant/Child CPR will be required. There will be an additional \$20.00 fee for First Aid and CPR. Offered as needed

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Not Applicable
- Area of Concentration - Child Care and Education

C.C.& E. 210 - Fundamentals of Childhood Education 3-0-3

(Prerequisite: English placement test score of 21st percentile.) offers an overview of the methods and procedures used in childhood education programs. Topics covered include curriculum, program planning, role of the teacher, use of materials and equipment, techniques of classroom management, and meeting the needs of individual children. The student needs either several of the C.C.& E. activity courses or equivalent knowledge to succeed in curriculum and program planning. Offered in Fall

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Not Applicable
- Area of Concentration - Child Care and Education

C.C.& E. 220 - The Exceptional Child 3-0-3

(Prerequisite: English placement test score of 21st percentile.) is a survey study of the mentally retarded child, the visually impaired child, the acoustically handicapped child, the emotionally disturbed child, the speech handicapped child, and the otherwise disadvantaged child. Simple assessment techniques are reviewed and resources for specialized services for the handicapped are investigated. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Not Applicable
- Area of Concentration - Child Care and Education

C.C.& E. 230 - Organization and Operation of Child Care Programs 4-0-4

(Prerequisite: English placement test score of 21st percentile.) is designed to develop the knowledge and skills in administration and supervision for persons presently engaged in the administration of child care programs as well as for those who aspire to do so. Principles and practices, organization and supervision of staffs, budgets, record keeping, filing, office equipment

usage, and legal responsibilities are studied. Equipment and plant operation are topics also included. Offered in Spring

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Child Care and Education

C.C.& E. 290 - Work Experience Practicum and Seminar 1-20-5

(Prerequisite: English placement test score of 21st percentile and completion of a sufficient portion of the total program to justify a learning experience in the employment setting and permission of the Associate Dean or a faculty member in the program.)

affords the student in a Child Care and Education program the opportunity to apply the principles learned in other courses to the work situation through employment in or observation of activities necessary for the operation of a business, industry, or agency. Employment or observation activities are coordinated with the student's course work. One of the requirements of this course will be a one-hour-per-week seminar to be arranged for maximum convenience of the student. Credit is determined at enrollment based on the ratio of five or more hours per week in the employment setting for a regular-length semester for one semester hour of credit. The course may be repeated for a maximum accumulation of five semester hours of credit. Students planning to enroll in this course must complete an application for enrollment and submit it to the Social and Natural Sciences Associate Dean 30 days or more prior to the first day of registration for the semester during which the student desires to participate in this course. Applications are available in the Social and Natural Sciences Division office. All practicum assignments are in the Richland Community College Child Care Learning Center.

Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Child Care and Education

COMPUTER INFORMATION SYSTEMS

C.I.S. 105 - Introduction to Business Computer Systems 2-2-3

(Prerequisite: Eligibility for Math. 116.) designed for Computer Information Systems majors and business transfer students. Computer concepts, terminology, equipment, programming, and systems analysis and applications as they relate to computers of all sizes in business are surveyed. Computer programs through arrays are written and executed in the BASIC language on IBM-compatible microcomputers. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Business

Area of Concentration - Not Applicable

C.I.S. 110 - Business Applications on Microcomputers 3-0-3

(Prerequisite: eligibility for both Engl. 101 and Math 091 or approval of Associate Dean, Business Division.) studies typical business applications on IBM-compatibles using software packages in the following categories: spreadsheet, word processing, and data base. Intensive lab experiences are involved. Topics include an analysis of current software and methods to evaluate software and hardware. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Business (A.A.S. only)

Area of Concentration - Not Applicable

C.I.S. 115 - Introduction to Windows 3-0-3

(Prerequisite: previous IBM-compatible experience or C.I.S. 110.) introduces students to Microsoft Windows. Topics include pull-down menus, Windows utilities, running of multiple applications and sharing data between applications, Program Manager, File Manager, and system customization. Intensive lab experiences are involved. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Business (A.A.S. only)

Area of Concentration - Not Applicable

C.I.S. 120 - Spreadsheet Applications 3-0-3

(Prerequisite: C.I.S. 110.) teaches the use of LOTUS 1-2-3. Students learn to prepare data or text for processing, complete entries, validate entries, use appropriate menus or commands, and obtain desired results. Students learn data management, file, and graph commands. How to write macros is also covered. This course provides intensive lab experiences on the IBM-compatible microcomputer. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Business (A.A.S. only)

Area of Concentration - Not Applicable

C.I.S. 130 - Word Processors 3-0-3

(Prerequisite: C.I.S. 110.) provides hands-on experience using Microsoft Word. The student will learn how to create, edit, format, print, save, and retrieve as well as learn to use headers, footers, automatic page numbering, fonts, superscript/subscript, merge, spell check, search and replace, thesaurus, glossary, sort, merge, summary sheets, style sheets, library, and integrating data from other packages. This course provides intensive lab experiences on the IBM-compatible microcomputer. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Business (A.A.S. only)

Area of Concentration - Not Applicable

C.I.S. 135 - Microcomputer Accounting Systems 3-0-3

(Prerequisite: O.T. 160 or Acct. 100 or Acct. 101.) teaches the use of microcomputers to provide financial information in a format useful for business decision-making. It provides hands-on experience using microcomputer accounting applications such as general ledger, payroll, payables,

receivables, and inventory. This course provides intensive lab experiences on the IBM-compatible microcomputer. Offered in Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Business (A.A.S. only)
- Area of Concentration - Not Applicable

C.I.S. 145 - DOS for Technicians 3-0-3

is an introductory course for students majoring in technical areas such as electronics, CAD/CAM, CIM, and drafting. In addition to basic computer concepts, file-handling commands and disk processing commands, most other areas of MS DOS are also covered, including EDLIN, directories, redirection, and batch files. The student will also be introduced to word processing, spreadsheets, and BASIC programming. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Business (A.A.S. only)
- Area of Concentration - Not Applicable

C.I.S. 161 - COBOL Programming 1 3-1-3

(Prerequisite: successful completion of C.I.S. 105 or approval of Associate Dean, Business Division.) emphasizes essentials of structured COBOL programming. Students will write programs using sequential files to print reports from a single input file covering many business applications. Headings, calculations, nested ifs, totals, control breaks, introduction to table handling, and data validation are taught. Intensive lab experiences are involved using IBM-compatible microcomputers. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Business (A.A.S. only)
- Area of Concentration - Not Applicable

C.I.S. 162 - COBOL Programming 2 3-1-3

(Prerequisite: C.I.S. 161.) reinforces concepts from C.I.S. 161—COBOL Programming 1. Advanced reporting techniques using sequential files including extracts, multi-level table processing, file updates, and use of sub-programs are taught. This course provides an introduction to random access files. Intensive lab experiences are involved using IBM-compatible microcomputers. Offered in Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Business (A.A.S. only)
- Area of Concentration - Not Applicable

C.I.S. 210 - Business Graphics 3-0-3

(Prerequisite: previous IBM-compatible experience or C.I.S. 110.) teaches the use of Harvard Graphics to create charts, import/export data, and slide shows. Other topics include editing, printing, drawing, annotating, and get/save/remove charts as well as using the spelling checker and resizing/repositioning charts. This course provides intensive lab experiences on the IBM-compatible microcomputer. Offered in Fall

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Business (A.A.S. only)
- Area of Concentration - Not Applicable

C.I.S. 220 - Local Networks 3-0-3

(Prerequisite: C.I.S. 110 or approval of Associate Dean, Business Division.) presents concepts of LANs and practical experience. Topics include topology, protocols, transmission media, and local network hardware and software. Course provides hands-on experience installing and maintaining server based and peer networks. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Business (A.A.S. only)
- Area of Concentration - Not Applicable

C.I.S 221 - Microcomputer Data Base Systems 3-0-3

(Prerequisite: C.I.S. 110.) teaches the use of microcomputers to provide information useful in making business decisions. It allows for entry of data and retrieval of formatted information. This course provides intensive lab experiences on the IBM-compatible microcomputer. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Business (A.A.S. only)
- Area of Concentration - Not Applicable

C.I.S. 222 - Advanced Microcomputer Data Base Systems 3-0-3

(Prerequisite: C.I.S. 221 with a grade of "B" or better.) focuses on data base design, comparative data base management systems, SQL, distributed data base, client-server processing, application generators, and exporting and importing between data base systems, word processors, and spreadsheets. Offered in Fall

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Business (A.A.S. only)
- Area of Concentration - Not Applicable

C.I.S. 225 - Pascal Programming 3-2-4

(Prerequisite: Math. 116 and Math. 117.) teaches the student reading and writing proficiency in Pascal on microcomputers. Top down programming, documentation, Abstract Data Types, subroutines and functions are the tools used to teach the usual three structures of good programming. In addition to real, integer, and the typical data types, the student will learn to use the user defined data types, sets, Booleans, records, and time permitting dynamic data types(s) such as linked lists and queues. The use of recursion may be included. The above data types will be used for both sequential and random access data files. (The student must allow some time to be spent doing some laboratory work on the computers outside the scheduled class time.) Credit cannot be received in both C.I.S. 225 & Math. 125. Offered in Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Business (A.A.S. only)
- Area of Concentration - Not Applicable

C.I.S. 245 - Microcomputer Operating Systems & Utilities 3-0-3

(Prerequisite: C.I.S. 110.) centers on the Disk Operating System for the IBM-compatible microcomputer. Covers programs that expand and extend the function of the operating system, is concerned with background utility programs, and presents keyboard enhancement programs and templates. This course provides intensive lab experiences on the IBM-compatible microcomputer. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Business (A.A.S. only)
- Area of Concentration - Not Applicable

C.I.S. 251 - C Programming 2-2-3

(Prerequisite: C.I.S. 105 and Math. 098.) introduces C programming for students who want to learn the C language to write programs for MS-DOS environments. Students study the syntax and structure of C programs, introduce standards and styles for producing understandable C programs, and examine elements of the language, including fundamental data types, variable declaration, expressions, operators, control statements, pointers, arrays, strings, I/O, functions, parameters, structures, and libraries. This course provides intensive lab experiences on the IBM-compatible microcomputer. Offered in Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Business (A.A.S. only)
- Area of Concentration - Not Applicable

C.I.S. 252 - Advanced C Programming 2-2-3

(Prerequisite: C.I.S. 251 or approval of Associate Dean, Business Division.) provides a more in depth view of C++. This course takes a look into Object Oriented Programming. It includes a study

of classes, function and operation overloading, inheritance, virtual functions, polymorphism, and C++'s I/O Library. This course provides intensive lab experiences on the IBM-compatible microcomputer. Offered in Fall

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Business (A.A.S. only)

Area of Concentration - Not Applicable

C.I.S. 255 - Data Communications 3-0-3

(Prerequisite: a previous course in Computer Information Systems.) is a study of 1) hardware of communications systems: terminal devices, data transmission techniques, switching processors, multiplexors, concentrators, front-end processors, network architectures; 2) software in data communications systems: data representation codes, modes of data transmission including asynchronous and synchronous transmission; and 3) the evolving state of the data communications industry. Offered in Fall

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Business (A.A.S. only)

Area of Concentration - Not Applicable

C.I.S. 261 - Introduction to CICS 3-1-3

(Prerequisite: C.I.S. 162 with grade of "B" or approval of Associate Dean, Business Division.) introduces the student to a teleprocessing monitor, CICS. The student learns command-level programming with COBOL. Map designing, inquiry and file maintenance programs, debugging, and test plans are taught. The objective is to acquire practical experience writing on-line interactive programs. Offered in Fall

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Business (A.A.S. only)

Area of Concentration - Not Applicable

C.I.S. 262 - Advanced CICS 3-1-3

(Prerequisite: C.I.S. 261.) is an extension of C.I.S. 261 and covers advanced functions such as GETMAIN and FREEMAIN and file commands such as BROWSE, LOCK, and UNLOCK. It also covers VSAM local-shared resources, reading and writing out of the LINKAGE SECTION, sending and receiving terminal data, methods of passing data, reading and writing from data bases such as SQL, DL/1 and DB2, and maintaining data integrity during an abend. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Business (A.A.S. only)

Area of Concentration - Not Applicable

C.I.S. 270 - IBM JCL and Utilities Programming 2-1-2

(Prerequisite: C.I.S. 161.) is designed to develop skills in Job Control Language statements including Job, Exec., Data Set Definitions, Utility programs, and VSAM. Access Method Services (IDCAMS) concepts are also introduced. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Business (A.A.S. only)

Area of Concentration - Not Applicable

C.I.S. 275 - Data Base with SQL 3-1-3

(Prerequisite: C.I.S. 162 with grade of "B" or better.) introduces the student to a relational data base management system. The student learns SQL programming with COBOL. The objective is to acquire practical experience writing on-line interactive data base programs. Intensive lab experiences are involved using IBM-compatible microcomputer. Offered in Fall

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Business (A.A.S. only)

Area of Concentration - Not Applicable

C.I.S. 280 - Basic Assembler Language (BAL) 3-1-3

(Prerequisite: a higher-level language course such as Math. 131, Math. 141, C.I.S. 161, or C.I.S. 225.) introduces computer organization and assembler language programming. Internal data representation, basic input/output and arithmetic operations, branching, and limited register operations are covered. Offered in Spring

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Business (A.A.S. only)

Area of Concentration - Not Applicable

C.I.S. 285 - Systems Analysis Methods 3-0-3

(Prerequisite: C.I.S. 110.) is an introductory course in systems analysis and design for business data processing. Includes comparative analysis of business systems, file design, documentation, feasibility studies, system implementation, controls, and security. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Business (A.A.S. only)

Area of Concentration - Not Applicable

COMPUTER INTEGRATED MANUFACTURING

C.I.M. 100 - Introduction to Computer Integrated Manufacturing (CIM) 3-0-3

(Prerequisite: eligibility for Engl. 101.) relies heavily upon plant visits, visiting lecturers, and demonstrations to give the student a first hand view of today's manufacturing with CIM hardware, software, and CIM trained personnel. Topics covered include CIM as it applies to the integration of people, processes, and information at all levels from order entry to automated manufacturing to shipping and billing. Also covered are the production hardware issues and technology used in CIM applications. Reference to JIT, TQM, and statistical process control are used for a complete view of manufacturing today. Students interested in either the management or the process applications will benefit from the course. Offered in Fall

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Computer Integrated Manufacturing, Industrial Engineering Technology, Industrial Production Technology, Materials Management, Production Control, Supervision of Personnel

C.I.M. 101 - Computer Aided Manufacturing (CAM) Fundamentals 1-2-2

(Prerequisite: Draft. 210 or equivalent competencies.) is a course that makes use of a commercial software package to provide the student with hands-on experience in CAM techniques. Various two-dimensional and three-dimensional surfaces are modeled and modified to produce images of desired machined products. Editing of the graphical images is practiced in laboratory experiments. Tool path modeling is simulated, and tolerance of the part is checked in software as a learning tool for proper machining of the product. The machine code for creating the part on a computer numerical controlled machine is generated. Offered in Spring

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Computer Integrated Manufacturing

C.I.M. 102 - CNC Programming 2-2-3

(Prerequisite: C.I.M. 101 and Mfg. 130 or equivalent competencies.) is a hands-on course in the programming of computer numerical controlled machines including lathes and vertical milling machines. The student will experience the correct sequence of CNC programming utilizing computer-aided manufacturing software, graphic modeling software, tool path checking, code generation, and manual code verification. Machine operation will include proper fixturing, feed rates, torques, machine parameters, and machine maintenance. Offered in Fall

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Computer Integrated Manufacturing

C.I.M. 110 - Introduction to Automated Manufacturing 2-2-3

(Prerequisite: C.I.M. 101, C.I.M. 102, and Robotics 101 or concurrent enrollment in C.I.M. 102 or equivalent competencies.) is a hands-on course in the design and configuration of computer controlled automatic manufacturing equipment consisting of automatic storage and retrieval systems, conveyors, robots, lathes, mills, and vision inspection systems. The computer control system for the automation hardware will be programmed to perform the manufacturing of various case studies of high volume production tasks. Simulation of the manufacturing configuration and cycle times will be employed in the design and documentation phase of the projects. Each project will result in an operating automated production system. Offered in Fall

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Computer Integrated Manufacturing

C.I.M. 120 - Production and Inventory Control 2-2-3

provides the student with experience in production and inventory control techniques. Lectures on the principles of inventory management starting from sales forecasts through production scheduling and just-in-time delivery are practiced in experiments on operating automatic manufacturing equipment. Production control in a computer-integrated manufacturing environment

will expose the student to order scheduling, tracking, costing, data collecting, and quality tracking. Real time control of production case studies will be investigated. Offered in Spring

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Computer Integrated Manufacturing

C.I.M. 130 - Automated Manufacturing 2-2-3

is a course in automation that utilizes an operating manufacturing system to emphasize inspection of parts and the refinements necessary to improve quality. Vision systems are employed for inspection and are interfaced to the operating manufacturing system. Custom software for graphical display and control of the process is written to enhance the computer integration of the manufacturing process. Automation projects are designed from specifications through the manufacturing to the final inspection. Offered in Spring

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Computer Integrated Manufacturing

DRAFTING

Draft. 101 - Fundamentals of Drafting 2-4-4

is an introductory course involving drafting techniques, sketching, lettering, orthographic projection, sectioning, primary auxiliary projections, and dimensioning as well as some geometric construction. Offered in Fall

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Industrial Drafting

Draft. 102 - Industrial Drafting 2-4-4

(Prerequisite: Draft. 101 or equivalent competencies.) includes secondary auxiliaries, dimensioning, detail and assembly drawings, threads and fasteners, revolutions, and dimetric projections. Attention will also be given to symbols and shop processes. Offered in Spring

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Industrial Drafting

Draft. 110 - Technical Design 2-2-3

introduces the student to the principle of design. The student will develop individual creative/analytical problem solving skills and apply them to a team problem solving approach. These concepts will be developed through the construction of a project. Offered in Spring

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Industrial Drafting

Draft. 120 - Technical Graphics 1-3-2

(Prerequisite: Draft. 101 or equivalent competencies.) introduces the student to pictorial drawings and drafting room practices. Pipe drafting principles and practices are covered. Offered in Fall

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Industrial Drafting

Draft. 130 - Fundamentals of Tool Design Drafting 2-4-4

(Prerequisite: Draft. 101.) introduces the principles of jig, fixture, and die designing. The course also includes drawing machine layouts for conventional and N.C. machines. Emphasis will be placed on proper location and clamping of parts for all types of machining. Offered in Spring

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Industrial Drafting

Draft. 210 - Introduction to Computer Aided Drafting-Intergraph 2-3-3

(Prerequisite: Draft. 101 and concurrent enrollment in Draft 102 or Draft. 120 or equivalent competencies and consent of instructor.) will provide the basic knowledge of computer aided drafting (CAD). The student will learn to use the computer aided drafting system to draw 2-D mechanical drawings. This system uses graphics, terminals, digitizers, microcomputer, and plotter as drafting tools. Note: Credit cannot be received for both Draft. 210 and Draft. 215 when working toward an A.A.S. Degree. One may be used for an elective. Offered in Fall

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Industrial Drafting

Draft. 215 - Introduction to Computer Aided Drafting—Autocad 2-3-3

(Prerequisite: Draft. 101 and concurrent enrollment in Draft. 102 or Draft. 120 or equivalent competencies and consent of instructor.) will introduce the student to the principles of computer aided drafting using Autocad CAD software. After completing this course, the student should be

able to demonstrate knowledge of the following: A) the components of computer aided drafting, B) application of geometric principles in creating a 2-D drawing, C) the creation of completed 2-D drawings with dimensions, D) storage and retrieval of drawings from a common data base, and E) plotting drawings to scale from the screen and the data base. Note: Credit cannot be received for both Draft. 210 and Draft. 215 when working toward an A.A.S. Degree. One may be used for an elective. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Industrial Drafting

Draft. 220 - Intermediate Computer Aided Drafting 2-3-3

(Prerequisite: Draft. 210 or Draft. 215.) will provide the knowledge to create advanced 2-D and basic 3-D drawings on the computer aided drafting system. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Industrial Drafting

Draft. 230 - Advanced Computer Aided Drafting 2-3-3

(Prerequisite: Draft. 220.) will provide the knowledge to create advanced 3-D drawings. These drawings will include wire frame models as well as models with surfaces and shading. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Industrial Drafting

Draft. 240 - Computer Aided Drafting—Piping Systems 2-3-3

(Prerequisite: Draft. 220.) will introduce the student to the principles of industrial pipe drawing on a CAD system. The student will be able to demonstrate knowledge of pipe fittings, valves and instrumentation, PI & D diagrams, pumps, tanks, and general piping equipment. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Industrial Drafting

Draft. 241 - Computer Aided Drafting—Electronic 2-3-3

(Prerequisite: Draft. 220 or Eltrn. 203.) will introduce the student to the principles of electronic drafting using a CAD system. The student will be able to demonstrate knowledge of the following: A) the components of a CAD system as used for electronic drafting, B) the understanding and drawing of basic electronic diagrams on the CAD system, C) the understanding and drawing of electronic symbols and components on the CAD system, and D) the drawing and understanding of basic electronic circuits on the CAD system. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Industrial Drafting

Draft. 242 - Computer Aided Drafting—Electrical 2-3-4

(Prerequisite: Draft. 220.) will allow the student to design and develop residential and industrial electrical drawings on the CAD system. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Industrial Drafting

Draft. 243 - Computer Aided Drafting —Structural Steel Detailing 2-3-3

(Prerequisite: Draft. 220.) introduces the student to structural steel detailing using a CAD system. Steel frame terminology, typical details, framing plans, and working drawings are covered so that the student will have the understanding and experience of creating structural steel drawings using the CAD system. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Industrial Drafting

Draft. 244 - Computer Aided Drafting—Concrete Detailing 2-3-3

(Prerequisite: Draft. 220.) provides the student the experience in preparing working drawings for reinforced concrete structures using a CAD system. Principles of reinforced concrete are introduced to provide the student with a background in the standards and the conventions of logical detailing. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Industrial Drafting

Draft. 245 - Computer Aided Drafting—Architectural 2-3-3

(Prerequisite: Draft. 220.) includes the development and execution of a complete set of architectural working drawings using the CAD system. These drawings will include floor plans, elevations, foundation, plot plan, and wall sections. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Industrial Drafting

DRAMA

Drama 150 - Introduction to Theatre 3-0-3

is an introduction to the appreciation of theatre as an art form. At least eight plays are read and analyzed. Production values and the physical theatre are studied. The course includes background reading, lectures, reading of literature, and the discussion of the history of theatre. Offered as needed

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Humanities
- Area of Concentration - Speech and Drama

Drama 160 - Theatre Production 1-4-3

has as its primary activity the production of a complete play, including the analysis of script, interpretation, casting, rehearsal, and performance. Students may participate in four areas: 1) acting, assistant directing, and stage management; 2) set construction and lighting; 3) costuming, property construction, and make-up; and 4) publicity and program construction. The student is expected to stress one of the four areas and assist in one other. The course may be repeated. A student may enroll in and receive credit for this course a maximum of four times to have an opportunity to emphasize a different area during each enrollment. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Not Applicable
- Area of Concentration - Speech and Drama

Drama 170 - Introduction to Acting 2-2-3

is a study of the interpretative function and technique of the actor. Students are introduced to the principles of acting theory and are provided the opportunity to practice acting as a part of this course. Offered in Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Not Applicable
- Area of Concentration - Speech and Drama

EARTH SCIENCE**Ea. Sci. 210 - Physical Geography 3-2-4**

(Prerequisite: eligibility for Engl. 101.) offers an introductory study of the natural environment and is designed to develop an understanding of the earth and its environments as the home of man. It concentrates on the forces of change that produce the physical settings with which man must deal. A systematic approach is used with a de-emphasis on the mathematics and physics function.

Offered in Fall and Spring

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Natural Science

Area of Concentration - Earth Science

Ea. Sci. 220 - Introduction to Physical Geology 3-2-4

(Prerequisite: eligibility for Engl. 101.) is an introductory course to the study of the solid earth to include the earth building processes, landforms and the processes that shape landforms, rocks and minerals, and the use of topographic maps. It is recommended that Ea. Sci. 210 should be taken prior to this course. Offered in Spring

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Natural Science

Area of Concentration - Earth Science

Ea. Sci. 230 - Introduction to Weather and Climate 3-2-4

(Prerequisite: eligibility for Engl. 101.) is an introductory course to the study of weather and climate designed for science and non-science majors who want a basic understanding of weather terminology, atmospheric conditions, global climates, and climatic changes. Ea. Sci. 210 should be taken prior to this course. Offered in Fall

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Natural Science

Area of Concentration - Earth Science

ECONOMICS

Econ. 140 - American Economy 3-0-3

(Prerequisite: eligibility for Engl. 101.) is a general survey course of economics introducing the student to macro- and microeconomic theory in a one-semester course. Topics discussed include the price system and resource allocation, business cycles, economic development, national income, price levels, fiscal policy, money and banking, labor and business organization, market models, and international economics. The course is not designed for students majoring in business, economics, or programs requiring Econ. 231 and 232, or for students who have completed Econ. 231 and 232. Offered in Fall

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Social Science

Area of Concentration - Not Applicable

Econ. 200 - Economics of Social Issues 3-0-3

(Prerequisite: eligibility for Engl. 101.) is a study of selected topics in economics. The course consists of the survey and evaluation of major economic issues confronting the United States and the global economy. Specific issues considered will vary with the economic times. Topics that may be considered are environmental issues, employment/unemployment, energy, taxes, stagflation, world hunger, social programs, federal budget deficits, public policy issues, international economics, and U.S. trade policy. Offered in Spring

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Social Science

Area of Concentration - Not Applicable

Econ. 231 - Principles of Economics 1 3-0-3

(Prerequisite: eligibility for Engl. 101.) is an introduction to the study of general economic principles. Such topics as economic systems, demand and supply, business organizations, gross national product, unemployment, inflation, fiscal policy, monetary policy, interest rates, and business cycles are discussed. Macroeconomics and current economic topics are emphasized. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Social Science

Area of Concentration - Business, Economics, Social Science

Econ. 232 - Principles of Economics 2 3-0-3

(Prerequisite: Econ. 231.) is a continuation of the study of general economic principles. Such topics as elasticity, production costs, consumer demand, perfect and imperfect competition, agriculture, labor unions, social problems, and alternative economic systems are discussed. Microeconomics and current economic topics are emphasized. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Social Science

Area of Concentration - Business, Economics, Social Science

EDUCATION**Ed. 100 - Introduction to Public Education 3-0-3**

is designed for students considering a career in teaching and for laymen who wish to become better informed about the foundations of American education. The course reviews changing concepts in public education in America and examines the duties and responsibilities of the classroom teacher. Discussion of current issues and problems in education is included. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Social Science

Area of Concentration - Teacher Education: Elementary-Secondary

Ed. 200 - Educational Psychology 3-0-3

(Prerequisite: Psych. 110.) examines the growth and development of the individual through adolescence, with emphasis on the facilitation of learning, both within and outside the classroom. A student may not receive credit for both Ed. 200 and Psych. 200. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Social Science

Area of Concentration - Teacher Education: Elementary-Secondary

ELECTRONIC SYSTEMS TECHNOLOGY/ELECTRONICS**Eltrn. 101 - Basic Electricity AC 5-1-1**

is designed for those with no previous training in electronics. Fundamental concepts, terminology, and mathematical tools required to understand basic AC circuits are presented. Lab sessions follow in parallel, familiarizing students with test equipment, components, and safe laboratory procedures. Offered as needed

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Not Applicable
- Area of Concentration - Electronics

Eltrn. 102 - Basic Electricity DC 5-1-1

is designed for those with no previous training in electronics. Fundamental concepts, terminology, and mathematical tools required to understand basic DC circuits are presented. Lab sessions follow in parallel, familiarizing students with test equipment, components, and safe laboratory procedures. Offered as needed

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Not Applicable
- Area of Concentration - Electronics

Eltrn. 103 - AC and DC Electrical Theory with Industrial Applications 2-2-3

provides a hands-on environment in which to learn AC/DC electrical theory and applications in an industrial setting. The course also includes applications and assembly of motor control circuits. This course starts at a beginner level and takes the students through manual and automatic electromechanical controls with some exposure to solid state devices. Offered as needed

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Not Applicable
- Area of Concentration - Electronics

Eltrn. 108 - Industrial Electronics 2-2-3

(Prerequisite: Math. 091 or equivalent competencies.) is a course in the basic concepts of electricity. The student is introduced to electrical and magnetic forces, charge, voltage, current, resistance, work, energy, and power. Basic instrumentation, such as the oscilloscope, volt meter, ohm meter, ampere meter, function generator, and power supply, is used to build and test various electrical circuits. Lectures and computer-augmented instruction are used to introduce the student to the circuit analysis of series, parallel, and series-parallel DC and AC circuits. Various common electronic components are used in laboratory experiments. Offered in Fall

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Not Applicable
- Area of Concentration - Electronic Systems Technology

Eltrn. 109 - Industrial Controls 3-3-4

(Prerequisite: Concurrent enrollment in Eltrn. 110.) is a hands-on class and includes a study and application of Industrial Controls in actual circuit applications. This course will start at a beginning level and take the student through advanced manual and automatic electromechanical controls with some exposure to solid state devices and programmable controllers. Offered in Fall

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Not Applicable
- Area of Concentration - Electronic Systems Technology

Eltrn. 110 - Introduction to Electricity and Electronics 1-3-2

(Prerequisite: Math. 091 or equivalent competencies.) is a laboratory-oriented course in the fundamentals of electricity and electronics beginning with the basic concepts of electrical and magnetic forces, charge, voltage, current, resistance, and power. It also provides familiarization with the basic electronic systems, circuits and components, and methods of representation utilizing block diagram and schematic diagrams. Measurement techniques and use of laboratory instruments are emphasized. Offered in Fall

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Natural Science
- Area of Concentration - Electronics

Eltrn. 111 - Circuit Analysis 2-2-3

(Prerequisite: Eltrn. 110 and Math. 091 or concurrent enrollment or equivalent competencies.)

begins with definitions of voltage source, current source, and equivalent circuit. The loop, node, branch, ladder methods, Thevenin theorem, and superposition theorem used in circuit analysis are also covered. The RC and RL time constants are defined, and their applications are introduced. Both inductive reactance and capacitive reactance are defined, and impedance is discussed in terms of complex variables and phasors. Series and parallel resonance circuits are studied.

Offered in Fall

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Not Applicable
- Area of Concentration - Electronics

Eltrn. 112 - Electronic Devices and Circuits 3-4-5

(Prerequisite: Eltrn. 110 and 111.) begins with the study of basic semiconductor physics with emphasis on the theory of operation of solid state devices including diodes, transistors, and integrated circuits. As electronic devices are introduced, basic electronic circuits are studied, including power supplies, amplifiers, and oscillators. Measurement and breadboarding techniques and use of laboratory instruments are emphasized. Offered in Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Not Applicable
- Area of Concentration - Electronics

Eltrn. 113 - Industrial Controls 2 3-3-4

(Prerequisite: Eltrn. 109.) is a laboratory-oriented class and includes a study of programmable controllers, DC motors, single-phase motors, solid state control devices, SCRs and Triacs, photoelectronic and proximity control, reduced voltage starting techniques, and AC inverters and DC drives. Offered in Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Not Applicable
- Area of Concentration - Electronic Systems Technology

Eltrn. 120 - Fundamentals of Servicing 1-3-2

(Prerequisite: credit or concurrent enrollment in Eltrn. 112.) is a laboratory-oriented course designed to acquaint the student with systematic procedures for locating problems in the basic electronic circuits and systems. Proper use of instruments in testing components and tracing signals through circuits and systems is emphasized. The student will also be introduced to the various sources and proper use of technical service data and will be instructed in the proper use of the small hand tools commonly used in electronic repair work, including soldering and desoldering devices. Electronic assembly techniques are emphasized by requiring each student to participate in a construction project during the semester. Offered in Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Not Applicable
- Area of Concentration - Electronics

Eltrn. 160 - Digital Electronics 2-2-3

(Prerequisite: Eltrn. 110 and 111.) is a laboratory-oriented course that emphasizes analytical reasoning and basic digital design using the standard integrated circuits that are used in industry today. The student will become proficient at using the symbols and procedures that are the standard in manufacturers' data manuals and industrial settings. Topics include numbering systems and codes, digital electronic signals and switches, basic logic gates, inverting logic gates, Boolean Algebra and reduction techniques, Exclusive-Or and Exclusive-Nor gates, code converters, multiplexers and de-multiplexers, and logic families and their characteristics. Offered in Spring

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Electronic Systems Technology, Electronics

Eltrn. 202 - Advanced Digital Electronics 2-2-3

(Prerequisite: Eltrn. 160.) is a laboratory-oriented course that includes the following topics: flip-flops and registers, practical considerations for digital design, counter circuits and applications, shift registers, multivibrators, interfacing to the analog world, semiconductor memory, and programmable arrays. The course concludes with the construction of an individual project using digital principles. Offered in Spring

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Electronic Systems Technology, Electronics

Eltrn. 203 - Programmable Controllers 2-2-3

(Prerequisite: Eltrn. 109 or previous motor control experience.) is a laboratory-oriented course that utilizes an Allen Bradley PCL 2/16 processor and the IBM PS-2 Model 30 computer with ICOM ladder logic software for programming. Topics include relay type instructions, timer, counters, sequencers, arithmetic functions, files, shift registers, block functions, analog input and output, and troubleshooting. Offered in Fall

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Electronic Systems Technology

Eltrn. 204 - Programmable Controllers 2 3-3-4

(Prerequisite: Eltrn. 203 or previous programmable controllers experience.) is a hands-on course that utilizes the Allen Bradley PLC 5/15 processor and ICOM programming software. Topics include memory organization, I/O addressing, relay instructions, timers and counters, data manipulation, math functions, subroutines, sequencers, files, bit shifting, block transfer, and program troubleshooting. Offered in Spring

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Electronic Systems Technology

Eltrn. 210 - Advanced Electronic Devices & Circuits 2-2-3

(Prerequisite: Eltrn. 112.) is a continuation of Eltrn. 112, Electronic Devices and Circuits. Devices studied include Bipolar Power Transistors, Field Effect Transistors (small signal and power types), Operational Amplifiers, and Linear Integrated Circuits. Both the theory of operation of these devices and their typical circuit applications are covered. Special emphasis is given to Operational Amplifiers and their applications in negative feedback circuits. An introduction to Integrated Circuit manufacturing technology and a thorough treatment of discrete and IC Sinusoidal Oscillators will also be provided. Extensive use of computer-assisted instruction is used to supplement the lectures and traditional hands-on laboratory sessions. Offered in Fall

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Electronics

Eltrn. 211 - Pulse, Digital & Switching Circuits 3-4-5

(Prerequisite: Eltrn. 112.) begins with applications of diodes, transistors, and other semiconductors operating in the switching mode. Topics include wave shaping circuits (clippers, clampers, Schmitt triggers, differentiators and integrators), SCRs, TRIAC's Unijunction Transistors, and other thyristors. Applications to DC and AC power control and relaxation oscillators will also be covered. Also included are triggered multivibrators, counters, shift registers, memory circuits, various digital display devices, digital speech synthesis, stepper motors, switching type regulators, switching power supplies, analog-to-digital and digital-to-analog Converters. A project utilizing the building blocks covered in the course is required of each student. Computer simulations of digital

circuits and other instructional computer activities are used throughout the course. Use of Logic analyzers, digital oscilloscopes, and other digital test equipment is covered in the lab sessions.

Offered in Fall

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Electronics

Eltrn. 212 - Communications Systems 3-4-5

(Prerequisite: Eltrn. 210.) covers the theory of AM and FM Communication Systems and their applications to radio, television, and satellite communication. Topics include AM and FM receivers, transmitters, antennas, transmission lines and wave propagation. Each student builds, tests, and aligns a complete AM and FM stereo receiver. Students also design, build, and test a directional antenna and learn to use the College's antenna test range. An introduction to television broadcasting and TV receivers is also included. Using an Earth station in the electronics lab, students also work with fully operational communications satellites of both the geostationary and low Earth Orbit types commonly used in modern communication systems. Offered in Spring

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Electronics

Eltrn. 220 - FCC License Preparation 3-0-3

(Prerequisite: Eltrn. 212.) is a specialized course designed to prepare students for passing the examination given by the Federal Communications Commission for the General Radiotelephone Operator License. The course is suggested for students planning to enter the field of commercial communications, avionics, marine radio and radar, or broadcast engineering. Interested persons who do not have the formal prerequisites are invited to consult with a member of the electronics teaching staff. Offered in Summer

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Electronics

Eltrn. 222 - Advanced Electronic Servicing 3-3-4

(Prerequisite: Eltrn. 120 and credit or registration in Eltrn. 212.) is a continuation of Eltrn. 120 (Fundamentals of Servicing). In this course the student will learn to apply the systematic troubleshooting procedures learned previously to advanced electronic systems. Eltrn. 222 is divided up into four modules, each lasting four weeks. Each of these modules will be taught by a specialist in one of the four areas covered by the course. These areas include (1) Audio Components and Compact Disc players, (2) Personal Computers and Networks, (3) VCRs and TVs, and (4) Commercial Communications, including mobile radio and pagers. There will be a heavy emphasis on practical, hands-on experience with modern electronic products and test equipment. The same tools required for Eltrn. 120 will be used. Offered in Fall

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Electronics

Eltrn. 240 - Introduction to Microprocessors 2-2-3

(Prerequisite: Eltrn. 160 or Etrn. 211.) is a specialized course introducing three general areas: hardware, software, and troubleshooting. Special emphasis will be placed on how microprocessor systems function and how to maintain them. Microprocessor hardware and software will be used for most lab activities. Lab sessions will include troubleshooting and repair with topics to include signature analysis and use of logic analyzers. Students may also be expected to write simple programs for purposes of troubleshooting and maintenance. Offered in Spring

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Electronics

Eltrn. 290 - Work Experience Practicum 1-20-5

(Prerequisite: completion of Eltrn. 109, 110, and 111 in the Electronic Systems Technology Program.) will allow the student pursuing a degree in Electronic Systems Technology the opportunity to apply the principles learned in first-semester course work to the work situation through employment. The individual participating in the practicum will be paid an hourly wage by the employer with such wage to be at least equal to the prevailing minimum wage. One of the requirements of this program will be a one-hour-per-week seminar. Credit for this practicum is determined at enrollment based on the ratio of five hours per week in the job setting for a 16-week semester for each semester hour of credit. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Electronic Systems Technology

Eltrn. 295-Electronics Internship 1-20-5

(Prerequisite: Sophomore standing in Electronics.) is an on-the-job experience course where the student will be placed in a job related to his or her career goals. The work setting selected will be determined by consultation with the student's faculty advisor and the prospective employer. Students will be required to interview for their internship position. Credit received will depend on the number of hours worked each week but must range between two and five credit hours. Each semester hour of credit will correspond to five hours per week of employment up to a maximum of five credit hours. Students will be required to attend a weekly seminar to be scheduled at the convenience of the student. Payment of an hourly wage will be at the option of the employer. Students will be required to keep an accurate record of their activities and to write a report on their work study experiences at the end of the semester. The work supervisor's reports will be a major factor in determining the student's final grade

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Electronics

ENGINEERING**Engr. 110 - Engineering Graphics 1-4-3**

(Prerequisite: Draft. 101 or equivalent competencies.) is designed for pre-engineering students and includes shop terms and processes, geometry of engineering drawing, working drawings, intersections and developments, advanced projection systems, use and construction of graphs, charts and monographs, and design problems and applications. Offered in Spring

Applicable for graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Not Applicable
- Area of Concentration - Not Applicable

Engr. 211 - Analytical Mechanics 1: Statics 3-0-3

(Prerequisite: Phys. 210 and Math. 122 and concurrent enrollment in or completion of Math. 221 also required.) introduces basic concepts concerning force systems as applied to particles and rigid bodies in static equilibrium. Vector methods and calculus are used to examine two- and three-dimensional systems such as trusses, beams, and frames. Topics include resultants of force systems, moments of inertia, couples, distributed forces, center of mass, analysis of structures, friction, and virtual work. Offered in Fall

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Natural Science, Mathematics
- Area of Concentration - General Science, Physics, Mathematics

Engr. 212 - Analytical Mechanics 2: Dynamics 3-0-3

(Prerequisite: Engr. 211 or concurrent enrollment in or completion of Math. 221.) applies elements of vector calculus to two- and three-dimensional motion of a particle and of a rigid body. Topics include kinematics, kinetics, absolute and relative motion, translation, rotation, Newton's laws of motion, work and energy, power, and impulse and momentum. Offered in Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Natural Science, Mathematics
- Area of Concentration - General Science, Physics, Mathematics

ENGLISH

Engl. 088 - Reading and Study Skills 1 2-2-3

is designed to help the student improve basic reading and study skills through developmental exercises. It is required for students testing below the 21st percentile on the English Placement Test. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - Basic Certificates
- Group Requirement - Preparatory to other studies
- Area of Concentration - Preparatory to other studies

Engl. 089 - Developmental Writing 1 2-2-3

is designed for those students who desire or need additional preparation in English composition prior to taking Engl. 091. The course reviews those elements of mechanics and grammar necessary in all writing and provides intensive practice in construction of sentences and paragraphs. Much of the writing is done under tutorial direction in a supervised laboratory setting. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - Basic Certificates
- Group Requirement - Preparatory to other studies
- Area of Concentration - Preparatory to other studies

Engl. 090 - Reading and Study Skills 2 2-2-3

is designed to help the student improve basic reading and study skills through developmental exercises. It is strongly recommended for students who score within the 22nd percentile through 39th percentile on Richland's English Placement Test or SAT Verbal or a composite score of 18 or below on the ACT (English and Reading). Offered in Fall and Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - Basic Certificates
- Group Requirement - Preparatory to other studies
- Area of Concentration - Preparatory to other studies

Engl. 091 - Developmental Writing 2 2-2-3

prepares students for classes in which college-level writing is required. The course reviews mechanics and grammar basic to all writing and requires intensive practice in construction of sentences, paragraphs, and short themes. Much of the writing is done under tutorial direction in a supervised laboratory setting. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - Basic Certificates
- Group Requirement - Preparatory to other studies
- Area of Concentration - Preparatory to other studies

Engl. 101 - Composition 1 3-0-3

(Prerequisite: one of the following: 1) successful completion of Engl. 090/091; 2) score of 40th percentile or above on (a) ACT English and Reading, (b) SAT Verbal, (c) Richland's English Placement Test; or 3) evidence of equivalent competencies.) is a basic course in college writing. Students write and revise essays of a 500-word minimum according to several basic rhetorical organizational patterns. Qualities of writing to be achieved include clarity, coherence, unity, and conciseness. Special attention will be paid to persuasive writing, including the diction, logic, and persona appropriate to such writing. Indicated sections in the class schedule will stress composition and revision on the microcomputer using word processing programs. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Communications Skills
- Area of Concentration - Not Applicable

Engl. 102 - Composition 2 3-0-3

(Prerequisite: Engl. 101.) is the conclusion of the first-year, college-level writing program. Students learn to recognize various levels of formality and to develop a style of writing appropriate for a formal research paper. All elements of research are taught: choosing a topic, focusing on a

thesis, locating and evaluating varied sources, organizing materials, writing and documenting the text, and revising. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Communications Skills
- Area of Concentration - Not Applicable

Engl. 102H - Composition 2 3-0-3

(Prerequisite: Engl. 101 and admission to the Honors Program.) is the conclusion of the first-year college-level writing program. Students learn to recognize various levels of formality and to develop a style of writing appropriate for a formal research paper. All elements of research are taught: choosing a topic, focusing on a thesis, locating and evaluating varied sources, organizing materials, writing and documenting the text, and revising. The honors section centers on aspects of language such as linguistic awareness, jargon, sexism and racism in language, non-verbal communication, and propaganda, or it is tied to the subject of another course, such as economics, political science, or psychology. Offered as needed

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Communications Skills
- Area of Concentration - Not Applicable

Engl. 110 - Report Writing 3-0-3

(Prerequisite: eligibility for Engl. 101.) provides instruction and practice in the preparation of reports appropriate for business and industry. Various rhetorical strategies for identifying and reaching particular audiences are presented. Students learn all aspects of preparing reports: choosing a topic, identifying a primary audience, completing various kinds of research - which may include phone or personal interviews, surveys, letters, and questionnaires - organizing materials, writing and documenting the text, revising, designing graphics appropriate to the text, and as needed, creating glossaries and appendices to the text. Offered as needed

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Communications Skills
- Area of Concentration - Production Control, Supervision of Personnel, Welding

Engl. 114 - Comprehensive Speed Reading 1-2-2

is designed to improve the student's reading rate while maintaining a high level of comprehension. The course is designed for students who have been able to function effectively with their present reading rate and level of comprehension but who now desire to learn to read faster. This course may not be taken concurrently with Engl. 090. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Communications Skills
- Area of Concentration - Not Applicable

Engl. 115 - Introduction to Literature 3-0-3

introduces students to the careful reading, discussion, and written analysis of literature. Students read and discuss poetry, fiction, and drama. The course also includes practice in the skills necessary to write about literature. Offered as needed

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Humanities
- Area of Concentration - English

Engl. 124 - Introduction to Fiction 3-0-3

(Prerequisite: eligibility for Engl. 101 or completion of Engl. 115.) introduces students to the careful reading, discussion, and written analysis of short stories and novels. Students learn the use of various critical methods in examining the elements, aims, and effects of fiction. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Humanities
- Area of Concentration - English

Engl. 126 - Introduction to Poetry 3-0-3

(Prerequisite: eligibility for Engl. 101 or completion of Engl. 115.) introduces students to the reading, discussion, and written analysis and understanding of poetry through the study of techniques, themes, and some major poets of the English and American tradition. Offered as needed

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Humanities
- Area of Concentration - English

Engl. 128 - Introduction to Drama 3-0-3

(Prerequisite: eligibility for Engl. 101 or completion of Engl. 115.) introduces students to the reading, discussion, and written analysis of plays. Students read representative plays of the Western tradition from those of early Greece to recent American productions, studying dramatic conventions, techniques, and themes. Offered as needed

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Humanities
- Area of Concentration - English

Engl. 140 - Introduction to Film Art 2-2-3

(Prerequisite: eligibility for Engl. 101 or completion of Engl. 115.) examines the aesthetic and cultural qualities of film as a contemporary art form. By viewing and discussing a variety of films, students will become familiar with the unique properties of cinematic art along with the qualities it shares with other art forms. In addition, the place of film in American culture and society will be explored. Offered as needed

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Humanities
- Area of Concentration - Not Applicable

Engl. 150 - Topics on Literature 3-0-3

(Prerequisite: eligibility for Engl. 101 or completion of Engl. 115.) examines a selected topic or movement through careful reading, discussion, and written analysis of representative works of literature. The course content will vary each time it is offered. This course may be repeated once with a different topic. Offered as needed

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Humanities
- Area of Concentration - English

Engl. 201 - American Literature to 1900 3-0-3

(Prerequisite: Engl. 101 or 124 or 126 or 128 or 140 or 150.) is a historical survey of American literature from its beginning to 1900. Some of the authors read are Poe, Emerson, Thoreau, Hawthorne, Melville, Twain, Whitman, and Dickinson. Particularly examined are the cultural and political milieus of the periods in which this literature was created. Offered as needed

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Humanities
- Area of Concentration - English

Engl. 202 - American Literature in the 20th Century 3-0-3

(Prerequisite: Engl. 101 or 124 or 126 or 128 or 140 or 150.) is a historical survey of American literature from 1900 to the present. Some of the authors read are Frost, Hemingway, Faulkner, Cummings, Eliot, Stevens, Baldwin, Bellow, Plath, and Walker. Offered as needed

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Humanities
- Area of Concentration - English

Engl. 220 - Introduction to Creative Writing 3-0-3

(Prerequisite: Engl. 101 or equivalent competencies.) offers instruction and practice in writing fiction and poetry. Students learn the main critical and structural approaches to these genres. Students produce a set amount of writing in each genre, more in a chosen genre, and discuss student work in class. The work must be creative and also mechanically acceptable. Students learn about acceptable manuscript practices and market opportunities. Offered in Fall and Spring
Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Communications Skills
- Area of Concentration - English

Engl. 222 - Advanced Creative Writing 3-0-3

(Prerequisite: Engl. 220 or equivalent competencies.) offers students the opportunity to develop advanced skills in one of the genres presented in Engl. 220. Each student will be expected to produce a significant body of writing such as a collection of poems, a full-length play, a major part of a novel, or a collection of short stories
Offered as needed

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Communications Skills
- Area of Concentration - English

Engl. 231 - Masterpieces of Western Literature 1 3-0-3

(Prerequisite: Engl. 101 or 124 or 126 or 128 or 140 or 150.) is a selective survey of European literature in translation from its beginnings to the Renaissance. Stressed are the permanence and the current relevance of this literature. The course deals with such works and authors as the Bible, Homer, Virgil, Dante, Cervantes, and Rabelais. Offered in Fall 1995

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Humanities
- Area of Concentration - English

Engl. 232 - Masterpieces of Western Literature 2 3-0-3

(Prerequisite: Engl. 101 or 124 or 126 or 128 or 140 or 150.) is a selective survey of European literature in translation from the Renaissance to the present. Stressed are parallels and relationships between this literature and that of the English-speaking world. The course includes writings by Voltaire, Goethe, Dostoevsky, Tolstoy, Ibsen, Kafka, and Sartre. Offered in Spring 1996

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Humanities
- Area of Concentration - English

Engl. 251 - English Literature to 1800 3-0-3

(Prerequisite: Engl. 101 or 124 or 126 or 128 or 140 or 150.) is a selective historical survey of English literature from its beginnings to 1800. Some of the authors read are Chaucer, Spenser, Shakespeare, Milton, Dryden, Swift, Pope, and Johnson. Emphasis is on the interpretation of each work, the cultural context in which it was created, and the present relevance of the work. Offered in Fall 1994

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Humanities
- Area of Concentration - English

Engl. 252 - English Literature: 19th and 20th Centuries 3-0-3

(Prerequisite: Engl. 101 or 124 or 126 or 128 or 140 or 150.) is a selective survey of English literature from the beginning of the Romantic era, through the Victorian period, and into the twentieth century. Some of the authors read are Wordsworth, Keats, Tennyson, Browning, Conrad, Yeats, Lawrence, Joyce, Auden, Hughes, and Larkin. Offered in Spring 1995

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Humanities
- Area of Concentration - English

FIRE SCIENCE**Fire 110 - Introduction to Fire Science (Module A) 3-0-3**

is a basic introduction to the history and philosophy of fire protection and includes a review of loss of life and property statistics, responsibilities of the fire department in the community, and the behavior of fire. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Fire Science

Fire 111 - Techniques of Firefighting 1 (Module B) 3-0-3

is designed to teach and to develop the knowledge and manipulative skills needed by the firefighter. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Fire Science

Fire 112 - Techniques of Firefighting 2 (Module C) 3-0-3

is designed to expand and to develop the material covered in previous courses to raise the knowledge and skill level to firefighting two level. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Fire Science

Fire 120 - Fire Prevention Principles 1 3-0-3

(Prerequisite: Fire 110 or permission of the Social and Natural Sciences Associate Dean and eligibility for Engl. 101.) is a course required of eligible candidates pursuing Illinois certification as Fire Officer I. This course is designed to meet the needs of individuals who are expanding their knowledge about fire department operations. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Fire Science

Fire 130 - Building Construction for Fire Science 3-0-3

(Prerequisite: Fire 110 or permission of the Social and Natural Sciences Associate Dean.) analyzes methods of building construction including types of construction materials, principles of construction design, fire-resistant features of materials, a study of life-safety methods of construction, and an introduction to building codes. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Fire Science

Fire 140 - Fire Science Instructor - Basic 3-0-3

(Prerequisite: Fire 110 or permission of the Social and Natural Sciences Associate Dean and eligibility for Engl. 101.) meets the standard guidelines of the State Fire Marshal Division of Personnel Standards and Education to qualify fire service personnel to conduct training and educational courses for fire service personnel. The student will study development of course outlines, preparation of class material, and evaluation techniques. Also, the student will participate in the practice teaching of service materials. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Fire Science

Fire 150 - Fire Protection Systems 3-0-3

(Prerequisite: Fire 110 or permission of the Social and Natural Sciences Associate Dean.) studies the required standards for water supplies, protection systems, automatic sprinklers, and

extinguishing systems including analysis of various automatic signaling and detection systems.
Offered as needed

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Not Applicable
- Area of Concentration - Fire Science

Fire 170 - Extrication Specialist 2-2-3

(Prerequisite: Fire 110 or permission of the Social and Natural Sciences Associate Dean and eligibility for Engl. 101.) is designed to develop student skills in the use and care of extrication equipment needed to perform in rescue, extrication, and hazardous control functions. Upon successful completion of this course, students should be qualified for state certification as an extrication specialist. Offered as needed

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Not Applicable
- Area of Concentration - Fire Science

Fire 200 - Tactics and Strategy 3-0-3

(Prerequisite: eligibility for Engl. 101.) is an introduction to the basic principles and methods associated with fireground tactics and strategy as required of the company officer. The course emphasizes size-up, fire ground operations, pre-fire planning, and basic engine and truck company operations. Offered as needed

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Not Applicable
- Area of Concentration - Fire Science

Fire 210 - Firefighter Safety 3-0-3

(Prerequisite: Fire 110 or permission of the Social and Natural Sciences Associate Dean.) offers a knowledge of the fire service areas where accidents frequently occur and information that will decrease the hazards associated with operational areas. The course deals with all areas of firefighting from training to individual safety. Offered as needed

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Not Applicable
- Area of Concentration - Fire Science

Fire 230 - Fire Apparatus Engineer 3-0-3

(Prerequisite: Fire 110 or permission of the Social and Natural Sciences Associate Dean and eligibility for Engl. 101.) covers water supply systems, including resources, distribution systems, pumps, mechanics of hydraulics, and testing procedures. Offered as needed

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Not Applicable
- Area of Concentration - Fire Science

Fire 250 - Hazardous Materials 3-0-3

(Prerequisite: Fire 110 or permission of the Social and Natural Sciences Associate Dean and eligibility for Engl. 101.) studies all materials and chemicals that are potentially dangerous to life. The course material includes a knowledge of marking and placards used during shipping and the proper method of handling and extinguishing hazardous materials in case of fire. Offered as needed

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Not Applicable
- Area of Concentration - Fire Science

Fire 260 - Fire Investigation 3-0-3

(Prerequisite: Fire 110 or permission of the Social and Natural Sciences Associate Dean and eligibility for Engl. 101.) covers techniques and procedures for the investigation of fires. Students learn to determine the origin and causes of fire and about fire behavior, chemistry of fire, structural

fire patterns, detection of arson, and the role of the crime laboratory relations with law enforcement personnel. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Fire Science

Fire 270 - Management 1 3-0-3

(Prerequisite: Fire 110 or permission of the Social and Natural Sciences Associate Dean and eligibility for Engl. 101.) is one of two management courses required of eligible candidates pursuing Illinois certification as a Fire Officer I. The course acquaints the student with the role of the company officer and provides an introduction to basic management theories, practices, and functions. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Fire Science

Fire 280 - Management 2 3-0-3

(Prerequisite: Fire 110 or permission of the Social and Natural Sciences Associate Dean and eligibility for Engl. 101.) is one of two management courses required of eligible candidates pursuing Illinois certification as a Fire Officer I. The course acquaints the student with the principles of communications and group dynamics as they relate to the company officer. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Fire Science

FRENCH**Fren. 101 - Beginning French 1 4-0-4**

is an introduction to contemporary French, including oral practice, listening and reading comprehension, and the grammar necessary for spoken and written expression. Two assigned 25-minute laboratory periods per week are required in addition to scheduled class hours. Together with Fren. 102, it is designed for students with no previous study of French and also is the appropriate first college course for students who have accumulated less than five quality points for high school French or those whose prior study of French was completed more than five years ago regardless of earned quality points. Offered in Fall

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Humanities

Area of Concentration - Foreign Language

Fren. 102 - Beginning French 2 4-0-4

(Prerequisite: Fren. 101 or five to eleven quality points for high school French completed within the past five years.) is a continuation of Fren. 101. Two assigned 25-minute laboratory periods per week are required in addition to scheduled class hours. Offered in Spring

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Humanities

Area of Concentration - Foreign Language

Fren. 201 - Intermediate French 1 4-0-4

(Prerequisite: Fren. 102 or 12 to 14 quality points for high school French completed within the past five years.) includes readings in French, intensive aural-oral practice, and review of grammar and writing skills. Two assigned 25-minute laboratory periods per week are required in addition to scheduled class hours. Offered in Fall

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Humanities

Area of Concentration - Foreign Language

Fren. 202 - Intermediate French 2 4-0-4

(Prerequisite: Fren. 201 or 15 or more quality points for high school French completed within the past five years.) is a continuation of Fren. 201, with increased attention to composition and conversation. Two assigned 25-minute laboratory periods per week are required in addition to scheduled class hours. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Humanities

Area of Concentration - Foreign Language

GERMAN

Germ. 101 - Beginning German 1 4-0-4

includes elementary grammar, pronunciation, and reading of graded texts. The aural-oral approach is utilized toward acquiring skills in speaking, understanding, and reading German. Two assigned 25-minute laboratory periods per week are necessary in addition to scheduled class hours.

Together with Germ. 102, it is designed for students with no previous study of German and also is the appropriate first college course for students who have accumulated less than five quality points for high school German or those whose prior study of German was completed more than five years ago, regardless of earned quality points. Offered in Fall

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Humanities

Area of Concentration - Foreign Language

Germ. 102 - Beginning German 2 4-0-4

(Prerequisite: Germ. 101 or five to eleven quality points for high school German completed within the past five years.) is a continuation of Germ. 101. Two assigned 25-minute laboratory periods per week are required in addition to scheduled class hours. Offered in Spring

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Humanities

Area of Concentration - Foreign Language

Germ. 201 - Intermediate German 1 4-0-4

(Prerequisite: Germ. 102 or 12 to 14 quality points for high school German completed within the past five years.) includes reading of intermediate texts (Novellen and essays) and a review of grammar utilizing aural-oral practice in the classroom and laboratory. Two assigned 25-minute laboratory periods per week are required in addition to scheduled class hours. Offered in Fall

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Humanities

Area of Concentration - Foreign Language

Germ. 202 - Intermediate German 2 4-0-4

(Prerequisite: Germ. 201 or 15 or more quality points for high school German completed within the past five years.) is a continuation of Germ. 201, with increased attention to composition and conversation. Two assigned 25-minute laboratory periods per week are required in addition to scheduled class hours. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Humanities

Area of Concentration - Foreign Language

HEALTH**Hlth. 035 - Activity Program Director Course 2-1-2**

is an introduction to activity programming for residents of long-term care facilities. Topics include philosophy, coordination, communication skills, organizational structure, and evaluation techniques
Applicable toward graduation where program structure permits:

- Certificate or Degree - All Basic Certificates in General Studies except Personal Development
- Group Requirement - Not Applicable
- Area of Concentration - Basic Certificate in Development and/or Review of Vocational Skills

Hlth. 111 - Introductory Seminar on Alcoholism 2-0-2

will prepare the Alcohol Health Professional and interested people to deal with the problem of alcoholics. The course includes an overview of alcoholism, pharmacology, the progression of the disease process, and review of special populations

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Basic Certificates in General Studies except Personal Development
- Group Requirement - Not Applicable
- Area of Concentration - Basic Certificate in Alcoholism

Hlth. 141 - Basic Nurse Assistant Training Program 5-4-7

(Prerequisite: high school diploma or GED certificate, pass English and Math proficiency test, and permission of Allied Health Coordinator.) is designed to give the individual desiring employment as a nurse assistant or orderly basic training in order to improve the quality of patient care. The 142-hour course will be offered over a six-week period. Ninety-two (92) hours of class room work and 50 hours of clinical work will be offered. To become fully certified by Illinois Department of Public Health to work in long-term care, all students must complete the Nurse Aide Competency Evaluation Program (NACEP) testing for an additional fee. **Note:** The State of Illinois regulations require that all students must attend all class sessions or they will be dropped from the course

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Basic Certificates in General Studies except Personal Development
- Group Requirement - Not Applicable
- Area of Concentration - Basic Certificate in Development and/or Review of Vocational Skills

Hlth. 142 - Homemaker/Home Health Aide 1-0-1

is a four-day-long, 16-hour course designed to add to skills obtained in the Basic Nurse Assistant Training Program. The concepts and skills needed to give personal care and perform related homemaker services in the home for newborn infants, the sick, disabled, dependent, or infirm are presented. Upon satisfactory completion of this course a certificate will be awarded

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Basic Certificates in General Studies except Personal Development
- Group Requirement - Not Applicable
- Area of Concentration - Basic Certificate in Development and/or Review of Vocational Skills

Hlth. 143 - Alzheimer's Disease and Related Dementias Training 1-0-1

is designed for caring for the Alzheimer's Disease patient. The course will cover normal aging, Alzheimer Disease and related dementias, communication, treatment modalities, behavior and management techniques, activities, nutrition, family and community role/resources, and staff support

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Basic Certificates in General Studies except Personal Development
- Group Requirement - Not Applicable
- Area of Concentration - Basic Certificate in Development and/or Review of Vocational Skills

Hlth. 150 - RN Refresher Course 6-4-8

(Prerequisite: licensed registered nurse and liability insurance.) is intended to aid the RN who has been absent from clinical nursing for 5 years or more to integrate his/her previous knowledge with current trends in nursing practice. The purpose of the program is to be a basic review and update of nursing knowledge and skills. Upon completion of the program, the nurse will be prepared to practice in a health care facility after an orientation to that institution, which is separate from this course

Applicable toward graduation where program structure permits:

Certificate or Degree - All Basic Certificates in General Studies except Personal Development
 Group Requirement - Not Applicable
 Area of Concentration - Basic Certificate in Health and Safety

Hlth. 160 - EMT - Ambulance 5-0-5

is based upon the goals and training experience mandated by the Division of Emergency Medical Services and Highway Safety. Upon completion of this course, the student will be eligible to take the state test for EMT certification

Applicable toward graduation where program structure permits:

Certificate or Degree - All Basic Certificates in General Studies except Personal Development
 Group Requirement - Not Applicable
 Area of Concentration - Basic Certificate in Development and/or Review of Vocational Skills

Hlth. 161 - EMT - Intermediate 5-2-6

(Prerequisite: EMT-A license, sponsorship by an EMS facility, and liability insurance.) is based on the goals and training experiences mandated by the Division of Emergency Medical Services and Highway Safety. This course includes roles and responsibilities; patient assessment, examination, and care; medications; venipuncture; and medical emergencies. Upon completion, the student will be eligible to take state testing for EMT-1 certificate

Applicable toward graduation where program structure permits:

Certificate or Degree - All Basic Certificates in General Studies except Personal Development
 Group Requirement - Not Applicable
 Area of Concentration - Basic Certificate in Development and/or Review of Vocational Skills

Hlth. 162 - EMT - Defibrillation Course 2-0-2

(Prerequisite: EMT-1 license, sponsorship by an EMS facility, and liability insurance.) is based on the goals and training experiences mandated by the Division of Emergency Medical Services and Highway Safety. This course includes roles and responsibilities, cardiovascular anatomy and physiology and assessment, electrocardiography, cardiovascular treatment skills, and endotracheal intubation

Applicable toward graduation where program structure permits:

Certificate or Degree - All Basic Certificates in General Studies except Personal Development
 Group Requirement - Not Applicable
 Area of Concentration - Basic Certificate in Development and/or Review of Vocational Skills

Hlth. 163 - EMT - Paramedic 1 10-2-11

(Prerequisite: EMT-1 license and liability insurance.) is based on the state standards mandated by the Department of Emergency Medical Services and Highway Safety. The course includes legal aspects, medical terminology, communications, documentation, pharmacology, body systems, EKGs, and ACLS

Applicable toward graduation where program structure permits:

Certificate or Degree - All Basic Certificates in General Studies except Personal Development
 Group Requirement - Not Applicable
 Area of Concentration - Basic Certificate in Development and/or Review of Vocational Skills

Hlth. 164 - EMT - Paramedic 2 10-2-11

(Prerequisite: EMT-1 license, liability insurance, and successful completion of Health 163.) continues the EMT-P training begun in Health 163 and is based on the state standards mandated by the Department of Emergency Medical Services and Highway Safety. The course includes diabetes, thermoregulation, body systems, anaphylaxis, water and radiation emergencies, substance abuse, poisons, obstetrics, pediatrics, mental health, and mass casualty treatment

Applicable toward graduation where program structure permits:

Certificate or Degree - All Basic Certificates in General Studies except Personal Development
 Group Requirement - Not Applicable
 Area of Concentration - Basic Certificate in Development and/or Review of Vocational Skills

Hlth. 250 - Rehabilitation Nursing Course 5-0-5

is a 9-day course designed to enable the nurse to define the concept and philosophy of rehabilitation nursing, identify the role and responsibilities of the nurse in the rehabilitation process, identify aspects of the aging process, and utilize basic principles and practices of restorative nursing within the framework of the nursing process. This course has been approved by the Illinois

Department of Public Health, with certificates being issued by the Department. The course is open to LPNs and Registered Nurses

Applicable toward graduation where program structure permits:

Certificate or Degree - All Basic Certificates in General Studies except Personal Development

Group Requirement - Not Applicable

Area of Concentration - Basic Certificate in Development and/or Review of Vocational Skills

HEALTH EDUCATION**H. Ed. 120 - Health in the School and Community 3-0-3**

is designed to familiarize the student with consumer health, prevention and control of diseases, environmental influences, dental health, and nutrition. Special emphasis is placed on factors that influence the objectives and goals of a community health program. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Not Applicable

Area of Concentration - Teacher Education

HISTORY

Hist. 101 - United States to 1877 4-0-4

(Prerequisite: eligibility for Engl. 101.) covers the development of the United States from the colonial era through the Reconstruction period after the Civil War. Particular attention is given to the founding of the Colonies, Puritan thought and culture, Anglo-French rivalry, the political and economic background of the War of Independence, the formation of the American government, the Federalists, the Jeffersonians, the settlement of the West, Jacksonian democracy, "Manifest Destiny," sectional issues, the Civil War, and Reconstruction. Offered in Fall

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Social Science
- Area of Concentration - History, Social Science

Hist. 102 - United States since 1877 4-0-4

(Prerequisite: eligibility for Engl. 101.) surveys industrialization and urbanization, the Progressive Era, the background and American entry into World Wars I and II, the Depression, the New Deal, Cold War diplomacy, and domestic issues since World War II. The course will also examine the roles of women and minority peoples in our culture. A student may receive credit toward graduation for only two of the following three courses: Hist. 102 or 103 prior to 8-15-77, Hist. 102 since 8-15-77. Offered in Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Social Science
- Area of Concentration - History, Social Science

Hist. 105 - History of Illinois 3-0-3

(Prerequisite: eligibility for Engl. 101.) is a survey of Illinois history from the earliest times to the present. Topics covered include Indian cultures, Illinois under French and British rule, early statehood, settlement patterns, Land of Lincoln, growth of industrial and urban power, Progressivism, World Wars I and II, the New Deal, and post-World War II problems and growth. Offered as needed

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Social Science
- Area of Concentration - History, Social Science

Hist. 111 - European Civilization through the Reformation 4-0-4

(Prerequisite: eligibility for Engl. 101.) consists of a survey of European civilization from earliest times through Greece, the Roman Empire, the Middle Ages, the Renaissance, and the Reformation with particular emphasis on the development of Western thought, religion, art, culture, law, and government. A student may receive credit toward graduation for only two of the following three courses: Human. 101, 102, or Hist. 111. Offered in Fall

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Humanities
- Area of Concentration - History

Hist. 112 - European Civilization: The Modern Era 4-0-4

(Prerequisite: eligibility for Engl. 101.) examines the impact of intellectual, artistic, technological, and political developments from the rise of absolutist monarchies in the 17th century to the present day. Particular emphasis is given to the Enlightenment, Liberalism, the growth of Nationalism, the Industrial Revolution, Imperialism, World Wars I and II, and the decline of Colonialism. Attention is also given to major artistic, musical, and literary trends. Offered in Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Humanities
- Area of Concentration - History

Hist. 120 - History of the Middle East 3-0-3

(Prerequisite: eligibility for Engl. 101.) examines the history of the Middle East from the Ottoman era to the present day. The course will include the impact of imperialism and colonialism and will

emphasize major religious, social, economic, political, and cultural elements of the contemporary Middle East. Offered as needed

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Humanities
- Area of Concentration - History

Hist. 201 - The Origin and Development of Imperial China and Japan 4-0-4

(Prerequisite: eligibility for Engl. 101.) surveys early Chinese and Japanese history, religion, philosophy, art, and literature. China's "golden age" and Japanese feudalism are covered, and special emphasis is placed on how present day East Asian attitudes and beliefs were originally formulated. A student may receive credit toward graduation for only two of the following three courses: Human. 201, 202, or Hist. 201. Offered in Fall

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Humanities
- Area of Concentration - History

Hist. 202 - Modern East Asia 4-0-4

(Prerequisite: eligibility for Engl. 101.) provides a survey of China and Japan's entry into the modern world. The last 300 years are surveyed, but particular emphasis is placed on Japan's transition from feudalism to Asia's industrial leader and China's evolution from empire to Communism. A student may receive credit for only two of the following three courses: Human. 202, 203, or Hist. 202. Offered in Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Humanities
- Area of Concentration - History

Hist. 250 - History of Land Warfare 3-0-3

(Prerequisite: eligibility for Engl. 101.) examines the nature of war from ancient Greece to the present day with emphasis on the modern era. While the study of military weapons and tactics will be stressed, social and political influence in military affairs will also be analyzed. Offered as needed

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Social Science
- Area of Concentration - History

Hist. 251 - American Military History 3-0-3

(Prerequisite: eligibility for Engl. 101.) examines the evolution of the American military and the wars in which it fought. The attitudes of the American people and government before and during each war will be an integral part of the course. Offered as needed

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Social Science
- Area of Concentration - History

HOME ECONOMICS**H. Ec. 110 - Health, Nutrition, and Safety for Young Children 2-2-3**

(Prerequisite: English placement test score of 21st percentile.) is designed as an overview of methods and procedures for health, nutrition, and safety with children. Topics include good health practices, childhood illnesses, feeding methods, meal planning, and safety procedures for first aid, fire, and accidents. (Students are required to take first aid and CPR, for which there is an additional laboratory fee.) Offered as needed

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Natural Science (A.A.S. C.C.&E. only)
- Area of Concentration - Child Care and Education

H. Ec. 200 - Nutrition and Diet Therapy 3-0-3

is designed for students in health care professions and food service programs. It includes fundamentals of nutrition, maintenance of health through good nutrition, diet therapy, and food preparation. Offered as needed

Applicable toward graduation where program structure permits:

- Certificate of Degree - All Certificates, A.A.S, A.L.S., A.A., A.S
- Group Requirement - Natural Science (A.A.S. Allied Health and Nursing only)
- Area of Concentration - Dietetic Assistant/Technician, Allied Health and Nursing

HORTICULTURE

Hort. 101 - Turf Management 2-3-3

emphasizes general types of turf grasses, their growth habits, and the establishment of turf. Fertilizers, diseases, insects, weeds, and some turf equipment are included. Offered in Fall
Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Not Applicable
- Area of Concentration - Horticulture

Hort. 102 - Ornamental Plant Identification and Use 2-3-3

identifies commonly used ornamental trees, shrubs, and vines. In addition, their special growth and moisture requirements and their uses in a landscape plan will be emphasized. Offered in Fall
Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Not Applicable
- Area of Concentration - Horticulture

Hort. 103 - Landscape Layout and Design 2-3-3

(Prerequisite: Hort. 102.) emphasizes cost, specifications, land and plant material calculations, and layout design of specific landscape areas. Skills of surveying will be introduced as they are needed. Offered in Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Not Applicable
- Area of Concentration - Horticulture

Hort. 104 - Turf Management 2 2-3-3

(Prerequisite: Hort. 101 or previous turf experience.) will cover certain topics related to the care and production of fine turf. Among the topics will be irrigation systems, weed control, and the more advanced aspects and practices for the growth of fine turf grass. Offered in Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - Turf Grass Management
- Group Requirement - Not Applicable
- Area of Concentration - Horticulture

Hort. 105 - Turf Equipment Operation and Maintenance 2-3-3

(Prerequisite: Hort. 101 or previous turf experience.) will cover topics related to the maintenance and operation of turf equipment. Offered in Fall

Applicable toward graduation where program structure permits:

- Certificate or Degree - Turf Grass Management
- Group Requirement - Not Applicable
- Area of Concentration - Horticulture

Hort. 111 - Plant Pests 2-2-3

covers the basics of insect identification and control, disease identification and control, and weed identification and control in horticulture crops. Offered in Fall

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Not Applicable
- Area of Concentration - Horticulture

Hort. 130 - Electrical Controls 2-2-3

covers the basics of electrical wiring, electric motors, and the area of electrical controls such as systems for irrigation, timing, mist propagation, timed lighting, and electrical monitoring used in greenhouses, nurseries, and turf areas. Offered in Fall

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Not Applicable
- Area of Concentration - Horticulture

Hort. 140 - Plant Propagation 2-2-3

(Prerequisite: Hort. 190 or consent of instructor.) is designed to familiarize the student with the most widely used techniques in the production of woody plant material. Topics of discussion include propagation, structures, media, disease control, and types of propagation, including budding, grafting, cutting, seeding, layering, and tissue culturing. Offered in Fall
Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Not Applicable
- Area of Concentration - Horticulture

Hort. 150 - Greenhouse Management 2-2-3

includes a study of greenhouse construction and operation. Special emphasis is given to temperature, light, soils, gases, nutrition, and the growth of bedding plants. Offered in Spring
Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Not Applicable
- Area of Concentration - Horticulture

Hort. 160 - Building and Grounds Maintenance 2-2-3

covers the principles of heating, air conditioning, and lawn and landscape maintenance. Offered in Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Not Applicable
- Area of Concentration - Horticulture

Hort. 170 - Plantscaping 2-2-3

emphasizes installation, maintenance, and management of interior plantscapes. Topics include plant lighting, planting, watering, acclimatizing, cultural problems, containers, installation, and maintenance contracts. Offered in Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Not Applicable
- Area of Concentration - Horticulture

Hort. 180 - Small Gas Engines 1-2-2

develops the ability to maintain, adjust, and repair two- and four-stroke cycle single and multiple cylinder engines under 25 HP. Proper use of tools and testing equipment is included. Offered in Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Not Applicable
- Area of Concentration - Agricultural Products and Processing

Hort. 190 - Introduction to Horticulture 3-2-4

provides a general background in horticulture plant growth and development. Areas include the production, utilization, and marketing of fruits, vegetables, ornamentals, floriculture, landscaping, turf, and nursery. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Natural Science (A.A.S. only)
- Area of Concentration - Agricultural Products and Processing

Hort. 191 - Landscape Construction and Estimating 2-2-3

emphasizes the techniques and materials used in landscape construction. Students will also learn to use standard practices in estimating the costs of landscape construction projects. Offered in Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Not Applicable
- Area of Concentration - Horticulture

HUMANITIES

Human. 100 - Introduction to the Arts 3-0-3

examines such types of art as music, film, painting, sculpture, literature, and architecture as illustrating the values, capacities, and achievements of human beings. Various approaches to viewing, discussing, and writing about the arts will be stressed. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Humanities

Area of Concentration - Not Applicable

Human. 201H - Humanities Honors Seminar 3-0-3

(Prerequisite: completion of or concurrent enrollment in English 101 and either admission to the Honors Opportunities Program or a 3.0 G.P.A. and permission of the instructor.) has the student practice interpreting works of art, literature, and music. Various contexts for this interpretation will be used each time the course is offered, such as an emphasis of the historical period, the aesthetic analysis of the works, the cultural and philosophical background, or the relationships with the lives of the creators. This context will be specified each term the course is offered. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Humanities

Area of Concentration - Not Applicable

INDUSTRIAL SAFETY**Ind. S. 100 - Industrial Safety and Health 3-0-3**

investigates the principle causes of accidents in business and industry. It also is designed to increase supervisory awareness of methods of accident prevention and industrial hygiene. Each student will receive instruction in first aid and CPR. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Machine Tool Processes, Supervision of Personnel

JAPANESE

Japan. 101 - Beginning Japanese 1 **4-0-4**

is an introduction to modern Japanese, including speaking, understanding, reading, and writing. The course stresses the correct pronunciation of the basic sounds of Japanese, the ability to use contemporary expressions idiomatically in conversation, and the mastery of basic pattern sentences. Two 25-minute language laboratory or conversation sessions per week are necessary in addition to scheduled class hours. Japanese 101 also includes the teaching of two syllabic scripts, HIRAGANA and KATAKANA. The course is designed for students with no previous study of Japanese but with a strong linguistic, economic, or cultural interest in Japan. Offered as needed
Applicable toward graduation where program structure permits:

Certificate or degree - All Certificates, A.A.S., A.L.S., A.A., or A.S

Group Requirement - Humanities

Area of Concentration - Foreign Language

Japan. 102 - Beginning Japanese 2 **4-0-4**

(Prerequisite: Japanese 101 or equivalent competencies.) is a continuation of Japanese 101. It also begins the study of Kanji (Chinese characters) and reading modern colloquial Japanese. It continues the exposure to Japanese customs, non-verbal communication, human relationships, and business life. Two 25-minute language laboratory or conversation sessions per week are required in addition to scheduled class hours. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or degree - All Certificates, A.A.S., A.L.S., A.A., or A.S

Group Requirement - Humanities

Area of Concentration - Foreign Language

Japan. 201 - Intermediate Japanese 1 **4-0-4**

(Prerequisite: Japanese 102 or equivalent competencies.) is designed to build intermediate oral, reading, and writing skills through compositions and guided conversations upon topics of contemporary interest using graded readings. A student will learn to participate comfortably in Japanese conversations and write 200 kanjis. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or degree - All Certificates, A.A.S., A.L.S., A.A., or A.S

Group Requirement - Humanities

Area of Concentration - Foreign Language

JOURNALISM

Journ. 101 - News Writing 3-0-3

(Prerequisite: eligibility for Engl. 101 and typing ability.) introduces the students to basic techniques of news writing and news gathering with experience in the gathering, writing, and rewriting of news copy. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Not Applicable

Area of Concentration - Journalism

Journ. 102 - News Reporting 3-0-3

(Prerequisite: Journ. 101.) continues study and practice in writing and gathering news with added emphasis on editing, information sources, interviewing, and page make-up. The goals of accuracy, comprehensiveness, and appropriate interpretation are applied to investigative and interpretive reporting of public affairs. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Not Applicable

Area of Concentration - Journalism

Journ. 110 - Introduction to Mass Media 3-0-3

(Prerequisite: eligibility for Engl. 101.) examines the mass media of our society: newspapers, magazines, radio, and television. The course treats the development of the media to their present forms, the process and theory of mass communications, and issues arising from the present state of mass media, such as "new journalism," "protected sources," and freedom of the press. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Not Applicable

Area of Concentration - Journalism, Speech

LAW ENFORCEMENT

Law E. 110 - Introduction to Law Enforcement 3-0-3

(Prerequisite: eligibility for Engl. 101 and admission to one of the Law Enforcement programs or permission of the Social and Natural Sciences Associate Dean.) introduces the student to the philosophy and history of law enforcement and criminal justice. An overview of crime and police problems, organization and jurisdiction of local, state, and federal enforcement agencies, review of court systems, and procedures from incident to final disposition are included. Consideration also is given to professional career opportunities and necessary qualifications. Offered in Fall

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Not Applicable
- Area of Concentration - Law Enforcement

Law E. 113 - Fundamentals of Investigation and Investigative Reporting 3-0-3

(Prerequisite: eligibility for Engl. 101 and admission to one of the Law Enforcement programs or permission of the Social and Natural Sciences Associate Dean.) includes the fundamentals of investigation, crime scene search and recording, collection and presentation of physical evidence, basic photography, scientific aids, sources of information, interviewing, follow-up, and case preparation. The course also emphasizes report writing. Offered in Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Not Applicable
- Area of Concentration - Law Enforcement

Law E. 114 - Criminal Law 3-0-3

(Prerequisite: eligibility for Engl. 101 and admission to one of the Law Enforcement programs or permission of Social and Natural Sciences Associate Dean.) introduces law as it applies to crimes against persons, property, and the state. It includes the elements of crimes, criminal law procedures in Illinois, and federal agency jurisdiction. Offered in Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Not Applicable
- Area of Concentration - Law Enforcement

Law E. 120 - Motor Vehicle Laws and Traffic Control 4-0-4

(Prerequisite: eligibility for Engl. 101 and admission to one of the Law Enforcement programs or permission of the Social and Natural Sciences Associate Dean.) covers the laws relating to traffic and vehicles, traffic regulations and procedures, agencies involved in traffic control, techniques and methods of police patrol, fundamentals of crash investigation, and the responsibilities of the officer. A student may receive credit for only two of the following three courses: Law E. 111, 112, or 120. Offered in Fall

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Not Applicable
- Area of Concentration - Law Enforcement

Law E. 200 - Youth, the Law and Police Intervention 3-0-3

(Prerequisite: eligibility for Engl. 101 and completion of Introductory Sociology, Psychology, or Law Enforcement or permission of the Social and Natural Sciences Associate Dean.) covers all aspects of police contact with today's juvenile. Emphasis is on the social/psychological courses of delinquency, incorrigible behavior, and child abuse/neglect, as well as police, court, and social agency intervention in these matters. A study of the pertinent laws and contemporary youth problems in the community is involved. Offered in Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Not Applicable
- Area of Concentration - Law Enforcement

Law E. 210 - Law Enforcement and Community Relations 3-0-3

(Prerequisite: eligibility for Engl. 101 and admission to one of the Law Enforcement programs or permission of the Social and Natural Sciences Associate Dean.) studies the whole function of the

law enforcement officer and the ways in which the officer portrays an image to the entire community. The course considers the role and responsibility of the law enforcement agency in crime prevention, everyday relationships with the public, assistance to persons needing help, and public information. Ethics, courtesy, and impartiality as tools necessary in gaining public support and confidence are emphasized. Offered in Fall

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Law Enforcement

Law E. 211 - Law Enforcement Administration 4-0-4

(Prerequisite: eligibility for Engl. 101 and admission to one of the Law Enforcement programs or permission of the Social and Natural Sciences Associate Dean.) emphasizes the basic principles of administration and management. It provides study of the types of law enforcement organizational structure as well as the responsibilities and interrelationships of administrative, line, and staff services. Budgeting, planning, position classification, disciplinary methods, and manpower distribution are also considered. The course also examines the major law enforcement commissions of this century to include their impact on professionalization of the service. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Law Enforcement

Law E. 290 - Work Experience Practicum and Seminar 1-25-6

(Prerequisite: eligibility for Engl. 101 and approval of the Social and Natural Sciences Associate Dean after presentation of a goals statement by the student.) affords the student in a Law Enforcement program the opportunity to apply the principles learned in other courses to the work situation through employment in or observation of activities necessary for the operation of a business, industry, or agency. Employment or observation activities are coordinated with the student's course work. One of the requirements of this course will be a one-hour-per-week seminar to be arranged for maximum convenience of the student. Credit is determined at enrollment based on the ratio of five or more hours per week in the employment setting for a regular-length semester for one semester hour of credit. The course may be repeated for maximum accumulation of six semester hours of credit. Students planning to enroll in this course must complete an application for enrollment and submit it to the Social and Natural Sciences Associate Dean 30 days or more prior to the first day of registration for the semester during which the student desires to participate in this course. Applications are available in the Social and Natural Sciences Division office

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Law Enforcement

LEADERSHIP

Leadership 150 - Leadership Development 3-0-3

(Prerequisite: eligibility for Engl. 101) is an extensive exploration of leadership skills, with an emphasis on materials from the humanities, especially literature, philosophy, and film. Typical subjects included for discussion include leadership styles, delegation of authority, ethics and leadership, conflict resolution, and creativity in decision making. Core materials for the course come from the Phi Theta Kappa leadership development program, and the course is taught by certified instructors. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Not Applicable

Area of Concentration - Not Applicable

MACHINING

Mach. 101 - Machine Tool Processes 1 1-6-3

provides an introduction to machining metals and the principles of measurement. Also, the student receives instruction in measuring and layout. Introductory training begins on micrometer and vernier tools, dial indication instruments, and gauge blocks. The course includes tool grinder, metal lathe, band saws, drill press, twist drills, boring tools, screw threads, and taps and dies. Related topics such as bench work, the use of hand tools, elementary heat treatment of metals, and elementary tool grinding are a part of the course. Shop safety is covered in every operation. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Machine Tool Processes

Mach. 102 - Machine Tool Processes 2 1-6-3

(Prerequisite: Mach. 101 or equivalent competencies.) provides additional experience in elementary machine shop processes. Milling machines are introduced with the operations of milling vertical and horizontal surfaces. The horizontal milling machine and dividing heads are also introduced. The students begin tool and cutter grinding using various types of mill cutters. Measurement and layout on milling machines are a part of the course along with the cutting of spur, bevel gears, and racks. Shop safety is covered in every operation. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Machine Tool Processes

Mach. 103 - Introduction to Numerical Control 1-6-3

(Prerequisite: Mach. 102 or equivalent competencies.) provides introduction to computer-controlled vertical milling machines using the Crusader II Control. The student will become familiar with programming and operating the CNC. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Machine Tool Processes

Mach. 201 - Machine Tool Processes 3 1-6-3

(Prerequisite: Mach. 102 or equivalent competencies.) provides additional experience in grinding and grinding machines. A study of various types of abrasives with their uses is included. Types of grinding covered include tool, drills and reamers, end mills, mill cutters, tool bits, thread chasers, surface, outside and inside, and precision. Attention is given to heat treatment of metals and case hardening. Shop safety is covered in every operation. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Machine Tool Processes

Mach. 202 - Machine Tool Processes 4 1-6-3

(Prerequisite: Mach. 201 or equivalent competencies.) provides the opportunity for the student to be involved in introductory tool and die and/or special projects. In the tool and die study, the student will make a fixture, die, or tooling. The student will build or fabricate a major metal working project using all the equipment in the machine shop. Shop safety is covered in every operation. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Machine Tool Processes

MANUFACTURING

Mfg. 100 - Print Reading for Industry 1-2-2

provides experiences in reading industrial prints and some sketching of orthographic and pictorial drawings. Topics covered include the interpretation of detail and assembly drawings; auxiliary views; sections, dimensions, and tolerances; lists of materials; notes; drawing change systems; threads; callouts for machine processes; positional and form tolerances; gears; splines; NC documents; and sheet metal, welding, and control diagrams. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Industrial Maintenance, Machine Tool Processes

Mfg. 110 - Basic Metallurgy 3-0-3

introduces the basics of metal structures with mechanical, physical, and chemical properties related to plain carbon steel. Emphasis will be on terminology. Further study will include effects of heating and cooling on steel, the way metals bend or deform, and the principles of metal testing methods. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Not Applicable

Mfg. 120 - Manufacturing Processes 3-0-3

is designed to give a basic understanding of the various processes used in manufacturing. It explores theoretical and practical application of the processes, including welding, machining, casting, forging, basic metallurgy, steel making, non-ferrous materials, and testing principles. Field trips are used to demonstrate the processes. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Not Applicable

Mfg. 130 - Manufacturing Metallurgy and Processes 3-0-3

(Prerequisite: eligibility for Engl. 101.) provides the student with a basic understanding of metallurgy and the application to conventional manufacturing processes. The basics of metal structures and the mechanical, physical, and chemical properties of steel and aluminum are examined. The effects of heating and cooling and the way metals bend or deform are examined. Basic casting, forging, forming, and testing are examined as well as machining and tolerances in metal removal. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Computer Integrated Manufacturing

MATERIALS MANAGEMENT

Matls. 110 - Fundamentals of Materials Management 3-0-3

provides an introduction and overview of the field of materials management. Topics include objectives, benefits, relationships with other functions, organization, planning, customer order servicing, inventory management, production control, purchasing, receiving and stores, material handling, physical distribution, and computer applications. Credit cannot be received in both Matls. 110 and Bus. 150. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Not Applicable

Matls. 120 - Purchasing and Procurement Systems 3-0-3

studies the role of purchasing on the materials cycle, organization under centralized and decentralized philosophy, and legal aspects of the function in setting prices, terms and contracts, planning purchases, make-buy-or-lease analysis, environmental considerations, principles of effective competition, negotiation, finding qualified suppliers, measuring performance, and reducing costs. Value analysis, cost analysis, and business ethics will also be studied. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Not Applicable

Matls. 130 - Principles of Physical Distribution 3-0-3

(Prerequisite: Matls. 110 or appropriate business experience.) is concerned with 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. Heavy emphasis is given to distribution design and distribution system analysis. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Not Applicable

Matls. 140 - Inventory Management and Control 3-0-3

provides an overview of the dynamics of managing inventory in the constantly changing industrial and commercial environment. Topics include forecasting sales and inventory requirements, computer applications to inventory control problems, building inventory model simulation, and the relationships of inventory control to marketing management and production control. Credit cannot be received in both Matls. 140 and Bus. 160. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Not Applicable

Matls. 160 - Production Control Concepts 3-0-3

(Prerequisite: Matls. 110 or appropriate business experience.) is devoted to describing the development, scope, and objectives of production control. Specific attention will be given to scheduling, control, critical path, machine loading and material requirements planning, and other techniques, functions, and activities that are implicit in this aspect of materials management operations. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Not Applicable

Matls. 170—Traffic and Transportation 3-0-3

(Prerequisite: Matls. 110 or appropriate business experience.) provides an overview of transportation systems and the impact on cost, service, and inventory that each system can develop. Brief exposure to the methods of calculating costs in various modes and routings and

operational aspects of the transportation function are offered to enable the materials manager to better understand and evaluate available alternatives. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Not Applicable

Matls. 210 - Material Requirements Planning 3-0-3

(Prerequisite: Matls. 140 or appropriate business experience.) demonstrates the importance to modern materials management of computer-based Material Requirements Planning (MRP) systems, which focus on the use of MRP systems to reduce inventories, set priorities, initiate orders, set purchasing requirements, and develop a master production schedule. Credit cannot be received in both Matls. 210 and Bus. 250. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Not Applicable

Matls. 220 - Advanced Production Control 3-0-3

(Prerequisite: Matls. 160 or appropriate business experience.) builds upon the concepts developed in Matls. 160. Production forecasting, shop loading, capacity planning, shop floor control techniques, short-interval scheduling, and job shop versus continuous-flow systems are considered. Further attention is devoted to material requirements planning. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Not Applicable

Matls. 230 - Advanced Purchasing 3-0-3

(Prerequisite: Matls. 120 or appropriate business experience.) is a continuation of Matls. 120. Emphasis is given to the managerial aspects of purchasing, contract negotiations and administration, and speculative purchasing. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Not Applicable

Matls. 240 - Distribution Resource Planning 3-0-3

(Prerequisite: Matls. 110 or appropriate business experience.) ties together physical distribution with manufacturing. It presents concepts on how distribution resource planning can help achieve improvements in customer service, reductions in inventory levels, and reductions in the cost of operating a physical distribution network. Topics covered include "Push Versus Pull" distribution approaches, DRP and master production scheduling, transportation planning, scheduling DRP in the retail/wholesale sector, and justifying and implementing a DRP system. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Not Applicable

Matls. 250 - Master Planning 3-0-3

(Prerequisite: Matls. 110 or appropriate business experience.) brings the demand and supply sides of production into equilibrium. The relationships between the functions of forecasting, order service, demand planning and control, production planning, master production scheduling, final assembly scheduling, and shipping scheduling are presented. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Not Applicable

MATHEMATICS

All mathematics courses that are prerequisites for other mathematics courses must be completed with a "C" or better grade if they are to be used as prerequisites

Math. 087 - General Mathematics Skills 2-4-4

is designed around the module concept. Students will work independently under the guidance of an instructor to complete those modules with which the students need help with. Each student will take a pre-test prior to each module. If not, the student will complete the work in that module and then take a post-test. This is a computer-assisted learning course. Students will be expected to spend a minimum of four hours per week on computer instruction. Offered as needed

Applicable toward graduation where program structure permits:

- Certificate or Degree - Basic Certificates
- Group Requirement - Not Applicable
- Area of Concentration - Not Applicable

Math. 090 - Pre-Algebra 4-0-4

(Prerequisite: successful completion of Math. 087 ["C" or better grade] or satisfactory score on the mathematics placement exam, **and** either eligibility for Engl. 101 or concurrent enrollment in Engl. 090 and Engl. 091.) is designed to automate the use of fractions, mixed numbers, and decimal numbers in any and all operations. It is also designed to automate procedures for solving simple word problems. The concepts of area, percent, ratio, and order of operations are introduced. The beginning concepts of algebra are practiced thoroughly. Intensive work is done in teaching productive thought patterns that will be used in problem solving. Some of the basic concepts of spatial geometry including pyramids, spheres, and cones are integrated in the course. Successful completion of this course insures total preparation for Math. 091. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates
- Group Requirement - Preparatory to Other Studies
- Area of Concentration - Preparatory to Other Studies

Math. 091 - Basic Algebra 4-0-4

(Prerequisite: successful completion of Math. 090 ["C" or better grade] or satisfactory score on the mathematics placement exam, **and** either eligibility for Engl. 101 or concurrent enrollment in Engl. 090 and Engl. 091.) is a concentrated study of the topics in Beginning Algebra. The topics include the real number system, first degree equations, signed numbers, integer exponents, elementary graphing, products and quotients of algebraic expressions, systems of linear equations in two variables, radicals and quadratic equations, scientific notation, ratio problems, percent, variation, and unit conversion. A thorough discussion is presented on applied (word) problems with strong emphasis on identifying word problems by type and learning the procedures for each type. Algebraic methods are used in spatial geometry problems, concentrating on finding the areas and volumes of irregular geometric solids. The concept of volume and surface area of prisms, cylinders, cones, and spheres is practiced. Successful completion of this course prepares the student for Math. 098, Math. 104, Math. 110, Math. 111, and Math. 117. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates
- Group Requirement - Preparatory to Other Studies
- Area of Concentration - Preparatory to Other Studies

Math. 092 - Basic Algebra A 4-0-4

Note: Math. 092 is a one semester course that covers the first half of Math. 091 (Basic Algebra), and credit cannot be earned in both Math 091 and 092

(Prerequisite: successful completion of Math. 090 ["C" or better grade] or satisfactory score on the mathematics placement exam **and** either eligibility for Engl. 101 or concurrent enrollment in Engl. 090 and Engl. 091.) introduces the topics of algebra. It includes the topics of basic definitions, work with signed numbers, linear equations and inequalities, graphing and linear systems, formulas, exponents and polynomials, factoring, geometry review, perimeter, area, volume, surface area, degree measure, sets, conversions of areas and volumes, and applied problems. The course is designed to help the student improve basic algebra skills and study skills through developmental exercises. Work is done under tutored direction in a supervised classroom

setting. A student cannot be enrolled in both Math. 091 and Math. 092. Successful completion of Math. 092 prepares the student for Math. 093. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates
- Group Requirement - Preparatory to Other Studies
- Area of Concentration - Preparatory to Other Studies

Math. 093 - Basic Algebra B 4-0-4

Note: Math. 093 is a one semester course that covers the second half of Math. 091 (Basic Algebra), and credit cannot be earned in both Math 091 and 093

(Prerequisite: successful completion of Math. 092 ["C" or better grade].) is a continuation of Math. 092. Topics include operations on rational expressions, complex fractions, scientific notation, rational equations, operations with scientific notation, division of polynomials, Pythagorean theorem, properties of the set of real numbers, factoring by grouping, factoring by trinomials, quadratic equations, solving quadratic equations by graphing, roots and radicals, the quadratic formula, completing the square, compound inequalities, the slope of a line, point slope and slope intercept, variation, functions and functions notation and work with applied problems. Work is done under tutored direction in a supervised classroom. The topics of Math. 092 are continually reviewed. A student cannot be enrolled in both Math. 091 and Math. 093. Successful completion of Math. 093 prepares the student for Math. 098. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates
- Group Requirement - Preparatory to Other Studies
- Area of Concentration - Preparatory to Other Studies

Math. 095 - Basic Geometry 3-0-3

*(Prerequisite: successful completion of Math. 091 ["C" or better grade] or satisfactory score on the mathematics placement exam, **and** either eligibility for Engl. 101 or concurrent enrollment in Engl. 090 and Engl. 091.)* is an introduction to geometry. Topics include lines and plane and solid figures with concepts of congruence, similarity, symmetry, and logic. Offered in Fall

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates
- Group Requirement - Preparatory to Other Studies
- Area of Concentration - Preparatory to Other Studies

Math. 098 - Intermediate Algebra 4-0-4

(Formerly Math. 115)

*(Prerequisite: successful completion of Math. 091 or Math. 093 ["C" or better grade] or satisfactory score on the mathematics placement exam **and** successful completion of Math. 095 or one year of high school geometry **and** eligibility for Engl. 101.)* is a concentrated study of the topics in Intermediate Algebra. It is designed for students who have successfully completed one year of high school algebra or need to review thoroughly Intermediate Algebra concepts or a semester of college beginning algebra or the equivalent. The topics include real numbers, polynomials, rational expressions, equations, inequalities, problem solving, complex numbers, systems of equations, graphing, functions, relations, exponents, and logarithms. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Preparatory to Other Studies
- Area of Concentration - Preparatory to Other Studies

Math. 104 - Technical Mathematics 4-0-4

*(Prerequisite: successful completion of Math. 091 ["C" or better grade] or satisfactory score on the mathematics placement exam **and** either eligibility for Engl. 101 or concurrent enrollment in Engl. 090 and Engl. 091.)* includes the following topics: whole numbers, common fractions, decimal fractions, percents, measure, bar and line graphs, introductory algebra, signed numbers, basic algebraic operations, simple equations, complex equations, ratio and proportion, introduction to plane geometry, angular measure, angular geometric principles, triangles, similar figures, polygons, circles, areas of common polygons, areas of circles, sectors, segments, and ellipses, prisms and cylinders and their volumes, surface areas, and weights, pyramids and cones, spheres and composite objects and their volumes, surface areas, and weights, introduction to trigonometric functions, trigonometric functions with right triangles, practical applications with right triangles, law

of sines, and law of cosines. Presentation of concepts is followed by applied examples and problems that have been drawn from diverse occupational fields. Practical application examples from various occupations are shown to illustrate the actual on-the-job uses of the mathematical concepts. An understanding of mathematical concepts is emphasized in all topics. Derivations and formal proofs are not presented. An analytical approach to problem solving used in actual on-the-job training and technical occupations applications is emphasized in the plane geometry, computed measure, and trigonometry sections. Basic fundamentals of general mathematics are covered quickly, and examples and exercises from diverse applied problems are emphasized. Use of scientific calculators with algebraic logic is emphasized throughout the course. The student is exposed to many applied problems in mathematics using calculators. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Mathematics

Area of Concentration - Industrial Maintenance, Machine Tool Processes

Math. 106 - Mathematics for Health Careers 2-0-2

includes a review of fractions, decimals, and percents; the household, apothecaries', and metric systems of measurement; ratio and proportion; rate of flow of intravenous fluids; drugs measured in units; stock solutions; application problems; pediatric dosage formulas; insulin dosages; and milliequivalents. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Mathematics

Area of Concentration - Registered Nursing

Math. 108 - Mathematics for Health Technology 3-0-3

includes addition, subtraction, multiplication, and division of whole numbers, fractions, decimals, and signed numbers; measurement; scientific notation; equations, decimals, and signed numbers; measurement; scientific notation; equations and their graphs; ratio and proportion; areas; algebraic expressions; and right triangle trigonometry. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Mathematics

Area of Concentration - Radiologic Technology, Respiratory Therapy

Math. 110 - Concepts of Mathematics 4-0-4

*(Prerequisite: successful completion of Math. 098 ["C" or better grade] or satisfactory score on the mathematics placement exam **and** successful completion of Math. 095 or one year of high school geometry **and** eligibility for Engl. 101.)* provides an overall view of mathematics for students whose primary interests are not in engineering or the physical sciences. Topics will be selected from the following: deductive logic, inductive logic, evolution of the number system, systems of numeration, bases other than ten, logic of algebra, mathematics as a series of logical deductive systems, language of sets, history of numeration, elementary number theory, and an introduction to statistics. This course gives an introduction to the nature of mathematics, how it has grown in man's efforts to understand and master nature, and what the mathematical approach to the real numbers can accomplish. The emphasis is on ideas, concepts, and the nature of mathematics as an integral part of our civilization and culture rather than routine drills. Credit cannot be received in both Math. 110 and Math. 111. Offered in Fall

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Mathematics

Area of Concentration - Not Applicable

Math. 111 - Mathematics for Elementary School Teaching 1 4-0-4

*(Prerequisite: successful completion of Math. 098 ["C" or better grade] or satisfactory score on the mathematics placement exam **and** successful completion of Math. 095 or one year of high school geometry **and** eligibility for Engl. 101.)* includes the language of sets and their application to elementary mathematics; mathematical reasoning and problem solving; history of numeration; work in bases other than ten; whole numbers and operations; integers and rational numbers; decimals, irrational numbers, and elementary number theory; calculators and applications; the language and nature of deductive and inductive logic in mathematics; and an introduction to

statistics. Some of the issues underlying elementary school mathematics are analyzed. Credit cannot be received in both Math. 110 and Math. 111. Offered in Fall

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Mathematics
- Area of Concentration - Teacher Education - Elementary

Math. 112 - Mathematics for Elementary School Teaching 2 3-0-3

(Prerequisite: Math. 111 or equivalent competencies and eligibility for Engl. 101.) is a continuation of Math. 111 and the further development of the topics in Math. 111. Topics include geometry and geometric figures, probability and statistics, graphing, measurement, and basic computer literacy. Students are introduced to some of the current literature, innovations, methods, and proposals for the modern elementary mathematics curriculum. Offered in Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Mathematics
- Area of Concentration - Teacher Education - Elementary

Math. 113 - Introduction to Applied Statistics 4-0-4

(Prerequisite: successful completion of Math. 098 ["C" or better grade] or satisfactory score on the mathematics placement exam **and** successful completion of Math. 095 or one year of high school geometry **and** eligibility for Engl. 101.) is a beginning level course for the student in elementary applied statistics. Topics include basic statistical principles, graphic presentation, descriptive measures of central tendency, dispersion and location, inferential statistics and hypothesis testing, analysis and inference of linear correlation, and coefficient and slope of regression line. Students will apply statistical concepts to real-world situations. Current technology will be utilized in examining statistical information. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Mathematics
- Area of Concentration - Not Applicable

Math. 116 - College Algebra 4-0-4

(Prerequisite: successful completion of Math. 098 ["C" or better grade] or satisfactory score on the mathematics placement exam **and** successful completion of Math. 095 or one year of high school geometry **and** eligibility for Engl. 101.) is a concentrated study of the topics traditionally found in College Algebra. The topics include a quick and intense review of the topics from Intermediate Algebra, including real numbers, algebraic expressions, polynomials, equations, problem solving, complex numbers, graphing. Major topics include functions, exponential and logarithmic functions, matrices, polynomial equations, inequalities, introduction to analytic geometry, conic sections, systems of equations, mathematical induction, and the binomial theorem. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Mathematics
- Area of Concentration - Not Applicable

Math. 117 - Trigonometry 3-0-3

(Prerequisite: successful completion of Math. 098 ["C" or better grade] or satisfactory score on the mathematics placement exam **and** successful completion of Math. 095 or one year of high school geometry **and** eligibility for Engl. 101.) covers sets, relations and functions, trigonometric functions, solutions of right triangles and oblique triangles, radian and degree measure, trigonometric identities and equations, inverse trigonometric relations, and complex numbers. Calculators are used. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Mathematics
- Area of Concentration - Mathematics

Math. 121 - Calculus and Analytic Geometry 1 5-0-5

(Prerequisite: successful completion of both Math. 116 and Math. 117 ["C" or better grade] or satisfactory score on the mathematics placement exam.) studies definitions, theorems, proofs,

and applications of lines, slope, functions, limits, derivatives, antiderivatives, and applications of derivatives and integrals. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S, A.L.S., A.A., A.S
- Group Requirement - Mathematics
- Area of Concentration - Mathematics

Math. 122 - Calculus and Analytic Geometry 2 4-0-4

(Prerequisite: Math. 121 or equivalent competencies.) provides continued development of integration, logarithmic, trigonometric, exponential, and hyperbolic functions, inverse functions, conic sections, polar coordinates, and series and sequences. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Mathematics
- Area of Concentration - Mathematics

Math. 125 - Pascal Programming 3-2-4

(Prerequisite: Math. 116 and Math. 117.) teaches the student reading and writing proficiency in Pascal on microcomputers. Top down programming, documentation, Abstract Data Types, subroutines, and functions are the tools used to teach the usual three structures of good programming. In addition to real, integer, and the typical data types, the student will learn to use the user-defined data types, sets, Booleans, records, and (time permitting) dynamic data types such as linked lists and queues. The use of recursion may be included. The above data types will be used for both sequential and random access data files. (The student must allow some time to be spent doing some laboratory work on the computer outside the scheduled class time.) Credit cannot be received in both C.I.S. 225 & Math. 125. Offered in Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Mathematics
- Area of Concentration - Mathematics

Math. 131 - Introduction to Computer Programming - BASIC 2-2-3

(Prerequisite: Math. 116.) includes input, output, branching, and looping. The student writes programs and runs them using a microcomputer network. The student can choose problems from areas such as business, mathematics, physics, or social science. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Mathematics
- Area of Concentration - Mathematics

Math. 132 - Computer Programming in FORTRAN 0-2-1

(Prerequisite: Math. 131.) provides students the opportunity to learn FORTRAN, provided they know BASIC or another computer language. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Mathematics
- Area of Concentration - Mathematics

Math. 141 - FORTRAN for Science and Engineering 2-2-3

(Prerequisite: Math. 121 and Math. 125.) teaches the student reading and writing proficiency in FORTRAN on microcomputers. Presently FORTRAN 77 is being used. Top down programming, documentation, subroutines and functions are the tools used to teach the usual three structures of good programming. The data types, integer, real, double precision, complex, character, arrays, and logical, will be taught in conjunction with the data, parameter, if-then-else, do-while, do-until, and do- (counter) statements. Scientific problem solving will be emphasized leading to numerical methods including data analysis, curve fitting, root solving, systems of linear equations, and numerical differentiation and integration. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Mathematics
- Area of Concentration - Mathematics

Math. 142 - Computer Programming in BASIC 0-2-1

(Prerequisite: Math. 141.) includes input, output, branching, and looping. The student writes programs and runs them using time sharing. The student can choose problems from areas such as business, mathematics, physics, or social science. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Mathematics
- Area of Concentration - Mathematics

Math. 160 - Finite Mathematics 4-0-4

(Prerequisite: Math. 116 or equivalent competencies.) is an introductory level course covering mathematical ideas needed by students of business management, social science, or biology. The topics include sets and counting, functions, introduction to probability and statistics, interest and annuities, matrix theory, linear systems, and linear programming Offered in Fall and Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Mathematics
- Area of Concentration - Not Applicable

Math. 170 - Introduction to Statistics 4-0-4

(Prerequisite: Math. 160.) is a beginning level course for students in the business, social, or behavioral sciences or for anyone who can use a working knowledge of statistics. The course includes descriptive and inferential statistics together with applications. Offered in Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Mathematics
- Area of Concentration - Not Applicable

Math. 171 - Concepts of Statistics 4-0-4

(Prerequisite: Math. 116.) presents the basics of descriptive statistics, probability, inferential statistics, and regression analysis. Students from various areas - business, education, engineering, and social sciences - can effectively benefit from this course. Offered in Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Mathematics
- Area of Concentration - Not Applicable

Math. 190 - Polynomial Calculus 4-0-4

(Prerequisite: successful completion of Math. 116 ["C" or better grade] or satisfactory score on the mathematics placement exam.) is an introductory calculus course for the non-mathematics major. The course includes sequences, limits, differentiation and integration of polynomials, and exponential and logarithmic functions with applications to business and social science. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Mathematics
- Area of Concentration - Not Applicable

Math. 221 - Calculus and Analytic Geometry 3 4-0-4

(Prerequisite: Math. 122 or equivalent competencies.) studies further development of limits, vectors, solid analytic geometry, partial derivatives, and multiple integrals. Offered in Fall

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Mathematics
- Area of Concentration - Mathematics

Math. 230 - Differential Equations 4-0-4

(Prerequisite: Math. 122 or equivalent competencies.) studies linear differential equations, separation of variables, exact differential equations, linear independence, and systems of linear differential equations with applications. Offered in Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Mathematics
Area of Concentration - Mathematics

Math. 231 - Advanced Programming in BASIC 2-2-3

(Prerequisite: Math. 131.) is an advanced course in BASIC. Topics taught include file organization and file access techniques for business and other applications. Programs will be run on mainframe and microcomputers. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
Group Requirement - Mathematics
Area of Concentration - Mathematics

MECHANICAL SYSTEMS

Mec. S. 101 - Mechanical Power Transmission 1 3-2-4

(Prerequisite: Phys. 110.) provides experiences dealing with fundamentals of mechanical power transmission systems and related machine components used in processing and manufacturing industries. Topics covered include power belting, pulleys and drive arrangements, chain drives, shafting, dynamic shaft seals, and disc and shoe brakes. The student works with handbooks, manufacturers' catalogs, and trade literature in solving power transmission problems. Offered as needed

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Not Applicable
- Area of Concentration - Industrial Maintenance

Mec. S. 102 - Mechanical Power Transmission 2 3-0-3

(Prerequisite: Mec. S. 101.) provides additional experiences dealing with mechanical power transmission systems. Topics covered include selection of bearing types including sliding bearings, ball and roller bearings, lubricants, couplings, clutches, gear drives, speed reducers, and conveyor drive systems. The student works with handbooks, manufacturers' catalogs, and trade literature in solving power transmission problems. Offered as needed

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Not Applicable
- Area of Concentration - Industrial Maintenance

Mec. S. 110 - Fundamentals of Hydraulics 2-2-3

(Prerequisite: Phys. 115.) provides experiences dealing with fundamentals of hydraulics. Topics covered include principles of work, force, and energy as applied to fluid power systems. Also included are schematics, symbols, fluids, filters, strainers, reservoirs, accumulators, pumps, piping, tubing, hose, valves, activating devices, cylinders, and hydraulic motors. Planned maintenance and troubleshooting of fluid power systems are covered through the use of lecture-demonstrations and field trips to a variety of industrial settings that utilize fluid power systems. The student works with handbooks, manufacturers' catalogs, and trade literature in solving fluid power problems. Offered as needed

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Not Applicable
- Area of Concentration - Industrial Maintenance

Mec. S. 111 - Fundamentals of Pneumatics 2-2-3

provides experiences dealing with fundamentals of pneumatics. Topics covered include principles of work, force, and energy as applied to fluid power systems. Also included are schematics, symbols, filters, strainers, air line oilers, pumps, piping, tubing, hose, valves, activating devices, cylinders, air motors, air compressors, and air treatment. Planned maintenance and troubleshooting of fluid power systems are covered through the use of lecture-demonstration and field trips to a variety of industrial settings that utilize pneumatics systems. The student works with handbooks, manufacturers' catalogs, and trade literature in solving pneumatics power problems by using pneumatic trainers. Offered as needed

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Not Applicable
- Area of Concentration - Industrial Maintenance

Mec. S. 112 - Pneumatics and Hydraulics 2-2-3

(Prerequisite: eligibility for Math. 104.) is a hands-on course in the fundamentals of pneumatic and hydraulic systems. Topics covered include the principles of work, force, energy and flow, and their relationships in linear displacement systems. The student also learns schematics, symbols, and notation used in pneumatic and hydraulic systems. Cylinders and accumulators and various common fluid power components are used in laboratory experiments. Planned maintenance and troubleshooting are discovered through the experiments. Offered in Fall

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable
Area of Concentration - Computer Integrated Manufacturing

MUSIC

Music 100 - Music Appreciation 3-0-3

includes the various periods and styles of music with minimum attention to theory and harmony. The course requires listening to live and recorded performances. It is designed for students who do not intend to major in music. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Humanities

Area of Concentration - Music

Music 101 - Class Piano 1 2-0-2

provides group instruction for those who have little or no previous experience playing the piano, including non-keyboard music majors and elementary education majors as well as others. Materials are used that correlate basic keyboard skills to musicianship. Activities include reading popular, folk, and serious music, transposing, harmonizing, improvising, writing, and playing by ear. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Not Applicable

Area of Concentration - Music

Music 102 - Class Piano 2 2-0-2

(Prerequisite: Music 101 or consent of the instructor.) is a continuation of Class Piano 1. Topics include chord inversions, seventh chords, pedaling, and various scales. Activities include reading popular, folk, and serious music, transposing, harmonizing, improvising, writing, and playing by ear. Materials correlate skills to musicianship. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Not Applicable

Area of Concentration - Music

Music 103 - Theory and Ear Training 1 3-2-4

along with Music 104 provides instruction in the rudiments of music: scales, intervals, triads; rhythm and melody in singing, writing, playing, and dictation; diatonic harmony including analysis and partwriting; and sight singing and ear training correlated with the rhythmic, melodic, and harmonic activity. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Humanities

Area of Concentration - Music

Music 104 - Theory and Ear Training 2 3-2-4

(Prerequisite: Music 103.) is a continuation of Music 103. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Humanities

Area of Concentration - Music

Music 110 - Orchestra 0-5-1

is designed for students who have the proficiency and wish to participate in orchestra. It is open to all students with registration subject to an audition. Members must attend all rehearsals and concerts. The course may be repeated for credit a maximum of four times. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Not Applicable

Area of Concentration - Music

Music 120 - Band 0-6-1

is open to all students with registration subject to an audition. Marching is stressed during the football season. Members must attend all rehearsals and concerts. This course may be repeated for credit a maximum of four times. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Not Applicable

Area of Concentration - Music

Music 130 - Chorus 0-2-1

provides an opportunity to perform major choral works and public concerts. The course is open to all students with registration subject to an audition. Members must attend all rehearsals and concerts. The course may be repeated for credit a maximum of four times. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Not Applicable

Area of Concentration - Music

Music 140 - Small Ensemble 0-2-1

provides an opportunity for study and performance of musical works written for smaller instrumental and vocal ensembles. Students must be nominated by their band or orchestra instructor. Students enrolled in this course are required to present at least one public performance during the term. The course may be repeated for credit a maximum of four times. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Not Applicable

Area of Concentration - Music

Music 190 - Introduction to American Music 3-0-3

studies the origins, growth, and significance of the music of the United States as a distinctive art form derived from the nation's pluralistic culture. The course includes some listening to recorded performances and involves such types of music as classical, religious, folk, jazz, and pop. It is designed for students who do not plan to major in music. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Humanities

Area of Concentration - Music

Music 201 - Class Piano 3 2-0-2

(Prerequisite: Music 102 or consent of the instructor.) is a continuation of Class Piano 2. Topics include various scales, harmonizing using primary chords in minor keys, teaching technical exercises and studies, and solo repertoire. Activities include reading popular, folk, and serious music, transposing, harmonizing, improvising, writing, and playing by ear. Materials correlate keyboard skills to musicianship. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Not Applicable

Area of Concentration - Music

Music 202 - Class Piano 4 2-0-2

(Prerequisite: Music 201 or consent of the instructor) is a continuation of Class Piano 3. Topics include various scales and modes, harmonizing using substitute chords and secondary dominants, seventh chords qualities, technical exercises and studies, and solo repertoire. Activities include reading popular, folk, and serious music, transposing, harmonizing, improvising, writing, and playing by ear. Materials correlate keyboard skills to musicianship. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Not Applicable

Area of Concentration - Music

NURSING

Nurs. 101 - Concepts Basic to Nursing Practice 2-0-2

(Prerequisite: Admission to Associate Degree Nursing Program, concurrent enrollment in Nurs. 102, completion of or concurrent enrollment in Biol. 201 or approval of Associate Dean of Allied Health and Nursing Division.) describes the roles of the Associate Degree Nursing graduates as providers of care, managers of care, and members of the profession. It introduces the program's philosophy and the following concepts that are important to the program's conceptual framework for nursing practice: system theory, stress, adaptation, responses to illness, human needs, growth and development, nursing, nursing process, communication, legal/ethical, critical thinking, caring, teaching, and learning. It outlines the role of the nurse in promoting, maintaining, and restoring health and in assisting clients and families with adaptation to health problems. Issues related to the inherent worth, dignity, and choice of each individual regardless of race, age, ethnic group, or gender will also be identified. Offered in Fall

Applicable toward graduation where program structure permits:

- Certificate or Degree - A.A.S
- Group Requirement -Not Applicable
- Area of Concentration - Nursing

Nurs. 102 - Fundamentals of Nursing 3-9-6

(Prerequisite: Concurrent enrollment in Nurs. 101, completion of or concurrent enrollment in Biol. 201, or approval of Associate Dean of Allied Health and Nursing Division.) utilizes the nursing process and human needs as the framework for introducing basic nursing skills. Nursing skills are presented as the primary focus for meeting needs related to safety, hygiene, comfort, mobility, ambulation, nutrition, elimination, medication administration, asepsis, and infection control. Sixteen hours of this course will be devoted to physical assessment as a means of data gathering. The adult client as a consumer of health care and the hospital as one of several health care delivery systems will be topics for discussion and observation. Clinical experiences allow students to provide direct care for adult clients in a hospital setting, using the nursing process. Offered in Fall

Applicable toward graduation where program structure permits:

- Certificate or Degree - A.A.S
- Group Requirement - Not Applicable
- Area of Concentration - Nursing

Nurs. 151 - Medical Surgical 1 2-6-4

(Prerequisite: Nurs. 101 and 102, H. Ec. 200 [Nutrition], concurrent enrollment in Nurs. 152 and 154, completion of or concurrent enrollment in Math. 106 and Biol. 202, or approval of Associate Dean of Allied Health and Nursing Division.) applies the nursing process and critical thinking to the management of (a) clients with alterations in the integumentary, renal, and gastrointestinal systems; (b) clients experiencing surgery; and (c) clients with cell injury, inflammation, fluids and electrolytes disturbances. Clinical experiences will provide opportunities to use the nursing process, communication, critical thinking, and decision making in caring for adults in hospitals and other health care agencies. Offered in Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - A.A.S
- Group Requirement - Not Applicable
- Area of Concentration - Nursing

Nurs. 152 - Psychiatric Mental Health Nursing 2-6-4

(Prerequisite: Psych. 110, Nurs. 101 and 102 or approval of Associate Dean of Allied Health and Nursing Division.) applies the nursing process and critical thinking to the management of psychiatric and mental health problems in clients and families. Emphasis is placed on the interactive nature of clients with their environment and the use of various treatment modalities, communication, and relationship skills to manage clients with alterations in mental health. Clinical experiences will provide opportunities to plan and administer care to individuals and to small groups. Offered in Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - A.A.S
- Group Requirement - Not Applicable
- Area of Concentration - Nursing

Nurs. 154 - Pharmacological Principles for Nursing Practice 2-0-2

(Prerequisite: Nurs. 101 and 102, completion or concurrent enrollment in Biol. 202, or approval of Associate Dean of Allied Health and Nursing Division.) presents an overview of the basic knowledge nurses need for safe, effective drug administration. The actions, characteristics, and adverse effects of drugs classified by body systems are studied. The nursing process is applied to drug therapy. Offered in Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - A.A.S
- Group Requirement - Not Applicable
- Area of Concentration - Nursing

Nurs. 201 - Medical-Surgical Nursing II 3-6-5

(Prerequisite: Nurs. 151, 152, 154, completion of or concurrent enrollment in Biol. 220, or approval of Associate Dean of Allied Health and Nursing Division.) applies the nursing process and critical thinking to the care of adult and geriatric clients with alterations in immune, respiratory, cardiovascular, endocrine, and hematologic systems. Assessment and nursing skills are emphasized. Situations are provided to challenge decision making and exercising sound judgments. Clinical experiences will occur in a variety of health care settings. Offered in Fall

Applicable toward graduation where program structure permits:

- Certificate or Degree - A.A.S
- Group Requirement - Not Applicable
- Area of Concentration - Nursing

Nurs. 202 - Family Health Nursing 3-6-5

(Prerequisite: Nurs. 151, 152, and 154, Psych. 145, concurrent enrollment in Nurs. 201, completion of or concurrent enrollment in Biol. 220, or approval of Associate Dean of Allied Health and Nursing Division.) examines issues relevant to the promotion of sexual and reproductive health throughout the life span and the management of developmental needs and health problems that may occur from infancy through adolescence. The nursing process and critical thinking are applied to the management of clients and families from preconception through adolescence and to clients with diseases of breasts and the reproductive system. Individual and group teaching, assessment, and nursing skills are emphasized. Clinical experiences in clinics, hospitals, and selected community agencies will be provided. Offered in Fall

Applicable toward graduation where program structure permits:

- Certificate or Degree - A.A.S
- Group Requirement - Not Applicable
- Area of Concentration - Nursing

Nurs. 251 - Long-term Care/Acute Care 2-6-4

(Prerequisite: Nurs. 201 and 202 or approval of Associate Dean of Allied Health and Nursing Division.) focuses on the use of the nursing process and critical thinking to manage adult and geriatric clients with alterations in neurological and musculoskeletal functioning in both acute and long-term health care delivery systems. Students will gain clinical experience in oncology care, acute care, and geriatric care. Students will develop insight about the effects of an aging population as it relates to health care delivery systems. Home health settings will be included as a particularly observational experience. This is an eight week course. Offered in Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - A.A.S
- Group Requirement - Not Applicable
- Area of Concentration - Nursing

Nurs. 254 - Transition From Education To Practice 2-9-5

(Prerequisite: Nurs. 201, 202, or approval of Associate Dean of Allied Health and Nursing Division.) introduces nursing students to the work setting by involving them in as many situations common to everyday clinical practice as possible while providing support and guidance from a nurse preceptor and instructor. Students will work two eight-hour day and/or evening shifts per week provide direct care to a group of clients and manage care given by other health care workers. The course presents concepts and issues pertinent to the effective entry into nursing practice. Students are prepared to perform in their expected role, in regard to leadership, time management, patient care management approaches and principles, conflict management, accountability, quality assurance, employment, the health care delivery system, diagnosis-related groups, and

legal/ethical issues. Opportunities and challenges related to lifelong learning and professional responsibilities are identified. This is an eight-week course. Offered in Fall

Applicable toward graduation where program structure permits:

- Certificate or Degree - A.A.S
- Group Requirement - Not applicable
- Area of Concentration - Nursing

OFFICE TECHNOLOGY**O.T. 100 - Introduction to Keyboarding 1-1-1.5**

(Recommended course for Business, Computer information Systems, O.T. students and students needing keyboarding skills.) is designed to teach the touch system of keyboarding on microcomputers. Speed and accuracy are developed. Previous typing is not a requirement. Offered in Fall and Spring. *(Students may not receive credit for both Bus. 140 and O.T. 100.)*

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.L.S
- Group Requirements - Business (A.A.S. only)
- Area of Concentration - Teacher Education

O.T. 106 - Beginning Speed & Accuracy Development 0-3-1.5

(Prerequisite: touch-typing skill at 20 NWAM.) is designed to develop speed and accuracy on five-minute timed writings using the touch-keying technique. The skill level range for this course upon completion is 25-40 NWAM. There will be no keyboard presentation in this course. This course is suggested to be taken prior to or in conjunction with O.T. 111. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - Certificate or A.A.S. (Law Enforcement)
- Group Requirement - Law Enforcement
- Area of Concentration - Not Applicable

O.T. 107 - Intermediate Speed & Accuracy Development 0-3-1.5

(Prerequisite: touch-typing skill of 30 NWAM.) is designed to develop speed and accuracy on five-minute timed writings using the touch-keying technique. The skill level range for this course upon completion is 35-50 NWAM. There will be no keyboard presentation in this course. This course is suggested to be taken in conjunction with O.T. 111 or O.T. 112. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - Certificate or A.A.S. (Law Enforcement)
- Group Requirement - Law Enforcement
- Area of Concentration - Not Applicable

O.T. 108 - Advanced Speed & Accuracy Development 0-3-1.5

(Prerequisite: touch-typing skill of 40 NWAM.) is designed to develop speed and accuracy on five-minute timed writings using the touch-keying technique. The skill level range for this course upon completion is 45-60 NWAM. There will be no keyboard presentation in this course. This course is suggested to be taken in conjunction with O.T. 211 or O.T. 212. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Business (A.A.S. only)
- Area of Concentration - Not Applicable

O.T. 111 - Document Formatting 2-2-3

(Prerequisite: O.T. 100 or Bus. 140 or touch-key minimum skills of 25 NWAM for three minutes or 1 year high school typing with "B" grade or better.) designed for development of efficient skills in producing business and personal documents, centering, various styles of multi-page letters with special features, memoranda, tables, and multi-page manuscripts. Basic typing theory is reviewed. No keyboard presentation is included. Development of speed and accuracy skill is continued. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Business (A.A.S. only)
- Area of Concentration - Teacher Education

O.T. 112 - Basic Word Processing 2-2-3

(Prerequisite: O.T. 111 or equivalent competencies and concurrent enrollment in or completion of Bus. 119, or equivalent competencies.) introduces the student to such fundamentals of word processing as inserting, deleting, copying, moving, formatting, and tabulations using computer hardware and software to produce business documents. Speed and accuracy are measured. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Business (A.A.S. only)
Area of Concentration - Business Teacher Education

O.T. 121 - Gregg Shorthand I 4-0-4

(Prerequisite: Bus 119 or eligibility for Engl. 101 or concurrent enrollment in Bus. 119.) teaches and develops skill in the use of theory, phrasing, vocabulary, and brief forms in Gregg Shorthand, Centennial edition. Upon completion of this course, student will take dictation from 50 to 70 wpm with 95 percent accuracy. Although this course is very demanding in terms of time and effort, students are advised that skill in Shorthand is much in demand in the business community. Offered in Fall

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S
Group Requirement - Not Applicable
Area of Concentration - Not Applicable

O.T. 131 - Speedwriting 4-0-4

(Prerequisite: Bus. 119 or eligibility for Engl. 101 or concurrent enrollment in Bus. 119.) teaches and develops skill in the use of theory, phrasing, vocabulary, and brief forms in Speedwriting. On completing this course a student will be able to take dictation from 50 to 70 w.p.m. with 95 percent accuracy. Offered in Fall

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S
Group Requirement - Not Applicable
Area of Concentration - Not Applicable

O.T. 132 - Shorthand/Speedwriting Transcription 2-2-3

(Prerequisite: O.T. 121 or O.T. 131.) concentrates on increasing speed and accuracy in taking dictation from 70 to 90 wpm and transcribing at 95 percent accuracy, and developing transcription skills and techniques. Offered in Spring

Applicable toward graduation where program structure permits:

Certificates or Degree - All Certificates, A.A.S., A.L.S
Group Requirement - Not Applicable
Area of Concentration - Teacher Education

O.T. 141 - Medical Terminology 3-0-3

is a course designed to provide the student with a knowledge of the meaning of word parts, pronunciation, and correct spelling of medical terms. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S
Group Requirement - Not Applicable
Area of Concentration - Not Applicable

O.T. 150 - Records Management 3-0-3

(Prerequisite: Successful completion of Bus. 140, O.T. 100, or equivalent touch-typing competencies.) provides instruction and practice in basic storage, retrieval, and retention methods including alphabetic, subject, numeric, and geographic. Organization and operation of records management programs are also included. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S
Group Requirement - Not Applicable
Area of Concentration - Business Teacher Education

O.T. 160 - Office Accounting 3-0-3

emphasizes the use of accounting in keeping financial records with special emphasis on the income statement, balance sheet, and statement of owner's equity. The course allows students to become familiar with accounting rules and financial statements. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S
Group Requirement - Business (A.A.S. only)
Area of Concentration - Not Applicable

O.T. 200 - Office Software Applications & Production 2-2-3

(Prerequisite: O.T. 112 or concurrent enrollment in O.T. 112.) introduces the student to operating system software and to the integration of databases, spreadsheets, and graphics into word processing files on IBM or compatible microcomputers to increase office productivity. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Business (A.A.S. only)
- Area of Concentration - Business Teacher Education

O.T. 210 - Statistical Keyboard Entry 1-2-2

(Prerequisite: minimum touch-typing speed of 35 NWAM.) provides students with a functional knowledge of electronic calculator and entry-level skills in data entry on the microcomputer. It also emphasizes speed development and accuracy in entering data with realistic production jobs and keyboarding exercises. Major emphasis is on numeric entry. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Business (A.A.S. only)
- Area of Concentration - Not Applicable

O.T. 211 - Advanced Word Processing 2-2-3

(Prerequisite: O.T. 112.) designed to present advanced word processing applications on microcomputers. Some of these processes include mail merge, macros, outlining, column layout, and footnotes. Speed and accuracy will be measured. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Business (A.A.S. only)
- Area of Concentration - Business Teacher Education

O.T. 212 - Word Processing Desktop Publishing Applications 2-2-3

(Prerequisite: O.T. 211 or equivalent competencies.) is a continued development of word processing applications on microcomputers using WordPerfect. Some of these processes include basic typography, desktop publishing, graphics, and creating forms. Speed and accuracy are measured. Offered in Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Business (A.A.S. only)
- Area of Concentration - Business Teacher Education

O.T. 221 - Dictation Transcription Review 2-2-3

(Prerequisite: two years of high school Shorthand/Speedwriting or O.T. 132 or equivalent net speed.) reviews dictation and transcription rules, brief forms and phrases in both Gregg Shorthand and Speedwriting. Students concentrate on increasing speed and accuracy in taking dictation and transcribing mailable copy. In this course, the student will have the opportunity to develop dictation skills at a range of 90 to 120 wpm and to transcribe at 95 percent accuracy. Offered as needed

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Not Applicable
- Area of Concentration - Teacher Education

O.T. 230 - Legal Terminology and Documents 1-3-3

(Prerequisite: O.T. 112 and Bus. 119 or eligibility for Engl. 101.) is a specialized course designed to acquaint the student with legal vocabulary, definitions, and formatting of legal documents.

Offered in Fall and Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All certificates, A.A.S., A.L.S
- Group Requirement - Not Applicable
- Area of Concentration - Not Applicable

O.T. 242 - Basic Medical Machine Transcription 1-3-3

(Prerequisite: O.T. 112) provides experience in transcribing a variety of medical reports from machine dictation. Speed and accuracy are emphasized. A review of terminology is provided. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Not Applicable

O.T. 243 - Advanced Medical Machine Transcription 1-3-3

(Prerequisite: O.T. 242.) emphasizes the development of speed and accuracy of machine transcription. The course involves transcription of reports given by physicians in general offices, clinics, and hospitals. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirements - Not Applicable

Area of Concentration - Not Applicable

O.T. 245 - Medical Insurance Reports and Codes 2-2-3

is designed to provide the student with a knowledge of preparing and encoding medical information about a patient and to provide such information on the appropriate reporting documents. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirements - Not Applicable

Area of Concentration - Not Applicable

O.T. 250 - Professional Office Development 3-0-3

(Prerequisite: O.T. 112 or equivalent competency.) emphasizes skills, techniques, and attitudes businesses desire of office personnel. The course provides experience in applying skills and knowledge gained in previous technical courses and identifies professional standards of conduct and appearance necessary to work successfully in the business environment. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Teacher Education: Business

PERSONAL DEVELOPMENT**P. Dev. 100 - Human Potential Seminar 0-2-1**

(Prerequisite: eligibility for Engl. 101.) is a structured, positive group process. Its goals are increasing awareness of the student's present value system, personal achievements, and strengths and relating this awareness to plans for the future. Activities are aimed toward enhancing regard for oneself and others. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Not Applicable

Area of Concentration - Not Applicable

P. Dev. 101 - Orientation 1-0-1

(Note: Students with more than twenty college credits cannot register for this class.) provides motivation, access to inner resources as well as college and community resources, and specific, practical study skills and coping strategies to help each student take control of his or her lifelong self-education and personal development which can lead to personal and academic success.

Offered in Fall and Spring

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Not Applicable

Area of Concentration - Not Applicable

P. Dev. 109 - How to Market Yourself 1-0-1

is a self-esteem and introspective course that will help students to understand their own personal strengths and skills capabilities so they can better present themselves to prospective employers.

Offered Fall and Spring

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Not Applicable

P. Dev. 110 - Career Exploration 0-2-5

provides the individual with an opportunity to explore his interests, values, abilities, and other significant factors as they relate to vocational choice and the world of work. Various tests, career materials, guest speakers, and group discussion sessions will be used to assist the individual in making educational and career plans. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Not Applicable

Area of Concentration - Not Applicable

P. Dev. 111 - Job Preparation 1-0-1

designed to teach effective job search techniques to students. Students will prepare a resumé and cover letter, prepare for an interview, practice interviewing skill, and organize a job search. The course includes a review of current job search literature. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Not Applicable

Area of Concentration - Not Applicable

PERSONNEL RELATIONS**P. Rel. 100 - Human Relations 3-0-3**

(Prerequisite: successful completion of Bus. 119 and/or Bus. 120 or eligibility for Engl. 101.)

explores the fundamentals of human relations in all fields of everyday life. Study includes interpersonal relationships in both the work and home environment. The course is designed to improve the student's understanding of individual behavior and group dynamics. Topics covered include communication skills, assertiveness, setting goals, interviewing, cooperation, and handling conflict. Class activities are used to illustrate various human relations skills. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Social Science (A.A.S. only)

Area of Concentration - Not Applicable

P. Rel. 110 - Supervisory Techniques and Personnel Development 3-0-3

is designed for practicing or potential first-line supervisors and/or managers who hold or expect to hold up to middle-level management positions. The course consists of a survey of basic management concepts in proper combination to assist the individual to diagnose situations encountered by supervisors in their day-to-day activities, to analyze problems, and to work toward solutions. The course emphasizes human relations, motivation, conference leading, leadership training, and the basic managerial functions. Offered in Spring

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Social Science (A.A.S. only)

Area of Concentration - Not Applicable

P. Rel. 120 - Labor Management Relations 3-0-3

is designed to aid union members and persons currently employed or who desire employment in management positions to obtain a deeper understanding of union-management relations. It includes the history and development of the labor movement, labor laws, union structure, collective bargaining, arbitration, and administration of the collective bargaining agreement. Offered in Spring

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Social Science (A.A.S. only)

Area of Concentration - Not Applicable

P. Rel. 200 - Personnel Administration 3-0-3

studies the blending of the needs of the individual with the needs of the organization. Study will be made of personnel decisions, the impact of training on future performance, performance evaluation and human resource accounting, and motivating performance in an organizational setting. Current issues in personnel, such as women, minorities, and the disadvantaged, are also investigated.

Offered in Fall

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Social Science (A.A.S. only)

Area of Concentration - Not Applicable

PHILOSOPHY

Phil. 100 - Critical Thinking 3-0-3

(Prerequisite: eligibility for Engl. 101.) develops the student's ability to identify and correct faulty reasoning, to distinguish between scientific and pseudoscientific reasoning, and to reason according to elementary valid argument patterns. Throughout the course, students examine and evaluate examples of good and bad reasoning and construct several extended arguments of their own on a variety of topics. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Humanities

Area of Concentration - Philosophy

Phil. 110 - Introduction to Philosophy 3-0-3

(Prerequisite: eligibility for Engl. 101.) surveys the major methods and systems of philosophy through discussion of questions such as what is really real, what is truth, does God exist, why is there evil in the world, and how should moral issues be resolved. Students are encouraged to formulate their own answers to such questions through reading, discussion, and logical argument. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Humanities

Area of Concentration - Philosophy

Phil. 120 - Introduction to Ethics 3-0-3

(Prerequisite: eligibility for Engl. 101.) surveys major systems for distinguishing right and wrong conduct such as divine command theory, utilitarianism, and natural law theory. Attention is also given to issues such as the free will/determinism debate, ethical relativism, and selected contemporary moral issues such as abortion, euthanasia, and capital punishment. Students are encouraged to formulate their own responses to ethical issues through reading, discussion, and logical argument. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Humanities

Area of Concentration - Philosophy

Phil. 200 - Symbolic Logic 3-0-3

(Prerequisite: eligibility for Engl. 101.) surveys the basic elements of deductive reasoning on which the logic of fields such as data processing, electronics, algebra, and geometry are based. Topics include translation from English to symbolic notation, rules of deduction, techniques for proving validity and invalidity of arguments, and basic quantification. The course is useful as preparation for academic and technical fields using deductive logic and as a powerful tool for sound reasoning in any area. It assumes no mathematical or technical background. Offered in Spring

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Humanities

Area of Concentration - Philosophy

Phil. 210 - Introduction to World Religions 3-0-3

(Prerequisite: eligibility for Engl. 101.) surveys the major religions of the world in order to promote an understanding of the variety of religious beliefs. Major religions studied include Hinduism, Buddhism, Confucianism, Taoism, Judaism, Christianity, and Islam. The course may also include other religious traditions, if time permits. Offered in Fall

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Humanities

Area of Concentration - Philosophy

Phil. 215 - Oriental Philosophy 3-0-3

(Prerequisite: eligibility for Engl. 101.) surveys the basic philosophical aspects of Hinduism, Buddhism, Confucianism, and Taoism as a means of expanding the student's understanding of Eastern culture. Emphasis is on concepts of knowledge, reality, and ethics. Offered in Fall

Applicable toward graduation where program permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Humanities

Area of Concentration - Philosophy

Phil. 220 - Current Issues in Ethics 3-0-3

(Prerequisite: eligibility for Engl. 101.) examines selected topics from the fields of professional and business ethics, bio-medical ethics, environmental ethics, ethics of public policy, and other fields of current interest to moral philosophers. Emphasis is on providing students with experience in thinking about moral issues currently encountered in professional and private life. Offered in Spring

Applicable toward graduation where program permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Humanities

Area of Concentration - Philosophy

PHYSICAL EDUCATION

Note: Students may take any P. Ed. 110 course or group of courses up to four times for credit. After that, P. Ed. 110 courses may be taken on an audit or Richland Fitness Club basis. It is recommended that students enroll in credit courses for the maximum four repeatable credit courses available so as to obtain the highest level of benefit

P. Ed. 110 - Physical Education Activities Up to 1 Sem. Hr

emphasizes body development in such activities as physical fitness and swimming as well as the rules and techniques of such sports as judo and fencing. The schedule of classes indicates the specific activities for the various sections of this course each term. By repeating this course a student may earn additional credit. A maximum of four semester hours may be counted toward graduation requirements for an associate's degree. This course is available for credit registration only. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

Certificates or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Not Applicable

Area of Concentration - Not Applicable

P. Ed. 111 - Basketball 0-2-1

is an activity course designed to provide instruction and practice of the basic skills used in playing the game of basketball. Special emphasis is placed on rules interpretation, skill development, and strategies. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

Certificates or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Not Applicable

Area of Concentration - Physical Education

P. Ed. 112 - Volleyball 0-2-1

is an activity course designed to provide instruction and practice of the basic skills used in the game of volleyball. Instruction includes terminology, rules interpretation, and skill development of the set, serve, block, and the spike as well as the playing of the game. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Not Applicable

Area of Concentration - Physical Education

P. Ed. 114 - Golf 0-2-1

is an activity course designed to provide instruction in the basic skills used in the playing of golf. Special emphasis is placed on rules interpretation, terminology, and practice using the various clubs. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Not Applicable

Area of Concentration - Physical Education

P. Ed. 117 - Soccer 0-2-1

is an activity course designed to provide instruction and technique in the playing of soccer. Team play, rules interpretation, and game strategy are emphasized. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Not Applicable

Area of Concentration - Physical Education

P. Ed. 119 - Fitness 0-2-1

is a course designed to provide a program of physical fitness for the student. Instruction on the proper use of the equipment and individual fitness programs is emphasized. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Not Applicable

Area of Concentration - Physical Education

PHYSICAL SCIENCE**Phy. S. 105 - Physics and Astronomy 3-2-4**

(Prerequisite: eligibility for Math. 098.) is a laboratory science course that considers fundamental topics in physics and astronomy and is designed for non-science majors and elementary education majors. Experiments and exercises include motion, sound, light, zodiac constellations, stars, and galaxies. Offered in Fall

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Natural Science

Area of Concentration - Not Applicable

Phy. S. 220H - Physical Science 3-2-4

(Prerequisite: admission to Honors Opportunities Program, eligibility for Math. 121, and two years of high school science, including one year of physics or chemistry or equivalent.) is an honors seminar and laboratory providing qualified students an opportunity to examine a variety of topics normally presented in separate courses. The course emphasizes the interdisciplinary nature of science and mathematics. The unifying theme will be atomic theory, an abstract, mathematical model of the structure of matter that has profound implications for the conduct of science. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Natural Science

Area of Concentration - Not Applicable

PHYSICS**Phys. 100 - Elementary Concepts of Physics 3-0-3**

(Prerequisite: eligibility for Engl. 101 and Math. 091 ["C" or better grade].) is an elementary course which emphasizes principles and applications of mechanics, heat, sound, and electricity. The course is presented with an emphasis on observations with descriptions being used to illustrate basic problem-solving principles and laws, with students learning to solve problems applying these principles and laws. Both the subject material and the illustrations used in the course are drawn from common experiences. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Natural Science
- Area of Concentration - General Science

Phys. 101 - Introduction to Physics 1 3-2-4

(Prerequisite: successful completion of Math. 098 ["C" or better grade] or equivalent competencies and eligibility for Engl. 101.) is the first physics laboratory course introducing students to contents and methods useful for careers in engineering, bio-medicine, physics, or mathematics. Subjects include mechanics, matter, acoustics, and thermodynamics. Offered in Fall

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Natural Science
- Area of Concentration - General Science

Phys. 102 - Introduction to Physics 2 3-2-4

(Prerequisite: successful completion of Phys. 101 ["C" or better grade] or equivalent competencies and eligibility for Engl. 101.) is the second physics laboratory course introducing students to contents and methods useful for careers in engineering, bio-medicine, physics, or mathematics. Subjects include electricity, magnetism, optics, and atomic and nuclear physics. Offered in Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Natural Science
- Area of Concentration - General Science

Phys. 115 - Technical Physics 3-2-4

(Prerequisite: Math. 104 or equivalent competencies.) is a laboratory course with physics applications for technology students. Subjects include mechanics, machines, matter, sound, and heat. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Natural Science
- Area of Concentration - Industrial Maintenance, Machine Tool Processes

Phys. 120 - Basic Statics and Strength of Materials 3-0-3

(Prerequisite: Phys. 110 or equivalent competencies.) introduces the student to the study of forces on elastic members. Basic theory of the stress-strain relationship, basic flexure, shear and deflection, and column and beam loading is emphasized. Students work basic applied mechanics problems in designing basic footings, bearing walls, connections, columns, and beams. Offered as needed

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Natural Science
- Area of Concentration - Not Applicable

Phys. 210 - Mechanics, Fluid Mechanics, and Wave Motions 3-2-4

(Prerequisite: Math. 121 or equivalent, Math. 122 or equivalent or concurrent enrollment, and one year of high school physics or Phys. 101.) consists of such topics as vectors, equilibrium, friction, momentum, torque, stress and strain, simple harmonic motion, pressure in a fluid, surface tension, and viscosity. It is a laboratory course designed for students who plan to major in the field of engineering, physics, or mathematics. Offered in Spring

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
Group Requirement - Natural Science
Area of Concentration - General Science, Physics

Phys. 211 - Properties of Matter, Heat, Sound, Light, and Modern Physics 3-2-4

(Prerequisite: Phys. 210 or equivalent competencies and Math. 122 or concurrent enrollment.)

consists of such topics as temperature, heat and heat measurements, transfer of heat, thermal properties of matter, laws of thermodynamics, molecular properties of matter, traveling waves, vibrating bodies, acoustical phenomena, atoms, electrons and protons, radioactivity and nuclear physics, nature and propagation of light, reflection and refraction of light, lenses and optical instruments, interference, diffraction, and polarization. It is a laboratory course designed for students who plan to major in the fields of engineering, physics, or mathematics. Offered in Fall
Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
Group Requirement - Natural Science
Area of Concentration - General Science, Physics

Phys. 212 - Electricity and Magnetism 3-2-4

(Prerequisite: Phys. 210 or equivalent competencies and Math. 122 or concurrent enrollment.)

consists of such topics as electric charges, electric fields, electric potential, capacitance and dielectrics, current and resistance, direct current circuits, magnetic fields, magnetic forces, inductance, magnetic properties of matter, electromotive forces, alternating currents, and electromagnetic waves. It is a laboratory course designed for students majoring in the fields of engineering, physics, or mathematics. Offered in Spring

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
Group Requirement - Natural Science
Area of Concentration - General Science, Physics

PLANT/BUILDING MAINTENANCE**Pipe 101 - Basic Pipefitting - Maintenance 2-0-2**

(Prerequisite: Mfg. 100, eligibility for Math. 104 or equivalent skills.) is designed to provide instruction in procedures to lay out, fabricate, assemble, install, and/or maintain piping and piping systems, fixtures, and equipment for steam, hot water, heating, cooling, lubricating, sprinkling, and/or industrial processing systems. Offered in Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Not Applicable
- Area of Concentration - Industrial Maintenance

P. Sup. 101 - Plant/Building Maintenance Supervisor 4-0-4

develops leadership/management skills dealing with concepts, procedures, and skills necessary to keep a building functioning. Topics include safety, preventive maintenance planning, cleaning scheduling, hiring, firing, evaluating, and discipline of employees. Offered in Fall

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Not Applicable
- Area of Concentration - Industrial Maintenance

HVAC. 131 - Heating, Ventilation, and Air-Conditioning 3-0-3

(Prerequisite: Mfg. 100, eligibility for Math. 104 or equivalent skills.) is designed to introduce students to theory and fundamentals of heating and refrigeration systems. Topics include the installation, operation, and servicing of oil, electric, gas and coal heating systems; physics of refrigeration systems and components and installation, maintenance, repair, and troubleshooting techniques for commercial and domestic refrigeration and air-conditioning systems. Offered as needed

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Not Applicable
- Area of Concentration - Industrial Maintenance

POLITICAL SCIENCE

Pol. S. 100 - People and Politics 3-0-3

provides a basic introduction to what politics is all about. It looks at why we think and feel as we do about politics and politicians and better informs the student about his/her own and other governmental systems. It also introduces the student to specific political concepts such as the ideologies of democracy, socialism, and communism. Leading political personalities of our time are discussed. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Social Science

Area of Concentration - Not Applicable

Pol. S. 110 - American National Government 3-0-3

(Prerequisite: eligibility for Engl. 101.) uses a contemporary approach to American political behavior by viewing the forces that shaped our constitution, modern attitudes of liberalism and conservatism, the role played by political parties and the independent voter, Congress and the impact of special interest groups on that body, the modern presidency, and the important role the media plays in modern politics. Current topics of political interest are discussed throughout this course. This course is required for state teacher certification. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Social Science

Area of Concentration - Political Science, Social Science

Pol. S. 120 - Politics in States and Communities 3-0-3

(Prerequisite: eligibility for Engl. 101.) is a brief introduction into the history of state and local governments with emphasis on modern decision-making at the state and local level. Special consideration is given to current problems of modern urban America, including the topics of taxes, attempts to cut waste, pollution, and crime, and how government can effectively serve the needs of citizens without excessive cost. In addition, this course better acquaints the student with his/her own local political environment through guest lectures, possible field trips to local and state seats of power, and other related experiences in the field. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Social Science

Area of Concentration - Political Science, Social Science

Pol. S. 230 - Issues in International Relations 3-0-3

(Prerequisite: eligibility for Engl. 101.) is an introduction to the politics of the international arena of world power relationships. Emphasis is on current issues such as the development of nations into world powers, global economic factors, warfare and arms control as devices in international politics, and the concept of policy by crisis such as the Cuban Missile Crisis, oil crisis, and others. This course shall depend greatly on contemporary international events for case study material and class discussions. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Social Science

Area of Concentration - Political Science, Social Science

Pol. S. 280 - Individual Study in Political Science Up to 3 credit hrs

(Prerequisite: eligibility for Engl. 101 and instructor approval.) includes individual study of a particular issue or topic in political science involving advanced study, a special project, or field research closely directed by the instructor in an area of political science not available in the College's course offerings. The research project will be listed on the student's permanent academic record. This course may be repeated for up to 3 hours credit

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Social Science

Area of Concentration - Political Science, Social Science

Pol. S. 290 - Internship in Political Science/Government

Up to 3 credit hrs

(Prerequisite: eligibility for Engl. 101 and instructor approval.) involves participation in a work/learning experience in an area of political science under the joint supervision of the College and the government internship sponsor. Internship objectives will be individually identified for each student involved and a paper of substantial quality is required in which the student discusses the internship experience. For 1 hour of credit, 5 hours of internship per week are required. This course may not be repeated for credit

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Social Science

Area of Concentration - Political Science, Social Science

PRODUCTION CONTROL

Prod. C. 100 - Time and Motion Study 3-0-3

covers work simplification based upon time and motion study. The course encompasses product analysis, process analysis, flow charting, machine set-up, work motion, data recording, and rating and calculating elemental and job standard times. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Production Control

Prod. C. 110 - Production Scheduling 3-0-3

deals with the basic techniques used in controlling the rate of production in both product and process-type manufacturing. It includes sales forecasting, adjusting sales forecasts to establish production goals by product, production analysis of materials and parts, reservation of materials and parts carried in stock, operation and instruction sheets, analysis of production lot size, analysis of machine capacity, machine loading, manpower requirements, scheduling, dispatching, and expediting. Offered in Fall

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Production Control

Prod. C. 120 - Plant Layout and Materials Handling 3-0-3

introduces the principal techniques used in the layout of the production process. Students are required to determine how a specific product can best be manufactured and assembled. They will then lay out the process, set up production centers, estimate service storage and aisle space required, and lay out floor areas using templates. Offered in Spring

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Production Control

Prod. C. 130 - Inspection and Quality Control 3-0-3

deals with precision measurement and statistical quality control. Precision measurement is based on the knowledge of how measuring instruments can and should be used, including their advantages and limitations. Students are introduced to a variety of modern measuring tools. A portion of the course is devoted to the basics of statistical methods used in quality control. Applications and exercises are presented in the use of control charts; selection, use, and protection of sampling plans; and the types of information revealed by an analysis of data. Included in the course are field trips to local plants with up-to-date precision measuring laboratories. Offered in Spring

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Production Control

Prod. C. 140 - Methods and Operations Analysis 3-0-3

covers techniques used in determining the best way of doing a specific piece of work. The course presents the study of methods, materials, tools, and equipment for the purpose of finding the most economical way of doing work. Standardizing work methods and procedures and determining the time required on the average to perform tasks are presented. Student activities include the analysis of fundamental physical motions, construction of related charts, the practice of dividing operations into elements, and time-study observations. Experience is gained in select time determination, performance rating, handling of allowances, and calculated standard time. Computation of the number of cycles necessary to meet minimums in industry is utilized. Offered in Fall

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Industrial Production Technology, Production Control

PSYCHOLOGY

Psych. 100 - Practical Psychology 3-0-3

has as its primary purpose providing an opportunity for students to develop a basic understanding of the human person as well as the behavioral and environmental factors that influence the development of individuality and uniqueness of the person. In addition, the course can serve as a foundation for students who wish to familiarize themselves with fundamental concepts of human behavior prior to beginning a formal study of psychology. This course needs to be followed by Psych. 110 for students desiring to pursue a study of psychology through courses numbered above 110. Students who have earned credit for Psych. 110 may not register for this course. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Social Science
- Area of Concentration - Not Applicable

Psych. 110 - Introduction to Psychology 3-0-3

(Prerequisite: eligibility for Engl. 101.) examines major psychological approaches to the study of human and animal behavior. It includes topics on the biological bases of behavior, learning, motivation, and personality. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Social Science
- Area of Concentration - Psychology, Social Science

Psych. 130 - Psychology of Women 3-0-3

(Prerequisite: Psych. 100 or 110 or equivalent introductory Psychology course.) is a psychological approach to the study of the American female with emphasis on psychobiology, male/female differences, sex roles, conflicts, stresses, interaction with men, and contemporary source problems affecting the female. Offered as needed

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Social Science
- Area of Concentration - Psychology, Social Science

Psych. 145 - Human Growth and Development 3-0-3

(Prerequisite: Psych. 110) covers the interaction and development of human physical, intellectual, and psychosocial behavior from conception through old age. Similarities and differences in physical, social, emotional, and cognitive development at various stages of the life cycle are studied. Offered in Spring and Fall

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Social Science
- Area of Concentration - Psychology, Social Science

Psych. 150 - Developmental Psychology 3-0-3

(Prerequisite: Psych. 110.) examines the behavioral development of the individual from conception through adolescence. Consideration is given to the effects of psychological, social, and biological factors on that development. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Social Science
- Area of Concentration - Psychology, Social Science, Teacher Education - Elementary/Secondary

Psych. 200 - Educational Psychology 3-0-3

(Prerequisite: Psych. 110.) examines the growth and development of the individual through adolescence, with emphasis placed on the facilitation of learning both within and outside the classroom. (A student may not receive credit for both Ed. 200 and Psych. 200.) Offered in Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Social Science

Area of Concentration - Psychology, Social Science, Teacher Education -
Elementary/Secondary

Psych. 210 - Social Psychology 3-0-3

(Prerequisite: Psych. 110.) studies the ways in which individuals are influenced by others. Topics include research methods, attitude development, person perception, interpersonal attraction, aggression, and group behavior. Offered as needed

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Social Science
- Area of Concentration - Psychology, Social Science

Psych. 220 - Psychology of Death and Dying 3-0-3

(Prerequisite: Psych. 100 or Psych. 110.) examines the psychological aspects of death and the dying process by focusing on the existential problem of dying and on the interaction between the dying person and the significant figures during the last phase of one's own death and the deaths of others, including an evaluation of some of the methods of dealing with the dying patient. It investigates the psychological dynamics involved in those who are left behind (the bereaved) by the dying person. Offered as needed

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Social Science
- Area of Concentration - Psychology, Social Science

Psych. 230 - Psychology of Aging 3-0-3

(Prerequisite: Psych. 100 or 110.) is a study of the psychological aspects of aging. This course offers theoretical framework relating to the aging process, as well as scientific information regarding the patterns of behavior and attitude formation relating to the aging process. It examines the psychological needs and sociological adjustment mechanisms of the aged. Included in the course is a review of psychological disorders of adults and the aged. Offered as needed

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Social Science
- Area of Concentration - Psychology, Social Science

Psych. 240 - Psychology of Business and Industry 3-0-3

(Prerequisite: Psych. 110 or Psych. 110 eligibility and approval of instructor.) is a study of the application of psychology, its methods, and the principles that apply in business and industry with emphasis on employment selection and placement, interviewing, testing, training, motivation, supervision fatigue, accidents, and absenteeism. Offered as needed

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Social Science
- Area of Concentration - Psychology, Social Science

Psych. 250 - Human Sexuality 3-0-3

(Prerequisite: Psych. 110.) examines the physiological, psychological, and social dimensions of human sexuality. Topics to be covered include genetic and environmental influences on sexual development, effects of motivation and emotion on sexual behavior, sex-role identification, variations of sexual behavior, sexual abuse, and AIDS and other sexually transmitted diseases. Offered in Fall

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Social Science
- Area of Concentration - Psychology, Social Science

Psych. 280 - Abnormal Psychology 3-0-3

(Prerequisite: Psych. 110.) provides a description of abnormal behavior and an introduction to a variety of therapeutic approaches. Selected topics include personality disorders, psychotherapy, neuroses, case history, psychoses, medications, and crisis interventions. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
Group Requirement - Social Science
Area of Concentration - Psychology, Social Science

REAL ESTATE**R. Est. 101 - Real Estate Transactions 2-0-2**

provides experiences relevant to educational requirements established by the Illinois Department of Registration and Education. The purpose of this course is to assist in preparation of individuals for the Illinois Real Estate Salesmen License Examination. Student absences in excess of three hours of class will prevent the College from certifying satisfactory completion of the course to the Department of Registration and Education. Classes missed must be made up. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Not Applicable
- Area of Concentration - Not Applicable

R. Est. 102 - Advanced Real Estate Principles 1-0-1

(Prerequisite: R. Est. 101.) provides experiences relevant to educational requirements established by the Illinois Department of Registration and Education. The purpose of this course is to assist in preparation of individuals wishing to take the Illinois Real Estate Brokers License Examination and for those desiring a greater understanding of real estate than that obtained in R. Est. 101. Student absences in excess of one and one-half hours of class will prevent the College from certifying satisfactory completion of the course to the Department of Registration and Education. Classes missed must be made up. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Not Applicable
- Area of Concentration - Not Applicable

R. Est. 103 - Contract Conveyancing 1-0-1

(Prerequisite: R. Est. 101.) provides experiences relevant to educational requirements established by the Illinois Department of Registration and Education. The purpose of this course is to assist in preparation of individuals wishing to take the Illinois Real Estate Brokers License Examination and for those desiring a greater understanding of real estate than that obtained in R. Est. 101. Student absences in excess of one and one-half hours of class will prevent the College from certifying satisfactory completion of the course to the Department of Registration and Education. Classes missed must be made up. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Not Applicable
- Area of Concentration - Not Applicable

R. Est. 110 - Real Estate Appraisal 1-0-1

(Prerequisite: R. Est. 101.) provides experiences relevant to educational requirements established by the Illinois Department of Registration and Education. The purpose of this course is to assist in preparation of individuals wishing to take the Illinois Real Estate Brokers License Examination and for those desiring a greater understanding of appraisal techniques. Student absences in excess of one and one-half hours of class will prevent the College from certifying satisfactory completion of the course to the Department of Registration and Education. Classes missed must be made up. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Not Applicable
- Area of Concentration - Not Applicable

R. Est. 112 - Real Estate Financing 1-0-1

(Prerequisite: R. Est. 101.) provides experiences relevant to educational requirements established by the Illinois Department of Registration and Education. The purpose of this course is to assist in preparation of individuals wishing to take the Illinois Real Estate Brokers License Examination and for those desiring a greater understanding of the fundamentals of real estate financing. Student absences in excess of one and one-half hours of class will prevent the College from certifying satisfactory completion of the course to the Department of Registration and Education. Classes missed must be made up. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

Certificate of Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Not Applicable

R. Est. 114 - Real Estate Sales and Brokerage 1-0-1

(Prerequisite: R. Est. 101.) provides experiences relevant to educational requirements established by the Illinois Department of Registration and Education. The purpose of this course is to assist in preparation of individuals wishing to take the Illinois Real Estate Brokers License Examination and for those desiring an understanding of the real estate brokerage business. Student absences in excess of one and one-half hours of class will prevent the College from certifying satisfactory completion of the course to the Department of Registration and Education. Classes missed must be made up. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Not Applicable

R. Est. 116 - Property Management 1-0-1

(Prerequisite: R. Est. 101.) provides experiences relevant to educational requirements established by the Illinois Department of Registration and Education. The purpose of this course is to assist in preparation of individuals wishing to take the Illinois Real Estate Brokers License Examination and for those desiring a greater understanding of property management. Student absences in excess of one and one-half hours of class will prevent the College from certifying satisfactory completion of the course to the Department of Registration and Education. Classes missed must be made up. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Not Applicable

R. Est. 118 - Farm Property Management 1-0-1

(Prerequisite: R. Est. 101.) provides experiences relevant to educational requirements established by the Illinois Department of Registration and Education. The purpose of this course is to assist in preparation of individuals wishing to take the Illinois Real Estate Brokers License Examination and for those desiring a greater understanding of farm management. Student absences in excess of one and one-half hours of class will prevent the College from certifying satisfactory completion of the course to the Department of Registration and Education. Classes missed must be made up. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Not Applicable

R. Est. 120 - Illinois Property Insurance 1-0-1

(Prerequisite: R. Est. 101.) provides experiences relevant to educational requirements established by the Illinois Department of Registration and Education. The purpose of this course is to assist in preparation of individuals wishing to take the Illinois Real Estate Brokers License Examination and for those desiring a greater understanding of real estate property insurance. Student absences in excess of one and one-half hours of class will prevent the College from certifying satisfactory completion of the course to the Department of Registration and Education. Classes missed must be made up. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Not Applicable

RECREATION

Rec. 120 - Leadership in Recreation 3-0-3

is designed as an introduction to leadership and administration in the field of recreation. Major emphasis is placed on the various types, methods, and theories in leadership. External and internal organization is taught along with budgeting, financing, facility planning, and objectives of a recreational program. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Not Applicable

Area of Concentration - Teacher Education

ROBOTICS

Robot. 101 - Introduction to Robotics 2-2-3

(Prerequisite: Eltrn. 109 or concurrent enrollment.) provides an overview of the current robotics industry beginning with a brief history and an introduction to the basic terms used in the field. The course classifies robots by geometry, power source, application, path control, and intelligence, and includes operation of different types of end effectors, robot controllers, and system sensors. Also covered in the class are the operation, installation, and maintenance of low technology robot systems, including operation and programming of programmable logic controllers as they apply to robotic control systems. Operation and programming of high-technology servo-robotics, including servo-hydraulic and electric robot systems, are major topics of the course. Offered as needed
Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable

Area of Concentration - Electronic Systems Technology, Computer Integrated Manufacturing

SOCIOLOGY**Socio. 100 - People, Society, and Culture 3-0-3**

is designed to provide an opportunity for students to develop a basic understanding of how culture, society, and groups in which they live and participate affect their lives. The course also can serve as a foundation for those who wish to familiarize themselves with fundamental concepts about behavior of people in groups prior to beginning a formal study of sociology. Students who have earned credit for Socio. 101 or 110 should not register for this course except upon special approval of the Associate Dean of Social and natural Sciences Division and may receive credit toward graduation for only one of these three courses. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Social Science
- Area of Concentration - Not Applicable

Socio. 110 - Introduction to Sociology 3-0-3

(Prerequisite: eligibility for Engl. 101.) provides a basic introduction to the discipline of sociology. The course explores the basic perspectives and methods of sociological inquiry, the relationships between man, his society, and his culture, and the concept of social organizations. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Social Science
- Area of Concentration - Social Science, Sociology

Socio. 125 - Parenting 3-0-3

(Prerequisite: one college level course in sociology or psychology.) is the study of contemporary issues and trends in parenting. Topics include the nature of parenting; parent-child relationships through various developmental stages; parental guidance of child's personal, social, and educational growth; the influence of different family structures on children; and trends in social attitudes toward children and families. Offered in Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Social Science
- Area of Concentration - Social Science, Sociology/Psychology

Socio. 130 - Criminology 3-0-3

(Prerequisite: eligibility for Engl. 101.) is an introduction to criminology and includes basic concepts, coverage of the major criminological theories, and a brief look at the criminal justice system and the forms of crime. Special attention is given to white collar crime. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Social Science
- Area of Concentration - Social Science, Sociology

Socio. 135 - The Study of Substance Abuse 3-0-3

(Prerequisite: eligibility for Eng. 101.) is the social-psychological study of the characteristics of substance abuse and the ramifications for society. Offered in Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Social Science
- Area of Concentration - Social Science, Sociology/Psychology

Socio. 141 - Introduction to Social Work 3-0-3

provides the student with an opportunity to become familiar with contemporary social work practice. This course includes observing the community services available, studying the methods used in the helping relationship, and applying the problem-solving approach to individual, family, and community problems. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Social Science

Area of Concentration - Social Science, Sociology

Socio. 142 - Social Service Field Experiences 3-0-3

(Prerequisite: completion of Socio. 141 and permission of the Social and Natural Sciences Associate Dean or the class instructor.) provides the student with an undergraduate practicum in social work. The student will work a minimum of 8-10 hours per week in an assigned social agency. One lecture hour will include evaluation of resources, referral and follow-up activity, awareness of unmet needs, and development of new resources when and where needed. Students planning to enroll in this course must be approved by the instructor and must complete an application for enrollment and submit it to the Social and Natural Sciences Associate Dean 30 days or more prior to the first day of registration for the semester during which the student desires to participate in this course. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Social Science

Area of Concentration - Social Science, Sociology

Socio. 150 - Social Problems 3-0-3

(Prerequisite: Socio. 110.) provides exploratory studies of contemporary social problems using the concepts and techniques of sociological inquiry. Possible topics include alienation, population, drugs, work and leisure, poverty, aging, war, the environment, the sexual revolution, extremism and dissent, and technological progress. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Social Science

Area of Concentration - Social Science, Sociology

Socio. 160 - Community Problems and Resources 3-0-3

(Prerequisite: Socio. 100, 110, or 141.) is an examination of selected community problems such as child abuse, aging, poverty, physical and mental health care, substance abuse, and the local community resources that exist for the purpose of alleviating these problems. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Social Science

Area of Concentration - Social Science, Sociology

Socio. 200 - Marriage and the Family 3-0-3

examines patterns of dating, courtship, and marriage with consideration given to the relationship between parents, children, and other members of the family unit. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Social Science

Area of Concentration - Social Science, Sociology

SPANISH**Span. 101 - Beginning Spanish 1 4-0-4**

integrates the acquisition of basic structure of Spanish by the audiolingual method with readings and cultural material. Two assigned 25-minute laboratory periods per week are required in addition to scheduled class hours. Together with Span. 102, it is designed for students with no previous study of Spanish and also is the appropriate first college course for students who have accumulated less than five quality points for high school Spanish and/or those whose prior study of Spanish was completed more than five years ago regardless of earned quality points. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Humanities

Area of Concentration - Foreign Language

Span. 102 - Beginning Spanish 2 4-0-4

(Prerequisite: Span. 101 or five to 11 quality points for high school Spanish completed within the past five years.) is a continuation of Span. 101. Two assigned 25-minute laboratory periods per week are required in addition to scheduled class hours. Offered in Spring

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Humanities

Area of Concentration - Foreign Language

Span. 201 - Intermediate Spanish 1 4-0-4

(Prerequisite: Span. 102 or 12 to 14 quality points for high school Spanish completed within the past five years.) includes a wider range of reading selections than previous courses. Grammatical structure is reviewed, expanded, and reinforced by listen-respond practice in laboratory. Two assigned 25-minute laboratory periods per week are required in addition to scheduled class hours. Offered in Fall

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Humanities

Area of Concentration - Foreign Language

Span. 202 - Intermediate Spanish 2 4-0-4

(Prerequisite: Span. 201 or 15 or more quality points for high school Spanish completed within the past five years.) is a school continuation of Span. 201, with increased attention to composition and conversation. Two assigned 25-minute laboratory periods per week are required in addition to scheduled class hours. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Humanities

Area of Concentration - Foreign Language

SPEECH**Spch. 101 - Principles of Speech 2-2-3**

(Prerequisite: eligibility for Engl. 101.) instructs students in the fundamentals of the public speaking situation and provides students with an opportunity to build poise and confidence through practice. Units of study include listening, communication theory, and informative and persuasive speaking. Laboratory time is provided to allow additional opportunities for student presentations and discussions. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Communications Skills
- Area of Concentration - Not Applicable

Spch. 101H - Principles of Speech 2-2-3

(Prerequisite: admission to the Honors Opportunities Program and eligibility for Engl. 101.) instructs the Honors student in the use of hybrid structural formats and in advanced research and provides opportunities for public speaking. Further, the student may choose one area for extended scholarship from among the following: interpersonal, persuasive, small-group, conflict resolution, or mass media speaking. Offered as needed

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Communications Skills
- Area of Concentration - Not Applicable

Spch. 110 - Discussion and Group Conference 2-2-3

examines the nature and effect of interpersonal communication in small groups. Major areas of study include effective leadership and participation in groups, problem-solving and decision-making discussion, conference planning, and parliamentary procedure. Students plan, lead, participate in, and evaluate discussions. Offered as needed

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Communications Skills
- Area of Concentration - Speech and Drama

Spch. 120 - Business and Professional Speaking 2-2-3

develops and polishes the student's communication skills for business and professional use. Self-inventories are combined with interviewing, group dynamics, listening, negotiating, and conflict resolution as well as practice in specific public speaking situations. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Communications Skills
- Area of Concentration - Speech and Drama

Spch. 140 - Forensic Activities 0-2-1

(Prerequisite: Spch. 101 or consent of instructor.) provides opportunities for students to perform in actual communications situations in the community and/or interscholastic speech competition. This course may be taken a maximum of four times for credit. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Communications Skills
- Area of Concentration - Speech and Drama

Spch. 210 - Oral Interpretation of Literature 2-2-3

(Prerequisite: Spch. 101.) emphasizes oral communication as a means of understanding, appreciating, and experiencing literature. Students learn theory and performance techniques through in-class presentations of a variety of literary forms. In addition to individual performances, each student will help plan and participate in a readers' theatre production. Offered as needed

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S
- Group Requirement - Communications Skills
- Area of Concentration - Speech and Drama

Spch. 230 - Readers' Theatre (Group Interpretation) 2-2-3

(Prerequisite: Spch. 210 or consent of instructor.) involves the compilation from the three basic genres of literature (prose, poetry, and drama) of a script on a common theme. Each selection will be analyzed for character, plot, theme, and dramatic movement. The student will then develop their oral interpretation skills in an effort to present this performance in one of several audience settings, i.e., college, community, and/or competition. Offered as needed

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S., A.A., A.S

Group Requirement - Communications Skills

Area of Concentration - Speech and Drama

THEATRE

(See Drama 160, Drama 170, or English 128.)

WELDING**Weld. 100 - Oxy-Acetylene and Plasma Arc Cutting 0-3-1.5**

is designed to prepare the student to perform oxy-acetylene and plasma arc cutting for production and maintenance work. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Not Applicable
- Area of Concentration - Welding

Weld. 101 - Shielded Metal Arc Welding 2-6-4

(Prerequisite: Weld. 100 or equivalent competencies.) is designed to prepare the student to perform production welding, millwright work, and general maintenance welding. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Not Applicable
- Area of Concentration - Welding

Weld. 102 - Shielded Metal Arc Welding Advanced 0-8-4

(Prerequisite: Weld. 101 or equivalent competencies.) is designed to prepare the student to perform A.S.M.E. code welds in the 2-G, 3-G, and 4-G positions. This class will prepare the student for pipe welding. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Not Applicable
- Area of Concentration - Welding

Weld. 190 - Maintenance Welding 0-3-1.5

(Prerequisite: Weld. 100 and Weld. 101 or equivalent competencies.) is designed to prepare the student to perform basic industrial maintenance welds. These welds would include oxy-acetylene brazing and soldering, arc welding of cast iron, and arc air cutting and gouging. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Not Applicable
- Area of Concentration - Welding

Weld. 201 - Gas Metal Arc and Flux Core Arc Welding 0-4-2

is designed to prepare the student to perform A.S.M.E. code welds in the 1-G and 2-G positions using the GMAW and FCAW processes. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Not Applicable
- Area of Concentration - Welding

Weld. 202 - Welder Certification (Arc Welding) 0-4-2

(Prerequisite: Weld. 101, Weld. 102 and Weld. 204 or equivalent competencies.) is designed to prepare the student to perform A.S.M.E. code welds on plate in the 3-G and 4-G positions and pipe in the 6-G position. Offered in Fall and Spring

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Not Applicable
- Area of Concentration - Welding

Weld. 204 - Shielded Metal Arc Pipe Welding 0-8-4

(Prerequisite: Weld. 101 and Weld. 102 or equivalent competencies.) is a course that will allow a student to develop the skills to weld pipe in 2-G, 5-G, and 6-G positions using the shielded metal arc welding process. The weld testing in this class is done in accordance with A.W.S. and A.S.M.E. standards. Offered as needed

Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, A.A.S., A.L.S

Group Requirement - Not Applicable
Area of Concentration - Welding

Weld. 205 - Gas Tungsten Arc Welding 0-6-3

(Prerequisite: Weld. 101 and Weld. 102 or equivalent competencies.) is designed to prepare the student to perform maintenance and production welding using the gas metal arc process. Offered Fall and Spring

Applicable toward graduation where program structure permits:

Certificate or Degree - All Certificates, A.A.S., A.L.S
Group Requirement - Not Applicable
Area of Concentration - Welding

ADULT EDUCATION COURSES

Adult Basic Education

A.B.E. 010 - Basic Reading 1 2-2-3

is designed for new adult readers with a reading level of 0 to 1.9 who want to improve their reading comprehension. Individualized or small group instruction is offered for each student with consideration given to individualized reading needs. Adult reading material for the class is provided
Repeatability - 3 times

Certificate or Degree - All Basic Certificates in General Studies except Personal Development
Group Requirement - Not Applicable
Area of Concentration - Basic Certificate in Developmental, Preparatory, or Basic Skills

A.B.E. 011 - Basic Reading 2 2-2-3

is designed for adult readers with a reading level of 2.0 to 2.9 who want to improve their reading comprehension and writing skills. Individualized or small group instruction is offered for each student with consideration given to individualized needs. Adult reading material is provided for the class

Repeatability - 3 times

Certificate or Degree - All Basic Certificates in General Studies except Personal Development
Group Requirement - Not Applicable
Area of Concentration - Basic Certificate in Developmental, Preparatory, or Basic Skills

A.B.E. 012 - Basic Reading 3 2-2-3

is designed for adult readers with a reading level of 3.0 to 4.9 who want to improve their reading comprehension, writing, and communication skills. Individualized or small group instruction is offered for each student with consideration given to individualized needs. Adult reading material is provided for the class

Repeatability - 3 times

Certificate or Degree - All Basic Certificates in General Studies except Personal Development
Group Requirement - Not Applicable
Area of Concentration - Basic Certificate in Developmental, Preparatory, or Basic Skills

A.B.E. 013 - Individualized Integrated A.B.E. Study Skills 1-0-1 to 8

is designed for adults with a reading level comparable to the 1st through 8th grade who need integrated instructional review in reading, writing, arithmetic, and other basic skills. Individualized, small group, and computer-assisted learning are offered for each student with consideration given to individualized basic skill needs

Repeatability - 3 times

Certificate or Degree - All Basic Certificates in General Studies except Personal Development
Group Requirement - Not Applicable
Area of Concentration - Basic Certificate in Developmental, Preparatory, or Basic Skills

A.B.E. 014 - Responsive Parenting (Affective Learning) 1-0-1

is designed to give parents reading at or below the 8.9 level ideas for dealing with the developmental needs of their children under five. Topics covered include helping children learn, setting limits, and parent-child communication

Repeatability - 3 times

Certificate or Degree - All Basic Certificates in General Studies except Personal Development
Group Requirement - Not Applicable
Area of Concentration - Basic Certificate in Developmental, Preparatory, or Basic Skills

A.B.E. 015 - Parent Participation (Classroom Involvement) 1-0-1

involves parents reading at or below an 8.9 level and their children under five in a lapsit. Parents and children learn together through activities designed to encourage interactive play. Emphasis is placed on language development and the parent-child relationship

Repeatability - 3 times

Certificate or Degree - All Basic Certificates in General Studies except Personal Development
Group Requirement - Not Applicable
Area of Concentration - Basic Certificate in Developmental, Preparatory, or Basic Skills

A.B.E. 016 - Job Skills 1 1-0-1

is a course designed for adults reading at or below the 8.9 grade level in which employment skills and job search skills are presented and discussed

Repeatability - 3 times

Certificate or Degree - Not Applicable

Group Requirement - Not Applicable

Area of Concentration - Not Applicable

A.B.E. 017 - Job Skills 2 1-0-1

is a continuation of A.B.E. 016 for adults reading at or below the 8.9 grade level in which skills to obtain a job and to retain a job, the attitudes toward work, fellow employees, and the employing institution are discussed

Repeatability - 3 times

Certificate or Degree - All Basic Certificates in General Studies except Personal Development

Group Requirement - Not Applicable

Area of Concentration - Basic Certificate in Developmental, Preparatory, or Basic Skills

A.B.E. 018 - Job Skills 3 1-0-1

is designed for adults reading at or below the 8.9 grade level who wish to review and enhance their reading, writing, and math skills in preparation for job specific or employment training

Repeatability - 3 times

Certificate or Degree - All Basic Certificates in General Studies except Personal Development

Group Requirement - Not Applicable

Area of Concentration - Basic Certificate in Developmental, Preparatory, or Basic Skills

A.B.E. 019 - Individualized Integrated A.B.E. Study Skills 1-0-1 to 8

is designed for adults with a reading level comparable to the 6th through 8.9 grade level who need integrated instructional review in reading, writing, arithmetic, and other basic skills. Individualized, small group instruction and computer assisted learning are offered for each student with consideration given to individualized basic skill needs

Repeatability - 3 times

Certificate or Degree - All Basic Certificates in General Studies except Personal Development

Group Requirement - Not Applicable

Area of Concentration - Basic Certificate in Developmental, Preparatory, or Basic Skills

A.B.E. 020 - Self-Esteem for the Family 1-0-1

is designed to give parents reading at or below the 8.9 grade level tools they need to support their child in school. They will be empowered to communicate with school staff, support school programming, and encourage their child's school success

Repeatability - 3 times

Certificate or Degree - All Basic Certificates in General Studies except Personal Development

Group Requirement - Not Applicable

Area of Concentration - Basic Certificate in Developmental, Preparatory, or Basic Skills

A.B.E. 021 - Parents as Reading Partners 1-0-1

is designed to give parents reading at or below the 8.9 grade level instruction and experience for reading aloud to children of various ages. Parents will be taught to read aloud to infants, toddlers, preschoolers, primary grade children, and intermediate grade children. Appropriate child development issues will be explored and reading techniques adapted for the different age levels

Repeatability - 3 times

Certificate or Degree - All Basic Certificates in General Studies except Personal Development

Group Requirement - Not Applicable

Area of Concentration - Basic Certificate in Developmental, Preparatory, or Basic Skills

Adult Secondary Education

A.S.E. 010 - Job Skills 1 1-0-1

is a course in which employment skills and job search skills are presented and discussed

Repeatability - 3 times

Certificate or Degree - All Basic Certificates in General Studies except Personal Development

Group Requirement - Not Applicable

Area of Concentration - Basic Certificate in Developmental, Preparatory, or Basic Skills

A.S.E. 011 - Job Skills 2 1-0-1

is a continuation of A.S.E. 010 in which skills to obtain a job and to retain a job, the attitudes toward work, fellow employees, and the employing institution are discussed

Repeatability - 3 times

Certificate or Degree - All Basic Certificates in General Studies except Personal Development

Group Requirement - Not Applicable

Area of Concentration - Basic Certificate in Developmental, Preparatory, or Basic Skills

A.S.E. 012 - Responsive Parenting (Affective Learning) 1-0-1

is designed to give parents reading at or above the 9th grade level ideas for dealing with developmental needs for their children under five. Topics covered include helping children learn, setting limits, and parent-child communication

Repeatability - 3 times

Certificate or Degree - All Basic Certificates in General Studies except Personal Development

Group Requirement - Not Applicable

Area of Concentration - Basic Certificate in Developmental, Preparatory, or Basic Skills

A.S.E. 013 - Parent Participation (Classroom Involvement) 1-0-1

involves parents reading at or above a 9th grade level and their children under five in a lapsit. Parents and children will learn together through activities designed to encourage interactive play. Emphasis is placed on language development and the parent-child relationship

Repeatability - 3 times

Certificate or Degree - All Basic Certificates in General Studies except Personal Development

Group Requirement - Not Applicable

Area of Concentration - Basic Certificate in Developmental, Preparatory, or Basic Skills

A.S.E. 014 - Self Esteem for the Family 1-0-1

is designed to give parents reading at the 9th and above grade level tools they need to support their child in school. They will be empowered to communicate with school staff, support school programming, and encourage their child's school success

Repeatability - 3 times

Certificate or Degree - All Basic Certificates in General Studies except Personal Development

Group Requirement - Not Applicable

Area of Concentration - Basic Certificate in Developmental, Preparatory, or Basic Skills

A.S.E. 015 - Parents as Reading Partners 1-0-1

is designed to give parents reading at the 9th and above grade level instruction and experience for reading aloud to children of various ages. Parents will be taught to read aloud to infants, toddlers, preschoolers, primary grade children, and intermediate grade children. Appropriate child development issues will be explored and reading techniques adapted for the different age levels

Repeatability - 3 times

Certificate or Degree - All Basic Certificates in General Studies except Personal Development

Group Requirement - Not Applicable

Area of Concentration - Basic Certificate in Developmental, Preparatory, or Basic Skills

A.S.E. 016 - Job Skills 1-0-1

is designed for adults reading at or above the 9.0 level who wish to review and enhance their reading, writing, and math skills in preparation for job specific or employment training

Repeatability - 3 times

Certificate or Degree - All Basic Certificates in General Studies except Personal Development

Group Requirement - Not Applicable

Area of Concentration - Basic Certificate in Developmental, Preparatory, or Basic Skills

A.S.E. 017 - Classroom Anxiety Reduction 1-0-1

provides instruction that will help reduce the effect of performance-related classroom anxieties such as test anxiety. Class provides activities to reduce tension and improve classroom performance. Topics include study and test taking skills, coping and relaxation exercises, and stress management

Repeatability - 3 times

Certificate or Degree - All Basic Certificates in General Studies except Personal Development

Group Requirement - Not Applicable

Area of Concentration - Basic Certificate in Developmental, Preparatory, or Basic Skills

ENGLISH AS A SECOND LANGUAGE**E.S.L. 081 - Pre-Beginning 1-2-2**

is for students who function minimally in English. The course content covers beginning structure, pronunciation, vocabulary building, and limited reading and writing skills. The primary objective of the course is to help the students develop a basic comprehension of the English language. Offered in Fall and Spring

Repeatability - 3 times

Certificate or Degree - All Basic Certificates in General Studies except Personal Development

Group Requirement - Not Applicable

Area of Concentration - Basic Certificate in Developmental, Preparatory, or Basic Skills

E.S.L. 082 - Beginning 1-2-2

is for students who have minimal experience and/or instruction in English. The course content covers beginning structure, pronunciation, vocabulary building, and reading and writing skills. The primary objectives of the course is to provide repetitive practice toward a meaningful and communicative use of the English language. Offered in Fall and Spring

Repeatability - 3 times

Certificate or Degree - All Basic Certificates in General Studies except Personal Development

Group Requirement - Not Applicable

Area of Concentration - Basic Certificate in Developmental, Preparatory, or Basic Skills

E.S.L. 083 - Intermediate 1-2-2

is for students who have some experience and/or instruction in English. The course content reviews basic structure and pronunciation skills, continues vocabulary building, and devotes equal time to reading, speaking, and writing skills. The primary objective of the course is to review and refine basic skills and to promote purposeful communication both in and out of the classroom.

Offered in Fall and Spring

Repeatability - 3 times

Certificate or Degree - All Basic Certificates in General Studies except Personal Development

Group Requirement - Not Applicable

Area of Concentration - Basic Certificate in Developmental, Preparatory, or Basic Skills

E.S.L. 084 - Writing 1 1-2-2

is for students who have considerable experience and/or instruction in English. The course content includes review, advanced refinement, and expansion of listening, reading, speaking, and writing skills. The primary objective of the course is to provide opportunities for the student to develop confidence to use English proficiency in his/her everyday life, specifically to succeed in personal, work, and education-related experiences. Offered in Fall and Spring

Repeatability - 3 times

Certificate or Degree - All Basic Certificates in General Studies except Personal Development

Group Requirement - Not Applicable

Area of Concentration - Basic Certificate in Developmental, Preparatory, or Basic Skills

General Educational Development**G.E.D. 075 - G.E.D. Test Review Study Lab 1-0-1 to 8**

is designed for adults with a reading level comparable to 9th grade and above who need a review of test preparations skills and a specific overview of the General Educational Development test to include the areas of writing skills, social studies, science, interpreting literature and the arts, and mathematics. Individualized, small group, and computer-assisted learning is offered for each student with consideration given to individualized needs. Simulated and predictive testing is included

Repeatability - 3 times

Certificate or Degree - All Basic Certificates in General Studies except Personal Development

Group Requirement - Not Applicable

Area of Concentration - Basic Certificate in Developmental, Preparatory, or Basic Skills

G.E.D. 076 - General Educational Development 1 4-0-4

is designed to help individuals prepare for General Educational Development 2. Emphasis in the course is placed on basic reading, writing, and arithmetic skills. A placement test with a reading score of fifth grade is required prior to enrollment. This course is offered tuition free

Repeatability - 3 times

Certificate or Degree - All Basic Certificates in General Studies except Personal Development

Group Requirement - Not Applicable

Area of Concentration - Basic Certificate in Developmental, Preparatory, or Basic Skills

G.E.D. 077 - General Educational Development 2 4-0-4

is designed to help individuals prepare for General Education Development 3. Emphasis is placed on reading, writing, and mathematics. A placement test with a reading score of sixth grade is required prior to enrollment with a reading score of sixth grade. This course is offered tuition free

Repeatability - 3 times

Certificate or Degree - All Basic Certificates in General Studies except Personal Development

Group Requirement - Not Applicable

Area of Concentration - Basic Certificate in Developmental, Preparatory, or Basic Skills

G.E.D. 078 - General Educational Development 3 4-0-4

is designed to help individuals prepare for General Educational Development 4. Emphasis in the course will be placed on basic reading, writing, and mathematics skills. A placement test with a seventh/eighth grade reading score is required prior to enrollment in the course. This course is offered tuition free

Repeatability - 3 times

Certificate or Degree - All Basic Certificates in General Studies except Personal Development

Group Requirement - Not Applicable

Area of Concentration - Basic Certificate in Developmental, Preparatory, or Basic Skills

G.E.D. 079 - General Educational Development 4 4-0-4

is designed to help individuals prepare for the General Educational Development Test through a review of reading, writing, and mathematics skills. A placement test with a ninth grade reading score is required prior to enrollment in the course. This course is offered tuition free

Repeatability - 3 times

Certificate or Degree - All Basic Certificates in General Studies except Personal Development

Group Requirement - Not Applicable

Area of Concentration - Basic Certificate in Developmental, Preparatory, or Basic Skills

GENERAL STUDIES COURSES**Communications****Comm. 011 - Communicating with Hearing Handicapped Persons 1 1-1-1.5**

is designed for those who desire to learn to communicate with persons having hearing handicaps. It offers an opportunity to learn some of the basic elements of the total communication approach to language for deaf and other hearing handicapped persons, including signing and fingerspelling
Applicable toward graduation where program structure permits:

- Certificate or Degree - All Basic Certificates in General Studies except Personal Development
- Group Requirement - Not Applicable
- Area of Concentration - Basic Certificate in Community and Civic Development

Comm. 012 - Communicating with Hearing Handicapped Persons 2 1-1-1.5

is designed for those who have completed Comm. 011. It offers an opportunity to improve sign language and fingerspelling skills, become familiar with American Sign Language, Ameslan, and interpreting skills through the use of demonstration and films
Applicable toward graduation where program structure permits:

- Certificate or Degree - All Basic Certificates in General Studies except Personal Development
- Group Requirement - Not Applicable
- Area of Concentration - Basic Certificate in Community and Civic Development

Food Service Sanitation**Diet. 110 - Food Service Sanitation 1-0-1**

is a course designed for food service operators and management. The course covers techniques for protecting food from contamination in storage, preparation and service, cleaning and sanitizing, pest control, cleanability of facilities and equipment, sanitation and the customer, personnel training, and detailed procedures for self-inspection by the food service manager
Applicable toward graduation where program structure permits:

- Certificate of Degree - All Certificates, A.A.S., A.L.S
- Group Requirement - Not Applicable
- Area of Concentration - Dietetic Assistant/Technician

Personal Finances**P. Fin. 013 - Federal and State Income Tax 2-0-2**

is designed to assist the individual in understanding income taxes and how to prepare his or her federal and state returns, including determination of income, exemptions, dependents, and tax liability as well as tax savings and planning from the taxpayer's view
Applicable toward graduation where program structure permits:

- Certificate or Degree - All Certificates, All Basic Certificates in General Studies except Personal Development
- Group Requirement - Not Applicable
- Area of Concentration - Basic Certificate in Improving Family Circumstances

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Notes on the Catalog Conversion Process

This catalog is being viewed in the Adobe Acrobat Reader using Portable Document Format (PDF), but was originally prepared for use with a different multi-media viewer.

It was converted from computer files supplied by the school, or the printed catalog was scanned and converted using an OCR (Optical Character Recognition) process. In either case, the catalog's original page formatting was stripped and all photographs and graphics were removed to conserve disk space. The catalog was then reformatted to fit the viewer parameters.

Because of this, the page numbers in the original Table Of Contents and Index were no longer valid and these sections were deleted to avoid confusion. A new, hyperlinked table of contents was then created.

Future editions of this catalog will be converted with a process that better retains page formatting and the original table of contents and index will be hyperlinked.