1983-85 CATALOG

SHAWNEE COLLEGE

Shawnee College Road
Ullin, Illinois 62992

Phone (618) 634-2242

THIRTEENTH EDITION

Volume 13 Number 1
January, 1983
MESSAGE FROM THE PRESIDENT . . .

I am delighted to welcome you to Shawnee College. You made a wise decision when you decided to join hundreds of other Southern Illinoisans in seeking a quality education at this institution.

Shawnee College staff is of the highest caliber. They are well trained in their respective teaching areas and they care about their students.

Shawnee College is concerned with each student as an individual. We want to help each of you succeed in your chosen field of study. The successful faculty member at Shawnee College has compassion for you as an individual. The faculty member wants you to succeed. The rest is up to you.
A MEMBER OF

American Association of Community and Junior Colleges
Council of North Central Community Colleges
Illinois Association of Community College Trustees
American Association of Community College Trustees

RECOGNIZED BY

Illinois Community College Board
Illinois Board of Higher Education
Illinois State Scholarship Commission
Illinois Board of Vocational Education
U.S. Office of Health, Education & Welfare
Veterans Administration

ACCREDITED BY

North Central Association
of
Colleges & Secondary Schools
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William F. Whitnel
Academic Dean

Hal G. Anderson
Dean of Career Education

Suzanne Moorman
Business Manager

Gene A. Cross
Dean of Students

George A. Floyd
Dean of Continuing Education
ADMINISTRATION

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Dr. A. L. Robinson, Secretary ...................................................... Mounds
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ADMINISTRATIVE STAFF

Dr. Loren E. Klaus ................................................................. President
William F. Whitnel ............................................................... Academic Dean
Gene A. Cross ................................................................. Dean of Students
Hal C. Anderson ............................................................... Dean of Career Education
George A. Floyd ............................................................... Dean of Continuing Education
Suzanne Moorman ............................................................... Business Manager
OFFICIAL
SHAWNEE COLLEGE
CALENDAR
1983-85

FALL SEMESTER, 1983

August 15                  Freshman Orientation
August 17-18               Student Advisement and Registration
August 19                  Instruction Begins
September 2               Registration Closes/ Last Day to Drop
                           Classes Without Financial Penalty
September 5               Holiday-Labor Day
October 10                Holiday-Columbus Day
October 17                Mid-Semester
October 28                Last Day to Drop or Apply for Audit
                           Without Academic Penalty
November 24-25            Thanksgiving Vacation
December 14-16            Final Exams
December 16               End of Semester

SPRING SEMESTER, 1984

January 5-6                Student Advisement and Registration
January 9                 Instruction Begins
January 23                Registration Closes/ Last Day to Drop
                           Classes Without Financial Penalty
February 29               Mid-Semester
March 5-9                 Spring Break
March 12                  Classes Resume
March 16                  Last Day to Drop or Apply for Audit
                           Without Academic Penalty
April 20                  Holiday-Good Friday
May 9-11                  Final Exams
May 11                    End of Semester

SUMMER SESSION, 1984

May 31                    Student Advisement and Registration
June 1                     Instruction Begins
June 8  Registration Closes/ Last Day to Drop  
Classes Without Financial Penalty
June 29  Mid-Semester
July 1  Last Day to Drop or Apply for Audit  
Without Academic Penalty
July 4  Holiday-Independence Day
July 30-31  Final Exams
July 31  Semester Ends

FALL SEMESTER, 1984

August 13  Freshman Orientation
August 14-15  Student Advisement and Registration
August 16  Instruction Begins
August 30  Registration closes/ Last Day to Drop  
Classes without Financial Penalty
September 3  Holiday-Labor Day
October 8  Holiday-Columbus Day
October 19  Mid-Semester
October 26  Last Day to Drop or Apply for Audit  
Without Academic Penalty
November 22-23  Holiday Thanksgiving
December 12-14  Final Exams
December 14  End of Semester

SPRING SEMESTER, 1985

January 2-3  Student Advisement and Registration
January 4  Instruction Begins
January 15  Holiday-Martin Luther King’s Birthday
January 21  Registration Closes/ Last Day to Drop  
Classes Without Financial Penalty
February 12  Holiday-Lincoln’s Birthday
March 1  Mid-Semester
March 4-8  Spring Break
March 11  Classes Resume
March 15  Last Day to Drop or Apply for Audit  
Without Academic Penalty
April 5  Holiday-Good Friday
May 8-10  Final Exams
May 10  End of Semester
## SUMMER SESSION, 1985

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GENERAL INFORMATION

HISTORY AND ORGANIZATION

Shawnee College was organized as a Class 1 community college in September of 1967. Created to serve Southern Illinois and its people, the college district covers all of Union, Pulaski, Massac, Alexander and parts of Johnson and Jackson Counties.

The initial Board of Trustees was selected in December of 1967, and in May of 1968 Dr. Loren E. Klaus was named President. The college site consists of 163 acres in the scenic hills of Southern Illinois. Interim facilities were erected during the summer of 1969. Permanent campus buildings were completed in 1976. The college officially opened on September 24, 1969.

OBJECTIVES

The basic purpose of an educational institution is the preservation and advancement of civilization. Shawnee College attempts to develop in its students the ideas, attitudes, and spirit of inquiry which characterize the educated individual. The desired outcome of this educational process are stated broadly as follows:

For every student with whom it has significant contact, the college should challenge that student's prejudices, expand his awareness of the world and its people, enhance his social competence, strengthen his sense of purpose in life, increase his appreciation of the arts, improve his learning capacity, and arouse curiosity so that the student will continue to learn, to think, and to stimulate others after the completion of formal education.

The objectives of Shawnee College are:

(1) To provide two years of higher education in the arts and sciences leading to an associate degree.
(2) To provide associate degree programs leading to employment in specific technologies.
(3) To provide appropriate career programs leading to a certificate of completion.
(4) To provide opportunities for intellectual growth in academic areas and for training in specific career skills and part-time enrollment in regular programs.
(5) To initiate, support, and provide cultural and intellectual activities for all area citizens.
(6) To provide an educational atmosphere through counseling, activities, and other services which will give students a reasonable opportunity for success in college.

CAMPUS

The campus of Shawnee College is located on the Shawnee College Road approximately seven miles east of Interstate Route 57. The site of 163 acres consists of gently rolling hills. The campus is one of the most attractive in the nation. The campus is centrally located within the college district.

STATUS OF ACCREDITATION

Shawnee College is fully accredited by the North Central Association of Colleges and Secondary Schools. Full accreditation implies the attainment of significant educational standards of quality and excellence which are recognized and respected among the institutions of higher learning.

EVENING COLLEGE

An evening college is operated for those students who are working full time during the day and would like to enroll for a part-time college program in the evening. The demand for evening classes determines the number of classes that will be offered at any one time. The college reserves the right to withdraw any college offering for which there is insufficient registration.

Over a period of years nearly all classes offered during the day will be offered at night. It will be possible to select course sequences which will lead to associate degrees in various curricula. In addition, Shawnee College expects to offer course work in continuing education programs for those area residents who desire to take advantage of such programs.
SUMMER SESSION

Summer sessions of varying lengths are scheduled each year. A student may earn up to twelve semester hours of credit during the summer session.

Summer semester courses are the same quality as those offered during the regular academic year. The selection of classes is based on the demand of prospective summer students. Persons interested in having certain courses offered should contact the college early in the spring to make their wishes known.

BOOKSTORE

A bookstore is operated by the college and carries all required textbooks and other instructional materials, equipment, and supplies. Bookstore items are selected to meet objectives of the course work.

STUDENT CENTER

A spacious and attractive center for student activities is provided on campus. Food and recreational facilities are available. In addition, many public groups are hosted in the student center.
LEARNING RESOURCES CENTER

Shawnee College has developed a comprehensive Learning Resources Center.

The LRC's collection of more than 36,500 books is increasing annually. The series collection includes 240 periodicals, 12 newspapers, and 13 indexing services. The collection of films, filmstrips, tapes and phonograph records is being expanded monthly. In addition, thousands of volumes of other books and materials are available to students through the college participation in joint agreements with other major library systems.

Library materials are charged out to a student upon presentation of his current I.D. card.

Students, faculty, and all members of the community college district are encouraged to visit the Learning Resources Center and utilize its fine resources and services.
COUNSELING

All entering students meet with professional personnel for counseling. Through the use of test results, high school records, and personal consultation, an effort is made to counsel the student concerning a program appropriate to his/her skills, aptitudes, and preparation. Other more specialized examinations may be given individual students upon their request or upon the advice of a counselor.

Each student is assigned a faculty advisor. An attempt is made to match the students’ academic preferences with the background of their faculty advisors. It is hoped that students will avail themselves of the opportunity to counsel with their faculty advisors frequently.

The guidance program of the college involves a one semester hour course named Introduction to College Life. This course is mandatory for every entering freshman student carrying twelve or more semester hours credit. The one semester hour credit may be applied to any associate degree or certificate program at Shawnee College.
This course covers such topics as extra-curricular organizations and activities, use of the Learning Resources Center, requirements for graduation and transfer to senior institutions, general college regulations, testing, and other topics pertinent to the student's development.

**CONDUCT**

Shawnee College expects from its students the self-discipline necessary to acquire an education and will aid them in developing such a skill. Students who earnestly attempt to assume the responsibilities of college membership will receive the fullest measure of guidance and encouragement. Those found guilty of serious misconduct are subject to suspension and/or expulsion from the college. Cheating constitutes grounds for dismissal from the course with a grade of F assigned thereto.

**STUDENT ACTIVITIES**

The college offers a comprehensive program of student activities including fashion shows, the college yearbook, student newspaper, dances, plays, madrigal, and other social and cultural activities. In addition, a comprehensive athletic program is offered for both men and women including basketball, baseball, golf, softball, running club and volleyball.

**STUDENT SENATE**

The Student Senate is chiefly responsible for the development and guidance of student activities. It is a group of seven elected and two appointed students assisted by a faculty advisor. Its functions are to express student opinion, coordinate the activities of student groups, assist in planning and carrying out selected college social events, present a cultural series, and promote the welfare of the student body.

All official student activities must be pre-approved by the Dean of Students.

**TESTING**

Shawnee College provides a comprehensive testing program for the college community. It serves the needs of its population through its own testing program as well as cooperative contractual services with federal, state, and private agencies. Shawnee College has become a national testing center for several major testing agencies.
AMERICAN COLLEGE TEST (ACT)

The American College Test (ACT) is an assessment program which provides students and counselors information necessary for sound educational planning. These tests are administered on five national testing dates and are open to high school juniors and seniors as well as college students. Applications may be secured from the local high school counselor or the Director of Guidance and Counseling at Shawnee College.

GENERAL EDUCATIONAL DEVELOPMENT (GED)

There are many educationally mature persons who, for some reason or other, did not complete their formal high school training. The General Educational Development test provides an opportunity for these adults to secure an evaluation of their educational maturity and competence and receive a high school equivalency certificate. These tests are administered five times each year and are available to adults in the college district. Applications may be secured from the local Superintendent of the Educational Services Region.
COLLEGE-LEVEL EXAMINATION PROGRAM (CLEP)

Shawnee College believes college-level achievement should be recognized and rewarded whether or not gained from formal school attendance. The College-Level Examination Program (CLEP) offers the means by which colleges and universities can realize this objective. In essence, enrollment in certain college courses may be waived if the student demonstrates mastery of course content by achieving a certain score on the CLEP test. Applications for CLEP testing may be secured from the office of the Director of Guidance and Counseling at Shawnee College.

VOCATIONAL CREDIT BY PROFICIENCY EXAMINATION

If reasonable evidence exists that a student possesses proficiency in a particular subject area, the student may petition to take a proficiency examination. The petition must be approved by the appropriate dean.

Students desiring to take proficiency examinations must first contact the appropriate divisional chairman at the beginning of a semester to make arrangements to complete the tests. Test fees are the same as tuition fees and are payable to the business office prior to taking the proficiency test.

If a student's achievement on the examination meets the standard set by the college, credit for the course will be entered on the student's permanent record upon certification by the appropriate dean. A student will not be certified in any course for which he is not eligible to register for credit.

ENTRANCE TESTS

Various tests are administered to incoming students to assess their level of competencies in various areas or to determine their acceptance in particular curricula.

Individual tests may be administered to assist students to recognize their individual strengths and weaknesses and as an aid in choosing a relevant career.

Information concerning these tests may be secured from the Office of the Director of Guidance and Counseling at Shawnee College.
FINANCIAL AIDS

The goal of the college in promoting a Financial Aids Program is the removal of economic barriers to higher education among the able people of all classes of our society. To accomplish this objective, Shawnee College has developed a variety of financial aids to assist students in overcoming economic problems associated with college attendance.

LOCAL PROGRAMS

Valedictorian Scholarship. The valedictorian and/or the co-valedictorians from each recognized high school located in the Shawnee College district may be selected as VAI DICTORIAN SCHOLARS each year. The maximum total award is $2,200. Tuition, fees and required textbook charges are a portion of (not in addition to) the $2,200 award. The remainder of the $2,200 scholarship may be awarded for commuting costs and other education related expenses.

Qualifications of a Valedictorian Scholar:

1. Must be the class valedictorian and/or co-valedictorians.
2. A valedictorian scholar must file a completed application for the scholarship with the Financial Aids Director at Shawnee College by June 15.
3. A valedictorian scholar must complete the ACT with a score satisfactory to the college. And, complete any special examinations required with a satisfactory score required for his/her particular curriculum. All such scores must be filed with the college's Director of Financial Aids by June 15 before the application is complete.

4. To be considered, all completed applications and supporting materials must be on file in the college's Financial Aids Director's office by June 15.

5. Valedictorian scholars must enroll in a Shawnee College two-year transfer degree program.

6. Valedictorian scholars must enroll in at least 15 semester hours each semester (except summer) and maintain a 3.7 (A-) grade point average to qualify as a continuing valedictorian scholar.

Summer school students not planning to complete an associate degree program at Shawnee are ineligible.

7. The valedictorian scholarship program must be completed within 24 months from the date of that student's high school graduation.

8. Valedictorian scholars must remain in good standing in terms of conduct and citizenship as determined by the college.

9. To continue as a valedictorian scholar, the student must pay on schedule debts of any kind or character owed the college.

10. The college reserves the right to alter or cancel individual scholarships at any time.

**Presidential Scholarship.** Two qualifying graduating seniors from each high school located in the Shawnee College district may be selected as presidential scholars at Shawnee College each year. THE COLLEGE WAIVES ALL TUITION, REQUIRED TEXTBOOK AND FEE CHARGES.

Qualifications of a presidential scholar:

1. A presidential scholar must rank in the top ten percent of his/her high school graduating class as certified in writing to the college by the high school principal. Presidential scholars are the top two of that group who make proper application for the scholarship, enroll at Shawnee College, and are approved by the college.

2. A presidential scholar must file a completed application for the scholarship with the Director of Financial Aid at Shawnee College by March 15.

3. A presidential scholar must complete the ACT test with a score satisfactory to the college, and complete any special examinations required with a satisfactory score required for his/her particular
curriculum. All such scores must be filed with the college’s Director of Financial Aid by March 15 before the application is complete.

4. To be considered, completed applications and supporting materials must be on file in the college’s Director of Financial Aid office by March 15.

Other:

1. Presidential scholars must enroll in an Associate of Arts, Associate of Science or Associate of Applied Science Program.

2. Presidential scholars must enroll in at least 15 semester hours each semester (except summer) and maintain a 3.5 (B) grade point average to qualify as a continuing presidential scholar.

3. Presidential scholars must remain in good standing in terms of conduct and citizenship as determined by the college.

4. To continue as a presidential scholar, the student must pay on schedule debts of any kind or character owed the college.

5. The college reserves the right to alter or cancel individual scholarships at any time.

Miscellaneous Assistance. A variety of local scholarships are available to Shawnee College Students. For information concerning scholarships, contact the Financial Aids Officer.

STATE PROGRAMS

Illinois Guaranteed Loan. This loan enables a student who is an Illinois resident to borrow up to $2,500 each year to pay educational expenses. Normally students who receive an IGL are not eligible for an NDSL during the same period.

Some students who receive the IGL may qualify for federal interest benefits. Repayment may also be deferred for up to three years while the borrower is a member of the Armed Forces.

Illinois State Scholarship Monetary Grant. Monetary awards are conferred by the Illinois State Scholarship Commission in annual amounts to students on the basis of financial need. The applicant must be a legal resident of the State of Illinois, as determined by the legal residence of the parent or guardian. Applications are available from the Shawnee College Financial Aid Office and are to be returned to the Illinois State Scholarship Commission. This grant pays tuition and mandatory fees.
Vocational Rehabilitation Grants. The State of Illinois Division of Vocational Rehabilitation may provide funds for board, room, transportation, and other necessary expenses for a person who is found to be disabled. The applicant must have a disability which prevents his getting a suitable job, or threatens his continued employment. The applicant must have a "reasonable" chance of being able to work in suitable employment after training is provided. Students who have a medical or physical disability should contact an office of Vocational Rehabilitation or the office of the Dean of Students for further information.

FEDERAL PROGRAMS

Shawnee College subscribes to the principle that the amount of financial aid granted a student be based on financial need. Therefore, the ACT Family Financial Statement is required of all students securing federal funds through the college. Inquiries concerning financial aid should be made to:

Director of Financial Aids
Shawnee College
Ullin, Illinois 62992
(618) 634-2242

Supplementary Educational Opportunity Grant. The basic purpose of the SEOG is to assist students with exceptional financial need. The student does not repay the grant. The grant will provide these students a sum of federal money which must be matched with an equal amount of financial aid through the National Direct Student Loan or College Work-Study program.

Pell Grant. The amount of financial aid a student may receive is based on a formula which takes into account the amount the student and his family or spouse can be expected to contribute to his education. This grant does not have to be repaid or matched.

College Work-Study Program. Shawnee College provides job opportunities on the campus or through public and private non-profit agencies for students to earn money with which to finance their education. College work-study students are paid a salary equivalent to the minimum wage.

VETERAN'S BENEFITS (G.I. BILL)

Shawnee College has been approved by the State of Illinois Veteran's Approval Agency for Veteran's Education.

This Federal program administered by the Veteran Administration allows up to 45 months of higher education and up to $342 per month full time
single veteran students with half time and three-fourths time at lesser amounts. For married students it allows $407 per month plus a proportionate increase for each additional dependent.

The Veteran Administration does not furnish books and a student veteran must maintain satisfactory progress to continue.

Students who have served 180 days or more in the military after May 31, 1966 and prior to December 31, 1976 or after December 31, 1976 if they signed for the new G.I. Bill should contact the Illinois Department of Veteran Affairs or Veteran’s representative on campus to confirm the possibility of benefits and the G.I. Bill.

To be eligible each student must submit the original or a copy certified as true or their DD214 separation paper and fill out the appropriate application for education and training. For further information and assistance contact the Shawnee College Veteran Coordinator.

WAR ORPHANS ASSISTANCE PROGRAM

The War Orphans Educational Assistance Act (Chap. 35, Title 38, U.S.C.) was amended to provide benefits available not only to sons and daughters of deceased veterans but also to sons and daughters of living veterans who have disabilities which are considered to be total and permanent in nature.

Generally, a young person (man or woman) must be between 18 and 26 years of age to attend school under the program. In certain instances, it is possible to begin school before age 18 and continue after age 26. Marriage is not a deterrent to this benefit.

SATISFACTORY ACADEMIC PROGRESS

All students who receive financial aid to attend Shawnee College must make “satisfactory academic progress” or have the financial aid withdrawn until “satisfactory academic progress” is achieved. “Satisfactory academic progress” is defined as making a 2.0 cumulative grade point for all work taken at Shawnee College. A student must be enrolled in at least 6 semester hours of credit in order to qualify for financial aid.
ADMISSIONS

Shawnee College will admit students qualified to complete any of its programs if space for effective instruction is available. General Education, Transfer and Occupational programs are offered. Preference in admissions will be given to students whose legal residence is within the Shawnee College district.

The requirements for admission include the filing of the following forms and numbers with the Dean of Students:

1. Application for admission
2. Transcript from high school or GED scores
3. ACT scores
4. Social Security number
5. Other materials required for certain programs

ACT SCORES

Each applicant should have an official copy of his American College Test (ACT) scores on file with the Director of Guidance. Shawnee College is a national testing center for ACT and students may take their tests on campus on the designated testing dates. Otherwise, test scores are to be requested from the American College Test Service, Box 168, Iowa City, Iowa 52240. If scores from the American College Test Service are requested, the Shawnee College identification number, 1173, should be given.

STUDENT REGISTRATION

Applicants accepted for admission will be asked to report to the college during the summer for testing and academic counseling. At that time they will be given guidance in planning their programs of study and arranging their class schedules. Final registration will take place during orientation week. Ordinarily no student will be admitted to a curriculum before he has been tested. Counseling and pre-registration for the fall and spring semesters and the summer session will take place during the final weeks of the previous semester.
RESIDENCE

Should the number of admission requests exceed the space available, students living within the Shawnee College district will be given first preference. Students living outside the district will be accepted in a manner determined by the college. If space is not available for all resident students applying, the college will accept those best qualified using rank in class, ability and achievement tests, and other evidence as required by the college.

TUITION AND FEES

Illinois law provides that tuition charged may not exceed 1/3 the per capita cost of operation. The community college district is also authorized to charge out-of-state students the full per capita costs.

The Board of Trustees may adjust tuition rates listed in this catalog as necessary.
Resident Tuition (Residents of Shawnee College District 531)

Students who do not officially withdraw from Shawnee College by the tenth day of instruction are required to pay all tuition and fees incurred during the registration.

Per Semester Hour..........................................................$14.00

Special lab fees may be charged for selected courses.

Official tuition and fees refund policy:

A refund of tuition and fees will be given up to the 10th day of instruction. Refund on the cost of books will be determined on an individual basis primarily depending upon the condition of the book.

Charge-Back Tuition (Residents of Illinois Outside Shawnee College District)

A student who resides in an Illinois high school district, not located within a community college district, may have partial costs paid by his high school district if he notifies that district at the time provided by law that he plans to attend a community college the following year.

A student who resides in a community college district which has not begun operation may have partial costs paid by his community college district if he notifies that district of his intent to attend a community college the following year.

A student who resides in an Illinois community college district with an operational community college may have partial costs paid by that student’s college district if that student enrolls in a program which the local community college does not offer. In all other cases students from these districts must pay their own costs.

Non-Resident Special Charges

Non-resident out-of-state students will pay special charges determined by per capita costs.
Other Fees (Non-Refundable)

Graduation fee ................................................................. $20.00

CHANGE OF SCHEDULE

Any change of schedule after registration has been completed shall be processed through the Office of the Director of Guidance and Counseling.

WITHDRAWAL FROM THE COLLEGE

To officially withdraw from Shawnee College, a student must make proper application at the Office of the Director of Guidance and Counseling. An orderly withdrawal procedure assures the student that there would be no procedural problems which would prevent his entering another institution or re-entering Shawnee College. TUITION AND FEES FOR CLASSES FOR WHICH STUDENTS HAVE NOT OFFICIALLY WITHDRAWN BY THE TENTH DAY OF INSTRUCTION ARE DUE AND PAYABLE.
ACADEMIC REGULATIONS

GRADING SYSTEM

The progress of students at the college is indicated by the grades received in each course of study. The following system is used:

<table>
<thead>
<tr>
<th>GRADE</th>
<th>GRADE POINTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>4</td>
</tr>
<tr>
<td>B</td>
<td>3</td>
</tr>
<tr>
<td>C</td>
<td>2</td>
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<tr>
<td>D</td>
<td>1</td>
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<tr>
<td>F</td>
<td>0</td>
</tr>
<tr>
<td>I</td>
<td>0</td>
</tr>
<tr>
<td>W</td>
<td>0</td>
</tr>
</tbody>
</table>

A grade of W will be given for any withdrawal within a designated period of each semester. After this designated period a grade of F will be given for withdrawal in all classes except in cases where extenuating circumstances prevail. In such cases and upon the recommendation of the appropriate dean, a W may be given to the student.

If a student has a legitimate reason approved by the appropriate dean for not finishing course work during the current semester, that student may receive an “Incomplete” on the transcript. The work, however, must be completed the following semester or the “Incomplete” becomes a grade of “F”. This does not include the summer session.

The grade point average (G.P.A.) is computed by multiplying the grade points earned in a course by the number of credit hours for the course, adding these products for each course, and dividing by the total number of credit hours. The grade points with an F will be computed in the G.P.A. unless the course is later repeated with a satisfactory grade. Neither credit hours nor grade points will be computed in those courses where a grade of I or W is assigned. A student’s standing in a curriculum is determined by his cumulative G.P.A.

A student who does unsatisfactory work will be given academic warning for that semester. If work is unsatisfactory for the following semester, the student will be placed on probation. At this point the student may choose to change curriculum or continue the current program, but in either case the student must improve his/her standing satisfactorily or be dropped from college for one academic semester. A student may attend a summer session to raise the G.P.A. to a satisfactory level. The minimum satisfactory average is 2.0.
ATTENDANCE

All students shall be required to attend classes on a regular basis. Excessive absences may lead to a student being denied the right to take the final examination and consequently to a grade of F in the course.

If extenuating circumstances make it necessary for the student to drop a class or withdraw from school, he/she must withdraw formally through the Office of the Director of Counseling.

SCHOLASTIC RECORDS AND STANDARDS

Class records of students are kept by each instructor and are available to the student upon request. A personal grade report is mailed each student at the completion of each term.

Complete permanent records are maintained by the registrar and official transcripts are available upon request, providing the student owes the college no debts and has no default student loans. Each student is entitled to three free transcripts.

TRANSFER OF CREDITS

Colleges and universities reserve the right to reject, in certain cases, credits for courses in which the grade of D was received. Also, they can accept or reject a student for admission based upon the student’s prior academic accomplishment.

If the student should change his curriculum in the process of transferring from Shawnee College to another college or university, credits for certain courses may not be applicable toward requirements in the new curriculum.

If a student continues the same transfer curriculum started at Shawnee College and has maintained a grade of C or better for all courses taken, it is anticipated that all credits will be accepted in transfer. While there may be a question of applicability of particular courses for bachelor degree requirements, it is the responsibility of the student to check with his academic advisor or the Director of Guidance and Counseling.

CLASSIFICATION OF STUDENTS

Students with fewer than 30 semester hours of acceptable credit are classified as freshmen; those with 30 or more semester hours of acceptable credit are classified as sophomores.
STUDENT ACADEMIC LOAD

It is assumed that the usual academic load for full-time students in this institution will be 12-16 semester hours of credit. The total credit hours for any student cannot exceed 18 in any one term nor 12 in any one summer session without written permission from the appropriate Dean.

PRESIDENT’S HONOR LIST

At the completion of each semester, the college will publish a President’s Honor List of academic achievement. Any full-time student who has a 4.0 grade point average for that semester will receive this honor.

DEANS’ LIST

At the completion of each semester, the college will publish a Deans’ Honor List of academic achievement. Any full-time student who has a 3.20 grade point average for that semester will be placed on this list.

GRADUATION WITH HONORS

If a student has completed associate degree requirements with a cumulative index of 3.50 or higher, the degree shall be awarded with honors.

CREDIT IN ESCROW

Early college admission may be granted in advance of high school graduation if the student is sixteen years of age or older. This credit is contingent on the successful completion of the high school course of study. In no event shall these credits be counted toward high school graduation. Permission for such enrollment must be in writing from the high school superintendent. All courses for escrow students must be completed within the current semester and no grade of INC. granted.

PROGRAMS OF STUDY

Several programs of study are available at Shawnee College leading to the degrees of Associate of Arts, Associate of Science, Associate of Applied Science, and Associate of General Studies; other programs have one or more of the following purposes:
1. For preparation to enter an occupation.
2. For general education and cultural development.
3. General studies for development and preparatory work.

A student planning to transfer to a four year college or university may complete the requirements of the first two years of college work at Shawnee College and after two years of further study in the institution to which he/she transfers graduate with a baccalaureate degree. The student should make a decision regarding transfer plans and consult with a counselor to arrange a program of courses which will satisfy the requirements of the institution of his choice.

REQUIREMENTS FOR GRADUATION

The specific requirements for graduation with an Associate Degree (other than Associate of General Studies) are:

1. Successful completion of at least 64 semester hours of college credit, at least 30 semester hours of which must be earned at Shawnee College.
2. Enrollment at Shawnee College for the last semester preceding graduation.
3. Satisfactory performance and completion of course requirements for the curriculum chosen by the student as outlined.
4. A satisfactory grade on the examination covering the constitutions of the State of Illinois and of the United States as required by Illinois law (the examination is given in American Government 117 which is a required course for all degree candidates).
5. A cumulative grade point average for all work taken at Shawnee College of 2.00 (C) or higher.
6. Successful completion of the course, Introduction to College Life, a one semester hour course designed to orient the student to the educational opportunities and facilities of the college.

A candidate for an Associate of Arts Degree from Shawnee College must meet the following requirements:

1. Successful completion of eight semester hours of college credit in each of the four basic divisions:
   a. Language Communications
      1) Includes 6 required semester hours of English Composition 111, 112.
2) Excludes foreign language
   b. Science and Mathematics
   c. Social Science
      1) Includes 3 required semester hours of American Government 117.
   d. Humanities

2. Successful completion of eight semester hours of college credit in a sequence of foreign language. A student who has two or more years of high school foreign language may enroll in the second year of foreign language if that student obtains permission from the appropriate dean.

A candidate for an Associate of Science degree from Shawnee College must meet the following requirements:

1. Successful completion of eight semester hours of college credit in each of the three basic divisions:
   a. Language Communications
      1) Includes 6 required semester hours of English Composition 111, 112.
      2) Excludes foreign language.
   b. Humanities
   c. Social Science
      1) Includes 3 required semester hours of American Government 117.

2. Successful completion of a minimum of 16 semester hours of college credit in the areas of Science and/or Mathematics.

In the above Associate Degree programs, Literature courses may apply to either the Humanities or Language Communications divisions, but may not apply to both. Western Civilization courses may apply to either Humanities or Social Science divisions, but not to both.

GENERAL STUDIES PROGRAM

This program is designed to give the student an opportunity to develop the student's abilities, to remove deficiencies, and to qualify for the curriculum of the student's choice. The program is designed and supervised by the student's faculty advisor within guidelines established by the college. This general studies program is not the same as a general studies or general education program at a four-year institution.
GRADUATION REQUIREMENTS

Specific requirements for graduation with the Associate of General Studies Degree are:

1. Successful completion of at least 64 semester hours of college credit with at least 30 of the above 64 hours earned at Shawnee College.

2. A cumulative grade point average of 2.00 (C) for all courses presented for graduation.

3. Enrolled at Shawnee College during the semester immediately prior to graduation.

4. Includes 3 required semester hours of American Government 117.

CONTINUING EDUCATION

The continuing education program at Shawnee College is considered as an extension of programs rather than a separate division of the college. However, some courses are available under the general studies division which are not included in any other college program.

A program for general educational development (G.E.D.) is available in the general studies division which serves to prepare adults to successfully complete requirements for the high school equivalency (G.E.D.) test. This test is administered at Shawnee College. For further information, students should contact the Director of Guidance and Counseling.
APPLIED BIOLOGICAL AND AGRICULTURAL OCCUPATIONS

AGRI-BUSINESS

This program leads to an Associate of Applied Science degree and prepares the student to provide the farmer with goods and services. The types of jobs include salesmen in feeds, seeds, fertilizers, machinery, warehouse managers and employers, and self-employed dealers in agricultural supplies.

FRESHMAN YEAR

<table>
<thead>
<tr>
<th>Course</th>
<th>Sem. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIRST SEMESTER</td>
<td></td>
</tr>
<tr>
<td>English 104 or 111</td>
<td>3</td>
</tr>
<tr>
<td>Intro. to College Life 101</td>
<td>1</td>
</tr>
<tr>
<td>Accounting 111</td>
<td>4</td>
</tr>
<tr>
<td>Ag. Economics 126</td>
<td>3</td>
</tr>
<tr>
<td>Soil Science 123</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total Hours</strong></td>
<td><strong>14</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course</th>
<th>Sem. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUMMER SESSION</td>
<td></td>
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<tr>
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<td>4</td>
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</table>

<table>
<thead>
<tr>
<th>Course</th>
<th>Sem. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>SECOND SEMESTER</td>
<td></td>
</tr>
<tr>
<td>English 105 or 112</td>
<td>3</td>
</tr>
<tr>
<td>Government 117</td>
<td>3</td>
</tr>
<tr>
<td>Business Machines 125</td>
<td>3</td>
</tr>
<tr>
<td>Accounting 112</td>
<td>4</td>
</tr>
<tr>
<td>Animal Science 223</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total Hours</strong></td>
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SOPHOMORE YEAR

<table>
<thead>
<tr>
<th>Course</th>
<th>Sem. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIRST SEMESTER</td>
<td></td>
</tr>
<tr>
<td>Speech 111</td>
<td>3</td>
</tr>
<tr>
<td>Business Math 115 or Intermediate Algebra 114</td>
<td>3-5</td>
</tr>
<tr>
<td>Business Law 214</td>
<td>3</td>
</tr>
<tr>
<td>Use of Ag Chemicals 230</td>
<td>3</td>
</tr>
<tr>
<td>Crop Science 132</td>
<td>3</td>
</tr>
<tr>
<td>Elective</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total Hours</strong></td>
<td><strong>17-19</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course</th>
<th>Sem. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>SECOND SEMESTER</td>
<td></td>
</tr>
<tr>
<td>Animal Nutrition 122</td>
<td>3</td>
</tr>
<tr>
<td>Practical Psychology 214 or Intro to Psychology 211</td>
<td>3</td>
</tr>
<tr>
<td>Health 111</td>
<td>2</td>
</tr>
<tr>
<td>Principles of Sales 228</td>
<td>3</td>
</tr>
<tr>
<td>Business Finance 220</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total Hours</strong></td>
<td><strong>14</strong></td>
</tr>
</tbody>
</table>
AGRICULTURAL RESOURCES

A two-year curriculum leading to an Associate of Applied Science degree and preparing the student for a variety of jobs concerned with conservation and effective use of agricultural resources.

Proper selection of electives will allow the student to emphasize conservation, forestry, or outdoor recreation and park management within the total agricultural resources program.

FIRST SEMESTER

<table>
<thead>
<tr>
<th>Course</th>
<th>Sem. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>English 104 or 111</td>
<td>3</td>
</tr>
<tr>
<td>Intro. to College Life 101</td>
<td>1</td>
</tr>
<tr>
<td>Business Math 115</td>
<td>3</td>
</tr>
<tr>
<td>Soil Science 123</td>
<td>3</td>
</tr>
<tr>
<td>Conservation of Natural</td>
<td></td>
</tr>
<tr>
<td>Resources 127</td>
<td></td>
</tr>
<tr>
<td>Health 111</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total Hours</strong></td>
<td><strong>15</strong></td>
</tr>
</tbody>
</table>

SUMMER SESSION

<table>
<thead>
<tr>
<th>Course</th>
<th>Sem. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agricultural Resources Internship 240</td>
<td>4</td>
</tr>
</tbody>
</table>

SECOND SEMESTER

<table>
<thead>
<tr>
<th>Course</th>
<th>Sem. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>English 105 or 112</td>
<td>3</td>
</tr>
<tr>
<td>Government 117</td>
<td>3</td>
</tr>
<tr>
<td>Soil Science 124</td>
<td>3</td>
</tr>
<tr>
<td>Conservation of Water</td>
<td></td>
</tr>
<tr>
<td>Resources 128</td>
<td></td>
</tr>
<tr>
<td>Outdoor Recreation &amp; Park</td>
<td>3</td>
</tr>
<tr>
<td>Management 243</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total Hours</strong></td>
<td><strong>15</strong></td>
</tr>
</tbody>
</table>

SOPHOMORE YEAR

FIRST SEMESTER

<table>
<thead>
<tr>
<th>Course</th>
<th>Sem. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction to Forestry 225</td>
<td>3</td>
</tr>
<tr>
<td>Introduction to Wildlife 227</td>
<td>3</td>
</tr>
<tr>
<td>Application &amp; Use of Agriculture</td>
<td></td>
</tr>
<tr>
<td>Chemicals 230</td>
<td>3</td>
</tr>
<tr>
<td>Crop Science 132</td>
<td>3</td>
</tr>
<tr>
<td>Elective</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total Hours</strong></td>
<td><strong>15</strong></td>
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</table>

SECOND SEMESTER

<table>
<thead>
<tr>
<th>Course</th>
<th>Sem. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plant Propagation 231</td>
<td>3</td>
</tr>
<tr>
<td>Surveying 129</td>
<td>3</td>
</tr>
<tr>
<td>Practical Psychology 214</td>
<td>3</td>
</tr>
<tr>
<td>Nature Interpretation 244</td>
<td>3</td>
</tr>
<tr>
<td>Elective</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total Hours</strong></td>
<td><strong>15</strong></td>
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</tbody>
</table>

RECOMMENDED ELECTIVES

<table>
<thead>
<tr>
<th>Course</th>
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</thead>
<tbody>
<tr>
<td>Biology 111</td>
</tr>
<tr>
<td>Botany 213</td>
</tr>
<tr>
<td>Speech 111</td>
</tr>
<tr>
<td>Forest Management 226</td>
</tr>
<tr>
<td>Wildlife Management 228</td>
</tr>
</tbody>
</table>
ANIMAL AND CROP SCIENCE

A two-year curriculum leading to an Associate of Applied Science degree designed to improve in depth the student’s ability and knowledge to manage a farm producing livestock and/or crops.

FRESHMAN YEAR

<table>
<thead>
<tr>
<th>Course</th>
<th>Sem. Hrs.</th>
<th>FIRST SEMESTER</th>
<th></th>
<th>SECOND SEMESTER</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>English 104 or 111</td>
<td>3</td>
<td></td>
<td></td>
<td>English 105 or 112</td>
<td>3</td>
</tr>
<tr>
<td>Intro. to College Life 101</td>
<td>1</td>
<td></td>
<td></td>
<td>Soil Science 124</td>
<td>3</td>
</tr>
<tr>
<td>Business Math 115 or</td>
<td>1</td>
<td></td>
<td></td>
<td>Government 117</td>
<td>3</td>
</tr>
<tr>
<td>Intermediate Algebra 115</td>
<td>3.5</td>
<td></td>
<td></td>
<td>Prac. Psychology 214 or</td>
<td>3</td>
</tr>
<tr>
<td>Soil Science 123</td>
<td>3</td>
<td></td>
<td></td>
<td>Intro. to Psychology 211</td>
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<td>Ag. Economics 126</td>
<td>3</td>
<td></td>
<td></td>
<td>Animal Science 223</td>
<td>3</td>
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<tr>
<td>Health 111</td>
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<td></td>
<td></td>
<td>Total Hours</td>
<td>15-17</td>
</tr>
<tr>
<td>Total Hours</td>
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SUMMER SESSION

<table>
<thead>
<tr>
<th>Course</th>
<th>Sem. Hrs.</th>
<th>Animal and Crop Science</th>
<th>4</th>
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</thead>
<tbody>
<tr>
<td>Internship 247</td>
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<td>Total Hours</td>
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<td></td>
<td>4</td>
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SOPHOMORE YEAR

<table>
<thead>
<tr>
<th>Course</th>
<th>Sem. Hrs.</th>
<th>FIRST SEMESTER</th>
<th></th>
<th>SECOND SEMESTER</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Application and Use of Agricultural Chemical</td>
<td>3</td>
<td></td>
<td></td>
<td>Plant Propagation 231</td>
<td>3</td>
</tr>
<tr>
<td>Crop Science 132</td>
<td>3</td>
<td></td>
<td></td>
<td>Forage Production 222</td>
<td>3</td>
</tr>
<tr>
<td>Ag. Management 130</td>
<td>3</td>
<td></td>
<td></td>
<td>Animal Nutrition 122</td>
<td>3</td>
</tr>
<tr>
<td>Livestock Evaluation and Selection 249</td>
<td>3</td>
<td></td>
<td></td>
<td>Surveying 129</td>
<td>3</td>
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<tr>
<td>Elective</td>
<td>3</td>
<td></td>
<td></td>
<td>Elective</td>
<td>3-1</td>
</tr>
<tr>
<td>Total Hours</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>15-13</td>
</tr>
</tbody>
</table>
GREENHOUSE MANAGEMENT

This program should provide the student with the necessary knowledge and skills for employment in the area of greenhouse management. A certificate will be awarded upon successful completion of the program.

FIRST SEMESTER

<table>
<thead>
<tr>
<th>Course</th>
<th>Sem. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction to Greenhouse</td>
<td></td>
</tr>
<tr>
<td>Operation 112</td>
<td>3</td>
</tr>
<tr>
<td>Soil Science 123</td>
<td>3</td>
</tr>
<tr>
<td>Botany 213</td>
<td>4</td>
</tr>
<tr>
<td>Introduction to Horticulture 111</td>
<td>5</td>
</tr>
<tr>
<td>Insect Pest &amp; Plant Disease 128</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total Hours</strong></td>
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</table>

SECOND SEMESTER

<table>
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<tr>
<th>Course</th>
<th>Sem. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Landscape Design 113</td>
<td>3</td>
</tr>
<tr>
<td>Greenhouse Management 130</td>
<td>3</td>
</tr>
<tr>
<td>Horticulture Business Management 131</td>
<td>3</td>
</tr>
<tr>
<td>Internship 132</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total Hours</strong></td>
<td><strong>14</strong></td>
</tr>
</tbody>
</table>
HORTICULTURE—NURSERY MANAGEMENT

This program should provide the student with the necessary knowledge and skills for employment in such areas as horticulture-nursery operations. A certificate will be awarded upon successful completion of the program.

<table>
<thead>
<tr>
<th>FIRST SEMESTER</th>
<th>SECOND SEMESTER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction to Greenhouse</td>
<td>Landscape Design 113</td>
</tr>
<tr>
<td>Operation 112</td>
<td>Nursery Operations 127</td>
</tr>
<tr>
<td>Soil Science 123</td>
<td>Horticultural Business</td>
</tr>
<tr>
<td>Botany 213</td>
<td>Management 131</td>
</tr>
<tr>
<td>Introduction to Horticulture 111</td>
<td>Internship 132</td>
</tr>
<tr>
<td>Insect Pest &amp; Plant Disease 128</td>
<td>Total Hours 15</td>
</tr>
<tr>
<td>Total Hours</td>
<td>Total Hours</td>
</tr>
</tbody>
</table>

HORTICULTURAL TECHNOLOGY

This program should provide the student with the necessary knowledge and skills in the general area of horticulture such as golf course greens keeper, floriculture, nursery operator and landscape planner. A certificate will be awarded upon successful completion of the program.

<table>
<thead>
<tr>
<th>FIRST SEMESTER</th>
<th>SECOND SEMESTER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction to Greenhouse</td>
<td>Landscape Design 113</td>
</tr>
<tr>
<td>Operation 112</td>
<td>Turfgrass Culture 125</td>
</tr>
<tr>
<td>Soil Science 123</td>
<td>Nursery Operations 127</td>
</tr>
<tr>
<td>Botany 213</td>
<td>Greenhouse Management 130</td>
</tr>
<tr>
<td>Introduction to Horticulture 111</td>
<td>Horticultural Business</td>
</tr>
<tr>
<td>Insect Pest &amp; Plant Disease 128</td>
<td>Management 131</td>
</tr>
<tr>
<td>Total Hours</td>
<td>Total Hours 17</td>
</tr>
</tbody>
</table>

SUMMER SESSION

<table>
<thead>
<tr>
<th>SUMMER SESSION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internship 132</td>
</tr>
<tr>
<td>Total Hours 5</td>
</tr>
</tbody>
</table>

ASSOCIATE OF APPLIED SCIENCE DEGREE

The preceding certificate program may be extended into an Associate of Applied Science degree upon successful completion of additional semester hours consisting of at least six semester hours in each of the following areas: Communications, Mathematics and Science, Social Studies (must include American Government 117), and Humanities. A total of 65 semester hours is required.
### TURFGRASS MANAGEMENT

This program should provide the student with the necessary knowledge and skills for employment in such areas as golf course greens keeping. A certificate will be awarded upon successful completion of the program.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction to Greenhouse</td>
<td></td>
<td>Botany 213</td>
<td></td>
</tr>
<tr>
<td>Operation 112</td>
<td>3</td>
<td>Turfgrass Culture 123</td>
<td>4</td>
</tr>
<tr>
<td>Soil Science 123</td>
<td></td>
<td>Horticultural Business</td>
<td></td>
</tr>
<tr>
<td>Landscape Design 113</td>
<td>3</td>
<td>Management 131</td>
<td>3</td>
</tr>
<tr>
<td>Introduction to Horticulture 111</td>
<td>5</td>
<td>Internship 132</td>
<td>5</td>
</tr>
<tr>
<td>Insect Pest &amp; Plant Disease 128</td>
<td>3</td>
<td>Total Hours</td>
<td>16</td>
</tr>
<tr>
<td>Total Hours</td>
<td>17</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### WASTEWATER TREATMENT TECHNOLOGY

This program will provide the student with the required knowledge and skills appropriate for employment in the area of wastewater technology. It will prepare the student for employment in sewage treatment plants or other related areas of wastewater technology. A certificate will be awarded upon successful completion of the program.

This program is designed as an individualized, self-paced program and may require more than one semester to complete.

<table>
<thead>
<tr>
<th>FIRST SEMESTER</th>
<th>Sem. Hrs.</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction to Water/Wastewater Technology 110</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Basic Wastewater Treatment 111</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Advanced Wastewater Treatment 113</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Laboratory Analysis of Wastewater 116</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water/Wastewater Treatment Internship 133</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Hours</td>
<td>16</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
WATER TREATMENT TECHNOLOGY

This program will provide the student with the required knowledge and skills appropriate for employment in the area of water treatment technology. It will prepare the student for employment in water plants and other related areas of water treatment technology. A certificate will be awarded upon successful completion of the program.

This program is designed as an individualized, self-paced program and may require more than one semester to complete.

FIRST SEMESTER

<table>
<thead>
<tr>
<th>Course</th>
<th>Sem. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction to Water/Wastewater Technology</td>
<td>110</td>
</tr>
<tr>
<td>Basic Water Treatment 112</td>
<td>3</td>
</tr>
<tr>
<td>Advanced Water Treatment 114</td>
<td>3</td>
</tr>
<tr>
<td>Laboratory Analysis of Water 115</td>
<td>3</td>
</tr>
<tr>
<td>Water/Wastewater Treatment Internship 133</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total Hours</strong></td>
<td><strong>16</strong></td>
</tr>
</tbody>
</table>

WATER/WASTEWATER TREATMENT TECHNOLOGY

This program will provide the student with the required knowledge and skills appropriate for employment in the area of water/wastewater technology. It will prepare the student for employment in water plants, sanitation plants or other related areas in water and/or wastewater technology. A certificate will be awarded upon successful completion of the program.

This program is designed as an individualized, self-paced program and may require more than one semester to complete.

SECOND SEMESTER

<table>
<thead>
<tr>
<th>Course</th>
<th>Sem. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advanced Wastewater Treatment 113</td>
<td>3</td>
</tr>
<tr>
<td>Advanced Water Treatment 114</td>
<td>3</td>
</tr>
<tr>
<td>Laboratory Analysis of Wastewater 116</td>
<td>3</td>
</tr>
<tr>
<td>Water/Wastewater Treatment Internship 133</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total Hours</strong></td>
<td><strong>14</strong></td>
</tr>
</tbody>
</table>
WILDLIFE TECHNOLOGY

A two-year curriculum designed to prepare the student for employment in a variety of jobs related to wildlife management and conservation. The Associate of Applied Science degree will be awarded to the student upon successful completion of this program.

FRESHMAN YEAR

<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>English 104 or 111</td>
<td>3</td>
<td>English 105 or 112</td>
<td>3</td>
</tr>
<tr>
<td>Intro. to College Life 101</td>
<td>1</td>
<td>Soil Science 124</td>
<td>3</td>
</tr>
<tr>
<td>Business Math 113</td>
<td>3</td>
<td>Government 117</td>
<td>3</td>
</tr>
<tr>
<td>Soil Science 123</td>
<td>3</td>
<td>Animal Science 223</td>
<td>3</td>
</tr>
<tr>
<td>Cons. of Nat. Res. 127</td>
<td>3</td>
<td>Conservation of Water Res. 128</td>
<td>3</td>
</tr>
<tr>
<td>Health 111</td>
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</table>

Total Hours 15

SUMMER SESSION

<table>
<thead>
<tr>
<th>Sem. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wildlife Technology Internship 246</td>
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</tbody>
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SOPHOMORE YEAR

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Ag. Economics 126</td>
<td>3</td>
<td>Wildlife Mgmt. 228</td>
<td>3</td>
</tr>
<tr>
<td>Intro. to Forestry 225</td>
<td>3</td>
<td>Plant Propagation 231</td>
<td>3</td>
</tr>
<tr>
<td>Intro. to Wildlife 227</td>
<td>3</td>
<td>Prac. Psychology 214</td>
<td>3</td>
</tr>
<tr>
<td>Application and Use of Agricultural</td>
<td>3</td>
<td>Elective</td>
<td>6</td>
</tr>
<tr>
<td>Chemicals 230</td>
<td>3</td>
<td>Total Hours</td>
<td>15</td>
</tr>
<tr>
<td>Crop Science 132</td>
<td>3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total Hours 15
BUSINESS, MARKETING AND MANAGEMENT OCCUPATIONS

ACCOUNTING

This is a two-year curriculum leading to an Associate of Applied Science degree in accounting and is designed to provide the student with entry level skills as a junior accountant. The student should have a basic knowledge of accounting as it pertains to sales and purchases, commissions, piecework, payrolls, discounts, insurance, and tax computations.

FRESHMAN YEAR

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounting 111</td>
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<td>Accounting 112</td>
<td>4</td>
</tr>
<tr>
<td>English 104 or 111</td>
<td>3</td>
<td>English 105 or 112</td>
<td>3</td>
</tr>
<tr>
<td>Business Law 214</td>
<td>3</td>
<td>Practical Psychology 214</td>
<td>3</td>
</tr>
<tr>
<td>Business Machines 129</td>
<td>3</td>
<td>Government 117</td>
<td>3</td>
</tr>
<tr>
<td>Business Organization 119</td>
<td>3</td>
<td>Business Math 113</td>
<td>3</td>
</tr>
<tr>
<td>Intro. to College Life 101</td>
<td>1</td>
<td>Total Hours</td>
<td>16</td>
</tr>
<tr>
<td>Total Hours</td>
<td>17</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

SOPHOMORE YEAR

<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounting 211</td>
<td>4</td>
<td>Accounting 212</td>
<td>4</td>
</tr>
<tr>
<td>Cost Accounting 221</td>
<td>3</td>
<td>Auditing 222</td>
<td>3</td>
</tr>
<tr>
<td>Business English 117</td>
<td>3</td>
<td>Health 111</td>
<td>2</td>
</tr>
<tr>
<td>Introduction to Management 128</td>
<td>3</td>
<td>Business Internship 230</td>
<td>4</td>
</tr>
<tr>
<td>Elective</td>
<td>2</td>
<td>Business Finance &amp; Credit 220</td>
<td>3</td>
</tr>
<tr>
<td>Total Hours</td>
<td>15</td>
<td>Total Hours</td>
<td>16</td>
</tr>
</tbody>
</table>
CLERK-TYPIST

The purpose of this program is to provide students with an intensive training plan of relatively brief duration, which equips them with the skills necessary for gainful employment in the general clerical area of business and industry.

<table>
<thead>
<tr>
<th>FIRST SEMESTER</th>
<th>Sem. Hrs</th>
<th>SECOND SEMESTER</th>
<th>Sem. Hrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>English 104 or 111</td>
<td>3</td>
<td>Intermediate Typewriting 122</td>
<td>3</td>
</tr>
<tr>
<td>Typewriting 121</td>
<td>3</td>
<td>Secretarial Procedures 226</td>
<td>4</td>
</tr>
<tr>
<td>Business Math 115</td>
<td>3</td>
<td>Business English 117</td>
<td>3</td>
</tr>
<tr>
<td>Records Management 120</td>
<td>3</td>
<td>Business Internship 230</td>
<td>4</td>
</tr>
<tr>
<td>Business Machines 125</td>
<td>3</td>
<td>Word Processing 227</td>
<td>3</td>
</tr>
<tr>
<td>Intro. to College Life 101</td>
<td>1</td>
<td>Total Hours</td>
<td>17</td>
</tr>
<tr>
<td>Total Hours</td>
<td>16</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

EXECUTIVE SECRETARY

A two-year curriculum designed to prepare the student for employment as a secretary capable of taking dictation, transcribing, typing, handling appointments, screening office visitors, reading and writing routine office correspondence. The Associate of Applied Science degree will be awarded upon successful completion of the curriculum.

FRESHMAN YEAR

<table>
<thead>
<tr>
<th>FIRST SEMESTER</th>
<th>Sem. Hrs</th>
<th>SECOND SEMESTER</th>
<th>Sem. Hrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shorthand 123</td>
<td>3</td>
<td>Shorthand &amp; Transcription 124</td>
<td>3</td>
</tr>
<tr>
<td>Typewriting 121</td>
<td>3</td>
<td>Intermediate Typewriting 122</td>
<td>3</td>
</tr>
<tr>
<td>Practical Psychology 214</td>
<td>3</td>
<td>Government 117</td>
<td>3</td>
</tr>
<tr>
<td>English 104 or 111</td>
<td>3</td>
<td>English 105 or 112</td>
<td>3</td>
</tr>
<tr>
<td>Business Machines 125</td>
<td>3</td>
<td>Business Math 115</td>
<td>3</td>
</tr>
<tr>
<td>Intro. to College Life 101</td>
<td>1</td>
<td>Health 111</td>
<td>2</td>
</tr>
<tr>
<td>Total Hours</td>
<td>16</td>
<td>Total Hours</td>
<td>17</td>
</tr>
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</table>

SOPHOMORE YEAR

<table>
<thead>
<tr>
<th>FIRST SEMESTER</th>
<th>Sem. Hrs</th>
<th>SECOND SEMESTER</th>
<th>Sem. Hrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business Law 214</td>
<td>3</td>
<td>Secretarial Procedures 226</td>
<td>4</td>
</tr>
<tr>
<td>Typewriting 223</td>
<td>3</td>
<td>Business English 117</td>
<td>3</td>
</tr>
<tr>
<td>Shorthand &amp; Trans. 224</td>
<td>3</td>
<td>Shorthand &amp; Trans. 225</td>
<td>3</td>
</tr>
<tr>
<td>Records Management 120</td>
<td>3</td>
<td>Business Internship 230</td>
<td>4</td>
</tr>
<tr>
<td>Accounting 111</td>
<td>4</td>
<td>Word Processing 227</td>
<td>3</td>
</tr>
<tr>
<td>Total Hours</td>
<td>16</td>
<td>Total Hours</td>
<td>17</td>
</tr>
</tbody>
</table>
CERTIFIED PROFESSIONAL SECRETARY PROGRAM

The Certified Professional Secretary curriculum is designed to prepare individuals to pass the Certified Professional Secretary examination. The Certified Professional Secretary must demonstrate proficiency in areas of environmental relationships in business (human relationships); business and public policy (business law); economics of management; financial analysis and the mathematics of business; communications and decision making; and office procedures, including the fundamentals of business data processing.

Upon the successful completion of this curriculum, students will be awarded a certificate of completion.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Office Procedures and Administration 230</td>
<td>1</td>
<td>Economics and Management 233</td>
<td>1</td>
</tr>
<tr>
<td>Business and Public Policy 231</td>
<td>1</td>
<td>Financial Analysis and Math 234</td>
<td>1</td>
</tr>
<tr>
<td>Environmental Relationships in Business 232</td>
<td>1</td>
<td>Communications and Decision Making 235</td>
<td>1</td>
</tr>
<tr>
<td>Intermediate Typewriting 122</td>
<td>3</td>
<td>Shorthand &amp; Transcription 124</td>
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<tr>
<td><strong>Total Hours</strong></td>
<td>6</td>
<td><strong>Total Hours</strong></td>
<td>6</td>
</tr>
</tbody>
</table>

LEGAL SECRETARY

A two-year curriculum designed to prepare a student for employment as a legal secretary capable of meeting the demands of the busy legal profession. The lawyer depends on the typing of legal documents, dictation and transcription, research, telephone and reception service, filing, records management, and legal secretarial administration that can only be performed by a well-trained legal secretary. The Associate of Applied Science degree will be awarded upon successful completion of the curriculum.

FRESHMAN YEAR

<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>Business Law 214</td>
<td>3</td>
<td>Business Law 215</td>
<td>3</td>
</tr>
<tr>
<td>English 104 or 111</td>
<td>3</td>
<td>English 105 or 112</td>
<td>3</td>
</tr>
<tr>
<td>Shorthand 123</td>
<td>3</td>
<td>Shorthand &amp; Transcription 124</td>
<td>3</td>
</tr>
<tr>
<td>Beginning Typewriting 121</td>
<td>3</td>
<td>Intermediate Typewriting 122</td>
<td>3</td>
</tr>
<tr>
<td>Intro. to College Life 101</td>
<td>1</td>
<td>Practical Psychology 214</td>
<td>3</td>
</tr>
<tr>
<td>Government 117</td>
<td>3</td>
<td><strong>Total Hours</strong></td>
<td>15</td>
</tr>
<tr>
<td><strong>Total Hours</strong></td>
<td>16</td>
<td></td>
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</tr>
</tbody>
</table>
**SOPHOMORE YEAR**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Business English 117</td>
<td>3</td>
<td>Shorthand &amp; Trans. 225</td>
<td>3</td>
</tr>
<tr>
<td>Shorthand &amp; Trans. 224</td>
<td>3</td>
<td>Secretarial Procedures 226</td>
<td>4</td>
</tr>
<tr>
<td>Records Management 120</td>
<td>3</td>
<td>Business Internship 230</td>
<td>4</td>
</tr>
<tr>
<td>Accounting 111</td>
<td>4</td>
<td>Word Processing 227</td>
<td>3</td>
</tr>
<tr>
<td>Typewriting 223</td>
<td>3</td>
<td>Legal Terminology 229</td>
<td>3</td>
</tr>
<tr>
<td>Health 111</td>
<td>2</td>
<td>Total Hours</td>
<td>17</td>
</tr>
<tr>
<td>Total Hours</td>
<td>18</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**MEDICAL SECRETARY**

A two-year curriculum designed to prepare the student for employment as a medical secretary capable of taking and transcribing medical dictation, writing reports, and maintaining patient files. The Associate of Applied Science degree will be awarded upon successful completion of the curriculum.

**FRESHMAN YEAR**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Business Machines 123</td>
<td>3</td>
<td>English 105 or 112</td>
<td>3</td>
</tr>
<tr>
<td>English 104 or 111</td>
<td>3</td>
<td>Shorthand &amp; Transcription 124</td>
<td>3</td>
</tr>
<tr>
<td>Shorthand 123</td>
<td>3</td>
<td>Intermediate Typewriting 122</td>
<td>3</td>
</tr>
<tr>
<td>Practical Psychology 214</td>
<td>3</td>
<td>Government 117</td>
<td>3</td>
</tr>
<tr>
<td>Beginning Typewriting 121</td>
<td>3</td>
<td>Business Math 115</td>
<td>3</td>
</tr>
<tr>
<td>Intro. to College Life 101</td>
<td>1</td>
<td>Health 111</td>
<td>2</td>
</tr>
<tr>
<td>Total Hours</td>
<td>16</td>
<td>Total Hours</td>
<td>17</td>
</tr>
</tbody>
</table>

**SOPHOMORE YEAR**

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Medical Terminology 228</td>
<td>3</td>
<td>Shorthand &amp; Trans. 225</td>
<td>3</td>
</tr>
<tr>
<td>Shorthand &amp; Trans. 224</td>
<td>3</td>
<td>Secretarial Procedures 226</td>
<td>4</td>
</tr>
<tr>
<td>Records Management 120</td>
<td>3</td>
<td>Business Internship 230</td>
<td>4</td>
</tr>
<tr>
<td>Accounting 111</td>
<td>4</td>
<td>Business English 117</td>
<td>3</td>
</tr>
<tr>
<td>Typewriting 223</td>
<td>3</td>
<td>Word Processing 227</td>
<td>3</td>
</tr>
<tr>
<td>Total Hours</td>
<td>16</td>
<td>Total Hours</td>
<td>17</td>
</tr>
</tbody>
</table>
MID MANAGEMENT

This curriculum is designed to prepare the student for employment as a liaison between employees and top level management in the business world. The Associate of Applied Science degree in Mid Management will be awarded upon successful completion of the curriculum.

<table>
<thead>
<tr>
<th>FRESHMAN YEAR</th>
<th></th>
<th>SEM. HRS.</th>
<th></th>
<th>SEM. HRS.</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIRST SEMESTER</td>
<td></td>
<td></td>
<td>SECOND SEMESTER</td>
<td></td>
</tr>
<tr>
<td>English 104 or 111</td>
<td></td>
<td>3</td>
<td>English 105 or 112</td>
<td>3</td>
</tr>
<tr>
<td>Business Organization 119</td>
<td></td>
<td>3</td>
<td>Practical Psychology 214</td>
<td>3</td>
</tr>
<tr>
<td>Principles of Marketing 126</td>
<td></td>
<td>3</td>
<td>Business Math 115</td>
<td>3</td>
</tr>
<tr>
<td>Government 117</td>
<td></td>
<td>3</td>
<td>Principles of Sales 228</td>
<td>3</td>
</tr>
<tr>
<td>Intro. to College Life 101</td>
<td></td>
<td>1</td>
<td>Elective</td>
<td>3</td>
</tr>
<tr>
<td>Business Machines 125</td>
<td></td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total Hours</strong></td>
<td>16</td>
<td></td>
<td><strong>Total Hours</strong></td>
<td>15</td>
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</table>

<table>
<thead>
<tr>
<th>SOPHOMORE YEAR</th>
<th></th>
<th>SEM. HRS.</th>
<th></th>
<th>SEM. HRS.</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIRST SEMESTER</td>
<td></td>
<td></td>
<td>SECOND SEMESTER</td>
<td></td>
</tr>
<tr>
<td>Accounting 111</td>
<td></td>
<td>4</td>
<td>Accounting 112</td>
<td>4</td>
</tr>
<tr>
<td>Introduction to Management 128</td>
<td></td>
<td>3</td>
<td>Business Finance &amp; Cr. 220</td>
<td>3</td>
</tr>
<tr>
<td>Business English 117</td>
<td></td>
<td>3</td>
<td>Business Law 215</td>
<td>3</td>
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<tr>
<td>Business Law 214</td>
<td></td>
<td>3</td>
<td>Business Internship 230</td>
<td>4</td>
</tr>
<tr>
<td>Elective</td>
<td></td>
<td>3</td>
<td>Elective</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total Hours</strong></td>
<td>16</td>
<td></td>
<td><strong>Total Hours</strong></td>
<td>17</td>
</tr>
</tbody>
</table>
HEALTH OCCUPATIONS

NURSE ASSISTANT TRAINING PROGRAM

The aim of the Nurse Assistant Program at Shawnee College is to teach and train the nurse assistant to function effectively in basic nursing skills and as an integral part of the health team under the direction of a registered nurse or licensed practical nurse in a nursing home or in home health care.

Upon successful completion of this course, the student will be awarded a certificate.

Nurse Assistant 100 ......................................................... 6 semester hours

PRACTICAL NURSING

This curriculum is designed to prepare students for entry into the nursing profession upon completion of one year of training. The student should develop a relatively high degree of expertise in the following:

(1) Nursing the patient whose health has been affected by the aging process.

(2) Total nursing care for the adult whose nursing needs are relatively stable.

(3) Caring for the adult whose health has been impaired by nutritional deficiencies.

(4) Caring for the mother and new-born infant with emphasis on the nutritional needs.

(5) Caring for the infant and child whose nursing needs are relatively stable.

(6) Nursing the patient who requires care due to mental deficiencies or illness. This care should assist the patient in performing those activities of daily living.

Clinical experience will be conducted in hospitals and nursing homes.

Students will pay for their uniforms, books, transportation, insurance, and other necessary expenses.

Plans for enrollment should be made early since all admission requirements must be met before entering the program. Entrance requirements include a personal interview, satisfactory completion of pre-testing, and good
health as determined by a physical and dental examination. Each entering student must have graduated from high school or possessed a General Education Development certificate.

### PRACTICAL NURSING

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Intro. to basic Nutrition 140</td>
<td>1</td>
<td>Nursing Skills 148</td>
<td>3</td>
</tr>
<tr>
<td>Basic Nursing Skills 141</td>
<td>6</td>
<td>Health and Intro. to</td>
<td></td>
</tr>
<tr>
<td>Body Structure &amp; Functions 142</td>
<td>3</td>
<td>Medical Surgical Nursing 149</td>
<td>3</td>
</tr>
<tr>
<td>Communications 143</td>
<td>1</td>
<td>Medical Surgical Nursing 150</td>
<td>3</td>
</tr>
<tr>
<td>Personal &amp; Vocational Rela. 144</td>
<td>1</td>
<td>Nursing Care of Mother</td>
<td></td>
</tr>
<tr>
<td>Intro. to Pharmacology 146</td>
<td>2</td>
<td>and Newborn 151</td>
<td>3</td>
</tr>
<tr>
<td>Nursing Care of Geriatric Patient 147</td>
<td>2</td>
<td>Nursing Care of the Child 152</td>
<td>3</td>
</tr>
<tr>
<td>Intro. to College Life 101</td>
<td>1</td>
<td>Pharmacology 153</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total Hours</strong></td>
<td><strong>17</strong></td>
<td>Intro. to Mental Health 145</td>
<td>1</td>
</tr>
<tr>
<td>SUMMER SESSION</td>
<td></td>
<td>Nutrition 158</td>
<td>1</td>
</tr>
<tr>
<td>Diet Therapy 154</td>
<td>1</td>
<td><strong>Total Hours</strong></td>
<td><strong>19</strong></td>
</tr>
<tr>
<td>Personal &amp; Vocational Rela. 155</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Advanced Nursing Skills 156</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medical-Surgical Nursing 11 157</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pharmacology 159</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total Hours</strong></td>
<td><strong>10</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
ASSOCIATE DEGREE IN NURSING

The Associate Degree in Nursing Program, offered through the Southern Illinois Collegiate Common Market is accredited by the National League for Nursing. It is developed as an individualized program and is designed to provide career mobility for persons who have completed a practical nursing program or its equivalency through formal or informal methods. Students will be given an opportunity to validate past experiences through utilization of a comprehensive testing program.

This unique program is designed to prepare the student for the practice of nursing as defined in the Illinois Nurse Practice Act and meets the requirements for accredited schools in associated degree nursing in Illinois. Admission to the program requires a separate application and test. Contact the school for details.

Upon satisfactory completion of the program, the student will be eligible to write the State Board of Examination for registered nurses.

**FIRST SEMESTER**  
Sem. Hrs.
Introduction to Conceptual Framework 210 .......... 3  
Orthopedic Dermatological Nursing Interventions 226 .......... 3  
Neurological-Sensory Nursing Interventions 213 .......... 2  
Cardiovascular Nursing Interventions 228 .......... 3  
Respiratory Nursing Interventions 220 .......... 2  
*General Education .......... 7  
Total Hours .......... 20

**SUMMER SESSION**  
Sem. Hrs.
Psychiatric Nursing Interventions 227 .......... 3  
Community Health Nursing 218 .......... 2  
Nursing Today and Tomorrow 222 .......... 2  
Total Hours .......... 7

**SECOND SEMESTER**  
Sem. Hrs.
Maternal-Neonate Nursing Interventions 223 .......... 2  
Pediatric Nursing Interventions 224 .......... 3  
Gastrointestinal/Genital-Urinary Nursing Interventions 225 .......... 3  
Metabolic-Endocrine Nursing Interventions 217 .......... 2  
*General Education .......... 8  
Total Hours .......... 18

(Suggested order of courses may vary from year to year)

*Required General Education  
  Physical Science (4 credit hours) Chemistry  
  Introduction to Anatomy and Physiology (4 credit hours)  
  Government (3 credit hours)  
  Psychology (3 credit hours)  
  Elective (1 credit hour)
INDUSTRIAL ORIENTED OCCUPATIONS

AUTOMOTIVE MECHANIC HELPER

This program is designed to provide the student with the necessary knowledge and skills required of a mechanic's helper. Upon successful completion of this program, the student will be awarded a certificate.

<table>
<thead>
<tr>
<th></th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Shop Safety 115</td>
<td>1</td>
<td>Tune-Up, Troubleshooting,</td>
<td>3</td>
</tr>
<tr>
<td>Multi-cylinder Engine Servicing 111</td>
<td>3</td>
<td>Diagnosis 112</td>
<td>3</td>
</tr>
<tr>
<td>Brakes, Wheel Alignment, Balance and</td>
<td>3</td>
<td>Internship 127</td>
<td>5</td>
</tr>
<tr>
<td>Suspensions 217.</td>
<td></td>
<td>AC &amp; DC Electrical Systems 116</td>
<td>3</td>
</tr>
<tr>
<td>Auto Power Trains 113</td>
<td>3</td>
<td>Emission Control Systems 118</td>
<td>2</td>
</tr>
<tr>
<td>Technical Math 121</td>
<td>4</td>
<td>Fuel &amp; Fuel Systems 119</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total Hours</strong></td>
<td><strong>14</strong></td>
<td><strong>Total Hours</strong></td>
<td><strong>16</strong></td>
</tr>
</tbody>
</table>
# AUTOMOTIVE MECHANICS

This program is designed to provide the student with the necessary knowledge and skills required for employment as an auto mechanic. Upon successful completion of this program, the student will be awarded a certificate.

<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Shop Safety 115</td>
<td>1</td>
<td>Auto Blueprint Reading</td>
<td>3</td>
</tr>
<tr>
<td>Multi-Cylinder Engine Servicing 111</td>
<td>3</td>
<td>Tune-Up, Troubleshooting,</td>
<td>3</td>
</tr>
<tr>
<td>Brakes, Wheel Alignment, Balance and</td>
<td></td>
<td>Diagnosis 112</td>
<td>3</td>
</tr>
<tr>
<td>Suspensions 217</td>
<td>3</td>
<td>AC &amp; DC Electrical Systems</td>
<td>3</td>
</tr>
<tr>
<td>Auto Power Trains 113</td>
<td>3</td>
<td>Fuel &amp; Fuel Systems</td>
<td>3</td>
</tr>
<tr>
<td>Technical Math 121</td>
<td>4</td>
<td>Emission Control Systems</td>
<td>2</td>
</tr>
<tr>
<td>Total Hours</td>
<td>14</td>
<td>Total Hours</td>
<td>14</td>
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</tbody>
</table>

## SUMMER SESSION

<table>
<thead>
<tr>
<th>Sem. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manual &amp; Auto Transmissions 123</td>
</tr>
<tr>
<td>Air-Conditioning &amp; Heating 114</td>
</tr>
<tr>
<td>Internship 127</td>
</tr>
<tr>
<td>Auto Shop Management 124</td>
</tr>
<tr>
<td>Total Hours</td>
</tr>
</tbody>
</table>

# AUTOMOTIVE SERVICE

This program is designed to provide the student with the necessary knowledge and skills to enable him to perform minor engine repairs and related services. Upon successful completion of this program, the student will be awarded a certificate.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Shop Safety 115</td>
<td>1</td>
<td>Tune-Up, Troubleshooting,</td>
<td>3</td>
</tr>
<tr>
<td>Multi-cylinder Engine Servicing 111</td>
<td>3</td>
<td>Diagnosis 112</td>
<td>3</td>
</tr>
<tr>
<td>Brakes, Wheel Alignment, Balance and</td>
<td></td>
<td>AC &amp; DC Electrical Systems</td>
<td>3</td>
</tr>
<tr>
<td>Suspensions 217</td>
<td>3</td>
<td>Air-Conditioning &amp; Heating</td>
<td>3</td>
</tr>
<tr>
<td>Auto Power Trains 113</td>
<td>3</td>
<td>Auto Shop Management</td>
<td>2</td>
</tr>
<tr>
<td>Technical Math 121</td>
<td>4</td>
<td>Internship 127</td>
<td>5</td>
</tr>
<tr>
<td>Fuel &amp; Fuel Systems 119</td>
<td>3</td>
<td>Total Hours</td>
<td>16</td>
</tr>
<tr>
<td>Total Hours</td>
<td>17</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**DIESEL MECHANICS PROGRAM (OPTION)**

This program is designed to introduce mechanics to the operation, service, fuel systems and engine tune-up of various diesel engines.

Upon successful completion of this program, the student will be awarded a Certificate.

<table>
<thead>
<tr>
<th></th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Multi-Cylinder Engines 111</td>
<td>3</td>
<td>Diesel Engine Operation and</td>
<td>4</td>
</tr>
<tr>
<td>Shop Safety 115</td>
<td>1</td>
<td>Service 128</td>
<td></td>
</tr>
<tr>
<td>AC &amp; DC Electrical Systems</td>
<td>3</td>
<td>Diesel Fuel &amp; Fuel Systems 129</td>
<td>3</td>
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<tr>
<td>116</td>
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<td>Total Hours</td>
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<table>
<thead>
<tr>
<th>THIRD SEMESTER</th>
<th>Sem. Hrs.</th>
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<tbody>
<tr>
<td>Diesel Engine Tune-Up and</td>
<td>3</td>
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<tr>
<td>Diagnosis 130</td>
<td></td>
</tr>
<tr>
<td>Total Hours</td>
<td>3</td>
</tr>
</tbody>
</table>
AUTOMOTIVE TECHNOLOGY

This program is designed to provide the student with the necessary knowledge and skills for employment as a line mechanic, diagnostic technician, factory representative or factory technician. The Associate of Applied Science degree will be awarded upon successful completion of this curriculum which combines laboratory work and diagnostic skills to prepare the student for employment.

**FRESHMAN YEAR**

<table>
<thead>
<tr>
<th>Course</th>
<th>Sem. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shop Safety 115</td>
<td>1</td>
</tr>
<tr>
<td>Multi-Cylinder Engine</td>
<td></td>
</tr>
<tr>
<td>Servicing 111</td>
<td>3</td>
</tr>
<tr>
<td>Tune-up, Troubleshooting and Diagnosis 112</td>
<td>3</td>
</tr>
<tr>
<td>AC &amp; DC Electrical Systems 116</td>
<td>3</td>
</tr>
<tr>
<td>Emission Control Systems 118</td>
<td>2</td>
</tr>
<tr>
<td>Fuel and Fuel Systems 119</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total Hours</strong></td>
<td><strong>15</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course</th>
<th>Sem. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brakes, Wheel Alignment,</td>
<td></td>
</tr>
<tr>
<td>Balance &amp; Suspensions 117</td>
<td>3</td>
</tr>
<tr>
<td>Manual &amp; Automatic Trans. 123</td>
<td>3</td>
</tr>
<tr>
<td>Automotive Power Trains 113</td>
<td>3</td>
</tr>
<tr>
<td>Auto Blueprint Reading 126</td>
<td>3</td>
</tr>
<tr>
<td>Air Conditioning &amp; Heating 114</td>
<td>3</td>
</tr>
<tr>
<td>Auto Shop Management 124</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total Hours</strong></td>
<td><strong>17</strong></td>
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</tbody>
</table>

**SOPHOMORE YEAR**

<table>
<thead>
<tr>
<th>Course</th>
<th>Sem. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advanced Multi-Cylinder Engines 211</td>
<td>3</td>
</tr>
<tr>
<td>Ignition Systems Diagnosis 212</td>
<td>4</td>
</tr>
<tr>
<td>Diesel Engine Operation and Service 128</td>
<td>4</td>
</tr>
<tr>
<td>Technical Math 121</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total Hours</strong></td>
<td><strong>15</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course</th>
<th>Sem. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advanced Brakes and Suspension 217</td>
<td>3</td>
</tr>
<tr>
<td>Advanced Electrical Systems 216</td>
<td>3</td>
</tr>
<tr>
<td>Advanced Auto Power Trains 213</td>
<td>4</td>
</tr>
<tr>
<td>Advanced Auto Heating and Air Conditioning 214</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total Hours</strong></td>
<td><strong>13</strong></td>
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</table>

<table>
<thead>
<tr>
<th>Course</th>
<th>Sem. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internship 127</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total Hours</strong></td>
<td><strong>5</strong></td>
</tr>
</tbody>
</table>
ELECTRONICS

This program allows for a thorough study of electricity and electronic principles and prepares the student for entry into the many varied fields of electronics.

Emphasis in this program is placed upon practical and theoretical application of electronic principles. Digital electronics and rotating machinery are also emphasized.

Students may complete a course in F.C.C. license preparation (second class license) and radio communications if emphasis in this area is desired.

FRESHMAN YEAR

Basic Electrical Concepts 110..........................3   Basic Electronic Concepts I 112 .................3
Rotating Machinery I 111..........................3   Rotating Machinery II 113 ......................3
Government 117..........................3   Technical Writing 211..........................3
Math 114 or Math 115..........................5   Math 115 or Math 117..........................5
English 111..........................3   Physical Science 112..........................4
Total Hours 17                   Total Hours 18

SOPHOMORE YEAR

Electric Power Transmission 211...........................3   Digital Electronics II 215......................3
Digital Electronics I 212..........................3   Industrial Circuits and Controls II 216........3
Industrial Circuits and Controls I 213....................3   Electives...........................................5
Math 117 or Math 211......................5   Total Hours 14
Total Hours 17

RECOMMENDED ELECTIVES

Radio Communications 217
F.C.C. License Preparation 218
ARCHITECTURAL DRAFTING

This program is designed to prepare students for employment as draftsmen working primarily in construction industries. A basic knowledge of construction practices, materials and methods, and drafting techniques will allow the student to receive a certificate upon completion of the program.

<table>
<thead>
<tr>
<th>FIRST SEMESTER</th>
<th>Sem. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fundamentals of Drafting 120</td>
<td>3</td>
</tr>
<tr>
<td>Blueprint Reading 131</td>
<td>3</td>
</tr>
<tr>
<td>Technical Mathematics 121</td>
<td>4</td>
</tr>
<tr>
<td>Slide Rule 113</td>
<td>1</td>
</tr>
<tr>
<td>Architectural Drafting 121</td>
<td>3</td>
</tr>
<tr>
<td>Elective</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total Hours</strong></td>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SECOND SEMESTER</th>
<th>Sem. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engineering Graphics 127</td>
<td>4</td>
</tr>
<tr>
<td>Architectural Drafting 122</td>
<td>3</td>
</tr>
<tr>
<td>Materials &amp; Methods of Construction 124</td>
<td>5</td>
</tr>
<tr>
<td>Technical Math 122</td>
<td>4</td>
</tr>
<tr>
<td>Elective</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total Hours</strong></td>
<td><strong>18</strong></td>
</tr>
</tbody>
</table>

**RECOMMENDED ELECTIVES**

Math 111
Surveying 129

The above certificate program may be extended into an Associate of Applied Science degree upon successful completion of additional semester hours consisting of at least six semester hours in each of the following areas: Communications, Mathematics and Science, Social Studies (Must include American Government 117), and Humanities. A total of 65 semester hours is required.

MECHANICAL DRAFTING

The purpose of this program is to prepare skilled technicians for employment by providing the drafting skill and technical knowledge necessary to meet industrial drafting opportunities. A certificate will be awarded upon successful completion of the program.

<table>
<thead>
<tr>
<th>FIRST SEMESTER</th>
<th>Sem. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fundamentals of Drafting 120</td>
<td>3</td>
</tr>
<tr>
<td>Blueprint Reading 131</td>
<td>3</td>
</tr>
<tr>
<td>Technical Mathematics 121</td>
<td>4</td>
</tr>
<tr>
<td>Slide Rule 113</td>
<td>1</td>
</tr>
<tr>
<td>Engineering Graphics 127</td>
<td>4</td>
</tr>
<tr>
<td>Elective</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total Hours</strong></td>
<td><strong>18</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SECOND SEMESTER</th>
<th>Sem. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metallurgy and Heat Treatment 123</td>
<td>3</td>
</tr>
<tr>
<td>Mechanical Drafting 135</td>
<td>3</td>
</tr>
<tr>
<td>Technical Math 122</td>
<td>4</td>
</tr>
<tr>
<td>Mechanism &amp; Machine Design 134</td>
<td>4</td>
</tr>
<tr>
<td>Electric, Hydraulic &amp; Pneumatic Controls 136</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total Hours</strong></td>
<td><strong>17</strong></td>
</tr>
</tbody>
</table>

**RECOMMENDED ELECTIVES**

Math 114
Architectural Drafting 121
The preceding certificate program may be extended into an Associate of Applied Science degree upon successful completion of additional semester hours consisting of at least six semester hours in each of the following areas: Communications, Mathematics and Science, Social Studies (must include American Government 117), and Humanities. A total of 65 semester hours is required.

**BASIC DRAFTING**

This program is designed to provide the student with the basic drafting knowledge and skills for employment as a junior draftsman. A certificate will be awarded upon successful completion of the program.

<table>
<thead>
<tr>
<th>FIRST SEMESTER</th>
<th>Sem. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fundamentals of Drafting</td>
<td>120</td>
</tr>
<tr>
<td>Blueprint Reading</td>
<td>131</td>
</tr>
<tr>
<td>Technical Mathematics</td>
<td>171</td>
</tr>
<tr>
<td>Slide Rule 113</td>
<td></td>
</tr>
<tr>
<td>Engineering Graphics</td>
<td>127</td>
</tr>
<tr>
<td>Total Hours</td>
<td>15</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SECOND SEMESTER</th>
<th>Sem. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mechanical Drafting</td>
<td>135</td>
</tr>
<tr>
<td>Technical Math 122</td>
<td></td>
</tr>
<tr>
<td>Elective</td>
<td></td>
</tr>
<tr>
<td>Total Hours</td>
<td>8</td>
</tr>
</tbody>
</table>

**RECOMMENDED ELECTIVES**

Math 114
Surveying 129

**TOOL DRAFTING**

This program is designed to provide the student with the necessary knowledge and skills required by industry for tool drafting. The student will be exposed to such topics as manufacturing processes, standard parts, engineering data, tolerances and machine elements. A certificate will be awarded upon successful completion of the program.

<table>
<thead>
<tr>
<th>FIRST SEMESTER</th>
<th>Sem. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fundamentals of Drafting</td>
<td>120</td>
</tr>
<tr>
<td>Blueprint Reading</td>
<td>131</td>
</tr>
<tr>
<td>Technical Mathematics</td>
<td>121</td>
</tr>
<tr>
<td>Slide Rule 113</td>
<td></td>
</tr>
<tr>
<td>Engineering Graphics</td>
<td>127</td>
</tr>
<tr>
<td>Elective</td>
<td></td>
</tr>
<tr>
<td>Total Hours</td>
<td>18</td>
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<table>
<thead>
<tr>
<th>SECOND SEMESTER</th>
<th>Sem. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metallurgy &amp; Heating</td>
<td></td>
</tr>
<tr>
<td>Treatment 123</td>
<td></td>
</tr>
<tr>
<td>Mechanical Drafting</td>
<td>135</td>
</tr>
<tr>
<td>Jig, Fixture and Die</td>
<td></td>
</tr>
<tr>
<td>Design 137</td>
<td></td>
</tr>
<tr>
<td>Technical Math 122</td>
<td></td>
</tr>
<tr>
<td>Electric, Hydraulic &amp;</td>
<td></td>
</tr>
<tr>
<td>Pneumatic Controls 136</td>
<td></td>
</tr>
<tr>
<td>Total Hours</td>
<td>16</td>
</tr>
</tbody>
</table>

**RECOMMENDED ELECTIVES**

Math 114
Architectural Drafting 121
ASSOCIATE OF APPLIED SCIENCE DEGREE

The preceding certificate programs may be extended into an Associate of Applied Science degree upon successful completion of additional semester hours consisting of at least six semester hours in each of the following areas: Communications, Mathematics and Science, Social Studies (must include American Government 117), and Humanities. A total of 65 semester hours is required.

DRILL PRESS OPERATIONS*

This program is designed to provide the student with sufficient knowledge and skills for employment as a drill press operator. Experience with feeds and speeds, grinding and drilling operations on modern equipment will be provided. Upon successful completion of this program, the student will be awarded a certificate.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Machine Tool Fundamentals 116</td>
<td>3</td>
<td>Drill Press Operator 121</td>
<td>3</td>
</tr>
<tr>
<td>Lathe Operations I 117</td>
<td>3</td>
<td>Metallurgy and Heat Treatment 123</td>
<td>3</td>
</tr>
<tr>
<td>Milling Machine Operations I 119</td>
<td>3</td>
<td>Technical Math 122</td>
<td>4</td>
</tr>
<tr>
<td>Blueprint Reading 131</td>
<td>3</td>
<td>Total Hours</td>
<td>10</td>
</tr>
<tr>
<td>Technical Math 121</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Hours</td>
<td>16</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

LATHE OPERATIONS*

This program is designed to provide the student with sufficient knowledge and skills required for employment as a lathe operator. Upon successful completion of this program, the student will be awarded a certificate.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Machine Tool Fundamentals 116</td>
<td>3</td>
<td>Lathe Operations II 118</td>
<td>3</td>
</tr>
<tr>
<td>Lathe Operations I 117</td>
<td>3</td>
<td>Metallurgy and Heat Treatment 123</td>
<td>3</td>
</tr>
<tr>
<td>Milling-Machine Operations I 119</td>
<td>3</td>
<td>Technical Math 122</td>
<td>4</td>
</tr>
<tr>
<td>Blueprint Reading 131</td>
<td>3</td>
<td>Total Hours</td>
<td>10</td>
</tr>
<tr>
<td>Technical Math 121</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Hours</td>
<td>16</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
ELECTRONICS TECHNICIAN

This one year certificate program is designed to give the student the basic knowledge required for employment as a technical assistant in the field of electronics.

<table>
<thead>
<tr>
<th>FIRST SEMESTER</th>
<th>Sem. Hrs</th>
<th>SECOND SEMESTER</th>
<th>Sem. Hrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic Electrical Concepts 110</td>
<td>3</td>
<td>Basic Electronic Concepts I 112</td>
<td>3</td>
</tr>
<tr>
<td>Rotating Machinery I 111</td>
<td>3</td>
<td>Rotating Machinery II 113</td>
<td>3</td>
</tr>
<tr>
<td>Government 117</td>
<td>3</td>
<td>Math 115 or Math 117</td>
<td>5</td>
</tr>
<tr>
<td>Math 114 or Math 115</td>
<td>5</td>
<td>Physical Science 112</td>
<td>4</td>
</tr>
<tr>
<td>English 111</td>
<td>3</td>
<td>Total Hours</td>
<td>17</td>
</tr>
<tr>
<td>Total Hours</td>
<td>17</td>
<td>Total Hours</td>
<td>17</td>
</tr>
</tbody>
</table>

FIRE SCIENCE

This curriculum is designed for persons who desire to pursue a career in fire fighting.

<table>
<thead>
<tr>
<th>FIRST SEMESTER</th>
<th>Sem. Hrs</th>
<th>SECOND SEMESTER</th>
<th>Sem. Hrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orientation to Fire Fighting 110</td>
<td>3</td>
<td>Fire Fighting Operations 112</td>
<td>3</td>
</tr>
<tr>
<td>Fire Fighting Equipment &amp; Methods</td>
<td>3</td>
<td>Fire Fighting Safety 113</td>
<td>3</td>
</tr>
<tr>
<td>Methods 111</td>
<td>3</td>
<td>Total Hours</td>
<td>6</td>
</tr>
<tr>
<td>Total Hours</td>
<td>6</td>
<td>Total Hours</td>
<td>6</td>
</tr>
</tbody>
</table>
INDUSTRIAL MACHINIST*

This program is designed to provide the student with sufficient knowledge and skills for employment as a machinist. The student will be prepared to operate various machine tools such as turret lathes, milling machines, and drilling machines. Upon completion of this program, the student will be awarded a certificate.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Machine Tool Fundamentals 116</td>
<td>3</td>
<td>Lathe Operations II 118</td>
<td>3</td>
</tr>
<tr>
<td>Lathe Operations I 117</td>
<td>3</td>
<td>Metallurgy and Heat Treatment 123</td>
<td>3</td>
</tr>
<tr>
<td>Milling Machine Operations I 119</td>
<td>3</td>
<td>Milling Machine Operations II 120</td>
<td>3</td>
</tr>
<tr>
<td>Blueprint Reading 131</td>
<td>3</td>
<td>Drill Press Operations 121</td>
<td>3</td>
</tr>
<tr>
<td>Technical Math 121</td>
<td>4</td>
<td>Machine Shop 122</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total Hours</strong></td>
<td><strong>16</strong></td>
<td><strong>Technical Math 122</strong></td>
<td><strong>4</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Total Hours</strong></td>
<td><strong>19</strong></td>
</tr>
</tbody>
</table>

MILLING MACHINE OPERATIONS*

This program is designed to provide the student with sufficient knowledge and skills for employment as a milling machine operator. Upon successful completion of this program, the student will be awarded a certificate.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Machine Tool Fundamentals 116</td>
<td>3</td>
<td>Milling Machine Operations II 120</td>
<td>3</td>
</tr>
<tr>
<td>Lathe Operations I 117</td>
<td>3</td>
<td>Metallurgy and Heat Treatment 123</td>
<td>3</td>
</tr>
<tr>
<td>Milling Machine Operations I 119</td>
<td>3</td>
<td>Technical Math 122</td>
<td>4</td>
</tr>
<tr>
<td>Blueprint Reading 131</td>
<td>3</td>
<td><strong>Total Hours</strong></td>
<td><strong>10</strong></td>
</tr>
<tr>
<td>Technical Math 121</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total Hours</strong></td>
<td><strong>16</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Available only as part-time evening offerings

ASSOCIATE OF APPLIED SCIENCE DEGREE

The preceding certificate program may be extended into an Associate of Applied Science degree upon successful completion of additional semester hours consisting of at least six semester hours in each of the following areas: Communications, Mathematics and Science, Social Studies (must include American Government 117), and Humanities. A total of 65 semester hours is required.
ARC WELDING

This program will provide the student with the necessary knowledge and skills required for employment as an arc welder. A certificate will be awarded upon successful completion of the program.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Arc Welding I 123</td>
<td>3</td>
<td>Arc Welding II 124</td>
<td>3</td>
</tr>
<tr>
<td>Metallurgy and Heat Treatment 123</td>
<td>3</td>
<td>Low Hydrogen ARC Welding 127</td>
<td>3</td>
</tr>
<tr>
<td>Technical Math 121</td>
<td>4</td>
<td>Elective</td>
<td>3</td>
</tr>
<tr>
<td>Blueprint Reading 131</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total Hours</strong></td>
<td><strong>13</strong></td>
<td><strong>Total Hours</strong></td>
<td><strong>9</strong></td>
</tr>
</tbody>
</table>
ASSEMBLY LINE WELDING

This program is designed to provide the student with sufficient knowledge and skills in basic arc welding for employment as an assembly line welder. A certificate will be awarded upon successful completion of the program.

<table>
<thead>
<tr>
<th>Course</th>
<th>Sem. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arc Welding I 123</td>
<td>3</td>
</tr>
<tr>
<td>Metallurgy and Heat Treatment 123</td>
<td>3</td>
</tr>
<tr>
<td>Technical Math 121</td>
<td>4</td>
</tr>
<tr>
<td>Blueprint Reading 131</td>
<td>3</td>
</tr>
<tr>
<td>Elective</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total Hours</strong></td>
<td><strong>16</strong></td>
</tr>
</tbody>
</table>

COMBINATION WELDING

This program will provide the student with the necessary knowledge and skills appropriate for employment in the areas of electric and oxyacetylene welding. Students completing this program should have sufficient preparation to become certified welders.

<table>
<thead>
<tr>
<th>Course</th>
<th>Sem. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FIRST SEMESTER</strong></td>
<td></td>
</tr>
<tr>
<td>Arc Welding I 123</td>
<td>3</td>
</tr>
<tr>
<td>Metallurgy and Heat Treatment 123</td>
<td>3</td>
</tr>
<tr>
<td>Technical Math 121</td>
<td>4</td>
</tr>
<tr>
<td>Blueprint Reading 131</td>
<td>3</td>
</tr>
<tr>
<td>Gas Welding and Cutting 120</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total Hours</strong></td>
<td><strong>16</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course</th>
<th>Sem. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SECOND SEMESTER</strong></td>
<td></td>
</tr>
<tr>
<td>Arc Welding II 124</td>
<td>3</td>
</tr>
<tr>
<td>MIG Welding 125</td>
<td>3</td>
</tr>
<tr>
<td>Advanced Gas Welding 126</td>
<td>3</td>
</tr>
<tr>
<td>Low Hydrogen ARC Welding 127</td>
<td>3</td>
</tr>
<tr>
<td>Pipe Welding 128</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total Hours</strong></td>
<td><strong>15</strong></td>
</tr>
</tbody>
</table>

ASSOCIATE OF APPLIED SCIENCE DEGREE

The preceding certificate program may be extended into an associate of Applied Science degree upon successful completion of additional semester hours consisting of at least six semester hours in each of the following areas: Communications, Mathematics and Science, Social Studies (must include American Government 117), and Humanities. A total of 65 semester hours is required.
GAS WELDING

This program will provide the student with the necessary knowledge and skills required for employment as a gas welder. A certificate will be awarded upon successful completion of the program.

Sem. Hrs
Gas Welding and Cutting 120 ..................3
Metallurgy and Heat Treatment 123 ........3
Technical Math 121 ............................4
Blueprint Reading 131 ........................3
Advanced Gas Welding 126 ....................3
Total Hours 16

MIG WELDING

This program will provide the student with the necessary knowledge and skills in metallic inert gas welding sufficient for employment as a MIG welder. A certificate will be awarded upon successful completion of the program.

FIRST SEMESTER
Arc Welding I 123 .............................3
Metallurgy and Heat Treatment 123 ........3
Technical Math 121 ............................4
Blueprint Reading 131 ........................3
Total Hours 13

SECOND SEMESTER
Arc Welding II 124 ............................3
MIG Welding 125 ...............................3
Elective ........................................3
Total Hours 9
BASIC SURVEYING PROGRAM

(Cooperative Program)*

This program is designed to provide students with the necessary surveying skills for success in entry level positions in the surveying profession. A wide variety of different types of work, some indoors and some outdoors, are available in the field of surveying. The surveyor may specialize in precise calculations, boundary conflict problems, or construction layout. This program concentrates on land and engineering surveying.

Upon the successful completion of the surveying program, students will be awarded a Certificate of Achievement.

FIRST YEAR

<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Surveying I (2-6) 110</td>
<td>5</td>
<td>Surveying II (2-6) 111</td>
<td>5</td>
</tr>
<tr>
<td>College Algebra and Trigonometry 115</td>
<td>5</td>
<td>Surveying Calculations I 112</td>
<td>2</td>
</tr>
<tr>
<td>Intro. to College Life 101</td>
<td>1</td>
<td>Total Hours</td>
<td><strong>11</strong></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Surveying Field Work (0-6) 113</td>
<td>3</td>
<td>Surveying Calculations II 114</td>
<td>2</td>
</tr>
<tr>
<td>Total Hours</td>
<td><strong>5</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

SECOND YEAR

<table>
<thead>
<tr>
<th>Course</th>
<th>Sem. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blueprint Reading 131</td>
<td>3</td>
</tr>
<tr>
<td>Communications (3-0) 111</td>
<td>3</td>
</tr>
<tr>
<td>Legal Aspects of Surveying 115</td>
<td>2</td>
</tr>
<tr>
<td>Total Hours</td>
<td><strong>8</strong></td>
</tr>
</tbody>
</table>

*This program is being offered cooperatively by John A. Logan, Rend Lake, Kaskaskia, and Shawnee Colleges.
CONSTRUCTION MANAGEMENT TECHNOLOGY

(Cooperative Program)*

This program provides the academic background, technical specialization and actual field experience to begin a career in construction management. Emphasis is placed on current practices and principles necessary to compete successfully in today's construction industry.

Students completing the one-year curriculum are awarded the Certificate of Achievement.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction Estimating 201</td>
<td>3</td>
<td>Communications 112</td>
<td>3</td>
</tr>
<tr>
<td>Construction Blueprint Reading 192</td>
<td>3</td>
<td>Construction Materials and Methods 102</td>
<td>3</td>
</tr>
<tr>
<td>Construction Materials and Methods 101</td>
<td>3</td>
<td>Fundamentals of Labor Relations 202</td>
<td>3</td>
</tr>
<tr>
<td>Human Relations 128</td>
<td>2</td>
<td>Construction Surveying 105</td>
<td>3</td>
</tr>
<tr>
<td>Internship 121</td>
<td>3</td>
<td>Internship 122</td>
<td>4</td>
</tr>
<tr>
<td>Total Hours</td>
<td>14</td>
<td>Total Hours</td>
<td>16</td>
</tr>
</tbody>
</table>

*This program is offered as a cooperative program with Belleville Area College, Illinois Eastern Community Colleges, Kaskaskia Community College, Lewis and Clark College, Rend Lake College, Shawnee College, Southeastern Illinois College, and State Community College.
PERSONAL AND PUBLIC SERVICE OCCUPATIONS

COSMETOLOGY

The cosmetology program is designed to provide students with the basic knowledge and skills in accordance with the Department of Registration and Education guidelines to train licensed beauticians. A minimum of 1500 contact hours for 36 semester hours college credit will prepare the graduate for the Illinois State Licensing Examination.

FIRST SEMESTER

<table>
<thead>
<tr>
<th>Course</th>
<th>Sem. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cosmetology Theory 110</td>
<td>3</td>
</tr>
<tr>
<td>Cosmetology Lab 111</td>
<td>9</td>
</tr>
<tr>
<td><strong>Total Hours</strong></td>
<td><strong>12</strong></td>
</tr>
</tbody>
</table>

SECOND SEMESTER

<table>
<thead>
<tr>
<th>Course</th>
<th>Sem. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cosmetology Theory II 111</td>
<td>3</td>
</tr>
<tr>
<td>Cosmetology Lab 114</td>
<td>9</td>
</tr>
<tr>
<td><strong>Total Hours</strong></td>
<td><strong>12</strong></td>
</tr>
</tbody>
</table>

THIRD SEMESTER

<table>
<thead>
<tr>
<th>Course</th>
<th>Sem. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cosmetology Theory 112</td>
<td>3</td>
</tr>
<tr>
<td>Cosmetology Lab 115</td>
<td>9</td>
</tr>
<tr>
<td><strong>Total Hours</strong></td>
<td><strong>12</strong></td>
</tr>
</tbody>
</table>
ASSOCIATE OF APPLIED SCIENCE DEGREE

The preceding certificate program may be extended into an Associate of Applied Science degree upon successful completion of additional semester hours consisting of at least six semester hours in each of the following areas: Communications, Mathematics and Science, Social Studies (must include American Government 117), and Humanities. A total of 60 semester hours is required.

FOOD SERVICE TECHNOLOGY

This program will provide the student with the necessary knowledge and skills sufficient for entry level employment in a variety of positions in the food service industry. A certificate will be awarded upon successful completion of the program.

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Intro. to Food Services 110</td>
<td>3</td>
<td>Cooking Technology 123</td>
<td>3</td>
</tr>
<tr>
<td>Food Service Sanitation 111</td>
<td>2</td>
<td>Baking 124</td>
<td>3</td>
</tr>
<tr>
<td>Intro. to Food Preparation 112</td>
<td>2</td>
<td>Nutrition 125</td>
<td>3</td>
</tr>
<tr>
<td>Meat Cutting &amp; Processing 113</td>
<td>3</td>
<td>Food Services Internship 126</td>
<td>5</td>
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<tr>
<td>Introduction to Baking 114</td>
<td>2</td>
<td>Introduction to Management 128</td>
<td>3</td>
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<tr>
<td>Food Plant Equipment 115</td>
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<tr>
<td>Fish, Eggs, &amp; Poultry Cookery 117</td>
<td>3</td>
<td>Total Hours 17</td>
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<tr>
<td>Total Hours</td>
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</tbody>
</table>

ASSOCIATE OF APPLIED SCIENCE DEGREE

The preceding certificate program may be extended into an Associate of Applied Science degree upon successful completion of additional semester hours consisting of at least six semester hours in each of the following areas: Communications, Mathematics and Science, Social Studies (must include American Government 117), and Humanities. A total of 65 semester hours is required.

INSURANCE SPECIALIST

This program is designed for persons pursuing a career in the insurance field.

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Personal Insurance 100</td>
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<td>Business Insurance 102</td>
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<tr>
<td>Disability Income Insurance 101</td>
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<td>Advanced Insurance Sales 103</td>
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<td>Business Math 115</td>
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<td>Business Law 214</td>
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<td>Intro. to Data Processing 218</td>
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<td>Total Hours</td>
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</table>
CONSERVATION LAW ENFORCEMENT TECHNOLOGY

A two-year curriculum leading to an Associate of Applied Science degree in conservation law enforcement. This program would prepare the student for a variety of jobs in conservation law enforcement.

FRESHMAN YEAR

FIRST SEMESTER
<table>
<thead>
<tr>
<th>Course</th>
<th>Sem. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>English 104 or 111</td>
<td>3</td>
</tr>
<tr>
<td>Intro. to College Life 101</td>
<td>3</td>
</tr>
<tr>
<td>Intro. to Crime Control 103</td>
<td>3</td>
</tr>
<tr>
<td>Elective</td>
<td>3</td>
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<tr>
<td>Cons. of Nat. Res. 127</td>
<td>3</td>
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<tr>
<td>Health 111</td>
<td>2</td>
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</table>

Total Hours 15

SUMMER SESSION

Conservation Law Enforcement Internship 248

SECOND SEMESTER

<table>
<thead>
<tr>
<th>Course</th>
<th>Sem. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>English 105 or 112</td>
<td>3</td>
</tr>
<tr>
<td>Criminal Law 209</td>
<td>3</td>
</tr>
<tr>
<td>Government 117</td>
<td>3</td>
</tr>
<tr>
<td>Practical Psychology 214</td>
<td>3</td>
</tr>
<tr>
<td>Cons. of Water Resources 128</td>
<td>3</td>
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</table>

Total Hours 15

SOPHOMORE YEAR

FIRST SEMESTER

<table>
<thead>
<tr>
<th>Course</th>
<th>Sem. Hrs.</th>
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<tbody>
<tr>
<td>Intro. to Forestry 225</td>
<td>3</td>
</tr>
<tr>
<td>Intro. to Wildlife 227</td>
<td>3</td>
</tr>
<tr>
<td>Application and Use of Agricultural Chemicals 230</td>
<td>3</td>
</tr>
<tr>
<td>Criminal Behavior 105</td>
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<td>Elective</td>
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Total Hours 15

SECOND SEMESTER

<table>
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<th>Course</th>
<th>Sem. Hrs.</th>
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<tbody>
<tr>
<td>Plant Propagation 231</td>
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</tr>
<tr>
<td>Sociology 212</td>
<td>3</td>
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<tr>
<td>Elective</td>
<td>3</td>
</tr>
<tr>
<td>Speech 111</td>
<td>3</td>
</tr>
<tr>
<td>Criminal Law 210</td>
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</tr>
</tbody>
</table>

Total Hours 15
LAW ENFORCEMENT

This thirty-hour certificate program is designed to provide the student with sufficient background for employment in the law enforcement profession. When considering this program students should be aware of the fact that many law enforcement agencies generally require a person to be twenty-one years of age for employment.

Specialized law enforcement classes in this program may be offered only at night unless a sufficient number of day law enforcement students exist to justify these courses as day offerings.

This program is designed in cooperation with Southern Illinois University. All credit received in this program will be accepted as credit leading to the Associate Degree in law enforcement from the School of Technical Careers at S.I.U.

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<thead>
<tr>
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<tbody>
<tr>
<td>Sociology 212</td>
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<td>Speech 111</td>
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<td>Government 117</td>
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<td>Criminal Law 209</td>
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<tr>
<td>Introduction to Crime Control 103</td>
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<td>English 112</td>
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<tr>
<td>English 111</td>
<td>3</td>
<td>Interpersonal Relations 115</td>
<td>3</td>
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<tr>
<td>Criminal Behavior 105</td>
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<td>Criminal Law II 210</td>
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</tr>
<tr>
<td>Total Hours</td>
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<td>Total Hours</td>
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</table>
SOCIAL SERVICE TECHNOLOGY

This curriculum is designed to prepare students for employment in agencies which provide social services to the community. Upon completion of the program, which leads to the Associate of Applied Science Degree, the graduate is prepared for employment in welfare agencies, municipal recreation programs, social development projects, church-sponsored youth programs, and other private or public enterprises of human welfare.

FRESHMAN YEAR

<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>Health 111</td>
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<td>English 105 or 112</td>
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<td>Math Elective</td>
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<td>Practical Psychology 214</td>
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<td>Intro. to College Life 101</td>
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<td>Introduction to Social Problems 122</td>
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<td>Introduction to Social Work 121</td>
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<td>Government 117</td>
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Total Hours 16

SOPHOMORE YEAR

<table>
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<tr>
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<tbody>
<tr>
<td>Marriage &amp; Family 227</td>
<td>3</td>
<td>Abnormal Psychology 219</td>
<td>3</td>
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<tr>
<td>Introduction to Group Processes 221</td>
<td>3</td>
<td>Advanced Group Processes 222</td>
<td>3</td>
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<tr>
<td>Principles of Recreation 223</td>
<td>3</td>
<td>Practicum 223</td>
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<tr>
<td>Human Growth &amp; Development 228</td>
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<td>Elective</td>
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<tr>
<td>Introduction to Service Agencies 224</td>
<td>3</td>
<td>Total Hours</td>
<td>17</td>
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</tbody>
</table>

Total Hours 15

RECOMMENDED ELECTIVES

Physical Science 111
Physical Science 112
Biology 111
Speech 111
Speech 212
Introduction to Psychology 221
TEACHER'S AIDE

This program is designed to prepare the student for employment as a teacher aide in the Illinois public or private school system. Emphasis will be placed on relevant, practical topics for the future teacher aide. This program meets the basic requirements of the Office of the Superintendent of Public Instruction for a fully approved teacher aid program. A certificate will be awarded upon successful completion of the program.

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<thead>
<tr>
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<tbody>
<tr>
<td>English 104 or 111</td>
<td>3</td>
<td>Electives</td>
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<tr>
<td>Human Growth &amp; Development 228</td>
<td>3</td>
<td>Practical Psychology 214</td>
<td>3</td>
</tr>
<tr>
<td>Introduction to Teacher Aide</td>
<td>3</td>
<td>School Procedures 123</td>
<td>3</td>
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<tr>
<td>Duties 121</td>
<td>3</td>
<td>Practicum 225</td>
<td>5</td>
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<tr>
<td>Teaching Materials and Their Use 122</td>
<td>3</td>
<td><strong>Total Hours</strong></td>
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<td>Elective</td>
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<tr>
<td><strong>Total Hours</strong></td>
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RECOMMENDED ELECTIVES

Music 115
Art 114
Literature 211, 212 or 213
Math 111
English 105 or 112
TEA 124
TEA 125
TEA 126
TEA 127
COURSES OF STUDY

ACC 111    Accounting
An introduction to accounting theory and principles. The successive
steps in the accounting cycle. Subjects covered include special journals
and ledgers, working papers, adjusting and closing the books, prepa-
reration of statements, columnar journals and controlling accounts. Em-
phasis on internal control notes, interest, inventories, partnerships, de-
preciation, accruals, and special adjusting entries.
Credit: 4 hours — Four lecture hours per week.
Prerequisite: None

ACC 112    Accounting
A continuation of the study of accounting principles and their application
to corporations, manufacturing, payroll, inventories, and income taxes.
Credit: 4 hours — Four lecture hours per week.
Prerequisite: Accounting 111

ACC 211    Accounting
A comprehensive study of financial accounting theory and practice.
Subjects covered include foundations of accounting theory, the reporting
process, inventories, asset valuations, income determination, corporate
information, combinations and consolidations.
Credit: 4 hours — Four lecture hours per week.
Prerequisite: Accounting 112

ACC 212    Accounting
Continued specialization in investments, receivables, current and con-
tingent liabilities, corporate accounting, accounting for bonds, fund
accounting, statement preparation, continued financial accounting the-
ory and practice.
Credit: 4 hours — Four lecture hours per week.
Prerequisite: Accounting 211

ACC 220    Business Finance Credit
A study of finances of a small business operation, source of money,
determination of credit needs, records, security and repayment plans.
Credit: 3 hours — Three lecture hours per week.
Prerequisite: None

ACC 221    Cost Accounting
Job order, process accounting, and standard cost accounting for man-
ufacturing. Theory and technique of costing on actual and normal basis,
and distribution costs are presented.
Credit: 3 hours — Three lecture hours per week.
Prerequisite: Accounting 112
ACC 222    Auditing
Introduction to the principles involved in preparing audits of various accounts of a business enterprise, verifications and investigations, working papers, audit procedures, report writing and ethics of the profession.
Credit: 3 hours — Three lecture hours per week.
Prerequisite: Cost Accounting 221

ADN 210    Introduction to Conceptual Framework
Using the individualized modular approach to education, this course introduces the student to the concepts which are the foundation of the nursing curriculum. Emphasis is placed on the exploration and study of basic human needs and the components of the nursing process. Learning opportunities include both theory content and selected clinical experience.
Credit: 3 hours — Two lecture and two lab hours per week.
Prerequisite: Acceptance into the Associate Degree Nursing Program.

ADN 213    Neurological-Sensory Nursing Interventions
This course is designed to further the student’s knowledge of neurological and sensory function and those associated disorders commonly encountered in nursing practice. Emphasis will be placed upon the development of neurological assessment skills and the use of the nursing process for care of patients with major neurological and sensory dysfunction. Learning opportunities include both theory content and selected clinical experiences.
Credit: 2 hours — One lecture and two lab hours per week.
Prerequisite: Introduction to Conceptual Framework

ADN 217    Metabolic-Endocrine Nursing Interventions
This course is designed to further the student’s knowledge in metabolic-endocrine function and those associated disorders commonly encountered in nursing practice. Emphasis will be placed upon application of the nursing process in caring for patients experiencing metabolic-endocrine dysfunction. Learning opportunities include both theory content and selected clinical experiences.
Credit: 2 hours — One lecture and two lab hours per week.
Prerequisite: Introduction to Conceptual Framework

ADN 218    Community Health Nursing
This course is designed to introduce the student to concepts in the community health nursing. The student will learn that the health and well-being of citizens in the community is an integral part of nursing. The problem-solving approach will be applied to identify health problems of clients in a variety of community clinical agencies and settings
with special emphasis on community resources for special health problems, communicable diseases, problems accompanying disasters, and special problems of senior citizens.
Credit: 2 hours — One lecture and two lab hours per week.
Prerequisite: Introduction to Conceptual Framework.

ADN 220 Respiratory Nursing Interventions
This course is designed to provide the student with further study of pulmonary function and principles of pathophysiology pertaining to common respiratory problems. Emphasis will be placed on the application of the nursing process in caring for patients experiencing respiratory restriction or obstruction. Learning opportunities include both theory content and selected clinical experiences.
Credit: 2 hours — One lecture and two lab hours per week.
Prerequisite: Introduction to Conceptual Framework

ADN 222 Nursing Today and Tomorrow
Leadership in nursing, transition into the new graduate role, and current issues in nursing are the integral components of the terminal course of this program. The student will be given an opportunity to apply their knowledge and nursing skills in a practical experience.
Credit: 2 hours — One lecture and two lab hours per week.
Prerequisite: Introduction to Conceptual Framework and Consent of the Instructor.

ADN 223 Maternal-Neonate Nursing Interventions
This course is designed to provide the student with greater depth and broader perspectives of the antepartal, intrapartal, postpartal neonatal periods. A basic understanding of normal reproductive function and birth process will be necessary in order to study the nursing care of pathophysiological conditions. Emphasis is placed upon the family involvement and cultural needs of the child bearing family. Learning opportunities include both theory and selected clinical experiences.
Credit: 2 hours — One lecture and two lab hours per week.
Prerequisite: Introduction to Conceptual Framework.

ADN 224 Pediatric Nursing Interventions
This course is designed to provide the student with specific aspects of growth and development. The nursing process will be utilized to provide nursing care to meet the physical, intellectual, emotional, and social needs of the pediatric patient. Emphasis will be placed upon health promotion, family involvement, and cultural needs of the hospitalized child and/or adolescent. Learning opportunities include both theory content and selected clinical experiences.
Credit: 3 hours — Two lecture and two lab hours per week.
Prerequisite: Introduction to Conceptual Framework.
ADN 225  Gastrointestinal/Genital-Urinary Nursing Interventions
This course is designed to provide the student with further study and depth into gastrointestinal and genital-urinary function and into their associated pathophysiological processes. Emphasis will be placed upon assessing, analyzing, planning, implementing and evaluation nursing care for patients with common gastrointestinal and genital-urinary disorders. Learning opportunities include both theory content and selected clinical experiences.
Credit: 3 hours — One lecture and four lab hours per week.
Prerequisite: Introduction to Conceptual Framework

ADN 226  Orthopedic-Dermatological Nursing Interventions
This course is designed to further the student's knowledge of skeletal, muscular and skin function and those disorders commonly encountered in nursing practice. Emphasis will be placed upon assessing, analyzing, planning, implementing, and evaluating nursing care for those patients experiencing disorders associated with joints, bones, muscles, and skin. Learning opportunities include both theory content and selected clinical experiences.
Credit: 3 hours — One lecture and four lab hours per week.
Prerequisite: Introduction to Conceptual Framework

ADN 227  Psychiatric Nursing Interventions
This course is designed to provide the student with further exploration and study into the concepts of mental health and mental illness. Emphasis will be placed upon developing skills in therapeutic communication techniques, principles of psychiatric nursing, interpersonal relationships, and identifying psychosocial needs of the emotionally ill patient. Learning opportunities include both theory content and selected clinical experiences.
Credit: 3 hours — Two lecture and two lab hours per week.
Prerequisite: Introduction to Conceptual Framework.

ADN 228  Cardiovascular Nursing Interventions
This course is designed to provide the student with further study and depth into cardiovascular function and common pathophysiological processes. Emphasis will be placed upon the application of the nursing process, health maintenance, and disease prevention. Learning opportunities include both theory content and selected clinical experiences.
Credit: 3 hours — Two lecture and two lab hours per week.
Prerequisite: Introduction to Conceptual Framework.
AGR 101 Introduction to Small Engine Mechanics
This course will emphasize part identification, construction, operation, hand tool usage, and safety applications of 2 cycle and 4 cycle gasoline engines. Emphasis is placed on single cylinder engine operation.
Credit: 3 hours — Two lecture and two lab hours per week.
Prerequisite: None

AGR 102 Advanced Small Engine Mechanics
This course will acquaint students with overhaul, service and rebuilding of small engines. Emphasis is placed on advanced study of fuel systems, cooling systems, electrical systems, and troubleshooting small engines. This course should be taken to gain advanced knowledge of small engine mechanics.
Credit: 3 hours — Two lecture and two lab hours per week.
Prerequisite: AGR 101

AGR 122 Animal Nutrition
Study of the common feeding methods of livestock, including their relation to growth, maintenance and reproduction.
Credit: 3 hours — Three lecture hours per week.
Prerequisite: None

AGR 123 Soil Science
Fundamental study of the chemical and physical structure of soils of Southern Illinois. Anatomy and physiology of plants. Relationships between soil structure and plant production.
Credit: 3 hours — Two lecture and two lab hours per week.
Prerequisite: None

AGR 124 Soil Science
A study of the various methods of soil testing and how the results can be interpreted to make fertilizer recommendations. Investigation of chemical and organic fertilizers and their uses in modern crop production.
Credit: 3 hours — Two lecture and two lab hours per week.
Prerequisite: Soil Science 123

AGR 126 Agriculture Economics
A study of the role of agriculture in the present economy, nature and size of agricultural industries, future economic prospects for agriculture and government.
Credit: 3 hours — Three lecture hours per week.
Prerequisite: None
AGR 127  Conservation of Natural Resources
A study of conservation of natural resources at the national, state, and local levels.
Credit: 3 hours — Three lecture hours per week.
Prerequisite: None

AGR 128  Conservation of Water Resources
Study of water sheds, effective methods of controlling floods, pollution and water supplies.
Credit: 3 hours — Two lecture and two lab hours per week.
Prerequisite: None

AGR 129  Surveying
Fundamentals and concepts of surveying as it applies to agricultural usage in conservation practices.
Credit: 3 hours — One lecture and four lab hours per week.
Prerequisite: None

AGR 130  Agriculture Management
A study is made of the methods, characteristics and types of agriculture in Southern Illinois. Assignments are given which assist the student in applying management principles to a farm operation.
Credit: 3 hours — Three lecture hours per week.
Prerequisite: None

AGR 131  Products, Sales & Service
An introductory course which covers services rendered, product knowledge, display, pricing, advertising farm products, sales and service.
Credit: 3 hours — Three lecture hours per week.
Prerequisite: None

AGR 132  Crop Science
A study of the fundamental principles underlying the production of agricultural crops.
Credit: 3 hours — Three lecture hours per week.
Prerequisite: None

AGR 222  Forage Production
Forage Production is designed to acquaint the student with the distribution, morphology, identification, establishment, management, and utilization of forage crops for hay, silage, pasture, and soil improvement.
Credit: 3 hours — Two lecture and two lab hours per week.
Prerequisite: Crop Science 132

AGR 223  Animal Science
Production methods of livestock, effects of metabolic processess, infections and parasitic diseases. Selection and genetics of livestock.
Credit: 3 hours — Three lecture hours per week.
Prerequisite: None
AGR 224  Agriculture Mechanics
The operation, construction, adjustment, maintenance and repair of farm
machinery and buildings with emphasis placed on repairs, including
the use of arc and gas welding.
Credit: 3 hours — Two lecture and two lab hours per week.
Prerequisite: None

AGR 225  Introduction to Forestry
Fundamentals of forestry operations, including principles of stocking,
yields, growth, continued production, rotation, and control of cut.
Credit: 3 hours — Three lecture hours per week.
Prerequisite: None

AGR 226  Forest Management
Study of the commercial uses of forest and forest products.
Credit: 3 hours — Three lecture hours per week.
Prerequisite: Introduction to Forestry 225

AGR 227  Introduction to Wildlife
Identification of area wildlife including their life cycles, habitats and
uses.
Credit: 3 hours — Three lecture hours per week.
Prerequisite: None

AGR 228  Wildlife Management
A study of the balance of nature, habitat improvement, and control of
wildlife and their predators.
Credit: 3 hours — Two lecture and two lab hours per week.
Prerequisite: Introduction to Wildlife 227

AGR 230  Application and Use of Agriculture Chemicals
A study of the role of chemicals in agriculture, including herbicides,
insecticides, seed treatments, and livestock chemicals. Identification of
weeds and insects and their prevention, control and eradication.
Credit: 3 hours — Three lecture hours per week.
Prerequisite: None

AGR 231  Plant Propagation
Study of the natural methods of plant propagation with emphasis upon
asexual reproduction.
Credit: 3 hours — Two lecture and two lab hours per week.
Prerequisite: None
AGR 232  Crops, Lawn and Garden Sales & Service
A course designed to introduce the student to crop seed, lawn and garden seeds, and orchard supplies; their characteristics and utilization factors necessary to adapt to Southern Illinois agricultural practices.
Credit: 3 hours — Three lecture hours per week.
Prerequisite: None

AGR 233  Agriculture Management Inventory Control
The economic framework of agriculture businesses: organizing for effective management and management in local businesses; servicing agriculture including the management of custom services, retail credit, purchasing, inventory and customer relations.
Credit: 3 hours — Three lecture hours per week.
Prerequisite: Business Organization 119 or consent of the instructor

AGR 240  Agriculture Resources Internship
This course is designed to give the student practical work experience in a position similar to one for which the program is designed to prepare him.
Credit: 4 hours — One lecture and fifteen lab hours per week.
Prerequisite: None

AGR 243  Outdoor Recreation and Park Management
Policy, development and administration of outdoor recreation as encountered in forest, park and wildlands. Topics covered include outdoor recreation, Resource Review Commission report, programs for outdoor recreation and policies for both public and private administration.
Credit: 3 hours — Three lecture hours per week.
Prerequisite: None

AGR 244  Nature Interpretation
Appreciation of nature as an outdoor activity. Interpretation of nature as it relates to the National Park System, National Forests, Wildlife areas and urban sites. Man’s current malaise with the natural environment will be stressed.
Credit: 3 hours — Two lecture and two lab hours per week.
Prerequisite: None

AGR 245  Agri-Business Internship
This course is designed to give the student practical work experience in a position similar to one for which the program is designed to prepare him.
Credit: 4 hours — One lecture and fifteen lab hours per week.
AGR 246  **Wildlife Technology Internship**  
This course is designed to give the student practical work experience in a position similar to one for which the program is designed to prepare him.  
Credit: 4 hours — One lecture and fifteen lab hours per week.

AGR 247  **Animal and Crop Science Internship**  
This course is designed to give the student practical work experience in a position similar to one for which the program is designed to prepare him.  
Credit: 4 hours — One lecture and fifteen lab hours per week.

AGR 248  **Conservation Law Enforcement Internship**  
This course is designed to give the student practical work experience in a position similar to one for which the program is designed to prepare him.  
Credit: 4 hours — One lecture and fifteen lab hours per week.

AGR 249  **Livestock Selection and Evaluation**  
A study of the desirable type and economically important characteristics used in selecting, breeding, and slaughtering beef cattle, swine and sheep. Selection of dairy cattle and horses will also be covered.  
Credit: 3 hours — One lecture and four lab hours per week.  
Prerequisite: None

ANT 216  **Anthropology**  
An introduction to and survey of the nature of man, his origins and culture with the main emphasis on cultural anthropology.  
Credit: 3 hours — Three lecture hours per week.  
Prerequisite: None

ART 111  **Basic Studio-Drawing**  
A studio course designed for the beginner. This course is meant to develop the drawing skill; emphasis is placed on composition, line, texture, shape and form. Media explored will be graphite, charcoal, conte crayon, and pen and ink.  
Credit: 3 hours — Three studio hours per week.  
Prerequisite: None

ART 112  **Basic Studio-Painting**  
A studio course designed for the beginner in painting; emphasis is placed on the knowledge of the color theory and various painting techniques. Media explored will be tempera paint, water colors, acrylics, oils, collage.  
Credit: 3 hours — Three studio hours per week.  
Prerequisite: ART 111 or permission of instructor (based on examples of student’s drawings.)
ART 113  Basic Studio—Pottery and Sculpture
A basic course designed to introduce the beginner to the third-dimension. Emphasis is on the use of materials, balance and form in a sculpture. Materials used are found objects, wood, stone, plaster, metal and clay. Hand-built and wheel-thrown pottery is constructed.
Credit: 3 hours — Three studio hours per week.
Prerequisite: None

ART 114  Art Appreciation
Painting, sculpture and architecture from Paleolithic to the present. Intended to provide acquaintance with, and introduction to, the aesthetic attitude toward the arts of the past and contemporary life. Art forms are examined both for their individual qualities and the manner in which they exemplify changes in Western culture patterns.
Credit: 3 hours — Three lecture hours per week.
Prerequisite: None

ART 115  Basic Studio—Design and Crafts
An exploration of the elements of art (line, color, texture, shape, and form) and the principles of design through crafts, two-dimensional designs and three-dimensional designs.
Credit: 3 hours — Three studio hours per week.
Prerequisite: None

ART 211  Advanced Studio—Drawing
A studio course designed to develop the drawing skill with emphasis on the study of two-dimensional products, abstract approaches to drawing and personal expression. The human figure as subject matter will be emphasized. Various drawing media are explored.
Credit: 3 hours — Three studio hours per week.
Prerequisite: Art 111

ART 212  Advanced Studio—Painting
A studio course exploring various painting techniques and media (watercolors, acrylics, oils, and collage). Emphasis is placed on special problems in color theory, composition, surfaces, subject matter and personal expression.
Credit: 3 hours — Three studio hours per week.
Prerequisite: Art 112
ART 213  Advanced Studio—Pottery and Sculpture
A studio course to develop the student's skill in pottery and sculpture. Technical problems in throwing, firing and glazing are emphasized. In sculpture, emphasis is on the use of various materials, textures, balance and form.
Credit: 3 hours — Three studio hours per week.
Prerequisite: Art 113

ART 215  Advanced Studio—Design and Crafts
A studio course using the elements of art and the principles of design in the construction of crafts, two-dimensional and three-dimensional designs. Areas explored are batik, macrame, silk screen, linoleum block, and graphic design.
Credit: 3 hours — Three studio hours per week.
Prerequisite: Art 115

THE ART DEPARTMENT MAY RETAIN STUDENTS' WORKS FOR USE IN ART EXHIBITS.

AST 111  Introduction to Astronomy
A non-mathematical course in astronomy designed for students in any curriculum. It contains much material of importance for elementary teachers. The course includes a study of the sun and its planets together with a study of the stars and the nebulae beyond the sun. Evening observation of the moon and planets with the telescope and field glasses, together with the study of about 20 constellations, is a main part of the course.
Credit: 4 hours — Three lecture and two lab hours per week.
Prerequisite: None

AUT 111  Multi-Cylinder Engine Servicing
The study of two, four, six and eight cylinder engines. Emphasis is on providing background in the design and operation of gasoline engines. Participation in disassembly of engines and use of shop manuals will be covered.
Credit: 3 hours — Two lecture and two lab hours per week.

AUT 112  Tune-Up, Troubleshooting, & Diagnosis
Diagnosing Automotive engine and ignition conditions using electronic testing equipment. Emphasis on operation of equipment, troubleshooting, repairing and tune-up.
Credit: 3 hours — Two lecture and two lab hours per week.
AUT 113  Automotive Power Trains
Study of clutches, manual transmission, automated transmissions, drive lines, differentials, and related components. Emphasis is on study of construction, operating principles, repairing, adjustments and transferring of power.
Credit: 3 hours — Two lecture and two lab hours per week.

AUT 114  Air Conditioning & Heating
This course is designed to train students on operating principles, testing, diagnosis, and servicing of automobile air conditioners, heaters, and controls. Basic testing equipment will be used to determine repairs needed.
Credit: 3 hours — Two lecture and two lab hours per week.

AUT 115  Shop Safety
This course is designed to orient students to basic safety practices necessary with automotive equipment and to introduce the student to management, organization and operation of automotive business. Emphasis is placed on operating procedures, employee and labor relations, productivity, shop layout and planning, customer relations, record keeping, purchasing and basic principles of merchandising.
Credit: 1 hour — One lecture hour per week.

AUT 116  AC & DC Electrical Systems
A course dealing with the construction, operation, function, testing and repairing of the charging and ignition systems. Various electrical circuits such as the lighting and instrument circuits will also be studied. Students will be expected to perform selected tests using appropriate service manuals and test equipment.
Credit: 3 hours — Two lecture and two lab hours per week.

AUT 117  Brakes, Wheel Alignment, Balance and Suspensions
Study of manual and power brakes, suspension systems, front wheel alignment, dynamic and static wheel balance and standard and power steering systems. Emphasis is placed on operating principles, troubleshooting and repairing using latest equipment available.
Credit: 3 hours — Two lecture and two lab hours per week.

AUT 118  Emission Control Systems
A course designed to give the student background in the design, operation and troubleshooting of emission control systems.
Credit: 2 hours — One lecture and two lab hours per week.

AUT 119  Fuel and Fuel Systems
A course designed to provide background in fuel systems and carburetors. Included is nomenclature, design, construction and maintenance
of fuel tanks, fuel lines, fuel pumps, filtration systems and carburetors. Students will conduct inspection and rebuilding of various types of fuel pumps and carburetors.
Credit: 3 hours — Two lecture and two lab hours per week.

AUT 120 Auto Body I
This course is designed to assist students in learning the basic techniques, skills and procedures needed for auto body repair.
Credit: 3 hours — Two lecture and two lab hours per week
Prerequisite: None

AUT 121 Auto Body II
This course is designed as a continuation of Auto Body I. In Auto Body II, the student will also be assisted in learning how to develop a shop, as well as the organization and management of an auto body shop.
Credit: 3 hours — Two lecture and two lab hours per week.
Prerequisite: Auto Body I 120

AUT 123 Manual & Automatic Transmissions
Study of various types of manual and automatic transmissions for the understanding of disassembly, assembly, function, construction, operation service and troubleshooting procedures.
Credit: 3 hours — Two lecture and two lab hours per week.

AUT 124 Auto Shop Management
This course is designed to introduce the student to problems relating to management, organization and operation of an automotive shop.
Credit: 2 hours — Two lecture hours per week.

AUT 126 Auto Blueprint Reading
This course is designed to familiarize the student with the symbols utilized in automotive blueprints. Upon successful completion of this course the student should be able to readily identify automotive components from blueprint diagrams.
Credit: 3 hours — Two lecture and two lab hours per week.

AUT 127 Internship
This course is designed to assist the student with the application of information and skills acquired in previous automotive courses.
Credit: 5 hours — One lecture and twenty lab hours per week.

AUT 211 Advanced Multi-Cylinder Engines
This course covers advanced servicing of gasoline multi-cylinder engines. Engine fundamentals covering engine types, engine construction and operation, cooling systems, lubrication systems, engine measurements, and performance will be reviewed.
AUT 212  **Ignition Systems Diagnosis**  
This course covers advanced servicing of ignition systems, emissions control systems, and fuel systems. Fundamentals of these systems will be reviewed and discussed in class. Students will receive additional work related experience by repairing these systems on live vehicles which have these system failures. 
Credit: 4 hours — One lecture and six lab hours per week. 
Prerequisite: Tune-up, Troubleshooting, & Diagnosis 112, Emission Control Systems 118, Fuel and Fuel Systems 119

AUT 213  **Advanced Power Trains**  
This course covers advanced servicing of power trains, which include the clutch assembly, manual transmission, automatic transmission, drive lines and joints, differential, axle shafts, and experience by repairing these components on live vehicles which have these failures. 
Credit: 4 hours — One lecture and six lab hours per week.

AUT 214  **Advanced Auto Heating and Air Conditioning**  
This course covers advanced servicing of auto heating and air conditioning components, which includes the heater core, hoses, evaporator core, compressor, condenser, valves and all controls that operate these systems. Systems of all manufacturers are covered. 
Credit: 3 hours — One lecture and four lab hours per week. 
Prerequisite: Air Conditioning and Heating 114.

AUT 216  **Advanced Electrical Systems**  
This course covers advanced servicing of automotive electrical systems which include starting systems, charging systems, electrical circuits, and diagnosis and testing equipment. Fundamentals of these systems will be reviewed and discussed in class. Students will receive additional work related experience by diagnosing and repairing these electrical systems on live vehicles in our auto shop. 
Credit: 3 hours — One lecture and four lab hours per week. 
Prerequisite: AC & DC Electrical Systems 116

AUT 217  **Advanced Brakes and Suspension**  
This course covers advanced servicing of the automobile chassis, which include the car frame, springs, shock absorbers and wheel balance. The student will receive additional work related experience by repairing these components on live vehicles which have these failures. 
Credit: 3 hours — One lecture and four lab hours per week. 
Prerequisite: Brakes, Wheel Alignment, Balance & Suspension 117
BEL 101  Basic Electricity I
This course is designed to assist the student in learning the necessary
basic information on electrical devices and materials. The student will
also study the theory of electrical circuits and their characteristics.
Credit: 3 hours — Two lecture and two lab hours per week.

BIO 111  Introduction to Biology
This course sequence covers a year’s survey of the basic problems faced
by all forms of life, whether plant, animal, or microbe, and compares
the various alternative “solutions” to these problems as used by a variety
of organisms. Emphasis will be on the chemical and cellular basis of
life and the biology of organisms.
Credit: 4 hours — Three lecture and two lab hours per week.
Prerequisite: None

BIO 112  Biology
A continuation of Biology 111. The emphasis is placed upon the per-
petuation of life, population and communities, evolution, the plant king-
dom, and the animal kingdom.
Credit: 4 hours — Three lecture and two lab hours per week.
Prerequisite: Biology 111

BIO 211  Environmental Biology
Environmental biology is ecology. Emphasis is placed upon ecosystems,
populations, and communities. Contemporary problems in human ecol-
ogy are discussed from articles found in periodicals.
Credit: 4 hours — Four lecture hours per week.
Prerequisite: Biology 112

BIO 212  Introductory Human Physiology
The structure and function of organs and systems will be systematically
surveyed. The discussions will provide a basic overview of the gross,
as well as, the cellular and subcellular components of the human body.
The course will be of benefit to students in many disciplines such as
biology, medicine, pharmacy, dentistry, psychology and philosophy.
Credit: 4 hours — Three lecture and two lab hours per week.
Prerequisite: Biology 112
BIO 213  Botany
Introduction to the structure, development, relationships, ecological and economical importances of the algae, fungi, mosses, ferns, and the higher vascular plants. Some work in identification of plants is included. Credit: 4 hours — Three lecture and two lab hours per week. Prerequisite: Biology 112 or approval of the appropriate dean.

BM 101  Introduction to Behavior Modification
This course is designed to introduce the student to the basic principles and procedures of behavior modification as used in natural, applied settings. Credit: 3 hours — Three lecture hours per week.

BUS 115  Business Mathematics
Practice of fundamental mathematical processes with application to their use with percents, discounts, payroll, banking services, notes, simple interest, depreciation, and other typical business calculations. Credit: 3 hours — Three lecture hours per week. Prerequisite: None.

BUS 117  Business English
The practical application of English and communication processes to meet the needs of business. Examines written communications by surveying several types of business letters, specialized business correspondence and job application papers. Reviews principles of oral communication. Spelling, language and punctuation are incorporated into the study of business communications. Credit: 3 hours — Three lecture hours per week. Prerequisite: English 104 or consent of appropriate dean.

BUS 119  Business Organization
Study of organization structure; problems of organizing a business; business opportunities; locating, housing, equipping, laying out production facilities; financing; personnel organization, and government business relations. Credit: 3 hours — Three lecture hours per week. Prerequisite: None.

BUS 126  Principles of Marketing
Introduction to the marketing structure as it exists and functions. Emphasis is placed upon the manager’s and consumer’s influence in marketing functions. The product: packaging and branding, industrial and consumer products, product planning and development. Credit: 3 hours — Three lecture hours per week. Prerequisite: None.
BUS 128  Introduction to Management
Principles and practices of establishing and operating a business are presented, including opportunities, hazards, and problems which might be encountered. Fundamental considerations, planning, organizing, actuating and controlling management application of principles and techniques to all activities.
Credit: 3 hours — Three lecture hours per week.
Prerequisite: None

BUS 214  Business Law
Introduction to Law: nature, function, and classification. General understanding of the reasons for some of our laws governing businesses and people involved in business-related activities.
Credit: 3 hours — Three lecture hours per week.
Prerequisite: None

BUS 215  Business Law
The significant phases of law dealing with partnerships, corporations, unincorporated associations, and related topics. Emphasis is placed on laws which regulate the business enterprise.
Credit: 3 hours — Three lecture hours per week.
Prerequisite: Business Law 214 or consent of appropriate dean.

BUS 218  Introduction to Data Processing
This course serves as an introduction to data processing and, presumes that the student has no prior knowledge of data processing. It deals with the nature and matter of computer data processing and how these concepts relate to specific problems today.
Credit: 3 hours — Two lecture and two lab hours per week.
Prerequisite: None

BUS 228  Principles of Sales
Basic principles underlying the sales process are covered. The course is designed to promote an understanding of the salesman’s obligation to himself, the company, and the customer.
Credit: 3 hours — Three lecture hours per week.
Prerequisite: None

BUS 230  Business Internship
The student will work part-time for a period of one or two semesters as an intern in a business firm under the supervision of the staff of the Business Division.
Credit: 4 hours — Fifteen lab and one lecture hour per week.
Prerequisite: Consent of the department chairman.
CHE 114  **Inorganic Chemistry**
This course is designed for persons interested in any of the sciences including engineering, pre-medical and pre-dental majors. Emphasis is on quantitative measurement of chemical composition, the structure of matter, the relationship between the periodic table and properties of elements and the nature of chemical bonds. Laboratory experiments are designed to give the student experience in handling many of the analytical tools used in industry today.
Credit: 5 hours — Three lecture and four lab hours per week.
Prerequisite: Physical Science 111 or high school chemistry and two units of high school algebra or Intermediate Algebra 114.

CHE 115  **Inorganic Chemistry and Qualitative Analysis**
A continuation of Chemistry 114. Deals primarily with the various groups of elements and reactions which they undergo, and with the separation of elements on the basis of the solubility of their salts. The laboratory experiments are qualitative in nature.
Credit: 5 hours — Three lecture and four lab hours per week.
Prerequisite: Inorganic Chemistry 114

CHE 211  **Organic Chemistry**
Preparation and chemical properties of alipathic and aromatic compounds. Emphasis in the nature of the covalent bond and reaction of functional groups. Laboratory consists of synthesis and identification of organic compounds.
Credit: 4 hours — Three lecture and two lab hours per week.
Prerequisite: Inorganic Chemistry and Qualitative Analysis 115

CHE 212  **Organic Chemistry**
Continuation of Chemistry 211.
Credit: 4 hours — Three lecture and two lab hours per week.
Prerequisite: Organic Chemistry 211

CLE 103  **Introduction to Crime Control**
Review of the historical and ideological foundations of law enforcement and corrections; delineation of major patterns of practice and organizational structure; and description of major programs and their inter-relationships.
Credit: 3 hours — Three lecture hours per week.

CLE 105  **Criminal Behavior**
Introduction to personality theories and their application to causes of crime with primary emphasis on individual-oriented theories; consideration of the offender and his community context as problems for rehabilitation efforts; criticism of typical treatment programs.
Credit: 3 hours — Three lecture hours per week.
CLE 115  **Interpersonal Relations**
Delineation of the major patterns characteristic of relationships between pre-delinquents or offenders and staff of community-based programs; analysis of means of encouraging the development of internalized controls by offenders within the relatively free environment of the average community. Analysis of the fundamental problems of police relationship when situations call for persuasive techniques; discussion of principles pertinent to motivating law observance without coercion; study of the techniques of subject interrogation, consideration of creating favorable public image of policemen.
Credit: 3 hours — Three lecture hours per week.

CLE 209  **Criminal Law**
Consideration of legal aspects of law enforcement. Laws of arrest, search and seizure and constitutional due process, entrapment and informers, wire tapping, interrogation, evidence, examination of court procedures with special implications for criminal justice professionals.
Credit: 3 hours — Three lecture hours per week.

CLE 210  **Criminal Law II**
This course is a continuation of Criminal Law 209 and deals with the consideration of legal aspects of law enforcement.
Credit: 3 hours — Three lecture hours per week.
Prerequisite: Criminal Law 209

COM 219  **Computer Programming**
This course is designed to introduce students to computer programming. Cobol, basic, fortran and RPG will be introduced as programming languages. The computer and development of tools of programming will be incorporated into the course.
Credit: 3 hours — Two lecture and two lab hours per week.
Prerequisite: Introduction to Data Processing 218 or Instructor Approval

COM 220  **Computer Programming II**
This course is designed to provide students with in depth knowledge of COBOL language programming. The class will advance through various business type programs.
Credit: 3 hours — Two lecture and one lab hours per week.
Prerequisite: Introduction to Data Processing 218 and Computer Programming I 219

COS 110  **Cosmetology Theory**
A study and practice of professional ethics, personal hygiene, grooming, visual poise, personality development, bacteriology, sterilization, sanitation, the skin, scalp, tricology, nails, and disorders of the skin and scalp.
Credit: 3 hours — Three lecture hours per week.
Prerequisite: None

COS 111 **Cosmetology Theory**
This course will include the theory of electricity and light therapy, chemistry as applied to cosmetology, chemistry of cosmetics, anatomy, histology and physiology.
Credit: 3 hours — Three lecture hours per week.
Prerequisite: Cosmetology 110

COS 112 **Cosmetology Theory**
This course will include the mathematics of cosmetology, a study of the practical application of salon management, Illinois Law as defined by the Illinois Department of Rules and Regulations and a review of the entire curriculum in preparation for the Illinois State Board Examination.
Credit: 3 hours — Three lecture hours per week.
Prerequisite: Cosmetology 111

COS 113 **Cosmetology Laboratory**
There will be demonstrations and lectures by the instructor with the student participating in the following: shampooing and rinsing, scalp treatments, hair shaping, roller placement, pin curls, hair styling, permanent waving, hair straightening, hair coloring (all types), manicuring, facial massage, facial make up, eyebrow arching, superflous hair removal, hair pressing, thermal waving, wig care and styling. Students will perform these duties on each other until 160 clock hours have been obtained, then they will be allowed to work with patrons.
Credit: 9 hours — 27 lab hours per week.
Prerequisite: None

COS 114 **Cosmetology Laboratory**
This will be a review of the skills taught in Cosmetology 113 with lectures and demonstrations by the instructors. Also covered will be balance and design for hair styling, trend hair styling, fashion trend make-up (daytime and evening). The students will perform these services on each other, mannequins and patrons of the school.
Credit: 9 hours — 27 lab hours per week.
Prerequisite: Cosmetology 113

COS 115 **Cosmetology Laboratory**
A complete review of Cosmetology 112 and 113 in preparation for the State Board Examination. Also, included will be demonstrations by instructors, public clinics conducted by students, and sanitation duties performed by students in accordance with the Department of Registration and Education, State of Illinois.
Credit: 9 hours — 27 hours per week.
Prerequisite: Cosmetology 114

COS 210  **Cosmetology Instructor Training**
This course stresses basic cosmetology instructional techniques. The student will observe and assist with instruction under the direct supervision of a qualified cosmetology instructor. Both theory and practical courses will be emphasized. Students who are graduates of an approved school of beauty culture and have one year of experience as a registered beauty culturist may proficiency Cosmetology 210 and enroll directly in Cosmetology 211 to qualify for the State Licensing Examination by the Illinois Department of Registration.
Credit: 12 hours — Five lecture and thirty-five lab hours per week.

COS 211  **Cosmetology Instructor Training**
This course is a continuation of Cosmetology 210. More emphasis is placed on the supervision and instruction in the classroom and laboratory setting. Preparation of lesson plans and actual classroom instructional presentations by the student will be emphasized. Additional theory instruction in educational psychology, basic principles of student teaching, and business experience will be stressed.
Credit: 12 hours — Five lecture and thirty-five lab hours per week.

CPR 104  **Job Acquisition Skills**
The purpose of this course is to teach students the proper procedures to follow as they are seeking employment. This course will allow for an easier transition from the classroom environment to a work environment.
Credit: 2 hours — One lecture and two lab hours per week.

CPD 105  **Job Retention Skills**
The purpose of this course is to teach students appropriate on-the-job behavior. A central method to achieve this goal will be through the use of the situational assessment form.
Credit: 3 hours — Three lecture hours per week.

CPR 200  **Cardiopulmonary Resuscitation I**
The purpose of this course is to train persons in the techniques of administering cardiopulmonary resuscitation.
Credit: 1 hour — One lecture hour per week.
Prerequisite: None

CPR 201  **Cardiopulmonary Resuscitation II**
The purpose of this course is to train persons to become instructors to teach others the techniques for cardiopulmonary resuscitation.
Credit: 1 hour — One lecture hour per week.
DED 100  Driver Education
Driver Education is a class to instruct all students in the principles of road safety, car workmanship, and driving safety. Instruction includes both class instruction and in-car instruction.
Credit: 1.5 hours — One lecture and one lab hour per week.

DIS 128  Diesel Engine Operation and Service
This course will acquaint the student with the operation and servicing of diesel engines. Students should have prior knowledge of how engines operate and knowledge of basic tools used in servicing. Students must have completed AUT 111 Multi-Cylinder Engines successfully before entering this course. Difference in construction between gasoline and diesel engines will be discussed in detail.
Credit: 4 hours — Two lecture and four lab hours per week.
Prerequisite: Multi-Cylinder Engines (AUT 111)

DIS 129  Diesel Fuel and Fuel Systems
The operation and diagnosis of various systems components for diesel engines will be presented in this course. Emphasis will be placed on identification, testing, repair and replacement of various fuel-injection pumps, fuel injectors, filters, and deliver systems.
Credit: 3 hours — Two lecture and two lab hours per week.
Prerequisite: None

DIS 130  Diesel Engine Tune-Up and Diagnosis
Diagnosis and tune-up procedures of diesel engines using various testing equipment will be emphasized. Students must have a knowledge of diesel engines and diesel fuel systems by successfully completing DIS 128 - Diesel Engine Operations and Service and DIS 129 - Diesel Fuel and Fuel Systems prior to entering this course.
Credit: 3 hours — Two lecture and two lab hours per week.
Prerequisite: Diesel Engine Operation and Service and Diesel Fuel and Fuel Systems

DPB 111  Total Communication for Hearing Impaired
This course is for all interested parents, friends, associates, and professional people of the deaf and hard of hearing. It will cover the history, philosophy, and understanding of deafness and its implications. Brief history of manual communication of the deaf in the United States and other countries will be covered. Practice in learning to sign and fingerspell will also be given. Emphasis will be placed on reading fingerspelling and sign language.
Credit: 3 hours — Two lecture and two lab hours per week.
Prerequisite: None
DPB 112  Total Communication for the Hearing Impaired II
Review of sign language and fingerspelling learned in Total Communication I. Practice in learning to sign and fingerspell on the second level. Emphasis will be in reading fingerspelling.
Credit: 3 hours — Two lecture and two lab hours per week.
Prerequisite: DPB 111

DPB 113  Total Communication for the Hearing Impaired III
Review of sign language and fingerspelling learned in Total Communication II. Practice in learning to sign and fingerspell on a conversational level. Emphasis in developing expressive and receptive skills.
Credit: 3 hours — Two lecture and two lab hours per week.
Prerequisite: DPB 112

DRA 120  Fundamentals of Drafting
A study of basic drafting techniques involved in freehand and instrument drawing. Subjects included are: use of instruments, lettering, geometrical construction, orthographic projection, pictorial drawing, auxiliary views, sections, and dimensioning.
Credit: 3 hours — Two lecture and two lab hours per week.
Prerequisite: None

DRA 121  Architectural Drafting
An introduction to the basic fundamentals of architectural drawing. Subjects included are: drafting techniques, living area, service area, floor plans, elevations, pictorials, location plans, sections, and foundations.
Credit: 3 hours — Two lecture and two lab hours per week.
Prerequisite: Fundamentals of Drafting 120

DRA 122  Architectural Drafting
Continuation of Architectural Drafting 121 with selected individual projects of a more complex nature. Subjects included are: framing plans, schedules and specifications, building codes, electrical plans, air-conditioning plans, plumbing diagrams, modular plans, and design theory.
Credit: 3 hours — Two lecture and two lab hours per week.
Prerequisite: Architectural Drafting 121

DRA 124  Materials and Methods of Construction
Introduction to materials and products used in wood frame, masonry, concrete, and metal construction. Standards of construction and construction estimating will also be included.
Credit: 5 hours — Four lecture and two lab hours per week.
Prerequisite: Fundamentals of Drafting 120
DRA 127  Engineering Graphics
An application of descriptive geometry to problem solving. Subjects included are: reference planes, lines, planes, points, auxiliary views, revolution, force diagrams, cylinders, cones, spheres, curved surfaces, intersections, developments, mining, geology, and civil engineering.
Credit: 4 hours — Two lecture and four lab hours per week.
Prerequisite: Fundamentals of Drafting 120

DRA 131  Blueprint Reading
The fundamentals of blueprint reading involving the meaning of lines, symbols, notes, and specifications as applied to industry in the area of machine and construction blueprint reading.
Credit: 3 hours — Two lecture and two lab hours per week.
Prerequisite: Fundamentals of Drafting 120

DRA 134  Mechanisms and Machine Design
This course concentrates on the elements of machine design through problems involving the analysis of motions required and the selection of suitable mechanisms, materials and joining requirements.
Credit: 4 hours — Two lecture and four lab hours per week.
Prerequisite: Fundamentals of Drafting 120

DRA 135  Mechanical Drafting
A continuation of Fundamentals of Drafting 120. Subjects included are: basic machine elements, precision and limit dimensioning, weldments, power and motion machine elements, piping drawings, and simplified drafting practices.
Credit: 3 hours — Two lecture and two lab hours per week.
Prerequisite: Fundamentals of Drafting 120

DRA 136  Electric, Hydraulic, and Pneumatic Controls
A study of standard electrical, hydraulic and pneumatic elements commonly used to provide and control power in machinery and equipment. The student will learn how the elements work as well as become familiar with the nomenclature and symbols involved.
Credit: 3 hours — Two lecture and two lab hours per week.
Prerequisite: Fundamentals of Drafting 120

DRA 137  Jig, Fixture, and Die Design
A study of the common types of drill jigs, milling fixtures, and cutting and forming dies with emphasis on the design and preparation of working drawings of the production objects.
Credit: 3 hours — One lecture and four lab hours per week.
Prerequisite: Fundamentals of Drafting 120
DRV 100 Principles of Bank Operations
This course presents the fundamentals of bank functions in a descriptive fashion so that the beginning banker may view his chosen profession in a broad (and Operational) perspective. The descriptive orientation is intentional. Banking is increasingly dependent upon personnel who have the broad perspective necessary for career advancement.
Credit: 3 hours — Three lecture hours per week.

DRV 101 Installment Credit
In this course, the techniques of installment lending are presented concisely. Emphasis is placed on establishing the credit, obtaining and checking information, servicing the loan, and collecting the amounts due. Each phase of a bank's installment credit operation should be carefully scrutinized to be certain that the most efficient methods are employed, for only through an efficient operation can a bank maximize its profits on this particular kind of credit. Other topics discussed are inventory financing, special loan programs, business development and advertising, and the public relations aspect of installment lending.
Credit: 3 hours — Three lecture hours per week.

DRV 102 Money and Banking
This course stresses the practical aspects of money and banking and emphasizes the basic monetary theory needed by the banking student to apply knowledge on the job. Historical treatment is kept to a minimum. Emphasis is also placed on such problems as economic stabilization, types of spending, the role of gold, limitations of central bank operations, governance of fiscal policies, balance of payments and foreign exchange showing their repercussions on the banking industry in affecting yield curve and structuring of portfolios.
Credit: 3 hours — Three lecture hours per week.

DRV 103 Law and Banking
An introduction to basic American law, presenting the rules of law which underlie banking topics including jurisprudence, the court systems and civil procedures, contracts, quasi-contracts, property, torts and crimes, agencies, partnerships, corporations, sales of personal property, commercial paper, bank deposits and collections, documents of title, and secured transactions. Emphasis is on the Uniform Commercial Code.
Credit: 3 hours — Three lecture hours per week.

DRV 104 Agricultural Finance
The course is designed to acquaint loan officers with the various procedures in agricultural financing and credit. The course will explore
loan decisions, loan applications, budgeting and credit planning, financial and operational analysis as related to agricultural enterprises.
Credit: 3 hours — Three lecture hours per week.

**DRV 105 Savings and Time Deposit Banking**
This course is designed to acquaint the student with the legal concerns, customer relations, record-keeping, and safe keeping procedures involved in savings and time deposit banking.
Credit: 3 hours — Three lecture hours per week.

**DRV 109 Bee Culture**
A study of the fundamentals of beekeeping including their history, value, hive construction, biology, foods, and marketing of honey.
Credit: 1 hour — One lecture hour per week.

**ECO 211 Economics**
Macro-economics: American capitalism, money, banking, economic growth, national income, and fiscal policy.
Credit: 3 hours — Three lecture hours per week.
Prerequisite: None

**ECO 212 Economics**
Micro-economics, including a study of business cycles, fiscal policies, money-banking and monetary policies, economic growth, and international economics.
Credit: 3 hours — Three lecture hours per week.
Prerequisite: Economics 211

**ECO 213 American Economic History**
A study of the development of economic institutions in the United States emphasizing the changing structure and performance on the economy.
Credit: 3 hours — Three lecture hours per week.
Prerequisite: None

**ELT 110 Basic Electrical Concepts**
A study of the relationship between current voltage resistance and power for direct current and alternating current circuits. Topics included are: use of power sources and meters, component symbols and abbreviations, the electronic VOM, sources of electricity, the electronic power supply, switches and switching circuits.
Credit: 3 hours — Two lecture and two lab hours per week.
Prerequisite: The student must be enrolled in or have completed Math 114 or Math 115 at the time of enrolling in this course.
ELT 111  Rotating Machinery I
A study of DC and AC machines. Topics included are: series and parallel equivalent resistances, resistances in parallel, resistances in series and in series-parallel, safety and the power supply, Ohm's Law, circuit solution, power in DC circuits, the transmission line, the direct current motor, AC voltage and current measurement, the wattmeter, phase angle — real and apparent power, capacitive reactance, inductive reactance, watt — var, volt-ampere and power factor, vectors and phasors-series circuits.
Credit: 3 hours — Two lecture and two lab hours per week.
Prerequisite: The student must be enrolled in or have completed Math 114 or Math 115 at the time of enrolling in this course.

ELT 112  Basic Electronic Concepts I
An introduction to electronic concepts including the following topics: introduction to semiconductor diodes, rectifiers, half-wave and full-wave, filtering and voltage doublers, power supply test and checks, introduction to the transistor, transistor testing, transistor biasing, common base circuit, common emitter circuit, and common collector circuits.
Credit: 3 hours — Two lecture and two lab hours per week.
Prerequisite: Basic Electrical Concepts 110 and Rotating Machinery I 111

ELT 113  Rotating Machinery II
A continuation of Rotating Machinery I to include the following topics: the universal motor, the repulsion start-induction run motor, the single phase transformer, transformer phasing, transformer regulation, the autotransformer, transformers in parallel, distribution transformer, three phase circuits, three-phase — watts, vars and volt-amperes, three-phase power measurement, three-phase transformer connections, the wound-rotor induction motor, the squirrel cage induction motor, the synchronous motor, and the three-phase alternator.
Credit: 3 hours — Two lecture and two lab hours per week.
Prerequisite: Basic Electrical Concepts 110 and Rotating Machinery I 111

ELT 210  Electronic Concepts II
A continuation of the study of electronic concepts including the following topics: junction field effect transistor, JFET voltage amplifier, JFET constant current source, metal oxide semiconductor field effect transistor, MOSFET voltage amplifier, dual gate MOSFET, Zener diode, Zener diode voltage regulation, shunt type voltage regulator, series type voltage regulator, DC to DC converter, series feedback, shunt feedback,
multistage amplifier feedback, Darlington pair, differential amplifier, and integrated circuit operational amplifier.
Credit: 3 hours — Two lecture and two lab hours per week.
Prerequisite: Basic Electronic Concepts I 112 and Rotating Machinery II 113

**ELT 211 Electric Power Transmission**
A study of electric power transmission systems to include the following topics: safety and the power supply, phase sequence, real power and reactive power, power flow and voltage regulation of a simple transmission line, phase angle and voltage drop between sender and receiver, parameters which affect real and reactive power flow, parallel lines — transformers and power-handling capacity, the alternator, and the synchronous motor.
Credit: 3 hours — Two lecture and two lab hours per week.
Prerequisite: Basic Electronic Concepts I 112 and Rotating Machinery II 113

**ELT 212 Digital Electronics I**
An introduction to digital electronics to include the following topics: digital logic trainer familiarization, and/or logic gates; not circuit, NAND/NOR logic gates, dual gating functions — symbolic notation and practical gate applications, number systems; binary numbers and encoders, the decoder, exclusive-OR/NOR gates; parity circuits, and memory circuits.
Credit: 3 hours — Two lecture and two lab hours per week.
Prerequisite: Basic Electronic Concepts I 112 and Rotating Machinery II 113

**ELT 213 Industrial Circuits and Controls I**
A study of industrial circuits and controls including the following topics: continuity tests — buzzer and lamp, two-station and three-station control, control diagrams — schematic and connection, electromagnetic contractors and relays, full-voltage control, delayed start, start-stop-jog, definite-time jogging and the magnetic brake, forward-reverse control, primary-resistor starting, autotransformer, wye-delta starting, and unbalanced starting of a 30 induction motor.
Credit: 3 hours — Two lecture and two lab hours per week.
Prerequisite: Basic Electronic Concepts I and Rotating Machinery II 11

**ELT 214 Electronic Concepts III**
A continuation of the study of electronic concepts to include the following topics: silicon controlled rectifier, SCR gate characteristics, SCR DC power control, SCR AC power control, UJT-SCR time delay circuit, triac and diac, triac — diac AC power control, thermocouple — OP
AMP temperature control, thermistor temperature control, photoconductive cells, photo-conductive cell — light control, photovoltaic cells, and photovoltaic cell.
Credit: 3 hours — Two lecture and two lab hours per week.
Prerequisite: Electronic Concepts II 210

ELT 215  Digital Electronics II
A continuation of the study of digital electronics to include the following topics: registers, parallel to serial and serial to parallel conversion, synchronous and asynchronous data transmission, shift right/left register, complementing shift register, ring counter and twisted-ring counter, binary addition, binary subtraction, and the binary adder-subtractor.
Credit: 3 hours — Two lecture and two lab hours per week.
Prerequisite: Digital Electronics I 212

ELT 216  Industrial Circuits and Controls II
A continuation of the study of industrial circuits and controls to include the following topics: direct-current contractors and relays, direct-current time-delay relays, cam-switch control of a DC motor, CEMF starting of a DC motor, definite-time DC motor starter, plugging of a DC motor, cam-switch "hoist-lower" control of a DC motor, and magnetic "hoist-lower" control of a DC motor.
Credit: 3 hours — Two lecture and two lab hours per week.
Prerequisite: Industrial Circuits and Controls I 213

ELT 217  Radio Communications
This is an optional course which could be used as a program elective for students desiring additional background in the radio communications area. Topics included are: demodulation, audio preamplifier — driver and output stages, superheterodyne second if amplifier stage, superheterodyne first if amplifier stage, superheterodyne detector and AVC stage, and FM detection principles, and automatic frequency control principles.
Credit: 3 hours — Two lecture and two lab hours per week.
Prerequisite: Basic Electronic Concepts I 112

ELT 218  F.C.C. License Preparation
Intensive study on rules, regulations, and exam related theory is included. F.C.C. rules and regulations related to two-way communications is also studied. The laboratory time is spent studying advanced communication circuitry. The main objective is to enable the student to pass the F.C.C. Second Class exam.
Credit: 3 hours — Two lecture and two lab hours per week.
Prerequisite: Electronic Concepts II 210
ELT 220   Home Entertainment Service
This course is designed to acquaint the student with the servicing and
maintenance of a variety of home entertainment equipment.
Credit: 4 hours — One lecture and six lab hours per week.

ELT 230   Air Conditioning & Refrigeration I
This course is designed to introduce the student to the refrigeration and
air conditioning field including thermostatic expansion valves, cap-tub
refrigerant controls and to present a thorough understanding of refri-
gerants and their safe handling.
Credit: 3 hours — Two lecture and two lab hours per week.

ELT 231   Air Conditioning & Refrigeration II
This course is designed to provide the student with laboratory experi-
ences in the proper diagnostic service procedures required in a modern
refrigeration and air conditioning service.
Credit: 3 hours — Two lecture and two lab hours per week.

EMT 101   Emergency Medical Technician Refresher
This course is basically a refresher course for qualified EMT’s who must
update their training every four years. Subsequently, this course involves
work in essentially the material as presented in MET 1.
Credit: 4 hours — Three lecture and two lab hours per week.
Prerequisite: MET 1 100

ENG 101   Reading Improvement
This is a basic or fundamental course and will be used as a prerequisite
for some students. The course is designed to assist the student in de-
veloping his reading and study skills to the functional level of achieve-
ment necessary for college work. The course provides specific practice
required to maintain these skills at a high level. Improvement will be
sought in the four areas of reading: vocabulary, comprehension, study
skills, and fluency.
Credit: 2 hours — Two lecture hours per week.
Prerequisite: None

ENG 102   Reading Improvement
Continuation of Reading Improvement 101.
Credit: 2 hours — Two lecture hours per week.
Prerequisite: Reading Improvement 101

ENG 104   English
This English course is designed as a basic or fundamental course and
will be used as an option to ENG 111 English for vocational students.
This beginning course in English grammar and composition includes the
fundamental principles of writing and is aimed at helping students who
need assistance in the improvement of writing skills.
Credit: 3 hours — Three lecture hours per week.
Prerequisite: None

ENG 105    English
Continuation of English 104.
Credit: 3 hours — Three lecture hours per week.
Prerequisite: English 104

ENG 106    Creative Writing
This course is designed to provide a study of creative writing. Emphasis
will be placed on the production of student writing, with critical eval-
uation being an integral part of the progress. Areas of concentration will
be poetry, short story, non-fiction articles, and juvenile.
Credit: 3 hours — Three lecture hours per week.

ENG 111    English Composition
A composition course with stress on language skills—reading, writing,
speaking, and listening. Reading and writing fall into the general cat-
egories of description, exposition, narration, and argumentation.
Credit: 3 hours — Three lecture hours per week.
Prerequisite: None

ENG 112    English Composition
Continuation of English Composition 111.
Credit: 3 hours — Three lecture hours per week.
Prerequisite: English Composition 111

ENG 221    Technical Writing
A study of the organization and writing of technical materials, with
emphasis on description, process, abstract, technical reports and man-
uals.
Credit: 3 hours — Three lecture hours per week.
Prerequisite: None

ERT 100    Emergency Rescue Technician
This course is designed to acquaint students who have an interest in
emergency services with the correct extrication procedures, phases of
extrication and the hazards of extrication. Emphasis is placed upon the
correct usage of vehicle extrication tools to free entrapped persons from
wreckage.
Credit: 4 hours — Three lecture and two lab hours per week.
Prerequisite: Experience within the allied health field with rescue, fire
suppression or emergency medical health care technician or satisfactory
completion of MET 100.
FA 040 Acrylic Painting
This course is designed to explore the many uses and advantages of using acrylic paint as a painting media. The use of acrylic paints will provide students with a completed painting in a matter of hours as opposed to days when using oil paint.
Credit: 2 hours
Prerequisite: None

FA 044 Watercolor
This course is designed for those adults who have had little or no previous experience in elementary watercolor painting. Still life painting will include drawing, composition, and color.
Credit: 2 hours — One lecture and two lab hours per week.
Prerequisite: None

FA 045 Oil Painting
Basic introduction to oil painting techniques. Adults who have had little or no experience are encouraged to enroll in Watercolor before entering the Oil Painting program.
Credit: 2 hours — One lecture and two lab hours per week.

FA 046 Ceramics
A beginning course for those who want to learn to decorate and work with various types of ceramics. In this course you will learn how to pour and clean ceramics as well as glazing.
Credit: 2 hours — One lecture and two lab hours per week.
Prerequisite: None

FA 047 Intermediate Ceramics
This course is a continuation of the Ceramics 046 course. Greater emphasis shall be placed upon selection and use of appropriate materials.
Credit: 2 hours
Prerequisite: Ceramics 046

FA 048 Advanced Ceramics
This course is a continuation of Intermediate Ceramics 047. Considerable emphasis shall be placed upon proper use of materials, selection of materials, purchasing materials and storage of unfinished and finished products, how and when to fire the kiln.
Credit: 2 hours
Prerequisite: Intermediate Ceramics 047

FA 049 Antiquing
This course is designed for the beginner. Course instruction shall include how to condition raw wood, repair wooden surfaces, sandpaper surfaces and fill minor cracks with a minimum of effort. Course will also place significant emphasis on how to successfully market antiques.
Credit: 2 hours
Prerequisite: None

FA 050  Glass Staining
This is a basic course for the beginner in glass staining. The course will cover in detail all glass staining related factors from the initial involvement to how to price your work.
Credit: 2 hours
Prerequisite: None

FA 051  Candlemaking
This course is designed to instruct the beginning student in the craft of making candles.
Credit: 2 hours
Prerequisite: None

FA 090  Beginning China Painting
This course is a beginning in the knowledge of china painting. Emphasis shall be placed on the selection of materials, proper care of the materials, correct use of the materials, a basic knowledge of art, and how to fire the kiln.
Credit: 2 hours — One lecture and two lab hours per week.
Prerequisite: None

FA 091  Intermediate China Painting
This course is a continuation of Beginning China Painting 090. Considerable emphasis shall be placed upon making the student more aware of and greater appreciation for the world around him/her. Basic sketching will be reviewed at this time. A deeper study of color harmony and how china paint differs from other forms of color will be presented to the student.
Credit: 2 hours — One lecture and two lab hours per week.
Prerequisite: FA 090

FA 092  Advanced China Painting
This course is a continuation of Intermediate China Painting 091. Greater emphasis shall be placed upon experimentation of various mediums. Firing at different temperatures for different effects, drawing, color and color combinations. This class will work with gold and the different types of gold available for china work. Marketing and promotion of the finished products will be incorporated into the course.
Credit: 2 hours — One lecture and two lab hours per week.
Prerequisite: FA 091
FF 101  Fish Farming I
This course is designed to familiarize students with the basic practices of raising fish in ponds, cages, raceways, and/or tanks. Emphasis shall be given to producing fish for profit either as a small venture or a large scale vocation.
Credit: 3 hours — Two lecture and two lab hours per week.
Prerequisite: None

FF 102  Fish Farming II
This course is a continuation of the Fish Farming I 101 course. Advanced practices and procedures will primarily be covered in this course. Greater emphasis will be placed on the establishment of a business and marketing factors.
Credit: 3 hours — Two lecture and two lab hours per week.
Prerequisite: FF 101

FM 100  Financial Management for Small Municipalities
This course is designed to acquaint the student with the basic functions and requirements of efficient and effective financial management for small municipalities. Such topics as budget, auditing, reporting, purchasing, bookkeeping techniques, fund accounting, grant writing and grant sources will be covered.
Credit: 2 hours — Two lecture hours per week.
Prerequisite: None

FOS 110  Introduction to Food Service
An introductory course in food services designed to give the student a view of the total food service program with emphasis on knowledge of; various food service establishments, diversified cooking methods, proper food storage, commodities, kitchen tools, food identification, culinary skills, French influence, and culinary terms.
Credit: 3 hours — Two lecture and two lab hours per week.
Prerequisite: None

FOS 111  Sanitation and Safety
This course is basically a study of the principles involved in maintaining sanitary standards to protect the consumer from foodborne illness in food service establishments. One main objective is to enable the student to pass the Illinois Department of Public Health Sanitation Exam.
Credit: 2 hours — Two lecture hours per week.
Prerequisite: None

FOS 112  Introduction to Food Preparation
Principles of food preparation are discussed and practiced with emphasis on appetizers, eggs, salads and salad dressings, herbs and spices, cheeses, soups and stocks, vegetables, and potatoes.
Credit: 3 hours — Two lecture and two lab hours per week.
Prerequisite: None

**FOS 113  Meat Cutting and Processing**
A course dealing with the principles pertaining to cutting and processing beef, pork, lamb, and fish. Institutional bulk cut and prime table cuts suitable for locker plant retail shop training are emphasized.
Credit: 3 hours — Two lecture and two lab hours per week.
Prerequisite: None

**FOS 114  Introduction to Baking**
This course is designed to include baking principles in preparing quick-breads, cookies, roll doughs and sweet doughs.
Credit: 2 hours — One lecture and two lab hours per week.
Prerequisite: None

**FOS 115  Food Plant Equipment**
A course designed to develop the skills necessary to safely and efficiently operate both portable and stationary food preparation equipment, which includes; verticle cutters, food slicers, food mixers, deep fat fryers, grills, ovens, vegetable mills, scales, steam kettles, food grinders, and automatic steamers.
Credit: 2 hours — One lecture and two lab hours per week.
Prerequisite: None

**FOS 117  Fish, Eggs, and Poultry Cookery**
A course designed to increase the student's knowledge and skill when selecting, storing, preparing, and serving fish, eggs, and poultry. A variety of recipes are used to practice the principles of preparing these high protein foods.
Credit: 3 hours — Two lecture and two lab hours per week.
Prerequisite: None

**FOS 123  Cooking Technology**
Principles of food preparation are discussed and practiced with emphasis on beef, veal, pork, lamb, poultry, and fish. The laboratory introduces the student to the actual preparation of both quantity and small portions, including decorative cooking.
Credit: 3 hours — Two lecture and two lab hours per week.
Prerequisite: FOS 112

**FOS 124  Baking**
This course is designed to include baking principles in preparing pie doughs and fillings, cakes and icings, puddings, ice cream, and specialty desserts.
Credit: 3 hours — One lecture and four lab hours per week.
Prerequisite: FOS 114
FOS 125   Nutrition
Objectives of this course are to: cite the basic chemical and physiological concepts of nutrition, study the various nutrients and learn how they apply to health, acquaint the student with special diets required due to medical conditions, and to enable the student to translate nutrition knowledge into quantity food selection and buying. A unit on menu writing is included to give the student an insight into food production and the operation of a food service establishment.
Credit: 3 hours — Three lecture hours per week.
Prerequisite: None

FOS 126   Food Services Internship
The student will work part-time for one semester as an intern in a food service facility under the supervision of the staff of the Food Service Division. Class lecture will include job seeking skills in resume’ writing, letters of application, completing application forms, job interviews, and using placement services.
Credit: 5 hours — One lecture and twenty lab hours per week.
Prerequisite: Completion of 18 hours and currently enrolled in 17 hours in the Food Service Program.

FOS 127   Food Service Sanitation
This course is designed to provide the supervisor with the knowledge and methods necessary to teach sanitation to food service employees. The course also fulfills the requirements for mandatory training and certification required by the Illinois Department of Public Health.
Credit: 2 hours — Two lecture hours per week.
Prerequisite: None

FRN 111   French
An introductory course designed to present the fundamentals of French grammar, vocabulary, and culture. There is constant use of the language in the classroom, with graduated reading and writing.
Credit: 4 hours — Three lecture and two lab hours per week.
Prerequisite: None

FRN 112   French
A continuation of French 111 with increased stress on conversation. Aspects of grammar of greater complexity are presented, with readings and reports based on French culture and civilization.
Credit: 4 hours — Three lecture and two lab hours per week.
Prerequisite: French 111
FRN 211  French
Continued practice in speaking and reading French following review of basic principles. Occasional oral reports in French graded to students’ conversational level. Practice in reading at sight.
Credit: 4 hours — Three lecture and two lab hours per week.
Prerequisite: French 112

FRN 212  French
Continuation of French 211.
Credit: 4 hours — Three lecture and two lab hours per week.
Prerequisite: French 211

FS 110  Orientation to Fire Fighting
The purpose of this course is to introduce the recruit fire fighter to the fire science program. The course will include topics as follows: orientation, fire behavior, extinguishers and extinguishing agents, communications, fire prevention and inspection, apparatus familiarization and physical fitness.
Credit: 3 hours — Two lecture and two lab hours per week.
Prerequisite: None

FS 111  Fire Fighting Equipment Methods
This course is designed to provide the students with basic knowledge of fire fighting equipment and procedures for using equipment. The course will include instruction related to small tools and equipment, ground ladders, ropes and knots, forcible entry, rescue, and physical fitness.
Credit: 3 hours — Two lecture and two lab hours per week.
Prerequisite: None

FS 112  Fire Fighting Operations
This course will provide the student with training in the operation of a fire fighting unit. Fire suppression, hoses, fire streams and water supplies will also be included.
Credit: 3 hours — Two lecture and two lab hours per week.
Prerequisite: None

FS 113  Fire Fighting Safety
The purpose of this course is to provide the recruit with basic knowledge of such fire fighting safety topics as breathing, equipment, ventilation, first aid, personal safety and hazards, salvage and overhaul, arson evidence, installed fire protection and fire systems and physical fitness.
Credit: 3 hours — Two lecture and two lab hours per week.
Prerequisite: None
GED 010   Basic Communication
Review of basic English and communication skills in preparation for the GED test. This course may be taken for credit twice if necessary to prepare the student for the GED test.
Credit: 1 or 2 hours — One lecture hour per week.

GED 011   Basic Mathematics
Review of basic concepts of arithmetic, some attention to algebraic and geometric concepts in preparation for the GED test. This course may be taken for credit twice if necessary to prepare the student for the GED test.
Credit: 1 or 2 hours — One lecture hour per week.

GED 012   Basic Social Science
Review of basic Social Sciences including Civics, Economics, and History in preparation for the GED test. This course may be taken for credit twice if necessary to prepare the student for the GED test.
Credit: 1 or 2 hours — One lecture hour per week.

GED 013   Basic Science
Review of basic concepts of science, with consideration of general principles, biology, chemistry, and physics in preparation for the GED test. This course may be taken for credit twice if necessary to prepare the student for the GED test.
Credit: 1 or 2 hours — One lecture hour per week.

GEN 101   Genealogy
A basic course which is designed to expose students to procedures and materials used in genealogy. Students will learn specific information on how to begin a search and how to keep records on the findings.
Credit: 2 hours — Two lecture and one lab hours per week.

GEO 213   Geology
Fundamentals of physical geology with emphasis on geologic principles and processes.
Credit: 4 hours — Three lecture and two lab hours per week.
Prerequisite: None

GEO 214   Geology
Continuation of Geology 213.
Credit: 3 hours — Three lecture hours per week.
Prerequisite: Geology 213

GER 111   German
A beginning course which stresses the conversational approach to the language. Essential grammar is studied and composition is introduced.
Credit: 4 hours — Three lecture and two lab hours per week.
Prerequisite: None

GER 112  German
A continuation of German 111.
Credit: 4 hours — Three lecture and two lab hours per week.
Prerequisite: German 111

GER 211  German
A review of grammar combined with the reading of selected works of contemporary German authors. Oral expression as well as composition is stressed.
Credit: 4 hours — Three lecture and two lab hours per week.
Prerequisite: German 112

GER 212  German
A continuation of German 211.
Credit: 4 hours — Three lecture and two lab hours per week.
Prerequisite: German 211

GOV 117  Introduction to American Government
A survey of political institutions to include forms and functions of the three levels of government: national, state, and local. Throughout the course, stress will be placed on the right and responsibility of citizenship in the democratic process. Meets the requirements relative to the constitutions of the State of Illinois and the United States as required by Senate Bill 95.
Credit: 3 hours — Three lecture hours per week.
Prerequisite: None

GOV 118  Comparative Government
A course dealing with the major governments of modern Europe and Asia with reference to the study of political institutions and dynamics of political behavior.
Credit: 3 hours — Three lecture hours per week.
Prerequisite: None

GR 100  Grantsmanship
This is a course designed for the average inexperienced person who has an interest in developing the necessary grantsman's skills and determining the essential tools for grants procurement.
Credit: 2 hours
Prerequisite: None
GRY 214  Introduction to Physical Geography
A study of the primary regions of the world which includes such physical factors as topography, climate and vegetation within each region.
Credit: 3 hours — Three lecture hours per week.
Prerequisite: None

HEA 100  Heating
This course is designed to introduce students to the various forms of heating such as natural and L.P. gas, oil, and electric. The course will also consider heat pumps, humidifying, dehumidifying, air circulation and damper controls.
Credit: 3 hours — Two lecture and two lab hours per week.

HEC 100  Money Management
This course is designed to acquaint the student with the various methods of money management involving short-term, long-term credit, installment buying and the use of credit cards. In addition, the short-term and long-term investment of money will be discussed.
Credit: 1 hour — One lecture hour per week.

HEC 101  Consumer Credit Buying
This course will introduce the student to the various types of changes which may be made through the credit system as it exists in today’s market place.
Credit: 1 hour — One lecture hour per week.

HEC 102  Selection of Goods and Services
This course will acquaint the student with selection of goods and services available and present a sequential method for selecting the most appropriate product and/or service for a particular situation.
Credit: 1 hour — One lecture hour per week.

HEC 103  Insurance and Taxes
This course will acquaint the student with the various types of insurance and taxes which exist today. Analysis of various property, liability, and health insurance policies will be made; as well as discussion of the tax loss on the local, state, and federal levels.
Credit: 2 hours — Two lecture hours per week.

HLC 120  Home Energy Conservation
This course is designed to acquaint the homeowner with various energy conservation procedures and how they may effect his utility consumption.
Credit: 1 hour — One lecture hour per week.
HIS 116  Western Civilization
A survey of social, economic, political, and cultural development of the Western world from earliest times to 1715.
Credit: 3 hours — Three lecture hours per week.
Prerequisite: None

HIS 117  Western Civilization
A continuation of Western Civilization 116 emphasizing social, economic, political, and cultural development of the Western world, from 1715 to the present.
Credit: 3 hours — Three lecture hours per week.
Prerequisite: None

HIS 118  History of Illinois
History of Illinois is a survey course emphasizing economic, political and cultural developments in Illinois from 700 A.D. to 1865.
Credit: 3 hours — Three lecture hours per week.

HIS 119  History of Illinois
History of Illinois 119 is a continuation of Illinois History 118. This is a survey course emphasizing economic, political and cultural developments from 1861 to the present.
Credit: 3 hours — Three lecture hours per week.

HIS 214  History of the United States
A study of the major political, social, and economic development of the U.S. to 1865.
Credit: 3 hours — Three lecture hours per week.
Prerequisite: None

HIS 215  History of the United States
A continuation of History 214, emphasizing the political, social, and economic developments from 1865 to the present.
Credit: 3 hours — Three lecture hours per week.
Prerequisite: None

HLT 111  Health
An introduction to personal health and hygiene. Problems of smoking, alcohol, and drug usage are discussed.
Credit: 2 hours — Two lecture hours per week.
Prerequisite: None
HLT 125  First Aid
This course is designed to acquaint the student with basic first aid. Lectures, demonstrations and practice in laboratory situations will be used as methods of instruction.
Credit: 1 hour — One lecture hour per week.

HME 090  Beginning Sewing
Basic dressmaking techniques of clothing construction will be presented in this course. The Bishop method with variations is presented, and these principles are used to construct an attractive well fitted garment by each class member. This is a course for the beginner who knows how to use the sewing machine, but wants to learn construction techniques that will produce quality looking garments.
Credit: 2 hours — One lecture and two lab hours per week.

HME 091  Advance Sewing
This course will be a continuation of Clothing Construction I. The student will learn to solve figure problems and to construct a basic dress from which all later measurements can be taken to make properly fitted clothing. Upon completion of the basic dress the student will make a garment using the finer dress making points.
Credit: 2 hours — One lecture and two lab hours per week.

HME 092  Pattern Fitting
This course consists of basic tissue pattern, developing an understanding of grain line of fabric and its interpretation into the pattern by draping and drafting fabric. The course will place emphasis upon solving pattern problems by manipulation of miniature patterns and refining the patterns.
Credit: 2 hours — One lecture and two lab hours per week.

HME 093  Beginning Tailoring
A basic course which is designed to provide the student with the essential elements of making men and women’s clothing. The course is based upon the following three primary concepts: (1) Building a permanent shape into a garment, (2) Specific emphasis placed upon grading of seams, clipping, notching, and layering of fabrics and (3) Basic pressing techniques, pounding, fusing, understitching by hand or machine and top stitching.
Credit: 2 hours — One lecture and two lab hours per week.
Prerequisite: Beginning and advanced sewing

HME 094  Advanced Tailoring
This course is designed as a follow-up to Beginning Tailoring. Emphasis will be placed upon applying the basic techniques of the previous course through the use of more individual creativity.
Credit: 2 hours — One lecture and two lab hours per week.
Prerequisite: Beginning Tailoring 093

HOM 062 Furniture Upholstering
You can make your old furniture more beautiful and usable. Instruction, demonstration and individual help in repairing your furniture, tying springs, cording, upholstering, and covering. Limited storage space is available.
Credit: 2 hours — One lecture and two lab hours per week.

HOM 063 Furniture Refinishing
The stripping and refinishing of old pieces of furniture. You will be able to share ideas with one another plus receive assistance from the instructor. Hand chair caning will also be offered during this class for those wishing to learn the art. Limited storage space is available.
Credit: 2 hours — One lecture and two lab hours per week.

HOM 064 Intermediate Furniture Upholstery
This course is a continuation of Furniture Upholstery 062. Due to the extensive amount of material and work to be covered in the first course, it is recommended that all students continue with the second course to adequately learn all of the techniques for upholstering furniture.
Credit: 2 hours
Prerequisite: Furniture Upholstery 062

HOM 065 Intermediate Furniture Refinishing
This course is a continuation of the first refinishing course. This course is designed for the student interested in learning about the advanced techniques in refinishing.
Credit: 2 hours
Prerequisite: Furniture Refinishing 063.

HOM 066 Advanced Furniture Upholstery
This course is a continuation of the first two courses. Due to the extensive amount of material and work to be covered in the first two courses, it is recommended that all students continue with the third course to adequately learn all of the techniques and finalize their work. Additional information concerning how to set up an upholstery business will be provided in this course.
Credit: 2 hours
Prerequisite: Intermediate Furniture Upholstery 064

HOM 096  Interior Decoration
Fundamentals of interior decoration, harmony of color and fabric, helpful hints on decoration on a low budget.
Credit: 2 hours — One lecture and two lab hours per week.

HOM 097  Advanced Interior Decoration
This course is a continuation of beginning Interior Decoration 096. Specific emphasis will be placed upon saving while improving the home surroundings in a very inexpensive manner.
Credit: 2 hours — One lecture and two lab hours per week.

HOM 098  Home Design
This course is designed for the purpose of viewing home design from the various perspectives which essentially determines how and why houses are constructed in a variety of forms.
Prerequisite: 2 hours — One lecture and two lab hours per week.

HOM 100  Creative Stitchery
The fundamental techniques of knitting, crocheting, crewel embroidery and needlepoint are included in this course.
Credit: 2 hours — One lecture and two lab hours per week.

HOM 101  Quiltmaking
This course is designed to cover the fundamentals of quilting techniques to produce marketable, creative articles.
Credit: 2 hours — One lecture and two lab hours per week.

HOM 102  Intermediate Creative Stitchery
This course is a continuation of the first creative stitchery. This course will add the dimensions of marketing and how to wisely choose materials.
Credit: 2 hours
Prerequisite: Creative Stitchery 100

HOM 103  Advanced Creative Stitchery
This course is a continuation of the first two courses in creative stitchery. Greater emphasis will be placed upon intricate designs. A selling display will be held at the end of this course.
Credit: 2 hours
Prerequisite: Intermediate Creative Stitchery 102

ICT 100  Personal Income Tax
This course is designed to assist students in preparing and filing their personal income tax.
Credit: 3 hours — Two lecture and two lab hours per week.
Prerequisite: None

ICT 102  Small Business Tax
This course is specifically designed to assist those persons involved in small business income tax preparation.
Credit: 3 hours — Two lecture and two lab hours per week.
Prerequisite: None

ICT 103  Farm Tax
This course is specifically designed to assist farmers in income tax preparation.
Credit: 3 hours — Two lecture and two lab hours per week.
Prerequisite: None

ICT 104  Business Tax and Financial Planning
This course is designed to familiarize students with the benefits of financial planning in today’s business world.
Credit: 3 hours — Two lecture and two lab hours per week.

INS 100  Personal Insurance
This course is designed for insurance field representatives who wish to improve their skills in selling personal insurance. Emphasis will be placed upon developing skills in selling, as well as the development of professional attitudes and management techniques.
Credit: 3 hours — Three lecture hours per week.

INS 101  Disability Income Insurance
This course is designed to familiarize the beginning insurance agent with the following topics related to disability insurance: market opportunities, extra sales, professional prestige and skills, interview psychology, business coverages, using objections, and cases and action.
Credit: 3 hours — Three lecture hours per week.

INS 102  Business Insurance
This course is designed to familiarize the beginning agent with the business insurance market, business ownership, death and money problems related to business, taxes and tax related sales, key executive insurance, business continuation insurance, disposition of property, and business insurance sales tracks.
Credit: 3 hours — Three lecture hours per week.

INS 103  Advanced Insurance Sales
This course is designed to familiarize the student with various aspects of estate planning, business insurance, employee benefit plans, the agent as a business owner, and transfer of business capital.
Credit: 3 hours — Three lecture hours per week.
JOU 115  Journalism
Emphasis on newswriting, stressing development of terseness and vigor of style. Studying characteristics of outstanding newspapers. Practice in proofreading and layouts. Class publishes the college paper. Typing ability is helpful; some lab work required.
Credit: 3 hours — Three lecture hours per week.
Prerequisite: None

JOU 116  Journalism
A continuation of Journalism 115. Greater emphasis on writing heads and leads, feature stories, and editorials.
Credit: 3 hours — Three lecture hours per week.
Prerequisite: None

JOU 211  Sophomore Writing
Study and disciplined practice of the basic techniques of effective imaginative writing and considerable allowance for individual interests. Analysis of rhetorical models, discussion of short stories, and criticism of manuscripts produced by class members.
Credit: 3 hours — Three lecture hours per week.
Prerequisite: None

JOU 212  Sophomore Writing
A continuation of Sophomore Writing 211.
Credit: 3 hours — Three lecture hours per week.
Prerequisite: Journalism 211

LIT 211  Introduction to Poetry
Poetic forms, themes and styles are studied to enhance the student’s understanding and appreciation of poetry.
Credit: 3 hours — Three lecture hours per week.
Prerequisite: None

LIT 212  Modern Fiction
Representative novels and short stories are examined and studied in terms of style, structure, and contribution to modern civilization.
Credit: 3 hours — Three lecture hours per week.
Prerequisite: None

LIT 213  Introduction to Drama
A study of representative plays with emphasis on dramatic literary form and dialogue. Student may also gain experience in creating dramatic dialogue.
Credit: 3 hours — Three lecture hours per week.
Prerequisite: None
LIT 214  English Literature
A survey of English Literature from its early beginnings through James Boswell.
Credit: 3 hours — Three lecture hours per week.
Prerequisite: None

LIT 215  English Literature
Eighteenth century poets through the writers of the present.
Credit: 3 hours — Three lecture hours per week.
Prerequisite: None

LIT 216  American Literature
A study of writers and literary documents that contribute to an understanding of the American heritage from the Colonial beginning to the Civil War period.
Credit: 3 hours — Three lecture hours per week.
Prerequisite: None

LIT 217  American Literature
Continuation of Literature 216 from the Civil War to the present.
Credit: 3 hours — Three lecture hours per week.
Prerequisite: None

LIT 218  World Literature
A comprehensive survey of representative masterpieces of world literature of the Middle Ages and Renaissance.
Credit: 3 hours — Three lecture hours per week.
Prerequisite: None

MAC 116  Machine Tool Fundamentals
In this course the trainee studies measuring instruments, gauges, and the theory of metal cutting. This course includes machine shop experience on use and care of hand tools, taps and tapping methods, allowances and tolerances for standard fits and thread fits, the drill press, power saw, band saw, engine lathe, milling machines, turret lathe, grinders, cutting fluids, and surface finish.
Credit: 3 hours — Two lecture and two lab hours per week.

MAC 117  Lathe Operations I
This is a lecture, laboratory course designed to acquaint the student with the safe operation of the engine lathe. He should develop proficiency in learning the major parts of the lathe, proper setup, basic tool grinding, facing, center drilling, straight turning between centers, and threading. He should develop skill proficiency in determining feeds, speeds and proper tool selection in machining various types of materials.
Credit: 3 hours — One lecture and four lab hours per week.
MAC 118  Lathe Operations II
This course will prepare a person for employment as a lathe operator in a production or job shop. After completion of Lathe Operations I, he will develop proficiency in the safe operation of the engine lathe, turret lathe and trach lathe. Such operations as drilling, reaming, threading and the use of the attachments, fixtures and special purpose tooling will be emphasized.
Credit: 3 hours — Two lecture and two lab hours per week.
Prerequisite: Lathe Operations I 117

MAC 119  Milling Machine Operations I
This is a lecture, laboratory course designed to acquaint the student with the major parts of the milling machine and its accessories. The student will be expected to develop skill proficiency in the safe operation and setup, learn to calculate proper feeds and speeds for machining various types of materials.
Credit: 3 hours — Two lecture and two lab hours per week.

MAC 120  Milling Machine Operations II
This is a lecture, laboratory course designed to prepare the student for entry level employment as a milling machine operator in a production or job machine shop. After completion of milling Machine I, he will develop skill in the safe operation of the universal horizontal column, and ram type of vertical milling machine including the use of all available attachments, fixtures, and special purpose tooling.
Credit: 3 hours — Two lecture and two lab hours per week.
Prerequisite: Milling Machines Operations I 119

MAC 121  Drill Press Operator
This course is designed to prepare a person for employment as a drill press operator in a production or job shop. He is expected to develop skill proficiency in proper tool selection, feeds and speeds, in machining various types of materials, nomenclature of the drill press, drill grinding, setup and and safe operation of the drill press.
Credit: 3 hours — One lecture and four lab hours per week.

MAC 122  Machine Shop
This course is designed to give students experience in work layout and tool selection and will develop proficiency in the setup and operation of the drill press, power saw, milling machine, surface grinder and engine lathe.
Credit: 3 hours — One lecture and four lab hours per week.

MAC 123  Metallurgy and Heat Treatment
This is a lecture-lab course on the fundamental characteristics and properties of industrial metals including machinability, bonding, and heat
treatment. This course surveys the classification of modern industrial metals worked in modern machine shops. It points out the property differences between non-ferrous metals, ferrous metals, high temperature metals, rare metals, and how property differences affect machinability, malleability, brittleness, elasticity and hardness. The course surveys heat treating techniques involving controlled heating and cooling industrial metals. Through this lecture-lab course the student will understand the limitation of the material involved in machine shop work. He will have some degree of insight regarding the metallurgical processes involved. Parts produced in a machine shop require heat treatment and it is important for a machinist to be familiar with the science of heat treating metals.
Credit: 3 hours — Two lecture and two lab hours per week.

MAT 101 Introduction to Algebra
A course in the algebraic fundamentals. It is designed for students who have had no algebra or who desire a review of this material.
Credit: 3 hours — Three lecture hours per week.
Prerequisite: None

MAT 102 Basic Mathematics
A course in basic mathematics. No algebra. Material includes an analysis of the decimal number system; addition, subtraction, multiplication, and division; work with decimals, percents, ratios and proportions, measurement, equations, and formulas.
Credit: 3 hours
Prerequisite: None

MAT 111 Foundations of Mathematics
Designed for elementary teaching curricula. Emphasis is on mathematics as a subject viewed as a whole. The newer mathematical concepts, techniques, and terminology associated with elementary mathematics are introduced and analyzed.
Credit: 3 hours — Three lecture hours per week.
Prerequisite: None

MAT 113 Slide Rule
Fundamental operations on the log-log slide rule.
Credit: 1 hour — One lecture hour per week.
Prerequisite: Knowledge of logarithms & trigonometry.

MAT 114 Intermediate Algebra
Basic set theory, fundamental algebraic operations, linear equations, worded problems, factoring, fractions, exponents, logarithms, radicals, complex numbers, quadratic equations, inequalities, functions and graphs, systems of equations and special functions.
Credit: 5 hours — Five lecture hours per week.
Prerequisite: Introduction to Algebra 101 or high school algebra.

MAT 115 College Algebra Trigonometry
Sets, notation and operation, the algebra of numbers as a logical system, inequalities, absolute value, coordinate systems, functions and graphs, the circular functions, trig identities, linear and quadratic equations, determinants, binomial theorem, mathematical induction, complex numbers, inverse functions, arithmetic and geometric progressions, exponents and logarithms.
Credit: 5 hours — Five lecture hours per week.
Prerequisite: Intermediate Algebra 114 or satisfactory math background in high school.

MAT 117 Analytic Geometry & Calculus
Introduction to analytic geometry, slope, straight line, the conic sections, functions, limits, continuity, fundamental differentiation, differentiation formulas, and applications of Rolle's theorem and Mean Value theorem.
Credit: 5 hours — Five lecture hours per week.
Prerequisite: College Algebra & Trigonometry 115 or satisfactory math background in high school and consent of instructor.

MAT 120 Metric Math
This course consists of the basic elements of the metric system; it is primarily designed for the purpose of assisting the general public in the conversion process which will occur in the United States.
Credit: 1 hour — Two lab hours per week.

MAT 121 Technical Mathematics
An introduction to the basic concepts of mathematics as applied to the concepts of technology. Included will be such topics as basic algebraic operations, functions and graphs, the meaning of an equation, linear equations, exponents and radicals, and quadratic equations.
Credit: 4 hours — Four lecture hours per week.
Prerequisite: None

MAT 122 Technical Mathematics
Further development of mathematical concepts in which the student is introduced to trigonometry, logarithms, systems of equations, inequalities, ratio and proportion.
Credit: 4 hours — Four lecture hours per week.
Prerequisite: Technical Mathematics 121
MAT 139  Finite Math
Set concepts and operations, combinations, permutations, elementary probability theory, systems of linear equations, finite Markov chains, introduction to linear programming.
Credit: 3 hours — Three lecture hours per week.
Prerequisite: Intermediate Algebra 114 or two years of high school algebra.

MAT 210  General Elementary Statistics
Introduction to the theory of statistics. Common statistical measures, probability, the binomial distribution, the normal distribution, one-sample and two-sample hypothesis testing, confidence intervals, correlation, and prediction.
Credit: 3 hours — Three lecture hours per week.
Prerequisite: College Algebra & Trigonometry 115 or Finite Math 139

MAT 211  Analytic Geometry and Calculus
Analytic geometry extended, applications of derivatives, maxima, minima, implicit differentiation, concavity, antiderivatives, definite integrals, fundamental theorem of integral calculus. Application of definite integrals, transcendental functions.
Credit: 5 hours — Five lecture hours per week.
Prerequisite: Analytic Geometry & Calculus 117

MAT 212  Analytic Geometry and Calculus
Introduction to conics and application of conics, techniques of integration, polar coordinates, parametric equations and vectors, indeterminate forms, improper integrals, multiple integrals, infinite series, partial differentiation, differential equations, three dimension space and linear algebra.
Credit: 5 hours — Five lecture hours per week.
Prerequisite: Analytic Geometry & Calculus 211

MET 100  Emergency Medical Technology
The material covered in this course is designed to comply with the requirements of the Illinois Department of Transportation’s eighty-one (81) hour Emergency Medical Technician I course. The completion of this course will allow the student to take the examination administered by the State of Illinois Department of Public Health.
Credit: 6 hours — Six lecture hours per week.

MPD 100  Master Pastry Designing
This is an introductory course to the art of pastry design which provides individualized instruction for beginners. It provides instruction in everything from how to bake and prepare the pastries and how to design beautiful all occasion pastries.
COURSES OF STUDY

Credit: 2 hours — One lecture and two lab hour per week.
Prerequisite: None

MUS 111  College Choir
Membership in the college choir is open to all students with approval from the instructor. Members rehearse and perform music of all styles from renaissance to rock and develop basic singing techniques.
Credit: 1 hour — Two lab hours per week.
Prerequisite: None

MUS 112  Fundamentals of Music
A study of how sounds are combined to produce music through the actual processes of composing and performing. Basic music reading, notation, scales, and chords are studied and applied. Suitable for pre-teachers and non-music majors.
Credit: 3 hours — Three lecture hours per week.
Prerequisite: None

MUS 113  Harmony, Ear Training Sight Singing I
Study of traditional diatonic tonal materials and standard notational practice: intervals, scales, chords, chord roots, theory of chord inversion. Includes lab in sight singing, ear training, dictation and keyboard skills.
Credit: 4 hours — Three lecture and two lab hours per week.
Prerequisite: Music 112, or demonstrate proficiency of Music 112

MUS 114  Harmony, Ear Training & Sight Singing II
Beginning study of four part writing, theory of chord succession, structure of harmonic cadence, key systems, modal structured, seventh chords. Harmonic analysis of simple scores. Continuation of common diatonic materials in keyboard, ear training, and sight singing skills. Standard chord progressions at the keyboard.
Credit: 4 hours — Three lecture and two lab hours per week.
Prerequisite: Music 113

MUS 115  Music Appreciation
A course designed to help the student to become a more sensitive listener. Aural perception of musical sound events, relationships and structures emphasized. Also a survey of musical forms with a study of music in regards to other art forms.
Credit: 2 hours — Three lecture hours per week.
Prerequisite: None

MUS 116  Applied Class
Class instruction in applied study of voice, piano, and guitar.
Credit: 1 hour — One hour per week.
Prerequisite: None
MUS 117    Private Study
Private applied instruction in voice, piano, or guitar.
Credit: 1 hour — One half hour per week.
Prerequisite: Enrollment in music major program and consent of instructor

MUS 118    Survey of Music Literature
Musical forms and styles analyzed through listening to examples from leading composers of each historical period.
Credit: 3 hours — Three lecture hours per week.
Prerequisite: Music 112 or consent of instructor.

MUS 119 ab Chamber Singers
Membership is open to a select group of students. Designed to give experience with music written for the small ensemble, from Madrigals to pop. Members required to participate in College Choir. Chamber Singers give public performances.
Credit: 1 hour — One half hour per week.
Prerequisite: Membership concurrently in College Choir.

MUS 213    Harmony, Ear Training & Sight Singing III
Credit: 4 hours — Four lecture hours per week.

MUS 214    Harmony, Ear Training & Sight Singing IV
Original composition utilizing skills and knowledge of Music 213. Introduction of Twentieth Century materials.
Credit: 4 hours — Four lecture hours per week.
Prerequisite: Music 213

NUR 290    Physical Diagnosis
This course is designed to provide the professional nurse with the necessary knowledge and skills to conduct a physical examination and to provide a tentative diagnosis of possible illness and/or injury of a patient. Topics to be covered include, but are not limited to history taking; general evaluation; examination of the ear, eye, nose, throat, chest, heart and abdomen. This course is highly recommended for public health nurses, school nurses, and other professional nurses whose job requires the administration of physical examinations.
Credit: 2 hours — Two lecture hours per week.
Prerequisite: Registered Nursing or Licensed Practical Nursing
OHT 111  Introduction to Horticulture
A comprehensive study of the plants utilized in horticultural practices. 
Presentation of the techniques and procedures utilized to propagate, 
produce, and maintain these plants. 
Credit: 5 hours — Three lecture and four lab hours per week.

OHT 112  Introduction to Greenhouse Operation
An introduction to the basic types of greenhouses and their utility and 
adaptation for the culture and propagation of plants. The general tech-
niques for culturing and propagating plants in the greenhouse will be 
presented. 
Credit: 3 hours — Two lecture and two lab hours per week.

OHT 113  Landscape Design
A study of the theory and concepts of landscape design applied to private 
and public areas. In the laboratory, preliminary sketches and final plans 
of a landscape layout will be prepared. 
Credit: 3 hours — Two lecture and two lab hours per week.

OHT 125  Turfgrass Culture
A study of the prominent lawn and special purpose grasses, including 
methods of identification, propagation, and maintenance. Also an in-
troduction to the common weeds which infect turf and the utilization 
of herbicides. 
Credit: 4 hours — Two lecture and four lab hours per week.

OHT 127  Nursery Operations
An introduction to the techniques and procedures utilized in the com-
mercial production of annuals, herbaceous perennials, deciduous shrubs 
and trees, and conifers. Nursery practices of propagation and mainte-
nance will be emphasized. 
Credit: 4 hours — Two lecture and four lab hours per week.

OHT 128  Insect Pest and Plant Disease
Study of the insect pests and plant disease of ornamental plants. Intro-
duction to the safe and regulated utilization of insecticides and fungi-
cides. 
Credit: 3 hours — Two lecture and two lab hours per week.

OHT 130  Greenhouse Management
A study of the various culture techniques utilized for the commercial 
production of plants. Various other greenhouse management problems 
will be stressed. 
Credit: 3 hours — Two lecture and two lab hours per week.
OHT 131  Horticulture Business Management
A course utilizing and extending information and horticultural techniques for the proper management of a commercial operation.
Credit: 3 hours — Two lecture and two lab hours per week.

OHT 132  Horticulture Internship
A course designed to place the student in a practical work situation which is closely related to the area of emphasis of the student's program.
Credit: 5 hours — One lecture and twenty lab hours per week.

PD 101  Introduction to Emotional Self-Help
This course is designed to assist students in developing the ability to understand rational counseling and how this concept can be applied in their daily activities.
Credit: 2 hours — Two lecture hours per week.
Prerequisite: None

PE 100  Physical Education
A basic co-educational program in physical education which emphasizes essentially carry-over activities. Recreational aspects of activities including badminton, golf, bowling, tennis, and other related sports.
Credit: 1 hour — One lecture hour per week.
Prerequisite: None

PE 101  Bowling
A basic activity course designed to serve all students in the college. Significant consideration is given the basic fundamentals and techniques of bowling.
Credit: 1 hour — One lecture hour per week.
Prerequisite: None

PE 102  Beginning Tennis
A basic activity course designed to serve all students in the college. Significant consideration is given the basic fundamentals and techniques of tennis.
Credit: 1 hour — One lecture hour per week.
Prerequisite: None

PE 103  Intermediate Tennis
A basic activity course designed to serve all students in the college. Significant consideration is given the basic fundamentals and techniques of tennis. Students enrolled in this course will be expected to have the ability to execute basic fundamentals and techniques and greater emphasis shall be placed upon playing strategy.
Credit: 1 hour — One lecture hour per week.
Prerequisite: Beginning Tennis
PE 104  Golf
A basic activity course designed to serve all students in the college.
Significant consideration is given the basic fundamentals and techniques
of golf.
Credit: 1 hour — One lecture hour per week.
Prerequisite: None

PE 105  Badminton and Deck Tennis
A basic activity course designed to serve all students in the college.
Significant consideration is given the basic fundamentals and techniques
of badminton and deck tennis. Badminton will be taught the first nine
weeks and deck tennis will be taught the last nine weeks.
Credit: 1 hour — One lecture hour per week.
Prerequisite: None

PE 106  Volleyball
A basic activity course designed to serve all students in the college.
Significant consideration is given the basic fundamentals and techniques
of volleyball.
Credit: 1 hour — One lecture hour per week.
Prerequisite: None

PE 107  Archery
A basic activity course designed to serve all students in the college.
Significant consideration is given the basic fundamentals and techniques
of archery.
Credit: 1 hour — One lecture hour per week.
Prerequisite: None

PE 108  Stunts and Tumbling
A basic activity course designed to serve all students in the college.
Significant consideration is given the basic fundamentals and techniques
of stunts and tumbling.
Credit: 1 hour — One lecture hour per week.
Prerequisite: None

PE 109  Football: Flag and Touch
A basic activity course designed to serve all students in the college.
Significant consideration is given the basic fundamentals and techniques
of flag and touch football.
Credit: 1 hour — One lecture hour per week.
Prerequisite: None
PE 110  Basketball
A basic activity course designed to serve all students in the college. Significant consideration is given the basic fundamentals and techniques of basketball.
Credit: 1 hour — One lecture hour per week.
Prerequisite: None

PE 112  Softball
A basic activity course designed to serve all students in the college. Significant consideration is given the basic fundamentals and techniques of softball.
Credit: 1 hour — One lecture hour per week.
Prerequisite: None

PET 100  Parent Effectiveness Training
This course is a basic training class for parents and interested individuals. Emphasis shall be placed upon teaching the basic skills needed to assist in raising responsible children.
Credit: 2 hours — Two lecture hours per week.

PET 101  Parents-Special Needs Children
This course is designed to assist parents on how to work effectively with the physically and/or mentally handicapped children. The course will also acquaint parents with the services in their community that they can rely on for the additional help that they will need.
Credit: 3 hours
Prerequisite: None

PHI 215  Philosophy
Study of chief patterns of philosophic thought. Discussion of persistent problems of philosophy illustrated in the writing of major thinkers from Greece through the 20th Century.
Credit: 3 hours — Three lecture hours per week.
Prerequisite: None

PHS 111  Physical Science
This lecture course is an introduction to the basic concepts of chemistry with emphasis on atomic structure and the behavior of matter. It should be taken by non-science majors and science majors with very limited science background.
Credit: 4 hours — Three lecture and two lab hours per week.
Prerequisite: None

PHS 112  Physical Science
This lecture course is an introduction to the basic concepts of physics with emphasis on types of energy and their properties.
Credit: 4 hours — Three lecture and two lab hours per week.
Prerequisite: None

PHY 216 Physics
A general course in physics intended for those students who desire a major or minor in physics, mathematics majors, pre-engineering students, and other pre-professional students who require a basic course in college physics. The first semester course is a study of the basic laws of mechanics, heat, and sound, with considerable emphasis on the solution of problems. Topics covered include rectilinear motion, rotation, momentum, work and energy, heat, laws of thermodynamics, and wave motion.
Credit: 4 hours — Three lecture and two lab hours per week.
Prerequisite: Mathematics 115 and Inorganic Chemistry 114 or approval of appropriate Dean.

PHY 217 Physics
Basic laws of electricity and magnetism, light and atomic and nuclear physics. Topics covered include electric and magnetic fields, direct current and alternating circuits, physical and geometrical optics, and atomic and nuclear physics.
Credit: 4 hours — Three lecture and two lab hours per week.
Prerequisite: Physics 216

PN 110 Nurse Assistant
This course is designed to acquaint the student with the basic nursing skills and theory necessary for becoming a Nurse Assistant. Learning experiences will focus on direct patient care and are so organized to lead the student in understanding basic health concepts. Adequate time utilized in orientating the nurse assistant student to their work environment and responsibilities will provide a basis for quality patient care and good employee moral.
Credit: 6 hours — Four lecture and four lab hours per week.

PN 139 First Responder
This course is designed to assist in the improvement of emergency medical care rendered to victims of accidents and illness. Primary emphasis of this course is to provide students with training in emergency medical care with specific emphasis upon what to do if you are the first to reach the accident.
Credit: 3 hours — Three lecture hours per week.
Prerequisite: None
PN 140  Introduction to Basic Nutrition
This course is designed to introduce the practical nurse student to the basic food groups and nutritional requirements essential for maintenance of good health.
Credit: 1 hour — One lecture hour per week.
Prerequisite: None

PN 141  Basic Nursing Skills
This course will provide the concurrent instruction and supervised clinical laboratory experience necessary to meet the nursing needs of patients at an introductory level.
Credit: 6 hours — Five lecture hours and three lab hours per week.
Prerequisite: None

PN 142  Body Structure and Functions
This course is intended to help the practical nurse student give more intelligent nursing care because she better understands the normal functions of the body through a basic knowledge of anatomy and physiology. This basic knowledge will be reinforced and built upon throughout the program.
Credit: 3 hours — Three lecture hours per week.
Prerequisite: None

PN 143  Communications
This course is directed toward improving the verbal, non-verbal and written communicative skills. It is our intention to encourage the nurse to realize the importance of communications in her daily relationship with her patients, co-workers and family. This course will be integrated into all areas.
Credit: 1 hour — One lecture hour per week.
Prerequisite: None

PN 144  Personal and Vocational Relationships
This course is aimed at helping the practical nurse student understand others by better understanding herself, thus making her more effective in group action. It introduces a background of nursing history and shows practical nursing as an integral part of nursing on the vocational level.
Credit: 1 hour — One lecture hour per week.
Prerequisite: None

PN 145  Introduction to Mental Health
Learning to cope with personal fears and anxieties and the development of self-understanding is of utmost importance to the practical nurse student. This course is also designed to create within the practical nurse student an awareness of those mental health resources that are available to assist in meeting the physical and mental health needs of the indi-
vidual. It also emphasizes the importance of communications and interpersonal relationships between the practical nurse student and the patient and the ability to identify the major classifications of mental illness.

Practice and theory are given in the clinical area and includes the opportunity for observation of the professional team, patient-centered approach and the community approach.

Credit: 1 hour — One lecture hour per week.

Prerequisite: None

**PN 146 Introduction to Pharmacology**
This course is designed to develop a clear understanding of the limitations of the practical nurse and to develop a clear and basic knowledge of the safety measures involved in preparation and administration of medicines, the contradictions, sources, usual dosages and usual methods of administration. It also emphasizes the importance of medications, and an ability to observe and report these reactions intelligently.

Credit: 2 hours — Two lecture hours per week.

Prerequisite: None

**PN 147 Nursing Care of Geriatric Patient**
Recognizing that our geriatric population is increasing due to improved health and health practices, this course is directed toward a knowledge of the basic human needs of the older person, including physical, social, and emotional needs. Not only that the practical nurse might give understanding and competent care, but that she might develop an awareness of a positive approach toward aging as related to her own life.

Credit: 2 hours — One lecture hour and three lab hours per week.

Prerequisite: None

**PN 148 Nursing Skills**
A continuation of Basic Skills 141. This course is to familiarize the student with procedures and skills concurrent with the principles underlying their present theory and clinical experience to include the adult patient.

Credit: 3 hours — Two lecture hours and three lab hours per week.

Prerequisite: Basic Skills 141

**PN 149 Health & Introduction to Medical-Surgical Nursing**
This course is designed to present the basic concepts for maintaining adequate overall personal and community health. Causative factors and measures to control and/or prevent disease will be included. General symptoms of illness, basic principles of caring for the person who is ill, how the body’s natural defense mechanisms function and the more commonly used diagnostic aids will complete the course.
Credit: 3 hours — Two lecture hours and three lab hours per week. 
Prerequisite: None

PN 150  
Medical-Surgical Nursing I  
The care of selected adult patients in clinical affiliations and the study of disease conditions, symptoms and diagnostic measures used in such conditions.
Credit: 3 hours — Two lecture hours and three lab hours per week. 
Prerequisite: Health and Introduction to Medical-Surgical Nursing 149

PN 151  
Nursing Care of the Mother and Newborn  
This course is designed to develop within the practical nurse student an appreciation of the meaning of good prenatal and postnatal care and an understanding of the total birth process. To develop skills in caring for the mother and the newborn and to learn to recognize deviations from the normal in each. The student will learn the health needs of each and will participate in the teaching of these concepts. This will be accomplished through classroom instruction and clinical experience in the maternity division.
Credit: 3 hours — Two lecture hours and three lab hours per week. 
Prerequisite: None

PN 152  
Nursing Care of the Child  
This course is designed to help the student develop a basic understanding of the normal growth and development of the child, and how illness may interfere with the normal pattern. This understanding will be helpful in evaluation of the physical, intellectual, emotional and social behavior of the child patient. The student learns to care for the sick child using safety precautions, meaningful observations, and suitable nursing techniques. This experience will be accomplished through classroom instruction and clinical experience in the pediatric division and through the observance of the well child in the kindergarten.
Credit: 3 hours — Two lecture hours and three lab hours per week. 
Prerequisite: None

PN 153  
Pharmacology  
This is a course in theory and practice that offers a basic understanding of the principles of medication administration. It covers the basic information concerning the main effects, uses and dosages of the more common drugs. Practical experience will include administration of medications, observing and recording.
Credit: 2 hours — One lecture hour and two lab hours per week. 
Prerequisite: Introduction to Pharmacology 146
PN 154  Diet Therapy  
This course is designed to develop a clear understanding of the basic concepts of treatment of disease by diet.  
Credit: 1 hour — One lecture hour per week.  
Prerequisite: Introduction to Basic Nutrition 140 and Nutrition 158

PN 155  Personal Vocational Relationships  
A continuation of Personal and Vocational Relationships 144. This course develops within the student an awareness of duties, responsibilities, limitations, ethical and legal aspects, career opportunities and requirements, and nursing organizations.  
Credit: 1 hour — One lecture hour per week.  
Prerequisite: Personal and Vocational Relationships 144

PN 156  Advanced Nursing Skills  
This course offers the student advanced nursing theories concurrent with their clinical application. Techniques of charting, transcribing and team nursing as they relate to the duties of practical nursing are presented. In addition, skills relating to nurses station desk duties are developed.  
Credit: 2 hours — One lecture hour and three lab hours per week.  
Prerequisite: Nursing Skills 148

PN 157  Medical-Surgical Nursing II  
This course is a continuation of Medical-Surgical Nursing I 150.  
Credit: 6 hours — Four lecture hours and six lab hours per week.  
Prerequisite: Medical-Surgical Nursing I 150

PN 158  Nutrition  
This course is designed to present information concerning the modification of the normal basic diet to meet the therapeutic needs of the patient; the interpretation of a diet order in terms of daily foods and meals; and the many factors involved in feeding the sick.  
Credit: 1 hour — One lecture hour per week.  
Prerequisite: Introduction to Basic Nutrition 140

PN 159  Pharmacology  
A continuation of Pharmacology 153. This course presents information concerning the effect of drugs on various body systems; expansion of knowledge concerning drugs most commonly used in the treatment of major diseases, their main effects, dosages, contraindications and dangers.  
Credit: 1 hour — One lecture per week.  
Prerequisite: Introduction to Pharmacology 146 and Pharmacology 153

PSY 211  Introduction to Psychology  
An introduction to the study of human behavior, with emphasis on basic psychological principles. Topics such as learning, motivation, intelligence, special senses, and perception are considered.
Credit: 3 hours — Three lecture hours per week.  
Prerequisite: None

**PSY 214  Practical Psychology**
Basic concepts as it applies to human relations, employee organizations and working conditions. Problems of discipline, communications, motivation, authority, social change, and teamwork are examined through case studies.
Credit: 3 hours — Three lecture hours per week.  
Prerequisite: None

**PSY 219  Abnormal Psychology**
An examination is made of the development of both adaptive and maladaptive behavior patterns. Primary emphasis is devoted to the classification, symptoms, etiology, and treatment of maladaptive behavior.
Credit: 3 hours — Three lecture hours per week.
Prerequisite: None

**REP 111  Introduction to Real Estate Sales**
This course is designed to introduce the student to such real estate fundamentals as: ownership, principles and concepts of property ownership, various types of real estate opportunities, real estate marketing, financing, leasing, taxation, appraisal, development, insurance, and state licensing. This course would be appropriate for persons seeking to prepare for the Illinois License Examination for real estate salesman.
Credit: 3 hours — Three lecture hours per week.
Prerequisite: None

**REP 112  Intermediate Real Estate Practices**
This course is designed to cover the real estate functions of securing and servicing listings, qualifying buyers and sellers, multiple listing services, showing property, advertising, and real estate sales techniques. Additional topics covered will include information on financing, mortgages, deeds, foreclosure, insurances of mortgages and principles of property value for mortgage credit. Topics in real property insurance such as risk, nature and function of insurance, types of insurance, bonding the broker, etc., will also be covered.
Credit: 3 hours — Three lecture hours per week.
Prerequisite: Introduction to Real Estate Sales 111 or a valid real estate salesman license.

**REP 113  Advanced Real Estate Practices**
This course is designed to cover the obligations and effects of legal documents in listing, selling, conveying, leasing, and financing real estate. Emphasis will be placed upon the various legal documents used in real estate transactions. Other appropriate topics will be covered to
inform the student of the nature and functions of the real estate brokerage. Such topics as qualifications of the real estate broker, principles of land utilization, appraisal principles and methods, basic policies, organization and equipment of the broker’s office, office personnel, selection of salespersons, compensation of salespersons, types and sources of listings, control of listing, control of prospects, real estate markets, financing control and government regulations will be covered. Credit: 3 hours — Three lecture hours per week. Prerequisite: Introduction to Real Estate Sales 111 or a valid real estate salesman license.

SC 101  Introduction to Senior Legal Rights
The purpose of this course is to introduce senior citizens to the various legal avenues for obtaining:
1. Adequate income
2. Suitable housing
3. Opportunities for employment without discrimination
4. Pursuit of meaningful activity
5. Immediate benefit from proven research knowledge
6. Best possible physical and mental health
Credit: 2 hours — Two lecture hours per week.

SC 102  Senior Legal Rights
This course is a continuation of the introductory course. The second semester will be concerned with physical and mental health; restorative services; retirement in health, honor, and dignity; needed and available community services; and freedom, independence, and the free exercise of individual initiative.
Credit: 2 hours — Two lecture and two lab hours per week. Prerequisite: SC 101

SEC 120  Records Management
Fundamentals in alphabetic, numeric, geographic, and subject filing are reviewed. The elements of an organized records management program are studied, including records inventory procedures, records classification systems, active and inactive records control procedures, forms analysis and control, archives management, and records center management.
Credit: 3 hours — Three lecture hours per week.

SEC 121  Beginning Typewriting
Typewriter keyboard, techniques of developing speed and accuracy, centering, tables, letters and manuscripts. Minimum 5 minute speed of 35 wpm at end of course. Individualized self-paced method of instruction. Course may be waived based by placement test.
Credit: 3 hours — One lecture and four lab hours per week.
Prerequisite: None

**SEC 122 Intermediate Typewriting**
A continuation of beginning typing with emphasis on straight copy typing as well as timed production work. Includes letters, tables, memos, forms, reports, stencils, dittos. Minimum 5 minute speed of 45 wpm required at end of course. Individualized self-paced method of instruction. Course may be waived by placement test.
Credit: 3 hours — One lecture and four lab hours per week.
Prerequisite: Beginning Typewriting 121 or placement test.

**SEC 123 Beginning Shorthand**
A complete course in Gregg shorthand theory with brief forms, phrasing and vocabulary. Emphasis on writing speed with typewritten transcription. Minimum 3 minute dictation and transcription at 50 wpm at end of course. Course may be waived by placement test.
Credit: 3 hours — One lecture and four lab hours per week.
Prerequisite: Beginning Typewriting 121 enrollment or completion.

**SEC 124 Shorthand and Transcription**
Development of dictation and transcription skills. Minimum 3 minute dictation and transcription at 70 wpm at end of course. Includes mailable letter transcription. Course may be waived by placement test.
Credit: 3 hours — One lecture and four lab hours per week.
Prerequisite: Beginning Shorthand 123 or placement test.

**SEC 125 Business Machines**
A laboratory course which includes addition, subtraction, multiplication, and division on the ten-key adding machine, rotary, printing, electronic, and key-driven calculators. Basic skills are applied to payroll, percentage, merchandise, and simple interest problems. The student gains necessary skill needed for competent business machine operation.
Credit: 3 hours — One lecture and four lab hours per week.
Prerequisite: None

**SEC 128 Machine Transcription**
Typewriter transcription of prerecorded data from transcription machine into mailable letter. Includes punctuation, spelling, word usage, corrections and other transcription skills.
Credit: 2 hours — One lecture and two lab hours per week.
Prerequisite: Beginning Typewriting 121.

**SEC 223 Advanced Typewriting**
A continuation of intermediate typing with emphasis on speed development and timed production work. Government, medical, technical,
financial and legal correspondence. Minimum 5 minute speed of 50 wpm at end of course. Individualized self-paced method on instruction. Credit: 3 hours — One lecture and four lab hours per week. Prerequisite: Typewriting 122 or placement test.

SEC 224 Shorthand and Transcription
Increased development of dictation and transcribing skills. Minimum 3 minute dictation and transcription at 90 wpm at end of course. Strong emphasis on mailable letter transcription. Credit: 3 hours — One lecture and four lab hours per week. Prerequisite: Shorthand and Transcription 124 or placement test.

SEC 225 Shorthand and Transcription
Increased emphasis on mailable letter transcription. Minimum 3 minute dictation and transcription at 110 wpm at end of course. Credit: 3 hours — Two lecture and two lab hours per week. Prerequisite: Shorthand and Transcription 224.

SEC 226 Secretarial Procedures
A comprehensive study of the duties of the secretary. Topics examined include the secretarial profession, duplicating, communications personality, and human relations. Knowledge, attitudes, and values that are important for competent performance on the job are stressed. Credit: 4 hours — Three lecture and two lab hours per week. Prerequisite: Typing 121 or the equivalent through proficiency testing.

SEC 227 Word Processing
A three-hour course which includes instruction in the following areas: word processing concepts and careers; machine transcription, electronic keyboarding/text editing skills; word processing simulation; and word processing management/supervision. Credit: 3 hours — One lecture and four lab hours per week. Prerequisite: Beginning Typing 121

SEC 228 Medical Terminology
Development of a medical vocabulary through the study of word construction, spelling and pronunciation, medical abbreviations and symbols, and use of terminology in correspondence and reports used in the medical profession. Credit: 3 hours — Two lecture and two lab hours per week. Prerequisite: Typing 121 or the equivalent through proficiency testing.

SEC 229 Legal Terminology
Development of a legal vocabulary through the study of word construction, spelling and pronunciation, legal abbreviations and symbols, and
use of terminology in correspondence and reports used in the legal profession.
Credit: 3 hours — Three lecture hours per week.
Prerequisite: Shorthand 224 and Typing 121 or the equivalent through proficiency testing.

SEC 230  CPS-Office Procedures and Administration
This course will emphasize the knowledge that a secretary must possess pertinent to business date processing, communications techniques, advances in office management, records management, and office systems, layout and design.
Credit: 1 hour — One lecture hour per week.
Prerequisite: One year of full-time secretarial experience or consent of instructor.

SEC 231  CPS-Business and Public Policy
Business law as it applies in the secretary’s work-a-day world, and the implications of governmental controls as they impact upon business and office operations will be presented in this course.
Credit: 1 hour — One lecture hour per week.
Prerequisite: One year of full-time secretarial experience or consent of instructor.

SEC 232  CPS-Environmental Relationships in Business
Human relations, group dynamics and how effective communications can contribute to success in dealing with people as it relates to the role and function of the secretary in the office environment will be presented. Emphasis will be placed on the relationship between the secretary or administrative assistant and the supervisor and people the secretary comes in contact with in the business setting.
Credit: 1 hour — One lecture hour per week.
Prerequisite: One year of full-time secretarial experience or consent of instructor.

SEC 233  CPS-Economics and Management
The basic concepts of economics and management underlying the United States business system as it relates to the secretary’s role in business will be presented.
Credit: 1 hour — One lecture hour per week.
Prerequisite: One year of full-time secretarial experience or consent of instructor.

SEC 234  CPS-Financial Analysis and Math
Fundamental accounting principles that a secretary must possess in order to assist the supervisor in the preparation, summarization and interpre-
tation of financial data. Emphasis will be also placed on the secretary's application of basic math to business situations.
Credit: 1 hour — One lecture hour per week.
Prerequisite: One year of full-time secretarial experience or consent of instructor.

SEC 235 CPS-Communications and Decision Making
Setting priorities in the office and the role of the secretary or administrative assistant in taking action on these priorities will be presented. Emphasis will be placed on correspondence styles and the production of this correspondence.
Credit: 1 hour — One lecture hour per week.
Prerequisite: One year of full-time secretarial experience or consent of instructor.

SEM 101 Introduction to College Life
The student is introduced to the educational opportunities and facilities of the college: social activities, scholarships, study methods, college transfer requirements, and job opportunities. Introduction to College Life is a non-transferable requirement for all graduates of Shawnee College.
Credit: 1 hour — One lecture hour.
Prerequisite: None

SOC 212 Sociology
Basic principles of social organization with reference to communities, social institutions, social stratification, concepts of culture, collective behavior and social change in the contemporary societies.
Credit: 3 hours — Three lecture hours per week.
Prerequisite: None

SPA 111 Spanish
An introductory course designed to facilitate conversation from the beginning, with adequate emphasis on writing. The course is taught in Spanish with translation only where necessary.
Credit: 4 hours — Three lecture and two lab hours per week.
Prerequisite: None

SPA 112 Spanish
A continuation of Spanish 111. Increased stress on reading in order to inculcate idiomatic use of the language. Constant oral practice.
Credit: 4 hours — Three lecture and two lab hours per week.
Prerequisite: Spanish 111
SPA 211  Spanish
Intermediate Spanish. Continued major emphasis on conversation with
beginning writing.
Credit: 4 hours — Three lecture and two lab hours per week.
Prerequisite: Spanish 112

SPA 212  Spanish
A continuation of 211. Increased use of contemporary oral and written
Spanish material from Latin America.
Credit: 4 hours — Three lecture and two lab hours per week.
Prerequisite: Spanish 211

SPC 111  Basic Oral Communication
This course is designed to give the student the basic principles of in-
terpersonal communication with emphasis upon the techniques of com-
munication orally. Various types of oral presentation are studied with
emphasis upon public speaking. Attention is given to voice, bodily
action, organization of material and to the speaker's character and re-
sponsibility to society.
Credit: 3 hours — Three lecture hours per week.
Prerequisite: None

SPC 112  Oral Interpretation
Problems and techniques of reading various types of literature orally
are studied and practiced.
Credit: 3 hours — Three lecture hours per week.
Prerequisite: None

SPC 113  Introduction to Drama
Modern and ancient plays are studied with emphasis on dramatic con-
ventions and devices used to give form and meaning to human expe-
rience.
Credit: 3 hours — Three lecture hours per week.
Prerequisite: None

SPC 114 a,b  Forensic Activities
Students engaged in actual communication situations in the community
or in interscholastic speech competition may earn one hour credit per
semester. A total of four semester hours may be accumulated. Two lab
hours per week are utilized to research and practice for speech activities.
Credit: 1 hour — Two lab hours per week.
Prerequisite: None

SPC 211  Group Discussion
A study of the principles, methods, and types of discussion and their
application in the solving of modern day problems.
Credit: 3 hours — Three lecture hours per week.
Prerequisite: Basic Oral Communication 111 or consent of instructor.

SPC 212 Argumentation and Debate
The principles of argument analysis, evidence reasoning, fallacies, briefing, and delivery are studied and applied in debating experiences.
Credit: 3 hours — Three lecture hours per week.
Prerequisite: Basic Oral Communication 111 or consent of instructor.

SPC 213 Theatre
Attention is given to the various aspects of play production with opportunity to gain experience in one or more of the theatrical arts.
Credit: 3 hours — Three lecture hours per week.
Prerequisite: Introduction to Drama 113 or consent of instructor.

SPC 214 a.b Forensic Activities
Continuation of Speech 114 a,b.
Credit: 1 hour — Two lab hours per week.
Prerequisite: None

SSC 102 American Social Structure
An introduction to social science, with a general sociological perspective, focusing attention on economic theory, history, political science, and psychology. Emphasis on the structure and function of social institutions, particularly American society.
Credit: 3 hours — Three lecture hours per week.
Prerequisite: None

SSC 104 American Ethnic Groups
American Ethnic Groups is a course designed to foster an awareness and understanding of the major minority groups (Black Americans, Japanese Americans, Mexican Americans, and the American Indians) in the United States. This course will emphasize the historical background, culture, and achievements of these groups.
Credit: 3 hours — Three lecture hours per week.
Prerequisite: None

SST 121 Introduction to Social Work
A survey of the field of social work describing the historical development of social work from the early English Poor Laws through contemporary American practices. In addition, interviewing skills are developed through role playing.
Credit: 3 hours — Three lecture hours per week.
Prerequisite: None
SST 122  Introduction to Social Problems
A study of the major social problems in the American society, including historical perspective, etiology, and proposed plans of resolution. Sociological theory and research are also considered.
Credit: 3 hours — Three lecture hours per week.
Prerequisite: None

SST 221  Introduction to Group Processes
An introduction to the process of social group work to include fundamental methods, techniques, and skills with emphasis on the concepts and principles as practiced in the modern social agency.
Credit: 3 hours — Two lecture and two lab hours per week.
Prerequisite: None

SST 222  Advanced Group Processes
A continuation of Group Processes 221. Added emphasis is placed on modern practices of personalizing the learning process to develop more effective relationships.
Credit: 3 hours — Two lecture and two lab hours per week.
Prerequisite: Group Processes 221

SST 223  Principles of Recreation
A study of principles involved in organizing and supervising recreational programs for community agencies. Practical experience will be gained through fieldwork.
Credit: 3 hours — Two lecture and two lab hours per week.
Prerequisite: None

SST 224  Introduction to Service Agencies
This course is designed to study the relationship of effective leadership to effective community service, the decision-making process, and the principles at work in local and state governments. Field trips, work shops, and discussions of allied facilities constitutes the major portion of this course.
Credit: 3 hours — Three lecture hours per week.
Prerequisite: None

SST 225  Practicum
A community agency-based experience providing practice under the supervision of a trained practitioner. The student participates in staff activities, planning, recording, evaluating, group leading, and other agency tasks. Included in this practicum will be one seminar session per week for the purpose of discussing problems encountered during the work experience portion.
Credit: 4 hours — One lecture hour, fifteen lab hours per week.
Prerequisite: Sophomore standing in Social Service Technology Program
SST 227  Marriage & Family
The historical development of the American family is briefly studied including comparisons with other cultures. The primary emphasis is upon changes which have occurred in the family during the 20th century, factors causing the change, effects of it, and future trends.
Credit: 3 hours — Three lecture hours per week.
Prerequisite: None

SST 228  Human Growth & Development
A systematic study of behavior from conception through adolescence is conducted with emphasis on physical, social, emotional, and intellectual growth and development. Attention is directed to both normal and abnormal development in each of the above areas. Research methods and cross-cultural comparisons are considered as they relate to the development process.
Credit: 3 hours — Three lecture hours per week.
Prerequisite: None

SUR 110  Introduction to Surveying
This course is designed to give students a basic knowledge of surveying and the use and care of equipment used in surveying.
Credit: 5 hours — Two lecture and six lab hours per week.

SUR 111  Contour Surveying
This course is designed to provide students with knowledge and skills pertaining to contour layouts and designs. Students will be expected to construct case problems and layout contour grid patterns. Proper usage of level, chain, level rod, and transit will be stressed.
Credit: 3 hours — Two lecture and two lab hours per week.

SUR 114  Road Layout and Construction
This course is designed to train students in preliminary road layout, profiling and cross sectioning to determine areas of cuts and fills, also how to set grade stakes to bring the road bed to final grade by construction crews.
Credit: 3 hours — Two lecture and two lab hours per week.

SUR 130  Surveying
This course is a continuation of Surveying 114 with emphasis being placed on site development and actual case problems. The student will develop skills in differential level surveying, profile and cross-section leveling, contour surveying and surveying calculations.
Credit: 4 hours — Two lecture and four lab hours per week.
SUR 132  Surveying Internship
Students will be required to use the knowledge and skills obtained in Surveying 111 and 114 in order to complete a surveying project as a part of a surveying crew. Emphasis will be placed on transit work, rodman’s duties and chaining. Recording practices in areas of contouring, cutting and filling areas, construction and elevation work. Layouts of sewer and power supplies is also covered.
Credit: 5 hours — One lecture and twenty lab hours per week.

TEA 110  Health/Safety Early Childhood
This course is designed to give students a practical base of information for use in preschool settings in the areas of health, safety, mental health and nutrition. Included is training in emergency care procedures and illness detection. Visits by medical professionals are included.
Credit: 3 hours — Two lecture and two lab hours per week.

TEA 121  Introduction to Teacher Aide Duties
This course examines the role of the trained teacher aide at all levels of work in various areas of the curriculum. An in-depth study will be made of the duties, responsibilities and ethical principles of the teacher aide. A consideration of the future of the role of personnel in such positions will be made.
Credit: 3 hours — Three lecture hours per week.

TEA 122  Teaching Materials and Their Use
Operations of audiovisual equipment, organization of materials and books, preparation of audiovisual aids such as bulletin boards, mounting pictures, lettering etc. will be stressed.
Credit: 3 hours — Two lecture and two lab hours per week.

TEA 123  School Procedures
This course will deal with the school as a complex public owned institution, stressing the role of staff in helping to transmit a positive impression in a truthful and tactful manner. The importance of school forms, record keeping and work organization will be included, along with utilization of community resources.
Credit: 3 hours — Three lecture hours per week.

TEA 124  The Young Child’s Development
This course is planned to provide the child care giver with an understanding of the total development of the young child. It focuses on the physical, intellectual, emotional and social aspects of the preschool child’s development. Such an approach will benefit the day care worker, nursery school personnel, and licensed sitters, as well as parents.
Credit: 2 hours — Two lecture hours per week.
Prerequisite: None
TEA 125  Managing the Preschool Classroom
This course is planned to provide the child care giver with realistic approaches toward setting up the physical environment for a preschool or day care center. It will deal with the selection and use of equipment, define interest areas and consider safety and health in the center. Group management will be covered in terms of scheduling, transition periods and discipline.
Credit: 2 hours — Two lecture hours per week.
Prerequisite: None

TEA 126  Curriculum for Preschool Programs
This course will provide the child care giver with a wide range of curriculum possibilities that can add quality and enrichment to early childhood programs. It will encourage play and discovery techniques and will include theoretical and practical approaches toward developing language, cognitive, physical and creative skills in the young child.
Credit: 2 hours — Two lecture hours per week.
Prerequisite: None

TEA 127  Early Childhood Model Programs
This course will survey contemporary models of early childhood programs focusing on the theory supporting each program, and the goals and methods involved in each. It is designed to offer the student a broad understanding of alternate approaches to early childhood education and to equip the student with the ability to analyze approaches critically.
Credit: 2 hours — Two lecture hours per week.
Prerequisite: None

TEA 225  Practicum
This will be a supervised teacher aids experience program. Supervising personnel will be fully certified teachers in the public or private school system.
Credit: 5 hours — One lecture and 20 lab hours per week.

WEL 101  Heavy Equipment Repair II
A continuation of basic Arc Welding using the Low-Hydrogen electrode, designed for welding high sulfur and high carbon steels. A study of joint geometry also a study of oxy-acetylene and arc air cutting gouging and deseaming. This course is designed to give the student a working knowledge in heavy equipment repair.
Credit: 1 hour — One lecture and two lab hours per week.

WEL 120  Gas Welding and Cutting
A study of the techniques, procedures and uses of oxyacetylene welding and cutting equipment.
Credit: 3 hours — One lecture and four lab hours per week.
WEL 123  **Arc Welding I**
A study of welding processes used by Industry concentrating on metallic arc welding on flat, horizontal plates.
Credit: 3 hours — One lecture and four lab hours per week.

WEL 124  **Arc Welding II**
A continuation of welding course 123 metallic arc welding vertical and overhead, lap, and fillet welds.
Credit: 3 hours — One lecture and four lab hours per week.
Prerequisite: Arc Welding I 123.

WEL 125  **MIG Welding**
A course in the techniques of metallic inert gas (semi-auto welding). Concentration on a flat bend test — horizontal, vertical up-hill and down-hill welding.
Credit: 3 hours — One lecture and four lab hours per week.
Prerequisite: Gas Welding and Cutting 120 and Arc Welding II 124

WEL 126  **Advanced Gas Welding**
A continuation of Oxyacetylene Welding 120. Horizontal, vertical, and overhead welding. Also a study of brazing and soldering techniques.
Credit: 3 hours — One lecture and four lab hours per week.
Prerequisite: Gas Welding and Cutting 120

WEL 127  **Low Hydrogen ARC Welding**
A continuation of Arc Welding 124, using the low hydrogen electrode, designed for welding high sulphur and high carbon steels. Course concentrating on flat bend test, horizontal, vertical up-hill and down-hill welding.
Credit: 3 hours — Two lecture and two lab hours per week.
Prerequisite: Arc Welding II 124

WEL 128  **Pipe Welding**
This course is designed to teach up-hill and down-hill pipe welding — fixed position.
Credit: 3 hours — One lecture and four lab hours per week.
Prerequisite: Low Hydrogen Arc Welding 127

WEL 129  **Tig Welding I**
Tig welding is a gas-arc welding process which uses an inert gas to protect the weld zone from the atmosphere. The heat for welding is a very intense electric Arc which is struck between a non-consumable Tungsten electrode and work piece. Tig welding is more complex than regular Arc welding. More emphasis is placed on the tech-nology of
metals. The student shall be competent in Arc and Gas welding and have knowledge of metals, their properties and characteristics. Credit: 2 hours — One lecture and two lab hours per week.

**WEL 130 Metal Working Fabrications**
This is a course which teaches the fundamentals of working with metal, making layouts, templates, jogs, fixtures, pipe fabrications, and planning and designing projects using both hand and power tools. The student shall be competent in machine shop and welding. Credit: 2 hours — One lecture and two lab hours per week.

**WWT 110 Introduction to Water and Wastewater Technology**
A course introducing the fundamental principles of hygienic sewage disposal and water source development and protection emphasizing the scientific rationale for the development and application of standards protecting public health and the environment. Credit: 2 hours — Two lecture and no lab hours per week.
Prerequisite: None

**WWT 111 Basic Wastewater Treatment**
A course in the chemical, physical, and biological aspects of wastewater designed to familiarize students in the control aspects of wastewater effluents. Credit: 3 hours — Two lecture and two lab hours per week.
Prerequisite: None

**WWT 112 Basic Water Treatment Technology**
An introductory course in the principles of public water supply utility operation and management including the importance and use of water, sources of water, the physical, chemical, and biological quality of water, and the collection, treatment, storage, and distribution of water. Credit: 3 hours — Two lecture and two lab hours per week.
Prerequisite: None

**WWT 113 Advanced Wastewater Treatment**
An advanced study of course 111 dealing with the physical, chemical, and biological aspects of wastewater effluents. Emphasis in this course will be placed on operational principles and maintenance of wastewater treatment facilities. Credit: 3 hours — Two lecture and two lab hours per week.
Prerequisite: Basic Wastewater Treatment 111 or permission of instructor.

**WWT 114 Advanced Water Treatment Technology**
A continuation of course 112 with emphasis on study of the operational and maintenance principles of the unit processes of water treatment and laboratory control procedures.
Credit: 3 hours — Two lecture and two lab hours per week.
Prerequisite: Basic Water Treatment 112 or permission of instructor.

WWT 115 Laboratory Analysis of Water
A course designed to familiarize the student with the principles and practices of laboratory procedures used in the control of water treatment plant processes. The course will introduce the student to basic laboratory equipment and terminology, as well as procedures used in performing chemical, physical, and biological analysis of water.
Credit: 3 hours — Two lecture and two lab hours per week.
Prerequisite: Advanced Water Treatment Technology 114 or permission of instructor.

WWT 116 Laboratory Analysis of Wastewater
A course designed to familiarize the student with the principles and practices of laboratory procedures used in the control of wastewater treatment plant processes. The course will introduce the student to basic laboratory equipment and terminology, as well as procedures used in performing chemical, physical, and biological analysis of wastewater.
Credit: 3 hours — Two lecture and two lab hours per week.
Prerequisite: Advanced Wastewater Treatment 113 or permission of instructor.

WWT 133 Water/Wastewater Internship
A course designed to provide the student with practical work experience in water and/or wastewater treatment plants.
Credit: 5 hours — One lecture and twenty lab hours per week.
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Ullin, IL 62992
Telephone: (618) 634-2242

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Washington, DC 20001

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