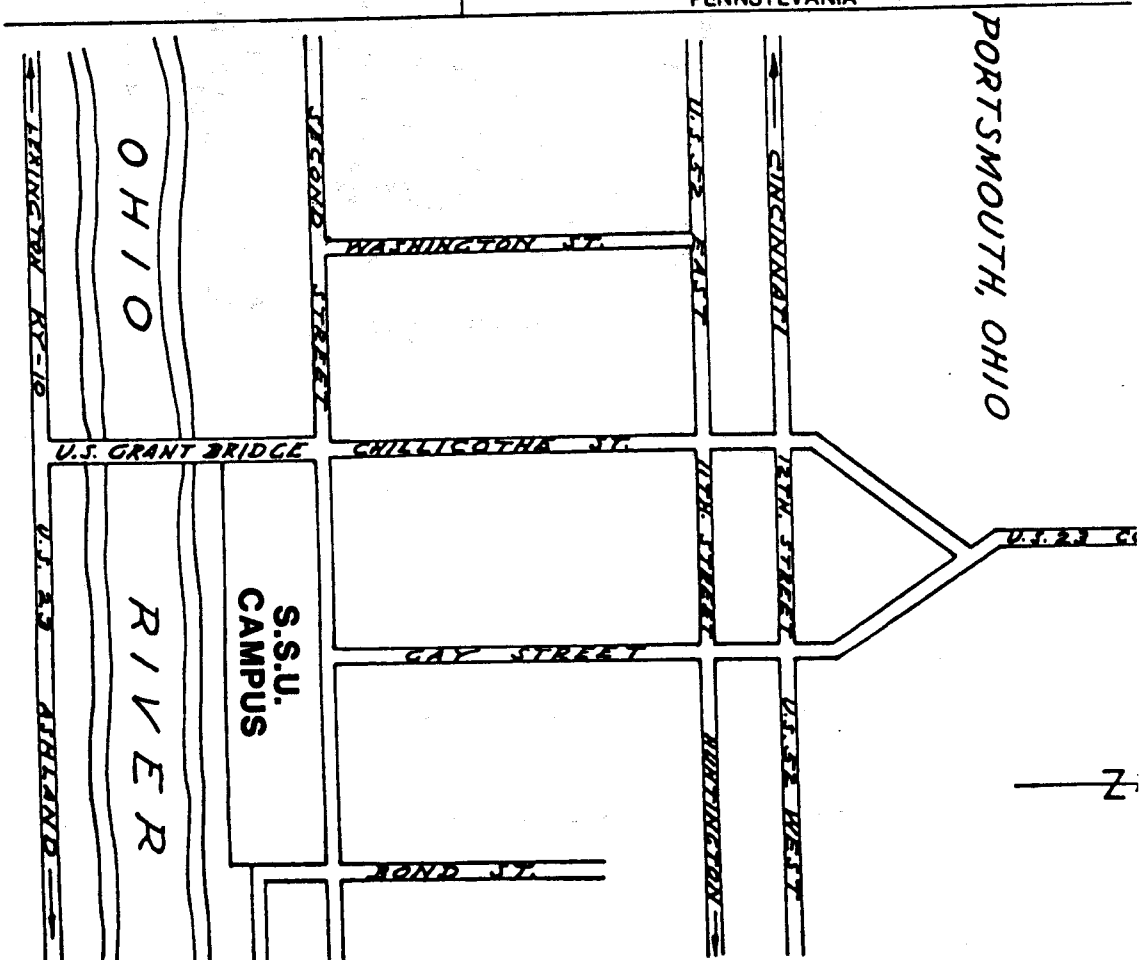
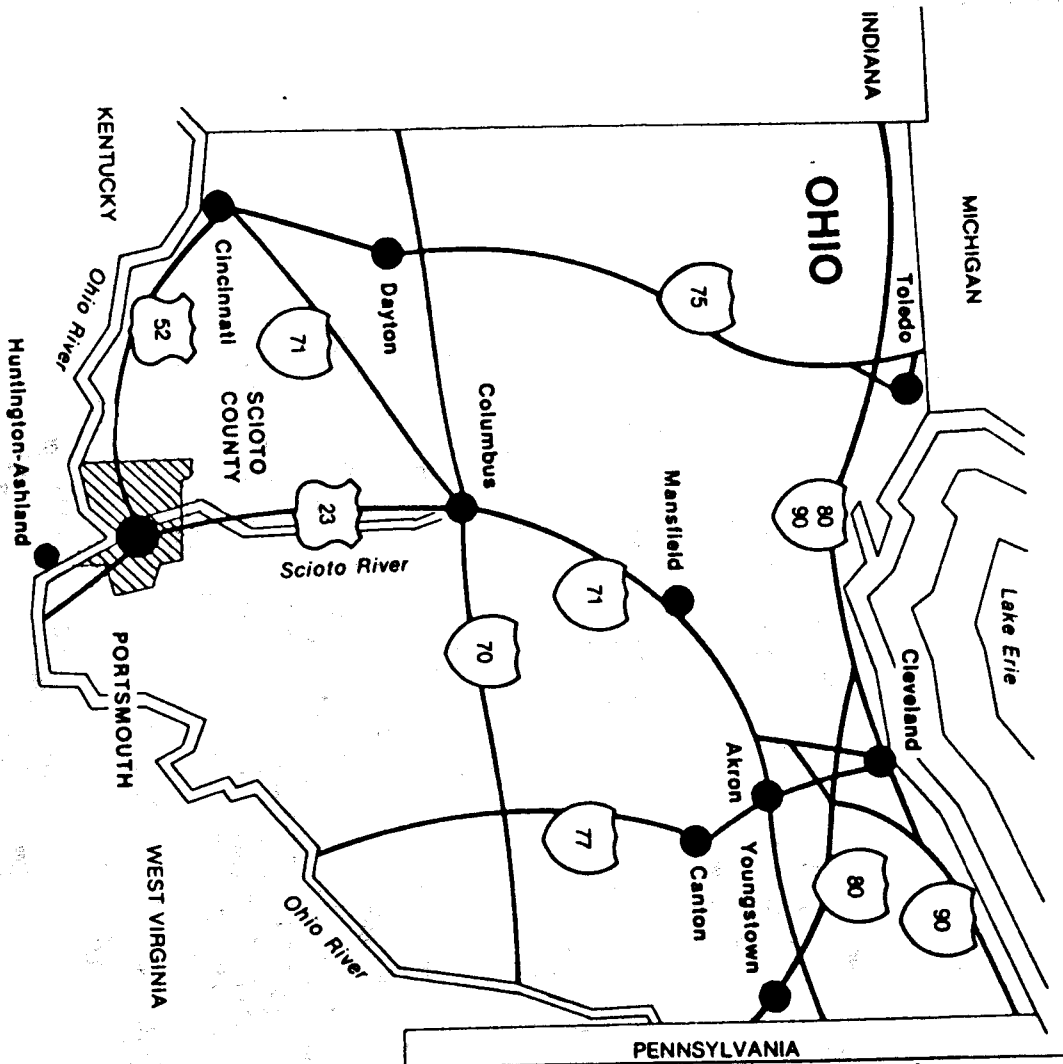


catalog 86-87



MAJORS OFFERED AT SHAWNEE STATE UNIVERSITY

ASSOCIATE OF APPLIED BUSINESS DEGREE

Accounting
Business Management
Retail Management
Banking/Finance
Business Management
Real Estate
Data Processing
Secretarial
General
Executive

ASSOCIATE OF ARTS DEGREE/ ASSOCIATE OF SCIENCE DEGREE University Parallel or Transfer Programs

Teacher Education/Social Sciences
Elementary Education
Special Education
Secondary Education
Biology - General Science
Chemistry - General Science
Communications - English Emphasis
Communications - Speech Emphasis
English - Comprehensive
General Speech - Speech Emphasis
General Speech - Theater Emphasis
Health
Physical Education
Physics - General Science
Social Studies

Business Administration
Government
History
Pre - Law
Psychology
Social Work
Sociology

Humanities/Fine Arts

Art
Communications (General)
Comparative Arts
English
Journalism
Theater

Mathematics/Sciences

Botany
Chemistry
Dentistry
Engineering
Forestry
Medical Technology
Medicine
Microbiology or Public Health and Sanitation
Optometry
Pharmacy
Physical Therapy
Recreation Studies
Veterinary
Zoology

ASSOCIATE OF APPLIED SCIENCE DEGREE

Automotive Technology
Civil Engineering
Diesel Technology
Electro-Mechanical Engineering
Instrumentation Technology
Major in Robotic Technology
Plastics/Chemical Engineering
Welding Technology

Dental Hygiene
Associate Degree Nursing
Medical Laboratory
Physical Therapist Assistant
Occupational Therapy Assistant
Radiologic Technology
Respiratory Therapy Technology

CERTIFICATE OF ALLIED HEALTH (One Year Programs)

Practical Nursing
Respiratory Therapy Technician
Emergency Medical Technician - Paramedic

ASSOCIATE OF INDIVIDUALIZED STUDIES DEGREE

A degree designed for the purpose of meeting the specialized career needs of the individual.

*Shawnee State University is in the process of developing Bachelor's Degree programs in several areas. It is anticipated that these majors will be available for student enrollment during summer quarter of 1988.

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ACCREDITATIONS

Shawnee State University is fully accredited as a two-year institution by:
NORTH CENTRAL ASSOCIATION OF COLLEGES AND
SECONDARY SCHOOLS*

In addition, the institution is approved by the following agencies:

U.S. Office of Education
American Association of Collegiate Registrars and Admissions
Counselors'
American Association of Junior Colleges
Ohio Board of Regents
Ohio State Department of Education--Division of Vocational Education
Ohio College Association
American Dental Association
American Medical Association--Committee on
Allied Health Education & Accreditation
State of Ohio Board of Nursing Education and Nurse Registration
Bureau of Vocational Rehabilitation
Social Security Department
College Entrance Examination Board

*Upperdivision and graduate level programs will be reviewed for accreditation
as they are developed.

TECHNICAL ADVISORY COMMITTEES

A technical Advisory Committee has been named for each technical area or cluster of technical areas. These committees, like the general committee, are advisory only, not policy-making. These committees, made up of professional and technical people competent in their fields of specialty, work directly with administration and staff on curriculum needs, employers' viewpoints, up-to-date changes in industry, new equipment and process trends, recruitment ideas, and many more pertinent subjects. This committee insures the college of the latest in industrial and business developments by meeting several times a year for discussions and evaluations.

MISSION OF THE COLLEGE

ADMISSIONS PROCEDURES

ACADEMIC INFORMATION

FEES AND EXPENSES

STUDENT ACTIVITIES

STUDENT SERVICES AND FACILITIES

Proposed MISSION of SHAWNEE STATE UNIVERSITY

The mission of Shawnee State University is to promote an appreciation of the accumulated knowledge of the region, nation, and the world; to develop critical thinking and creativity as the basis of a sound education; to develop skills which equip a broad spectrum of students for meaningful careers in a changing world; and to create an academic environment which is conducive to the spirit of intellectual inquiry through the personal and professional development of faculty and students. Shawnee State University will provide quality education through innovative teaching, research, leadership, and public service.

The university is committed to serving the community, region, and the nation by providing varied educational opportunities and services for both traditional and non-traditional students. The university offers masters and baccalaureate degrees, in addition to its associate degrees and one-year certificate programs. It offers as well a variety of life-long learning options designed to meet the personal and professional development needs of groups and individuals in the community. Shawnee State is committed to the development of curricula which address the expressed needs of business, industry, education and the nation as a whole in this era of rapid change. But beyond meeting the immediate career goals of its students and their employers, the University strives above all to meet the broader educational goal of a sound education in the liberal arts, bringing with it the values of clear thinking, sound judgment, problem-solving skills, and cultural development. Shawnee State extends this emphasis into the wider community through its encouragement of the arts and sciences through its sponsorship of cultural and public service activities.

The mission of Shawnee State University is predicated on a strong belief in the dignity and worth of the individual. The University designs its programs and services to students and the community with this belief as the primary consideration. Particular responses to the needs of individuals include counseling services addressing personal as well as academic concerns of students, personalized programs for non-traditional students and for those with special needs, and educational or personal development programs for specific groups in the community. Ultimately, the university strives to encourage, as its most serious obligation, the development of individual human potential.

ADMISSIONS PROCEDURES

Entrance Requirements

Shawnee State University will provide access to the college through an open-admissions policy which:

- A. Admits high school graduates as enrollment ceilings permit.
- B. Admits students that have successfully completed the General Education Development Test for high school equivalency as enrollment ceilings permit.
- C. Admits students over 18 years of age without a high school diploma or a GED as part-time students (less than 12 hours credit) as enrollment ceilings permit. The student may be full-time with the Vice-President of Student Services approval. Upon successful completion of one quarter of part-time course work, the student is eligible for full-time enrollment.
- D. Admits high school students on a part-time basis with written recommendation from the student's high school principal or counselor and written consent from the student's parent or guardian. Letters of permission and recommendation are required for each quarter of enrollment. Enrollment will be limited to less than 12 hours of credit per quarter.
- E. Admits students that have attended other colleges or universities as enrollment ceilings permit. Evidence of honorable dismissal is required of transfer students.
- F. Admits senior citizens on a non-credit, no-fee basis as enrollment ceilings permit.
- G. Admits foreign students with F-1 visas, satisfactory language test scores, and sufficient available funds for two years of maintenance and fees, as enrollment ceilings permit.

Application for Admission

Students may submit applications for Fall admissions during the senior year of high school. (Students applying for Dental Hygiene, Medical Laboratory Technology, Occupational Therapy Assistant, Physical Therapist Assistant, Respiratory Therapy, Radiology, Practical Nursing, EMT-Paramedic or Associate Degree Nursing are advised to apply for admissions to these programs before March 15. Students are also advised to review the specific admissions requirements for these programs. This information can be found in the program section of this bulletin).

It is suggested that students file applications for specific quarter enrollment prior to published registration dates for that quarter. (see College Calendar)

Admissions to Freshman studies is possible in the Fall, Winter, Spring, or Summer quarters, excepting programs in the Medical areas outlined above which are available only in the Fall quarter or by special permission of the Program Director.

It is suggested that students applying for financial aid make application for admissions and financial aid before April 15. Applications for admissions and financial aid are accepted after that date, however, financial aid is awarded on a first-come-first-serve basis.

A non-refundable fee of \$15 must accompany the application for admission.

All completed application forms must be directed to:

**Shawnee State University
Admissions Office
940 Second Street
Portsmouth, Ohio 45662**

High School Transcript

The two-part High School Transcript Request must be submitted to the high school counselor or principal. One part is to be returned with the student's transcript, the other may be retained by the high school as a release form. Students will be notified of admission status when both application and high school transcript are on file.

Students that did not complete high school must have a record of high school work completed, an official copy of the General Education Development (GED) transcript on file, or enroll as a part-time student for one quarter.

Admissions Test

Admissions tests are required as part of the admissions procedures to selected programs (Medical Laboratory Technology, Dental Hygiene, Physical Therapist Assistant Technology, Radiology, Respiratory Therapy, Practical Nursing, Emergency Medical Technician-Paramedic, and Associate Degree Nursing) but are not required as a part of college admissions to other educational programs.

Transfer Students

Students that have attended other colleges or universities are welcome to apply for admissions at Shawnee State. Admissions procedures for transfer students are the same as above (application and high school transcript) and the additional requirement of an official college transcript and evidence of honorable dismissal.*

See the section Academics Concerning Transfer Credit.

Admissions Procedures for Foreign Students

The applicant files (1) an admissions application, (2) complete official transcripts and pertinent certificates for all secondary and post-secondary work (an official translation must accompany transcripts and certificates which are not in English--do not submit documents for which there is only one copy. Documents submitted in support of an application cannot be returned to owner) (3) results of the test of English as a foreign language (TOEFL) if the applicant's native languages is not English. Applicants must score a total of 500 to be admitted without restriction. Applicants scoring 450-499 will be reviewed by the Director of Admissions with possible admission under a restricted course load and specific courses. Students with scores of less than 450 and without additional supporting evidence will not be admitted. (4) such evidence as may be required by the college concerning the applicant's ability to meet the financial obligations of a student in the United States.

The Shawnee State University budget for a self supporting single student is \$5,000.00 for the 1986-87 academic year. The applicant must present a statement from a U.S. bank indicating that the applicant has resources equal to the amount required for two years of education or \$10,000.00 and that these resources will be available to the applicant.

Immigration regulations prevent applicants from earning any substantial portion of this amount. There are virtually no scholarships available to students from abroad.

Due to the special problems which may be encountered by a student from abroad, upon arrival the student will be assigned a counselor by the Vice-President of Student Services.

Payment of the \$15.00 non-refundable application fee may be deferred until registration.

Further information concerning the TOEFL can be obtained by writing the Educational Testing Service, Box 592, Princeton, New Jersey, 08540.

Once the student receives an acceptance letter, he will also receive an I-20 form to be used in securing a student visa. Questions pertaining to your visa should be directed to the nearest immigration office.

Students must show evidence of a non-immigrant "F-1" student status visa to be eligible to register.

Senior Citizens

Shawnee State encourages senior citizens (60 or older) to audit any course of interest to them. Admissions to a course will be granted if space is available. Formal admission and registration is required but no fees will be charged, however, senior citizens can receive credit by paying tuition and fees.

*Students will be admitted as "provisional students" until such time the official transcripts have been received from the previous colleges.

ACADEMIC INFORMATION

Academic Integrity

Students at Shawnee State University are required to do their own work on all tests and assignments. Any form of cheating may result in the student's being withdrawn from a particular course or courses, as well as possible dismissal from the college. (See Student Handbook)

Faculty Role

Faculty expect regular and punctual attendance at all classes. Attendance policy for individual classes is made by the faculty members responsible for the class.

Grades are controlled by the faculty member responsible for the class.

In the event that a faculty member is not present at the normal time class begins, students are to remain in the classroom an additional 15 minutes. If the class meets once a week for 3-5 hours, the students must remain in the classroom for 45 minutes. If the faculty member has not arrived or no special instructions have been received, students may leave class without penalty.

Each faculty member posts office hours during which they are available to discuss individual problems relating to a student's academic progress. **Students are encouraged to take full advantage of the advisory assistance of the faculty.**

Grading

Final grades are mailed at the end of each quarter by the Student Records Office. Grades will not be issued orally.

Description of Grades

Grade	Description	Quality Points
A	Excellent	4.00
A-		3.67
B+		3.33
B	Good	3.00
B-		2.67
C+	Average	2.33
C		2.00
C-		1.67
D+	Poor	1.00
D-		0.67
F	Failing	0
TC	Transfer Credit	0
KE	Credit by Exam	0
NC	No Credit	0
WD	Withdrawal	0
I	Incomplete	0
P	Pass	0
AP	Adv. Placement	0

A grade of "F" receives no credit. A student making this grade must repeat the course if credit is to be received.

Transfer Credit

Credit earned at regionally approved colleges and universities or regents approved Ohio colleges with a grade of "C" or better may be converted to "TC" on the student's academic record. Normally, a "D" is not transferable, however, if the "D" is part of a course sequence in which the student's average grade is "C" or better, a "D" may be transferred. The credit hours transferred do not become a part of the grade point ratio. To receive transfer credit, the student must file an official transcript of previous college work and a transfer of credit form with the Director of Records.

Incomplete Grades

Students unable to attend class for extended periods of time may contact the faculty member responsible for the class requesting an incomplete grade. Incompletes must be converted to a grade 30 class days into the next quarter or they will be recorded as "F's."

Pass/Fail Option

Students may take courses on a pass/fail option by completing the proper forms with a Student Services Counselor. Forms for pass/fail must be completed within the first 10 class days of a regular quarter and 5 class days for a 5-week summer quarter. The student's decision to take a class on a pass/fail basis is not subject to change. Students may not take over one class per quarter on a pass/fail basis without approval of the Vice President of Student Services.

Course Credit by Examination

Students have the opportunity to fulfill requirements for selected courses offered at Shawnee State University by examination. Students interested in pursuing this educational option should first secure the advice of a college counselor (Academic courses) or program director (Technical courses) as to its appropriateness for the student's program of study. Since all courses are not available on a "by examination" basis, the student should then contact the appropriate vice-president. The vice-president, after consultation with appropriate faculty, will then make a determination as to the feasibility of the student's request.

A fee of \$30.00 is charged for Course Credit by Examination.

Approved proficiency will be recorded as "KE" on the student's transcript. Credit by examination is not included in the calculation of cumulative point ratio.

Students are not eligible to take a proficiency examination for a course in which he has been enrolled for 20 class days or more.

Credit given by examination does not apply toward the 30 hour residency requirement for graduation.

College Level Examination Program (CLEP)

Students may be awarded credit for College Level Examinations taken under the College Entrance Examination Board. Students taking the general examinations in English composition, mathematics, natural sciences, humanities, and social sciences and history with the recommended scores of the Commission on Educational Credit and Credentials of the American Council on Education (ACE) will be given "KE" credit for the first sequence course in the above areas.

Many Subject Examinations may be used to earn "KE" credit for courses in subject areas of the Examinations. Students must achieve recommended ACE scores to receive credit.

Credit give through the College Level Examination Program does not apply toward the 30 hour residency requirement for graduation.

Repeating Course Work

Students may repeat courses which they have previously completed. In order for the final transcript to reflect only the highest grade earned, the student must complete a course deletion form in the records office.

Changing Grades

Students questioning course grades must work through the faculty member responsible for the class. If you question a grade received, contact the faculty member.

Grade Point Ratio

Quality points for a course are determined by multiplying the total credit hours by the numerical equivalent of the letter grade received in the course.

The formula for calculating grade point ratios is:

Total Quality Points

Total Hours Attempted = Grade Point Ratio

Academic Probation

Students achieving a grade point average of 1.5 or less for any quarter will be placed on academic probation for the following quarter provided their accumulative grade average does not fall below that required to remain enrolled (See academic dismissal section below.)

Academic Dismissal

Students will be academically dismissed when their accumulation grade average falls below the following:

Credit Hours Attempted	Accumulative Grade Average
21-40	0.75 or below
41-55	1.00 or below
56-65	1.25 or below
66-75	1.50 or below
76-85	1.75 or below
86-and above	1.90 or below

Students academically dismissed are eligible to re-enroll after one quarter.

Adding a Class

Students may add a class to their schedule during the first five class days of the quarter (five days of a 5-week summer session) by completing a change order in the Student Services office. A fee of \$3.00 will be assessed for each change order.

Withdrawing from a Class

Students may withdraw from a class through the last day of the quarter by completing a change order form at the Student Records Office. A \$3.00 fee will be assessed for each change order. (See refund of fees.)

Withdrawing from College

Students withdrawing from college when classes are in session must request the proper forms from a student services counselor. Grades for scheduled classes will be recorded as withdrawal (WD).

Students not following the withdrawal procedure are considered enrolled in the class and graded accordingly.

See fee schedule for refund policy.

Non Credit

Students may elect to take a course for non-credit during the first 35 class days of a quarter (17 days of the 5-week summer sessions) by completing the proper forms in the Records Office.

Course Credit by Arrangement

Students have the opportunity to fulfill requirements for selected courses offered at Shawnee State University by arrangement. Students interested in pursuing this educational option should first secure the advice of a college counselor (Academic courses) or program director (Technical courses) as to its appropriateness for the student's program of study. Since all courses are not available on a "by arrangement" basis, the student should then contact the appropriate college vice-president. The college vice-president, after consultation with appropriate faculty, will then make a determination as to the feasibility of the student's request.

Students may earn up to 18 credit hours toward graduation with all credit being considered resident credit. The student is limited to eight hours of credit by arrangements per quarter. Students enrolling in a course by arrangement have until the date grades are due the following quarter to have all work completed in the course.

See the fee schedule for course by arrangement fees.

Advanced Placement

Students who have graduated from vocational high school programs may be eligible to receive advanced placement credit for certain courses completed in high school. Contact the Director of Records for further information.

Dean's List

Full-time students (12 or more hours per quarter) who achieve a 3.5 or above grade point ratio will be placed on the dean's list for that quarter.

Residency Status

A resident of Ohio for all education purposes shall be:

1. A dependent student living with a parent who has lived in Ohio for 12 months.
2. A person who has resided in Ohio for 12 months before enrolling in school.
3. A person who is living and employed in Ohio and going to college part time.
4. A person on active duty in the U.S. Military, who is stationed in Ohio.

Student Load

Students scheduled for 12-20 credit hours are considered full-time students. Students scheduled for less than 12 credit hours are considered part-time students. The permission of the Director of Records is required for students scheduling over 20 hours of credit. See fee schedule for extra hour fees.

Graduation Requirements

In order to graduate, a student must have successfully completed all course requirements and have achieved a 2.0 cumulative grade ratio in all course work and his major field of study. Students having outstanding institutional bills or notes will not be issued a degree. **All students are required to earn 30 hours of credit at Shawnee State in order to be eligible for graduation.**

Note: Students in Allied Health and nursing majors must be in good standing in order to graduate. Students must petition to graduate prior to the quarter they intend to graduate. Petitions are available in the Records Office.

Graduation with Honors

Students that achieved an accumulative grade point ratio of 3.5 or above prior to the quarter of graduation will be graduated with honors. Students that have achieved an accumulative grade point ratio of 3.7 or above prior to the quarter of graduation will be graduated with high honors.

Transcripts

Each quarter students will receive a grade report that includes grades achieved that quarter and all previous quarters.

Students having errors in grade reports should contact the Director of Records immediately.

Students may request transcripts from the Records Office. Transcript fees are \$2.00.

Requests for official transcripts must be in writing and addressed to the Director of Records.

Visitors to Class

Students planning to bring a visitor to a class with them are requested to obtain permission of the faculty member responsible for the class in advance of the visit.

Internship Guidelines

Programs requiring internship as part of the graduation requirements have guidelines for internship established by faculty. Students are urged to request a copy of these guidelines from faculty advisors.

FEES AND EXPENSES

Registration Fees

Registration fees are payable at the Business Office prior to the opening of classes and in accordance with instructions issued with your quarterly bill. For students registering during late registration, fees are assessed as part of the registration process and are due at that time. Fees may be paid by cash, check, money order, Visa, or MasterCard. It is important that the student retain all fee receipts.

Payment of fees owed is a prerequisite to official enrollment and all students should have sufficient funds (cash and/or financial aid) to cover expenses.

A review of students enrolled will be made the 14th day of each quarter and any student showing a balance due will be administratively dismissed.

Schedule of Fees*

	Resident of Ohio	Nonresident
Instructional fee		
Full Time Student (12-20 cr. hrs.)	\$301.00	\$351.00
Part Time Student (1-11 cr. hrs.)	28.00 per cr. hr.	32.00 per cr. hr.
General Fee		
Full Time Student	57.00	57.00
Activity Fee		
Full Time Student	10.00	10.00
Part Time Student	10.00	10.00
Lab Fees		
Extra fee for each quarter hour in excess of 20 hrs.	28.00 per cr. hr.	32.00 per cr. hr.
Credit by Examination	30.00 per course	30.00 per course
Course by Arrangement	40.00 per cr. hr.	40.00 per cr. hr.
Graduation Fee	30.00	30.00

*Shawnee State University reserves the right to make, without prior notice, any fee adjustments that may become necessary.

Bad Check Policy

Payment of fees owed is a prerequisite to official enrollment, and all students should have sufficient funds (cash and/or financial aid) to cover these expenses.

A check returned for insufficient funds is a federal offense and constitutes nonpayment of your obligation to Shawnee State University.

Therefore, any student that has a check returned for insufficient funds, and the same is not cleared by the fourteenth day of the quarter, shall be considered in noncompliance with institutional policy and will be administratively dismissed.

Any student administratively dismissed due to a bad check has no recourse for readmission for the current quarter.

Lab Fees

See the course description section for identification of classes with lab fee charges. The fee per class is available at any of the following offices:

Business Office Admissions Office Library

Student Insurance

Shawnee is providing all full-time students with the benefit of a very good comprehensive health insurance policy. You may pick up a Student Insurance Program Brochure at the Business Office. Questions concerning student health insurance should be referred to the Business Office.

Refund of Fees

Continuing students dropping hours by change order prior to or during the first fourteen (14) days of the quarter, when such changes result in a reduction of fees, are entitled to receive a 100 percent refund of the reduction. Changes made after the fourteenth (14th) day of the quarter will result in no refund.

Students that officially **withdraw** from Shawnee State will receive a refund, if due, based upon the following schedule. Students that do not officially withdraw are not eligible for any refund and fees assessed are due and payable.

Time of Withdrawal (Regular Term)	Refund
1 to 14 calendar days	100% of Tuition
15 to 20 calendar days	50% of Instructional fee
over 20 calendar days	No refund

Time of Withdrawal* (5 week session)	Refund
1 to 4 calendar days	100% of Tuition
5 to 8 calendar days	60% of Instructional Fee
over 8 calendar days	No refund

*This schedule for refunds will apply to students registered only in a five week session.

Please note: Students taking classes from both a regular quarter and a five week session will be issued refunds under the regular Term Policy.

Questions concerning the above information should be referred to the Business Office.

Late Registration and Late Payment Policy

A late registration fee of \$25.00 will be assessed all students enrolled in the previous quarter that do not register during the announced early registration period.

A late payment fee would normally not be applicable since payment is a prerequisite to registration. However, should exceptions be made to the Registration Fee section a late payment fee of \$20.00 will be assessed by the Business Office.

Miscellaneous Fees

Activity Fee

All students will be assessed a \$10.00 activity fee for each quarter. This fee is to support all student activities.

Application Fee

A \$15.00 application fee, non-refundable, must accompany all admission applications.

Transcript Fee

The College will produce an official transcript upon written request from the student at a cost of \$2.00 per copy.

Change Order Fee

A fee of \$3.00 will be assessed for each change order processed.

Records Processing Fee

A fee of \$1.00 will be assessed for "copies of schedules, unofficial transcripts, etc."

Graduation Fee

A \$30.00 graduation fee is required prior to the issuance of an official college diploma. Students are not billed for this fee. It is the students responsibility to pay this fee prior to graduation.

Student eligibility to graduate is determined by the records office after the student petitions for graduation.

STUDENT ACTIVITIES

Music and Drama

The music and theatre departments at Shawnee State University actively plan performances the year round. During the regular school year the music department presents at least three concerts by the performing choral group, the Shawnee Choir. These performances feature both classical and popular music. The Choir is made up of both college students and community members whose common interest is singing good music. The Choir frequently performs for civic and service organizations outside the college community, as well. Shawnee Choir is open to any Shawnee State student.

The drama department presents several dramatic productions during the year. These shows tour area high schools and are also presented on campus. Each spring the music and theatre departments combine to present a musical at Bonneyfiddle. The Bonneyfiddle productions are open not only to Shawnee State performers, but to community and area performers as well.

Student Complaints

Guidelines are available to assist in the maintenance of legitimate rights and obligations of both students and institutional representatives, and to assist in the maintenance of academic integrity. The climate of the institution is one of the services to the student and in assisting him/her in reaching his/her established goals. Guidelines can be found in the Shawnee State Student Handbook located in the library and in each counselor's Office. The institution seeks to establish an atmosphere of openness and it is in this spirit that these guidelines are offered.

College Rules and Regulations

General Student Conduct

A student community can function effectively only if the rights and obligations of all its members are recognized. At Shawnee State University, students are expected to observe the standards of propriety at all times. This implies thoughtful consideration of the welfare of the students and the college. Of particular concern to the college are the following areas of improper conduct which may result in disciplinary action, including suspension from the college.

Unacceptable Conduct

Unacceptable conduct is concerned with the following areas:

- Consumption or possession of alcoholic beverages
- Possession and/or Use of Narcotics
- Harmful or Dangerous items (possession and/or use of firearms, etc.)
- Gambling
- Dishonesty
- Forgery
- Hazing
- Interfering with Safety Procedures

Further information on this area can be found in the library or in the administrative offices. The Behavior Code is published in the Student Handbook.

Information can be found in the Shawnee Student Handbook on Ohio House Bill No. 1219, College Policy to Review Student's Records and the Grievance Procedure for Student Senate Affairs. Handbooks are available in the Library and Administrative Offices.

Cultural Affairs

A committee composed of both faculty and students directs a program of cultural affairs. This committee arranges for speakers, musical groups, and other activities of a cultural nature to appear on campus.

Intramural Athletics

The Athletic Department is striving to provide an intramural program that offers a wide variety of athletic and recreational activities. It is felt that the students at Shawnee State University should have an opportunity to participate in a program that gives them the freedom to choose leisure time activities that will best meet their individual needs. Our goal is to have every student participating in intramural activities. To accomplish this goal there must be close cooperation between the student body, the Intramural Department and College officials. Students are asked to participate in planning and supervising various aspects of the program.

Tentative Intramural Events 1986-87

Team Events	Individual Events & Dual Events
1. Touch Football	1. Badminton
2. Basketball	2. Golf
3. Volleyball	3. Tennis
4. Bowling	4. Table Tennis
5. Softball	5. Archery
	6. Bridge
	7. Chess
	8. Swimming
	9. Handball

Interscholastic Athletics

Shawnee State University's philosophy holds that there is more to learning than academics. Besides attending classes, every student has an opportunity to participate in a recreational or athletic area.

Varsity athletics supplement the classroom experience by emphasizing cooperation, leadership, courage, sacrifice and discipline.

Athletic policies at Shawnee State conform to the policies and regulations of the National Junior College Athletic Association of which they are a member. Presently within the NJCAA framework, Shawnee State teams participate on an intercollegiate level in basketball, golf, and tennis. The college plans to expand with additional programs in the near future.

STUDENT SERVICES AND FACILITIES

Student Services Counseling

The College provides a wide variety of counseling services through the different offices of Student Services. Admissions, placement, financial aid, veterans, educational, vocational, marriage and family, and personal-social counseling are available to students.

Counseling services are available to students, alumni, and their families at no cost upon request at the Student Service offices.

Professional Counselors and Building Location:

Mary Beaumont	Business Annex
Fred Chrisman	Commons Building
Dr. Paul D. Crabtree	Commons Building
Tom Davidson	Commons Building
Richard R. Howard	Commons Building
Stephen Midkiff	Commons Building
Dotty Welch	Commons Building
Eugene Wilson	Commons Building

Counseling sessions are confidential.

Student Services Offices are open from 8:00 a.m. to 8:00 p.m., Monday thru Thursday and 8:00 a.m. to 4:00 p.m. on Friday.

Faculty Advising

Academic advising is provided by faculty advisors. The purpose of faculty advisement is to assist students with their immediate academic concerns. Faculty members meet with students by appointment and each faculty member will have available hours posted near his/her office.

Developmental Education

Developmental education consists of three areas:

1. Pre-college courses in mathematics, biology chemistry, physics, English, reading development, and vocabulary development are offered to students who have completed the admissions process. Students take these courses to qualify for certain programs, or to increase their chances for success in college.

2. A peer tutoring program is also available to students upon faculty or counselor recommendation. A student may receive academic tutoring of up to three hours per week for a course in which he is experiencing academic difficulty. If he is interested in receiving the service, he/she should contact the instructor of the course, the Director of Developmental Education, or a student services counselor. If he is interested in being a tutor, he should see the Director of Developmental Education.

3. The Learning Center represents an important features of student services. In the Center students can use a variety of services aimed at helping them succeed at the college. These services include peer tutoring and individualized instructional aids. The Center houses a variety of equipment for students use, like audio-visual, microcomputers, and typewriters.

Financial Aid

An extensive Financial Aid Program is available to assist students in meeting some of the expenses of a college education. The Financial Aid Program is administered by the Financial Aid Office. The program includes four categories: scholarships, grants, loans, and employment.

Scholarships: The college administers a limited number of special scholarships for students demonstrating a high degree of academic ability or special talents. Students interested in scholarships should contact the Financial Aid Office.

Grants: The college administers three types of grant programs: the Ohio Instructional Grant (O.I.G.), the PELL GRANT, and the Supplemental Educational Opportunity Grant (SEOG). Grants are not repaid. Interested students should contact the Financial Aid Office.

Loans: Questions regarding state or federal guaranteed loans should be addressed to the student's local bank or lending agencies.

Emergency Loans are available on a limited basis to students needing short-term assistance with direct or related educational expenses. Amounts of these loans are not to exceed \$50.00.

College Work Study: The College Work-Study Program is available to students who can demonstrate financial need through the completion of the FAF.

Part-time Student Employment: Part-time student employment is available on a limited basis through the Placement Office of the Student Services Office. This is not part of the Financial Aid program, therefore, evidence of financial need is not necessary.

To be considered for these programs, a student must complete the Financial Aid Form (FAF), and submit it to the College Scholarship Service (CSS). Ohio residents must complete the Ohio Instructional Grant Application and submit it to the Ohio Board of Regents. Once Shawnee State has this information, the student's file is complete and an award notice will be sent.

Veteran's Administration Benefits

The programs at Shawnee State are approved by the State Approving Agency for the education of veterans and their eligible dependents. Students interested in V.A. benefits should contact the Veterans Affairs Office located in the Office of Financial Aid.

Placement Services

The nature of the programs offered at Shawnee State University makes two types of placement necessary: Occupational and Transfer Placement.

Occupational Placement: Students interested in employment after graduation should contact the Placement Office in advance of the quarter they plan to graduate. Companies and business establishments conduct annual recruiting campaigns for two-year graduates. The Office for Occupational Placement is located in the Commons Building.

Transfer Placement: Students interested in continuing their education at a four-year college or university should contact the Placement Office two quarters before they plan to graduate. Recruiters from four-year institutions will be invited on campus. The Office of Transfer Placement is located in the Commons Building.

Placement services are available to graduating students and alumni of the college at no cost.

Housing

Celeron Square offers the Shawnee State student quality, affordable living accommodations right on campus. It features fully furnished 3-level townhomes for the very best in student living. Each unit is designed to house 8 students comfortably. Every townhome has complete kitchen, laundry, dining and living areas. Call University Housing Company (614) 353-5405.

Handicapped

Adaptive equipment and services required of the handicapped student are extended through the university's SPECIAL NEEDS PROGRAM, which also serves minority and disadvantaged students.

Students of Shawnee State University that are subject to a physiological defect or deficiency which restricts or limits their mobility may apply to the Director, Special Needs Program for a sentinel key card to the restricted parking lot.

Bookstore

The College operates a bookstore for student convenience. Bookstore hours will be posted.

Closing the College

If an emergency would exist because of mechanical failure that would necessitate the closing of the college, the announcement would be carried over WPAY, WIOI, WIRO, WLGC, WKEE, WXIZ, WSRW, WRAC, WBEX, WLMJ and WNXT radio and Century Cable TV.

Library Media Services

The library's holdings reflect the dual aspect of Shawnee State's curriculum. The collection has a high concentration of books and journals in technology, business, and allied health as well as a broad base of liberal arts and sciences materials to support an active college transfer program. Shawnee State's library now houses approximately 70,000 books and 600 currently received periodicals. Should the material you need not be available in our collection, the library can borrow using a computer linkup with 4,000 other libraries nationwide. The library is open 6 days a week for a total of 70 hours, including evenings and Saturdays.

Media Services offers viewing facilities for various forms of media (filmstrips, audio tapes, slides, and videotapes) within the library. Various projectors are also available for classroom use by faculty and students (with faculty approval). Basic media production facilities are also available to faculty and students for producing slides, transparencies and videotapes.

Identification Cards

I.D. cards will be issued to Shawnee State University students. An I.D. card is a necessary source of campus identification in utilizing the library and student activities. Students must present evidence of registration certification at the time the I.D. card is received.

SHAWNEE STATE UNIVERSITY

ASSOCIATE OF ARTS DEGREE

ASSOCIATE OF SCIENCE DEGREE

UNIVERSITY PARALLEL/

TRANSFER CURRICULA

TRANSFER OR UNIVERSITY PARALLEL PROGRAMS

Transfer or University Parallel Programs

The various transfer curricula developed at Shawnee State University are designed with the major objective of enabling students to complete the first two years of study toward a baccalaureate degree. In awarding the Associate of Arts and Associate of Science Degrees, Shawnee State verifies that the student has successfully completed the first two years of a four-year program and is ready for upper division work in a baccalaureate college or university. Students can pursue transfer programs in the fields of social and behavioral sciences, natural sciences, humanities, fine arts, teacher education, and several other preprofessional programs.

Because curricula of the first two years in various colleges and universities may differ, students who plan to transfer to a baccalaureate institution should follow the procedure outlined below:

1. Secure a catalog of the institution to which they wish to transfer and become familiar with its admission requirements and suggested freshmen and sophomore courses in their major field of interest.
2. Consult with a counselor or academic advisor at Shawnee State about fulfilling these requirements.
3. Confer with an admissions officer at the senior institution for further information about transfer regulations and applicability of credit.

The transfer programs which are outlined are intended to indicate typical requirements in various programs. The student assumes responsibility for course selections necessary to satisfy the requirements of the senior institution to which they intend to transfer.

Associate of Arts/Associate of Science (College or University Parallel Programs)

Courses offered under the A.A. or A.S. Degrees at Shawnee State resemble those courses typically offered during the first two years at a baccalaureate institution. Students may enroll in courses for personal enhancement, or enroll in a program developed specifically for transfer to a four-year college or university. The A.A. & A.S. Degrees have been specifically designed to permit a broad curricula sampling in the areas of communications, social sciences, natural sciences and humanities, thus preparing the student for more advanced study at the receiving institution.

Requirements for the Associate of Arts/Associate of Science

A total of 90 qtr. hours of credit (minimum)--30 qtr. hours of which must be in courses numbered 200. A 2.00 cumulative average is required for graduation.

Associate of Arts

I. Core Requirements

Designed primarily for those desiring two years of general education with an emphasis in the arts, social sciences, or humanities.

- A. Communications (11 qtr. hrs.)

Two courses from: Eng. 111, Eng. 112, Eng. 115, Eng. 140A, B, C, D (topics in English Languages and Literature), and Speech 0103.

- B. Natural Sciences (12 qtr. hrs. min.)

At least two courses from one area:

- A. Biological Sciences (Bio. 111 or above)
- B. Chemistry (Chem. 121, 122, or Chem. 141, 142, 143)
- C. Geology
- D. Physics
- E. Physical Sciences
- F. Mathematics (Math. 120, 121, 130-32, 150, 201-203)

- C. Social Sciences (12-15 qtr. hrs)

Courses covering two areas:

- A. Economics (Econ. 101, 102)
- B. Psychology
- C. Geography
- D. Government
- E. History
- F. Sociology
- G. Anthropology

- D. Humanities (20 qtr. hrs. min.)

Courses covering two areas:

- A. Philosophy
- B. Comparative Arts
- C. Humanities
- D. Arts
- E. Modern Language
- F. Music
- G. Theater
- H. Literature/English

- E. Health/Physical Education (2-4 qtr. hrs.)

Two activity courses or Health 202.

II. Concentration Area.

Selected Specialized Courses

Associate of Science

I. Core Requirements

Designed primarily for those desiring two years of general education with an emphasis in the sciences and mathematics.

- A. Communications (11 qtr. hrs.)

Two courses from: Eng. 111, Eng. 112, Eng. 115, Eng. 140A, B, C, or D (topics in English Language and Literature), and Speech 0103.

- B. Natural Sciences/Mathematics (20 qtr. hrs. min.)

At least two courses from one area:

- A. Biological Sciences (Bio. 111 or above)
- B. Chemistry (Chem. 121, 122, or Chem. 141, 142, 143)
- C. Geology
- D. Physics
- E. Physical Sciences
- F. Mathematics (Math 120, 121, 130-32, 150, 201-203)

- C. Humanities and Social Sciences (24-30 qtr. hrs.)

1. (Social Sciences) (12-15 qtr. hrs.)

Three courses covering two areas:

- A. Economics (Econ. 101, 102)
- B. Psychology
- C. Geography
- D. Government
- E. History
- F. Sociology
- G. Anthropology

2. (Humanities) (12-15 qtr. hrs.)

- A. Philosophy
- B. Comparative Arts
- C. Humanities
- D. Art
- E. Music
- G. Theater
- H. Literature

- D. Health/Physical Education (2-4 qtr. hrs.)

Two activity courses or Health 202.

II. Concentration

Selected Specialized Courses

SHAWNEE STATE UNIVERSITY

UNIVERSITY PARALLEL/TRANSFER CURRICULA

The suggested transfer curricula which follow have been based upon various baccalaureate degree requirements using Ohio University as a guide. It is important to note that they are *suggestions* only, and that the personal preference and the college or university to which the student may transfer will ultimately determine appropriate course selections and program.

CONCENTRATION AREAS EDUCATION/SOCIAL SCIENCE

Elementary Education

Special Education

Secondary Education:

Biology--Gen. Sci.

Chemistry--Gen. Sci.

Communications--English Emphasis

Communications--Speech Emphasis

English--Comprehensive

General Speech--Speech Emphasis

General Speech--Theater Emphasis

Health

Physical Education

Physics--Gen. Sci.

Social Studies

Business Administration

Government

History

Pre-Law

Psychology

Social Work

Sociology

Humanities/Fine Arts

Arts

Communication (General)

Comparative Arts

English

Journalism

Theater

Mathematics/Sciences

Botany

Chemistry

Dentistry

Engineering

Forestry

Medical Technology

Medicine

Microbiology or Public Health and Sanitation

Optometry

Pharmacy

Physical Therapy

Recreation Studies

Veterinary

Zoology

CONCENTRATION AREAS

EDUCATION

Elementary Education
Special Education
Secondary Education:
 Biology--Gen. Sci.
 Chemistry--Gen. Sci.
 Communications--English Emphasis
 Communications--Speech
 Emphasis
 English--Comprehensive
 General Speech--Speech Emphasis
 General Speech--Theater Emphasis
 Health
 Physical Education
 Physics--Gen. Sci.
 Social Studies

ELEMENTARY EDUCATION*

	Hours
Freshman	
Science (Core Requirements--See Page 15)	12
Modern Math (Math 120 & 121--Elem. Topics in Math)	10
Speech 103	3
Psy 101, General	4
English (Eng. 111, 112, 115, 140 A, B, C, D)	8
2 Social Sciences (Electives) (Core Req.-See P. 15)	8
Physical Education	1
Total	46
	Hours
Sophomore	
2 (Electives) (Core Requirements--See Page 15).	12
Ling. 270	5
Music 160, 161	6
HPER 202 Personal and Community Health	4
HPER 270 Phy. Ed. for the Elem. Teacher	3
HPER (Activity Courses)	1
Art for the Elem. Teacher I, II	5
Psychology (275) (Educ. Psy.)	4
Humanities Electives (Core Requirements--See Page 15)	4
Total	46

1. Three courses required--must include at least one course in Biology and one in the Physical Science. (All courses must include lab).

2. Social Science Electives must include one course in Am. Hist. or Am. Govt., Geog. 121 Cultural Geog. and Psyc 0173 Human Growth & Development.

*A 20 qtr. hr. concentration is required for a Baccalaureate Degree for the College of Education at Ohio University. This concentration may be in any department outside the College of Education, but may be taken in the School of Health, Physical Education and Recreation or School of Home Economics.

EDUCATION--SPECIAL EDUCATION

	Hours
Freshman	
English (111, 112, 115, 140 A, B, C, D)	8
Psychology 101	4
Social Sciences (Core Requirements--See Page 15)	8
Natural Sciences (Core Requirements--must include lab)	8
Humanities (Core Requirements--See Page 15)	8
Physical Education	1
Electives (Math 150, Psy. 131, Psy. 241)	8
Total	45
	Hours
Sophomore	
Speech 103	3
HPER 202 (Per., and Comm. Health)	4
HPER 250 (Recreational Leadership)	3
Art 201, 202 (Art for the Elem. School I, II)	6
Math (Math 120 or higher)	5
Music 160, 161	6
Physical Education	1
Pysc. 275	5
Electives	12
Total	45

EDUCATION (BIOLOGY--GENERAL SCIENCES)

	Hours
Freshman	
English (111, 112, 115, 140 A, B, C, D)	8
Chemistry 141, 142, 143	12
Biology 111, 112, 113	16
*Math 201, 202	10
Physical Education	2
Total	48
	Hours
Sophomore	
Speech 103	3
Physics 201, 202, 203	12
Humanities (Core Requirements--See Page 15)	12
Social Sciences (Core Req.--Psy. 101 required)	12
Psychology 275 (Educ. Psy.)	5
Electives (Sciences)	4
Total	48

*Math 130 sequence may be elected in preparation for calculus.

EDUCATION (CHEMISTRY-GENERAL SCIENCE)

	Hours
Freshman	
English (111, 112, 115, 140 A, B, C, D)	8
Chemistry 141, 142, 143	12
*Math 201, 202, 203	15
Humanities (Core Requirements--See Page 15)	8
Social Sciences (Core Requirements--Psy. 101 required)	4
Physical Education	1
Total	48
	Hours
Sophomore	
Chemistry 205, 206, 207	12
Physics 201, 202, 203	12
Social Sciences Elective	4
Psychology 275 (Educ. Psy.)	5
Chemistry 223	10
Physical Education	1
Speech 103	3
Total	47

*Math 130 sequence may be elected in preparation for calculus.

EDUCATION -- COMMUNICATIONS (ENGLISH EMPHASIS)

	Hours
Freshman	
English (111, 112, 115, 140 A, B, C, D)	8
Natural Sciences/Math (Core Requirement--1 science, 1 math) (Math 120 or higher)	12
Social Sciences (Core Requirements--Psy 101 required)	12
Humanities (Core Requirements--See Page 14)	12
Physical Education	1
Total	45
	Hours
Sophomore	
Psychology 275	5
Speech 103	3
Speech 105 (Intro. to Mass. Comm.)	4
Speech 220 or Thar. 220 (Oral Inter. of Lit.)	4
Speech 215 (Discussion)	4
Physical Education	1
English 201, 202, or 203	4
English 204, 205, or 206	4
English 225 or 226	4
Electives (English)	4
English (General)	8
Total	45

COMMUNICATIONS--SPEECH EMPHASIS

Freshman	Hours
English 111, 112, 115, 140 A, B, C, D	8
Speech 103	3
Natural Sciences/Math (At least 1 course in each) (Math 120 or higher)	12
Social Sciences (Core Requirements -- Psy. 101 required)	12
Humanities (Core Requirements--See Page 15)	<u>12</u>
Total	47
Sophomore	Hours
Psychology 275 (Educ. Psy)	5
Thar. (Elective)	3
Journalism 231 (News Reporting)	4
English 201, 202, 203	4
Physical Ed	2
Total	18
Speech 105 (Intro to Mass. Comm.)	4
Speech 215 (Group Discussion)	4
Speech 220 or Thar. 220 (Oral Interp)	4
Electives	<u>20</u>
	32
Total	50

**EDUCATION--GENERAL SPEECH
(SPEECH EMPHASIS)**

Freshman	Hours
Speech 103	6
Speech 105 (Intro. to Mass. Comm)	4
English 111, 112, 115, 140 A, B, C, D	8
Natural Sciences/Math (At least 1 course in each) (Math 120 or higher)	12
Psychology 101	4
Humanities (Core Requirements--See Page 15).	<u>12</u>
Total	46
Sophomore	Hours
Psychology 275 (Educ. Psy)	5
Social Sciences (Core Requirements--See Page 15)	8
Physical Ed.	2
Thar. 220 or Speech 220 (Oral Inter)	4
Speech 215 (Group Discussion)	4
Electives (Thar. 215, Thar. 100)	Min. 5
Electives (General)	<u>17</u>
Total	45

ENGLISH--ENGLISH COMPREHENSIVE

Freshman	Hours
English 111, 112, 115, 140 A, B, C, D	8
Speech 103	3
Natural Sciences/Math (At least 1 science and 1 math) (Math 120 or higher)	12
Social Sciences (Core Requirements--Psy 101 required)	8
Humanities (Core Requirements--See Page 15)	8
Physical Education	2
Electives	<u>4</u>
Total	45
Sophomore	Hours
Social Science (Core Requirements--See Page 15)	4
Humanities (Core Requirements--See Page 15)	4
Psychology 275 (Educ. Psy.)	5
English 201, 202, or 203	4
English 204, 205, 206	8
English 225 and 226	8
Electives (Must include 1 English course above freshman level)	<u>12</u>
Total	45

**EDUCATION--GENERAL SPEECH
(THEATER EMPHASIS)**

Freshman	Hours
Speech 103	6
English 111, 112, 115, 140 A, B, C, D	8
Natural Sciences/Math (At least 1 course in each) (Math 120 or higher)	12
Social Sciences (Core Requirements--Psy. 101 required)	8
Humanities (Core Requirements--See Page 15)	<u>12</u>
Total	46
Sophomore	Hours
Psychology 275 (Educ. Psy)	5
Social Sciences (Core Requirements--See Page 15)	4
Physical Ed	8
Thar. (Electives)	27
Electives	<u>6</u>
Total	44

NOTE: 30 hours required at 200 level for graduation

EDUCATION-HEALTH

Freshman

English 111, 112, 115, 140 A, B, C, D
 Speech 103
 HPER 261 (Introduction to P.E. & Health)
 Psychology 101
 Sociology 101
 Biology 111
 Math (1 course) (Math 120 or higher)
 Comparative Arts and/or Philosophy
 HPER 227 (First Aid)
 HPER 234 (Laboratory Experience in Phys. Ed.)
 HPER 110 (3 Activity Classes)
 HPER 295 (Independent Study)
 Natural Sciences (Core Requirements--See Page 15)

TOTAL

Sophomore

English (111, 112, 115, 140 A, B, C, D)
 Psychology 275 (Educ. Psy.)
 Comparative Arts and/or Philosophy
 Biology 290, 291 (Anatomy & Physiology)
 HPER 202 (Personal and Community Health)
 HPER 110 (3 Activity Classes)
 HPER 204 (Drugs, Alcohol and Tobacco)
 HPER Electives

TOTAL

Hours

4
3
2
4
4
5
4-5
8
4
2
3
2
4

49-50

Hours

4
5
4
10
4
3
4
11

45

EDUCATION-(PHYSICS-GENERAL SCIENCE)

Freshman

English 111, 112, 115, 140 A, B, C, D
 Chemistry 141, 142, 143
 *Math 201, 202, 203
 Humanities (Core Requirements--See Page 15)
 Social Sciences (Core Requirements--Psy. 101 required)
 Physical Education
 Speech 103

TOTAL

Sophomore

Physics 201, 202, 203
 Humanities (Core Requirements--See Page 15)
 Psychology 275 (Educ. Psy.)
 Social Sciences (Core Requirements--See Page 15)
 Electives (Sciences)

TOTAL

*Math 130 sequence may be elected in preparation for calculus.

Hours

8
12
15
4
4
2
3

48

Hours

12
8
5
8
12

45

EDUCATION-PHYSICAL EDUCATION*

Freshman

English 111, 112, 115, 140 A, B, C, D
 Speech 103
 HPER 261 (Introduction to P.E. & Health)
 Psychology 101
 Social Science (Elective)
 Biology 111
 Math (1 course) Math 120 or higher
 Comparative Arts and/or Philosophy
 HPER 227 (First Aid)
 HPER 234 (Laboratory Experience in Phys. Ed.)
 HPER 110 (3 Activity Classes)
 HPER 295 (Independent Study)
 Natural Sciences (Core Requirements--See Page 15)

TOTAL

Sophomore

English (111, 112, 115, 140 A, B, C, D)
 Psychology 275 (Educ. Psy.)
 Comparative Arts and/or Philosophy
 Biology 290, 291 (Anatomy & Physiology)
 HPER 202 (Personal and Community Health)
 HPER 110 (3 Activity Classes)
 HPER 250 (Recreation)
 HPER 204 (Drugs, Alcohol and Tobacco)
 HPER 239 Athletic Officiating Football
 240 Athletic Officiating Basketball
 241 Athletic Officiating Baseball
 HPER 281 (Administration of Intramural Athletics)

TOTAL

Hours

4
3
2
4
4
5
4-5
8
4
2
3
2
4

49-50

Hours

4
5
4
10
4
3
4
4
6
4

48

EDUCATION-SOCIAL STUDIES*

Freshman

English 111, 112, 115, 140 A, B, C, D
 Laboratory Sciences (two quarter sequence)
 Mathematics (Math 120 or higher)
 Humanities (Core Requirements--See Page 15)
 History 101, 102, 103
 Psychology 101

TOTAL

Sophomore

History 201, 202, 203
 Government 101 and 102
 Humanities elective (200 level)
 Geography 101
 Psychology 275 (Educ. Psy.)
 Sociology 101
 Anthropology 201
 Speech 103
 Physical Education

TOTAL

*For preparation leading to state teacher certification in a history-government comprehensive, students consult faculty in the Social Science Division and the appropriate catalog of the college to which they plan to transfer.

Hours

8
8-10
4-5
12
12
4

48-51

Hours

12
8
8
4
5
4
5
3
2

51

*Ohio University: Geol. 0101 or Geog. 0101 and Chem. 0121 required additionally by the College of Health & Human Services.

Note: 30 hours required at 200 level for graduation.

CONCENTRATION AREAS

***Humanities/Fine Arts**

Art
Communication (General)
Comparative Arts
English
Journalism
Theater

***Students interested in transferring to Ohio University should consult with the Director of the O.U. Resident Credit Center for specific foreign language requirements.**

PRE-ART MAJOR

	Hours
Freshman	8
English 111, 112, 115, 140 A, B, C, D	12
Natural Sciences (Core Requirement--See Page 15)	12
Social Sciences (Core Requirements--See Page 15)	15
Art 101, 102, 103 (Studio Foundations)	<u>1</u>
Physical Education	
TOTAL	48
Sophomore	Hours
Speech 103	3
Art 221, 222, 223 (Painting I, II, III) and/or	
Art 231, 232, 233 (Ceramics I, II, & III)	12
Art 271, 272, 273 (Life Drawing I, II, III)	12
Comparative Arts (101, 102, 103)	9
Art Electives	8
Physical Education	<u>1</u>
TOTAL	45

COMPARATIVE ARTS CONCENTRATION

	Hours
Freshman	3
Speech 103	8
English (111, 112, 115, 140 A, B, C, D)	12
Natural Sciences (Core Requirements--See Page 15)	12
Social Sciences (Core Requirements--See Page 15)	9
Comparative Arts 101, 102, 103	<u>2</u>
Physical Education	
TOTAL	46
Sophomore	Hours
Music (choose 15 hours)	15
Theater (choose 15 hours)	15
Thar. 100 level	9
Thar. 200 level	6
Art (choose 15 hours)	15
Art 101 (Studio Foundations)	5
Art 102 (Studio Foundations)	5
Art 103 (Studio Foundations)	5
Electives	<u>3</u>
TOTAL	48

Students who enroll in this program should do so with the prior knowledge that when they transfer to a four-year institution they will in most circumstances be required to enroll in only one of the three areas (Theater, Art or Music). The courses taken in the other areas will be electives.

Note: 30 hours required at 200 level for graduation.

PRE-ART MAJOR (GRAPHIC DESIGN EMPHASIS)

	Hours
Freshman	8
English 111, 112, 115, 140, A, B, C, D	12
Natural Sciences (Core Requirements--See Page 15)	12
Social Sciences (Core Requirements--See Page 15)	12
Art 101, 102, 103 (Studio Foundations)	15
Art 104 (Terminology, Tools & Materials for the Graphic Designer)	<u>4</u>
TOTAL	51
Sophomore	Hours
Speech 103	3
Art 251 (Techniques in Illustration & Design I: Typography for the Graphic Designer)	4
Art 252 (Techniques in Illustration & Design II: Basic Illustration)	4
Art 253 (Techniques in Illustration & Design III: Basic Illustration)	4
Art 271, 272, 273 (Life Drawing I & II)	8
Art 221, 222, 223 (Painting I, II, III)	12
Art 205 Graphic Design Production Techniques	4
Art 215 Photography for the Graphic Designer	4
Comparative Arts 101, 102, 103	<u>9</u>
TOTAL	52

PRE-COMMUNICATIONS (GENERAL) MAJOR

	Hours
Freshman	8
English 111, 112, 115, 140 A, B, C, D	12
Natural Sciences (Core Requirements--See Page 15)	12
Social Science (Core Requirements--See Page 15)	12
Humanities (Core Requirements--See Page 15)	12
Physical Education	<u>2</u>
TOTAL	46
Sophomore	Hours
Speech 103	3
Jour. 105, or Speech 105 (Intro. to Mass Comm.)	4
Speech 215 (Group Discussion)	4
Thar. 210 or 215 (Acting, or Sp. 220/Thar. 220 (Oral Interp.))	3
Psychology 101 (Principles of Psychology)	4
Electives	<u>27</u>
TOTAL	45

PRE-ENGLISH MAJOR

	Hours
Freshman	8
English 111, 112, 115, 140 A, B, C, D,	12
Humanities (Core Requirements--See Page 15)	12
Language 111, 112, 113	12
Natural Sciences (Core Requirements--See Page 15)	12
P.E. or Health	<u>2</u>
TOTAL	46
Sophomore	Hours
Speech 103	3
English (201, 202, 203)	4
English (204, 205, 206)	4
English 225, 226	8
Language 211, 212, 213	12*
Social Science (Core Requirements--See Page 15)	12
English Elective	<u>4</u>
TOTAL	47

*Dependent upon previous language experience and college to which the student transfers.

PRE-JOURNALISM

	Hours
Freshman	
English 111, 112, 115, 140 A, B, C, D	8
Government 102	4
Natural Sciences (Core Requirements--See Page 15)	12
Philosophy 101, 102, 103 or Lang. 111, 112, 113	12
Journalism 105 (Intro. to Mass Comm.)	4
Soc. 201 (Current Social Problems)	4
Physical Education	<u>1</u>
TOTAL	45
Sophomore	
Speech 103	3
Economics 101, 102	8
History 201, 202, 203 or History 111, 112, 113	12
Psychology 101	4
Journalism 231 (News Reporting)	4
Physical Education	1
Electives (Social Sciences)	<u>13</u>
TOTAL	45

PRE-THEATER MAJOR

	Hours
Freshman	
English (111, 112, 115, 140 A, B, C, D)	8
Natural Sciences (Core Requirements--See Page 15)	12
Social Sciences (Core Requirements--See Page 15)	12
Humanities (Core Requirements--See Page 15)	12
Physical Education	<u>1</u>
TOTAL	45
Sophomore	
Speech 103	3
3 English Classes 200 level or above	12
Thar. Electives	<u>29</u>
TOTAL	45

Note: 30 hours required at 200 level for graduation

CONCENTRATION AREAS

MATHEMATICS / SCIENCES

- *Botany
- *Chemistry
- Dentistry
- Engineering
- Forestry
- *Medical Technology
- Medicine
- Microbiology or Public Health and Sanitation
- Optometry
- Pharmacy
- Physical Therapy
- Recreation Studies
- Veterinary
- *Zoology

*Students interested in transferring to Ohio University should consult with the Director of the O.U. Resident Credit Center for specific foreign language requirements.

PRE-BOTANY MAJOR

	Hours
Freshman	
English 111, 112, 115, 140 A, B, C, D	8
Speech 103	3
Chemistry 141, 142, 143	12
Biology 111, 112, 113	16
*Math 201, 202	10
Physical Education	2
TOTAL	51

	Hours
Sophomore	
Chemistry 205, 206, 207	12
Biology 211	5
Biology 225	5
Biology 210	5
Social Sciences (Core Requirements--See Page 15)	12
Humanities (Core Requirements--See Page 15)	12
TOTAL	51

*Math 130 sequence may be elected in preparation for calculus.

PRE-DENTISTRY MAJOR

	Hours
Freshman	
English 111, 112, 115, 140 A, B, C, D	8
Speech 103	3
Chemistry 141, 142, 143	12
*Math 201, 202	10
Biology 111, 113	11
Biology 225	5
Physical Education	2
TOTAL	51

	Hours
Sophomore	
Chemistry 205, 206, 207, 223	17
Physics 201, 202, 203	12
Social Sciences (Core Requirements--See Page 15)	12
Humanities Electives (Core Requirements--See Page 15)	12
TOTAL	53

*Math 130 sequence may be elected in preparation for calculus.

PRE-CHEMISTRY MAJOR

	Hours
Freshman	
English 111, 112, 115, 140 A, B, C, D	8
Speech 103	3
Chemistry 141, 142, 143	12
*Math Calculus 201, 202, 203	15
Humanities Elective (Core Requirements--See Page 15)	4
Social Sciences (Core Requirements--See Page 15)	4
Physical Education	1
TOTAL	47

	Hours
Sophomore	
Chemistry 205, 206, 207	12
Physics 201, 202, 203	12
Humanities Elective (Core Requirements--See Page 15)	8
Social Sciences (Core Requirements--See Page 15)	8
Chemistry 224 & 225	10
Physical Education	1
TOTAL	51

*Math 130 sequence may be elected in preparation for calculus.

PRE-ENGINEERING MAJOR

	Hours
Freshman	
A student may obtain one full year in the various areas of Engineering. The freshman schedule should be built around the freshman curriculum of the college or university to which you plan to transfer.	

PRE-FORESTRY MAJOR

	Hours
Freshman	
English 111, 112, 115, 140 A, B, C, D	8
Speech 103	3
Chemistry 141, 142, 143	12
*Math 201, 202	10
Biology 111, 112, 113	16
Physical Education	2
TOTAL	51

Sophomore

See counselor for additional information regarding the Forestry School Transfer.

*Math 130 sequence may be elected in preparation for calculus.

Note: 30 hours required at 200 level for graduation.

PRE-MEDICAL TECHNOLOGY MAJOR

	Hours
Freshman	
Chemistry 141, 142, 143	12
*Math 201, 202	10
Speech 103	3
Biology 111, 113	11
English (111, 112, 115, 140 A, B, C)	8
Physical Education	<u>2</u>
TOTAL	46
Sophomore	
Chemistry 205, 206, 207	12
Chemistry 223, 224 & 225	10
General Genetics (Biology 225)	5
Social Sciences (Core Requirements--See Page 15)	12
Humanities Elective (Core Requirements--See Page 15)	<u>12</u>
TOTAL	51

*Math 130 sequence may be elected in preparation for calculus.

PRE-MEDICINE MAJOR

	Hours
Freshman	
English 111, 112, 115, 140 A, B, C, D	8
Speech 103	3
Chemistry 141, 142, 143	12
Biology 111, 113	11
*Math 201, 202	10
Social Sciences (Core Requirements--See Page 15)	4
Physical Education	<u>2</u>
TOTAL	50
Sophomore	
Chemistry 205, 206, 207, 223	17
Biology 225	5
Physics 201, 202, 203	12
Social Sciences (Core Requirements--See Page 15)	8
Humanities Elective (Core Requirements--See Page 15)	<u>12</u>
TOTAL	54

*Math 130 sequence may be elected in preparation for calculus.

**PRE-MICROBIOLOGY or
PUBLIC HEALTH & SANITATION MAJOR**

	Hours
Freshman	
English 111, 112, 115, 140 A, B, C, D	8
Speech 103	3
Chemistry 141, 142, 143	12
Biology 111, 112, 113	16
*Math 201	4
Biology 225	5
Social Science	<u>4</u>
TOTAL	53
Sophomore	
Chemistry 205, 206, 207	17
Physics 201, 202, 203	12
Social Sciences (Core Requirements--See Page 15)	8
Humanities Elective (Core Requirements--See Page 15)	12
Physical Education	<u>2</u>
TOTAL	51

*Math 130 sequence may be elected in preparation for calculus.

PRE-OPTOMETRY MAJOR

	Hours
Freshman	
English 111, 112, 115 140 A, B, C, D	8
Speech 103	3
Chemistry 141, 142, 143	12
Biology 111, 113	11
*Math 201, 202	10
Psychology 101	4
Physical Education	<u>2</u>
TOTAL	50
Sophomore	
Chemistry 205, 206, 207, 224	17
Physics 201, 202, 203	12
Social Sciences (Core Requirements--See Page 15)	12
Humanities Elective (Core Requirements--See Page 15)	<u>12</u>
TOTAL	53

*Math 130 sequence may be elected in preparation for calculus.

PRE-PHARMACY MAJOR

	Hours
Freshman	
English 111, 112, 115, 140 A, B, C, D	8
Speech 103	3
Chemistry 141, 142, 143	12
Biology 111, 113	11
*Math 201, 202	10
Economics 101	<u>4</u>
TOTAL	48
Sophomore	
Chemistry 205, 206, 207, 223	17
Physics 201, 202, 203	12
Social Sciences (Core Requirements--See Page 15)	8
Physical Education	2
Humanities (Core Requirements--See Page 15)	<u>12</u>
TOTAL	51

*Math 130 sequence may be elected in preparation for calculus.

PRE-PHYSICAL THERAPY MAJOR

	Hours
Freshman	
English 111, 112, 115, 140 A, B, C, D	8
Chemistry 141, 142, 143	12
Biology 111, 113	11
Biology 225	5
Physical Education 202	4
Psychology 173	5
Math 150 or Psychology 261	<u>5</u>
TOTAL	50
Sophomore	
Biology 290B, 291B (Anatomy & Physiology I, II)	10
Speech 103	3
Sociology 101	4
Physics 201, 202	8
Psychology 275	5
Psychology 270	5
Humanities Elective (Core Requirements--See Page 15)	12
Social Sciences	<u>4</u>
TOTAL	51

Note: 30 hours required at 200 level for graduation.

PRE-VETERINARY MAJOR

Freshman	Hours
English 111, 112, 115, 140 A, B, C, D	8
Speech 103	3
*Math 201, 202	10
Chemistry 141, 142, 143	12
Biology 111, 113	11
Zoology 225	5
Physical Education	<u>2</u>
TOTAL	51

Sophomore	Hours
Chemistry 205, 206, 207, 223	17
Physics 201, 202, 203	12
Social Sciences (Core Requirements--Page 15)	12
Humanities (Core Requirements--See Page 15)	<u>12</u>
TOTAL	53

*Math 130 sequence may be elected in preparation for calculus.

PRE-ZOOLOGY MAJOR

Freshman	Hours
English 111, 112, 115, 140 A, B, C, D	8
Speech 103	3
Chemistry 141, 142, 143	12
Biology 111, 112, 113	16
*Math 201, 202	10
Physical Education	2
Social Science	<u>4</u>
TOTAL	55

Sophomore	Hours
Chemistry 205, 206, 207, 223	17
Physics 201, 202, 203	12
Social Sciences (Core Requirements--See Page 15)	8
Biology 225 -- Genetics	5
Humanities Elective (Core Requirements--See Page 15)	<u>12</u>
TOTAL	54

*Math 130 sequence may be elected in preparation for calculus.

RECREATION STUDIES

Freshman	Hours
English 111, 112, 115, 140 A, B, C, D	8
Speech 103	3
Math 130	4
Biol 111, 215, 271	12
Social Science (Core Requirements--See Page 15)	4
HPER 200 (Introduction to Recreation)	4
HPER 227 (First Aid)	4
HPER 110 (3 Activity Classes)	3
Humanities (Core Requirements--See Page 15)	<u>8</u>
TOTAL	50

Sophomore	Hours
HPER 260 (Outdoor Recreation)	4
HPER 237 (Orientation to Recreation Employment)	1
HPER 250 (Recreation Leadership)	4
HPER Electives	10
HPER 110 (3 Activity Classes)	3
BIOL Electives	10
Social Science (Core Requirements--See Page 15)	8
Humanities (Core Requirements--See Page 15)	<u>4</u>
TOTAL	44

Note: 30 hours required at 200 level for graduation.

CONCENTRATION AREAS

SOCIAL SCIENCES

Business Administration

***Government**

***History**

***Pre-Law**

***Psychology**

Social Work

***Sociology**

***Students interested in transferring to Ohio University should consult with the Director of the O.U. Resident Credit Center for specific foreign language requirements.**

PRE-BUSINESS ADMINISTRATION MAJOR

	Hours
Freshman	
English 111, 112, 115, 140 A, B, C, D	8
¹ Social Sciences	8
*Math 155, 201	10
Economics 101, 102	8
Natural Sciences	12
Physical Education	<u>2</u>
TOTAL	48
Sophomore	
Humanities (Core Requirements--See Page 15)	12
Social Sciences	4
Business Law 250	4
Accounting 101, 102, 103	12
Speech 103	3
QM 200, 201 (Quantitative Methods)	8
Electives (RMMT 0201 RMMT 0301 Suggested)	<u>8</u>
TOTAL	51

¹Recommended: Government 101, 102
Sociology 101
Psychology 101, 131

*Math 130 sequence may be elected in preparation for calculus.

PRE-HISTORY MAJOR

	Hours
Freshman	
English 111, 112, 115, 140 A, B, C, D	8
Philosophy 101 (Fundamentals)	4
History 111, 112, 113 (United States)	12
Foreign Language or Humanities/Arts	12
Natural Science (2 courses in the same area)	8
Physical Education	<u>2</u>
TOTAL	46
Sophomore	
Speech 103	3
History 201 202, 203 (West Civ)	12
Philosophy 102 (Logic)	4
Humanities	4
Natural Science	4
History Electives	6
Electives	<u>12</u>
TOTAL	45

GOVERNMENT MAJOR

	Hours
Freshman	
English 111, 121, 115, 140 A, B, C, D	8
Natural Science (Core Requirements--See Page 15)	12
Physical Education	2
Language or Humanities/Arts 200 level	12
Government 101, 102	8
Philosophy (102 or 103)	<u>4</u>
TOTAL	46
Sophomore	
Speech 103	3
History (111, 112, 113)	12
Any three courses from the following	15
Govt. 201 (Urban Policitics)	
Govt. 203 (Pol. in the American States)	
Govt. 205 (Appalachian Politics)	
Govt. 204 (Intro. to World Politics)	
Govt. 229 (Current Pol. Topics)	
Soc. Sci. 210 (Introduction to Urban Politics)	
Electives	12
Math 150 (Elem. Stat. for Soc. & Behavioral Sciences)	<u>4</u>
TOTAL	46

*Total 20 hrs. needed in Humanities.

PRE-LAW MAJOR

	Hours
Freshman	
English 111, 112, 113,m 115, 140 A, B, C, D	8
Philosophy 102 (Logic), 103 (Moral)	8
Business Law 250, 260	8
Lab Science (2 quarter sequence)	8
Government 101, 102	8
Speech 103	3
Electives (200 level)	<u>4</u>
TOTAL	47
Sophomore	
History 111, 112, 113	12
Economics 101, 102	8
Psychology 101 (Introduction)	4
Physical Education	2
Electives (200 level courses)	<u>19</u>
TOTAL	45

*Total 20 hrs. needed in Humanities.

Note: 30 hours required at 200 level for graduation.

PRE-PSYCHOLOGY MAJOR

	Hours
Freshman	
English 111, 112, 115, 140 A, B, C, D	8
Humanities	8
Natural Sciences (Core Requirements--Biology 111, 112 recommended)	12
Language or Humanities/Arts	12
Psychology 101	4
Math 150 (Elem. Stat. for Soc. & Behav. Science)	<u>4</u>
TOTAL	48
Sophomore	
Speech 103	3
Philosophy	4
Sociology 101 (Prin. of Sociology)	4
Sociology 210 (Current Social Problems)	4
P.E. or Health	2-4
Psychology (Electives)	13-15
Electives	<u>12</u>
TOTAL	45

PRE-SOCIOLOGY MAJOR

	Hours
Freshman	
English 111, 112, 115, 140 A, B, C, D	8
Humanities (Core Requirements--See Page 15)	8
Natural Sciences (Core Requirements--Biology 111, 112 recommended)	12
Language or Humanities/Arts	12
Sociology 101 (Principles of Sociology)	4
Physical Education	<u>2</u>
TOTAL	46
Sophomore	
Speech 103	3
Humanities (Core Requirements--See Page 15)	4
Math 150 (Elem. Stat. for Soc. & Behav. Sciences)	4
Psychology 101	4
Anthropology 201	5
Sociology Electives	13
Electives	<u>12</u>
TOTAL	45

PRE-SOCIAL WORK MAJOR

	Hours
Freshman	
English 111, 112, 115, 140 A, B, C, D	8
Psychology 101 (General Psychology)	4
Psychology 173 (Child and Adolescent)	4
Sociology 101 (Principles of Sociology)	4
Natural Sciences (Core Requirements--Biology 111, 112 recommended)	12
¹ Social Sciences	4
Philosophy 102 (Moral Philosophy)	4
Physical Education	2
Electives	<u>4</u>
TOTAL	46
Sophomore	
Speech 103	3
Math 150 (Elem. Stat. for Soc. & Behav. Sciences)	4
Economics 101, 102	8
¹ Social Sciences	8
Sociology 202 (Intro. to Family Sociology)	4
Humanities (Core Requirements--See Page 15)	8
Electives (Humanities)	<u>9-10</u>
TOTAL	45

- ¹Recommended: Minorities
 Sociology of Education
 Sociology of Aging
 Urban Society
 Social Deviance
 Introduction to Family Sociology SOCI 0202
 **Introduction to Social Welfare and Social Work
 SOWR 0101

**Offered on demand only

Note: 30 hours required at 200 level for graduation.

BUSINESS TECHNOLOGIES

(ASSOCIATE OF APPLIED BUSINESS DEGREE)

ACCOUNTING

BUSINESS MANAGEMENT

Retail Management Business Management
Banking/Finance Real Estate

DATA PROCESSING AND COMPUTER TECHNOLOGY

SECRETARIAL

General Executive
Medical Legal

ACCOUNTING TECHNOLOGY

CAREERS IN ACCOUNTING

Management (Industrial) Accounting

The management accountant is trained to determine the financial consequences of management decisions. The reports and analyses of the management accountant are essential ingredients of most management decisions about the finance investments and pricing policies. More than anyone else on the management team, the management accountant participates in virtually every phase of the business problem solving and decision making process. Because of the accountant's role in this process, he or she has many times advanced to a top management position within the company.

Governmental Accounting

All organizations need accounting information. Government and other non-profit organizations are no exception. The federal government hires accountants in most of its agencies. Three prominent agencies are the Internal Revenue Service, the General Accounting Office and the Defense Contract Audit Agency. State and local government units hire accountants in their tax divisions and in general accounting function. Schools and hospitals are major users of accounting services. Many opportunities exist for those interested in governmental accounting.

Public Accounting and the CPA

For the protection of the public the CPA is expected to possess certain professional qualifications. The Uniform CPA Examination is designed to measure the technical competency, the exercise of good judgment, and the understanding of professional responsibility of each man or woman who chooses this career in accounting. The public accountant is a true independent professional person with the stature as that of a doctor or lawyer. In public accounting many opportunities exist for professional growth whether you practice as a sole practitioner or as part of a larger firm.

FIRST YEAR CURRICULUM ACCOUNTING

Course No.	Course	Class Hrs.	Lab Hrs.	Cr. Hrs.
FIRST QUARTER				
Acct 0101	Accounting I	3	4	4
Engl 0111	Contemporary Writing Skills	5	0	4
ExST 0120	Business Machines I or approved elective	3	0	3
*Math	Math (See Advisor)	5	0	4
BMNT 0101	Introduction to Business	4	0	3
		20	4	18
SECOND QUARTER				
Acct 0102	Accounting II	3	4	4
Engl 0112	Contemporary Writing Skills II	5	0	4
Econ 0101	Principles of Economics I	5	0	4
*Math	Math (See Advisor)	5	0	4
BMNT 0201	Principles of Management	4	0	4
		22	4	20
THIRD QUARTER				
Acct 0103	Accounting III	3	4	4
Acct 0104	Tax Accounting	3	3	4
Engl 0115	Comp. and Mass Comm.	5	0	4
	Business Elective II	3	3	4
Econ 0102	Principles of Economics II	5	0	4
		19	10	20

*Students with adequate high school mathematics should elect Math 0130 if intending to pursue advanced degrees.

*Students may take any math sequence from the list below as long as they have 8 credit hours and 10 contact hours for the two-year degree.

**BUSINESS ELECTIVES (See Advisor)

Acct. 0161 – Accounting W/D.P. Application I (4)	EDPT 0201 – Systems LAnalysis & Design (4)
Acct 0175 – Financial Statement Analysis (3)	ExST 0101 – Typing I (3)
Acct 0231 – Governmental Accounting (4)	ExST 0121 – Intro. to Word Processing (4)
Acct. 0241 – Auditing	Math 0105 – Business Mathematics
Acct. 0261 – Accounting W/D.P. Application II (4)	Math 0155 – Business Statistics
BMNT 0102 – Marketing (4)	Math 0130 – College Algebra I (4)
BMNT 0240 – Industrial Relations (4)	Math 0131 – College Algebra II (4)
BMNT 0241 – Labor Relations (4)	Math 0201 – Calculus I (5)
EDPT 0103 – BASIC Language II (3)	RMMT 0235 – Advertising (3)
EDPT 0104 – COBOL Programming I (4)	QMet 0200 – Quantitative Methods I (4)
EDPT 0105 – COBOL Programming II (4)	QMet 0201 – Quantitative Methods II (4)

SECOND YEAR CURRICULUM ACCOUNTING/PROFESSIONAL EMPHASIS

Course No.	Course	Class Hrs.	Lab Hrs.	Cr Hrs.
FOURTH QUARTER				
Acct 0211	Intermediate Accounting I	3	4	4
Acct 0221	Cost Accounting I	3	4	4
Acct 0205	Principles of Finance	3	0	3
BusL 0250	Business Law I	4	0	4
	Social Science Elective	5	0	4
		18	8	19
FIFTH QUARTER				
Acct 0212	Intermediate Accounting II	3	4	4
Acct 0222	Cost Accounting II	3	3	4
BMNT 0242	Business Communications	3	2	3
EDPT 0101	Intro. to Data Processing	2	3	3
Spch 0103	Pub. Speaking & Human Comm.	3	0	3
		14	13	16
SIXTH QUARTER				
Acct 0213	Intermediate Accounting III	3	4	4
Acct	Accounting Elective	3	3	3
	Social Science Elective	5	0	4
BMNT 0202	Personnel Management	3	0	3
*EDPT	Data Processing Elective	4	0	4
		18	7	18

SECOND YEAR CURRICULUM ACCOUNTING/MANAGEMENT EMPHASIS

Course No.	Course	Class Hrs.	Lab Hrs.	Cr Hrs.
FOURTH QUARTER				
Acct 0221	Cost Accounting I	3	4	4
Acct 0205	Principles of Finance	3	0	3
BusL 0250	Business Law I	4	0	4
	Social Science Elective	5	0	4
Acct 0211	Intermediate Accounting I	3	4	4
		18	8	19
FIFTH QUARTER				
Acct 0222	Cost Accounting II	3	4	4
BusL 0260	Business Law II	4	0	4
EDPT 0101	Intro. to Data Processing	2	3	3
Spech 0103	Pub. Speaking & Human Comm.	3	0	3
	Business Elective**	0	0	4
		12	7	18
SIXTH QUARTER				
Acct 0110	Payroll Records/Accounting	2	3	3
EDPT	Data Processing Elective	3	4	4
	Social Science Elective	5	0	4
BMNT 0202	Personnel Management	3	0	4
	Business Elective **	3	0	3-4
		17	7	18-19

BUSINESS MANAGEMENT TECHNOLOGY

With majors in

Retail Management

Business Management

Banking / Finance

Real Estate

The Associate Degree in Business Management

The Associate Degree in Business Management is designed to provide the student with the knowledge, understanding, and skills required for entry-level management positions. The successful student is provided access to a career path leading to a variety of challenging and rewarding middle-management positions in business, service organizations, industry and financial institutions.

The Core Curriculum

Flexibility is a key feature of the Business Management curriculum. Students will choose 18-24 credit hours within one of the four specialized areas, shown on the following pages, as their area of emphasis. The remainder of the required 45 technical elective hours may be chosen from the remaining three areas of specialization or any other approved business courses offered at Shawnee State. This provides the student the opportunity to design a program compatible to their individualized interest and career goals.

BUSINESS MANAGEMENT CURRICULUM

Course No.	Course	Class Hrs.	Lab Hrs.	Cr Hrs.
FIRST QUARTER				
Engl 0111	Contemporary Writing Skills I	5	0	4
Math 0125	Business Math	5	0	4
Acct. 0101	Accounting I	3	4	4
	Technical Elective	<u>4-6</u>	4	<u>4-6</u>
		19-21	8	16-18
SECOND QUARTER				
Engl 0112	Contemporary Writing Skills II	5	0	4
Acct 0102	Accounting II	3	4	4
Econ 010	Principles of Economics I	5	0	4
	Technical Elective	<u>4-6</u>	4	<u>4-6</u>
		17-19	8	16-18
THIRD QUARTER				
Engl 0115	Composition and Literature	5	0	4
Econ 0102	Principles of Economics II	5	0	4
	Technical Elective	<u>8-10</u>	8	<u>8-10</u>
		8-20	8	16-18
FOURTH QUARTER				
Psyc 0101	Principles of Psychology	5	0	4
Engl 0121	Technical Writing	3	0	3
BusL 0250	Business Law I	4	0	4
	Technical Elective	<u>4-8</u>	8	<u>6-8</u>
		16-20	8	17-19
FIFTH QUARTER				
Soci 0101	Principles of Sociology	5	0	4
BusL 0251	Business Law II	4	0	4
	Technical Elective	<u>8-10</u>	0	<u>8-10</u>
		17-19	0	16-18
SIXTH QUARTER				
Spch 0103	Public Speaking & Human Comm.	3	0	3
Psyc 0131	Human Adjustment	3	0	3
	Technical Elective	<u>10-12</u>	0	<u>10-12</u>
		16-18	0	16-18

Retail Management

Retailing involves all those activities related to the sale of consumer goods to consumers. The retailing segment of our economy provides jobs for about 17% of all employed people. These jobs are in small "mom and pop" stores and giant corporate chains in nearly every part of the U.S.

Successful management trainees in retailing can move into a number of challenging jobs. Department managers, assistant buyer or buyer, sales manager, merchandise manager, assistant store manager, and store manager are but a few of the possibilities. If you would like an emphasis in Retailing in the Business Management program, you should take the following courses as part of technical electives:

Course No.	Course Hrs.	Class Hrs.	Lab Hrs.	Cr.
RMMT 0103	Introduction to Retailing	5	0	4
RMMT 0104	Salesmanship	3	2	3
RMMT 0223	Retail Buying	4	0	4
RMMT 0225	Marketing Case Studies	4	0	4
BAFT 0105	Installment Credit	4	0	4
RMMT 0223	Sales Promotion	4	2	4
RMMT 0235	Advertising	3	2	3

Banking/Finance

The specialization in Banking and Finance is designed to provide individuals interested in a career in banking, savings and loans, credit unions, or credit departments of retail companies with the basic knowledge and skills required to gain employment and to advance to managerial level occupations. There are a large number of lower and middle level management positions in most financial institutions that a student would be qualified to fill with this specialty and the requested experience. Some of the managerial positions available in banks are loan officer, trust officer, collections officer, branch manager, and cashier.

The Banking and Finance curriculum parallels those required by the American Institute of Banking.

If your area of emphasis is Banking and Finance, you should plan to take the following courses as a part of technical electives required in the Business Management program:

Course No.	Course Hrs.	Class Hrs.	Lab Hrs.	Cr
BAFT 0101	Banking and Finance I	2	3	3
BAFT 0102	Intro. to Commercial Lending	4	0	4
BAFT 0105	Installment Credit	4	0	4
BAFT 0106	Principles of Bank Operations	4	0	4
BAFT 0202	Home Mortgage Lending	3	3	4
BAFT 0204	Investments I	4	0	4

GRADUATE REALTORS INSTITUTE DESIGNATION

Business Management

The Business Management option is a general business curriculum appropriate for three types of students.

First, the option provides a general business background for those who want to work in business but haven't decided on a specific career area. With some experience and, perhaps, additional specialized courses, this option can lead into management trainee programs in most types of business and industry.

Second, this option is appropriate for those with a technical degree or background who want to move into managerial positions.

Third, the curriculum provides an excellent business background for individuals who want to operate their own small business.

If you fit one of the above three categories, you should choose from the following courses for your technical electives:

Course No.	Course Hrs.	Class Hrs.	Lab Hrs.	Cr. Hrs.
BMNT 0101	Introduction to Business	4	0	3
BMNT 0102	Marketing	5	0	4
BAFT 0105	Installment Credit	4	0	4
BMNT 0240	Industrial Relations	4	0	4
BMNT 0241	Labor Relations	4	0	4
BMNT 0242	Business Communications	3	2	3
BMNT 0201	Principles of Management	4	0	4
BMNT 0202	Personnel Management	3	0	3
ACCT 0205	Principles of Finance	3	0	3
RMMT 0235	Advertising	3	2	3
RMMT 0225	Marketing Case Studies	4	0	4

Real Estate

If you have an interest in becoming a real estate agent, real estate broker, appraiser, or manager of a real estate firm the real estate specialization of the Business Management program is for you.

Successful completion of specific courses in the curriculum meets the requirements of Ohio law and qualifies the student to sit for the Real Estate Salesman's and Real Estate Broker's examination. The curriculum also prepares the student for the Graduate Real Estate Institute examination.

If your area of emphasis is Real Estate, you should choose from the following courses for your technical electives:

Course No.	Course	Class Hrs.	Lab Hrs.	Cr. Hrs.
REST 0210	Real Estate Principles & Practices	4	0	4
REST 0211	Real Estate Brokerage	4	0	4
REST 0212	Real Estate Law	4	0	4
REST 0213	Real Estate Finance	4	0	4
REST 0214	Real Estate Appraisal	4	0	4
REST 0215	Special Topics in Real Estate	4	0	4

Real Estate Salesman's Program

Persons wishing to take the Ohio examination for real estate salesmen must first successfully complete Real Estate Principles and Practices and Real Estate Law. Both of these courses are offered at Shawnee State.

PURPOSE

A. To fill the need for a more comprehensive and better instruction program in all facets of the real estate profession through courses of instruction in institutions of higher learning.

B. To provide licensed real estate brokers and salesmen an opportunity for enhancement of professional competence and financial success through participation in the Graduate, Realtors' Institute (GRI).

C. To enhance the community status of the real estate profession through a formal education program.

D. To provide individuals not in the profession an opportunity to become knowledgeable about particular facets of the real estate industry.

E. To recognize those who have successfully qualified for the GRI designation by awarding them a certificate and pin that identifies them as a Graduate, Realtors' Institute (GRI) member.

ENROLLMENT

Enrollment in the Real Estate program is not limited to candidates for the GRI certificate.

Individuals seeking information about specific facets of the real estate industry may enroll in any course; however, program curriculum is oriented to the educational needs of the professional.

GRI CERTIFICATE PROGRAM

The GRI designation is available to those who hold membership in the Ohio Association of Real Estate Boards and have completed the program requirements.

A certificate in recognition of achievement and a GRI lapel pin will be awarded to those individuals successfully completing the following: program requirements, application to the Ohio Association of Real Estate Boards, payment of required fees and successful completion of a comprehensive examination.

Please refer to page 67 for the Real Estate Courses and their course description offered at Shawnee State.

DATA PROCESSING AND COMPUTER TECHNOLOGY

The Data Processing and Computer Technology Associate Degree Program at Shawnee State University is designed to meet the manpower demand of industries, government, and educational institutions. In addition to theoretical fundamentals, practical aspects of data processing are emphasized. Hands-on opportunity is provided and encouraged. Graduates of this program will be fully prepared to enter employment as staff members (computer programmers or operators) in computer installations and application departments or enroll in a four-year program as a fully accredited junior. Graduates of this technology receive an associate degree in Applied Business.

Job Opportunities

PROGRAMMER -- Works closely with systems analysts to define problems, analyze the input data and output report requirements, and prepare a program of instructions which the computer can follow to solve the problem.

SYSTEMS ANALYST -- Develops ordered methods for data collection, processing, and reporting.

DATA PROCESSING MANAGER -- Plans, coordinates and directs all data processing activities for organization; supervises computer center and punched card installations.

Other positions are available to the graduate technician after several years of experience.

DATA PROCESSING AND COMPUTER TECHNOLOGY CURRICULUM

Course No.	Course	Class Hrs	Lab Hrs	Cr. Hrs
FIRST QUARTER				
Engl. 0111	Contemporary Writing Skills I	5	0	4
Acct. 0101	Accounting I	3	4	4
*Math	Math	5	0	4
*EDPT 0102	Basic & Assembler Programmer	2	3	3
EXST 0101	Typing I**	2	3	3
		17	10	18
SECOND QUARTER				
Engl 0112	Contemporary Writing Skills II	5	0	4
Acct 0102	Accounting II	3	4	4
*Math	Math	5	0	4
EDPT 0103	BASIC Language I	2	3	3
EDPT 0107	RPG II Language	3	4	4
		18	11	19
THIRD QUARTER				
Engl 0115	Composition and Literature	5	0	4
Acct 0103	Accounting III	3	4	4
Math 0155	Business Statistics	4	0	4
EDPT 0104	BASIC Language II	2	3	3
EDPT 0206	FORTRAIN IV	3	4	4
		17	11	19
FOURTH QUARTER				
Engl 0121	Technical Writing	3	0	3
Soci 0101	Principles of Sociology	5	0	4
Bus L 0250	Business Law I	4	0	4
EDPT 0201	Systems Analysis & Design	3	3	4
EDPT 0105	COBOL Programming I	3	4	4
		18	7	19

FIFTH QUARTER

BMNT 0201	Principles of Management	4	0	4
Econ 0101	Principles of Economics I	5	0	4
EDPT 0202	Computer Operations Management	3	0	3
EDPT 0203	Business Computer Projects I	3	4	4
EDPT 0106	COBOL Programming II	3	4	4
		18	8	19

SIXTH QUARTER

Spch 0103	Pub Speaking & Human Comm.	3	0	3
Psyc 0101	Principles of Psychology	5	0	4
*EDPT	Data Processing Electives	10-14	10-18	12
		18-22	10-18	19

DATA PROCESSING ELECTIVE COURSES

EDPT 0202	Comp. Operations (3)
EDPT 0204	Business Computer Projects II (4)
EDPT 0205	Business Data Syst. & Comm. (3)
EDPT 0207	Pascal (4)
EDPT 0208	Data Base Management (4)
Acct 0205	Data Systems & Comm. (3)

See prerequisites on page 68 under Data Processing.

*Math sequence for Data Processing: Basic Algebra, College Algebra I, College Algebra II, Trigonometry, and Analytic Geometry or Calculus I.

Advisor to determine math sequence. Students may take any math sequence from the above list as long as they have 8 credit hours and 10 contact hours for the two-year degree with advisor's approval.

**Typing--Students are to have a high school equivalent or 1 quarter of college typing.

** Typing I - Students may take Typing I and Basic Assembler first quarter concurrently.

*EDPT 204, 205, 207, 208 - Students may take any 3 or 4 classes.

*Required courses for Data majors only.

*EDPT 0101 - Intro. to Data Processing for non-data majors only.

Data Processing majors may not use EDPT 0101 Introduction to Data Processing as credit toward their degree.

SECRETARIAL TECHNOLOGY

WITH MAJORS IN EXECUTIVE SECRETARIAL (SHORTHAND REQUIRED) GENERAL SECRETARIAL (NON-SHORTHAND PROGRAM)

Job Opportunities

Positions available after completion of one of the Secretarial Majors are:

GENERAL SECRETARY -- Is qualified to fill a broad range of office positions which require technical skills. This student will not be trained for shorthand dictation but will be qualified as a machine transcriptionist.

EXECUTIVE SECRETARY -- Has a high degree of stenographic speed and accuracy. Responsible for supervision of other clerical personnel. Usually handles all types of correspondence and handles private and confidential reports

MEDICAL AND LEGAL SECRETARY -- Within the executive or general secretarial program the students are trained to prepare medical and legal documents.

WORD PROCESSING SPECIALIST -- Is qualified to keyboard, revise, and store documents for immediate or future use. This student will be fully trained in all functions of a word processor.

FIRST YEAR CURRICULUM GENERAL & EXECUTIVE SECRETARIAL MAJORS

Cours No.	Course	Class Hrs.	Lab Hrs.	Cr. Hrs.
FIRST QUARTER				
Engl 0111	Contemporary Writing Skills I	4	0	4
Math 0125	Business Mathematics	4	0	4
ExST 0101	Typing I	2	3	3
*ExST 0111	Shorthand I	3	2	3
BMNT 0101	Intro to Business	4	0	3
		19	5	17
SECOND QUARTER				
Engl 0112	Contemporary Writing Skills II	4	0	4
ExST 0102	Typing II	2	3	3
*ExST 0112	Shorthand II	3	2	3
***Acct 0101	Accounting I	3	4	4
Soci 0101	Principles of Sociology	5	0	4
		17	9	18
***Accounting Substitution				
Basic Accounting (Acct 0100), which is for CAREER ORIENTED STUDENTS ONLY, may be substituted for Acct 0101 (Accounting I).				
THIRD QUARTER				
ExST 0231	Records Management	2	3	3
Engl 0115	Composition & Mass Comm.	4	0	4
ExST 0221	Dictation & Transcription	3	2	3
ExST 0103	Typing III	2	3	3
*Exst 0113	Shorthand III	3	2	3
EDPT 0101	Intro to Data Processing	2	3	3
		17	13	19

Previous Typing and Shorthand Training

Students who have had prior instruction at the high school level in typing and shorthand before coming to Shawnee State University may receive transfer credit for their work if they meet the following criteria:

1. If you have successfully completed at least 180 hours (one school year) of typing and/or shorthand and received full credit: you may substitute this credit for our Typing I and Typing II and/or Shorthand I and Shorthand II.
2. If you have completed at least 360 hours (two school years) of typing and/or shorthand and received a final grade of A or B in the second year, you may substitute this credit for our Typing III and/or Shorthand III.

However, if you are not trained on the IBM Electronic 85 typewriter, you must take our Typing III in order to be trained on this machine. You will be required to use the Electronic 85 in Typing IV.

If you are not proficient in typing from your shorthand notes into mailable copy under the pressure of being timed, then you should take our Shorthand III in order to be ready for Shorthand IV which requires you to be proficient in doing mailable copy work.

SECOND YEAR CURRICULUM GENERAL & EXECUTIVE SECRETARIAL MAJORS

Course No.	Course	Class Hrs.	Lab Hrs.	Cr Hrs
FOURTH QUARTER				
BuSL 0250	Business Law	4	0	4
BMNT 0242	Business Communications	3	2	3
*ExST 0214	Shorthand IV	3	2	3
ExST 0104	Typing IV	2	3	3
ExST 0241	Secretarial Practices I	3	2	3
ExST 0121	Word Processing I	3	2	3
		18	11	19
FIFTH QUARTER				
ExST 0242	Secretarial Practices II	3	2	3
Spch 0103	Pub. Speaking & Human Comm.	3	0	3
Psyc 0101	Principles of Psychology	5	0	4
*ExST 0215	Shorthand V	3	2	3
Econ 0101	Principles of Econ I	4	0	4
ExST 0222	Word Processing II	2	3	3
		19	7	20
SIXTH QUARTER				
Psyc 0173	Human Growth & Development	3	0	4
BMNT 0202	Personnel Management	3	0	3
Acct 0110	Payroll Records & Accounting	2	3	3
*ExST 0216	Shorthand VI	0	3	2
ExST 0243	Secretarial Practice III	0	15	5
		8	21	16

*General secretarial majors must elect basic business courses instead of shorthand.

MEDICAL AND LEGAL SPECIALIZATION

If enough of the EXECUTIVE SECRETARIAL majors want to specialize in legal and medical to warrant the formation of these classes, their last three quarters would adhere to the following format:

MEDICAL SPECIALIZATION					LEGAL SPECIALIZATION				
Course No.	Course	Class Hrs	Lab Hrs	Cr Hrs	Course No.	Course	Class Hrs	Lab Hrs	Cr Hrs
FOURTH QUARTER					FOURTH QUARTER				
MDST 0241	Medical Secretarial Practices I	2	3	3	LgST 0241	Legal Secretarial Practices I	2	3	3
BusL 0250	Business Law I	4	0	4	BusL 0250	Business Law I	4	0	4
MDST 0111	Medical Shorthand I	2	3	3	LgST 0111	Legal Shorthand I	2	3	3
MDST 0221	Medical Dictation & Transcription I	3	2	3	LgST 0221	Legal Dictation & Trans. I	2	3	3
MDST 0223	Medical Terminology I	3	0	3	LgST 0223	Legal Terminology & Judicial Procedures	2	3	3
	Basic Business Elective	<u>3</u>	<u>0</u>	<u>3</u>		Basic Business Elective	<u>3</u>	<u>0</u>	<u>3</u>
		17	8	19			15	12	19
FIFTH QUARTER					FIFTH QUARTER				
MDST 0242	Medical Secretarial Practices II	2	3	3	BusL 0260	Business Law II	4	0	4
Spch 0103	Pub Speaking & Human Comm.	3	0	3	Spch 0103	Pub Speaking & Human Comm.	3	0	3
Psyc 0101	Principles of Psychology	5	0	4	Psyc 0101	Principles of Psychology	5	0	4
MDST 0224	Medical Terminology II	2	3	3	LgST 0224	Legal Terminology & Judicial Procedures II	2	3	3
MDST 0112	Medical Shorthand II	<u>2</u>	<u>3</u>	<u>3</u>	LgST 0112	Legal Shorthand II	<u>2</u>	<u>3</u>	<u>3</u>
		14	9	16			16	6	17
SIXTH QUARTER					SIXTH QUARTER				
MDST 0222	Medical Dictation & Trans. II	5	0	4	LgST 0222	Legal Dictation & Trans. II	5	0	4
BMNT 0202	Personnel Management	3	0	3	BMNT 0202	Personnel Management	3	0	3
ExST 0243	Secretarial Practices III	0	15	5	ExST 0243	Secretarial Practices III	0	15	5
ExST 0121	Intro. to Word Processing	<u>5</u>	<u>0</u>	<u>4</u>	ExST 0121	Intro. to Word Processing	<u>5</u>	<u>0</u>	<u>4</u>
		13	15	16			13	15	16

ALLIED HEALTH TECHNOLOGIES
(ASSOCIATE OF APPLIED SCIENCE DEGREE)

Associate Degree Nursing
Dental Hygiene
Medical Laboratory
Occupational Therapy Assistant
Physical Therapist Assistant
Radiologic Technology
Respiratory Therapy Technology

CERTIFICATE PROGRAMS

(One Year)

Emergency Medical Technician - Paramedic
Practical Nursing
Respiratory Therapy Technician

**ALLIED HEALTH TECHNOLOGIES
ACADEMIC REQUIREMENTS FOR STUDENTS
ENROLLED IN ALLIED HEALTH PROGRAMS AT
SHAWNEE STATE UNIVERSITY**

In order to remain in good standing in an Allied Health Program at Shawnee State University a student must:

1. Maintain an overall grade point average of 2.000 for all coursework needed to meet degree requirements. This applies to required courses taken before as well as after admission.
2. Maintain an overall Allied Health major grade point average of 2.000 in all courses with the MLTC, DTHY, ADNR, PNRS, PTAT, OTAT, RPTT, RDLT prefix.
3. Not receive a grade of F,D-, D, D+ in any Allied Health major course (MLTC, DTHY, PTAT, OTAT, RDLT, ADNR, PNRS, OR RPTT prefix) and academic courses required for graduation.

The following schedule of events shall apply once the student has failed to achieve any **one of the three** requirements listed above.

- A. The Allied Health Program Director may dismiss a student from his major program. The student may appeal the decision of the Allied Health Program Director in the Appeal process as outlined.
 1. Student submits a letter of appeal to the Director of Allied Health Program.
 2. The Program Director will arrange re-admissions interview with the student, the Director, and the Vice-President of Student Services or his/her designee. A decision will be made regarding the student's dismissal status after evaluating the student's past academic achievement, the student's rational for current grade status, and the prediction of future performance in the program. A decision must be reached on or before three working days after the Director receives the student's appeal notice.
 3. Students that wish to appeal the decision of the Director and the Vice-President of Student Services (or his/her designee) may appeal the decision to the Vice-President of Technical Programs. The student's appeal must be in writing and must be received within three working days of the receipt of notice from the appeal interview. The Vice-President of Technical Programs shall elect to support or reject the decision of the interview within three working days from receipt of the student's appeal. The Vice-President of Technical Programs will promptly notify the Program and the student of his/her decision.
 4. The student may also have recourse to the President if he/she is dissatisfied with decisions made at lower levels.
- B. The Allied Health Program Director may allow the student to continue:
 1. If the student is permitted to continue in the program, he/she will have one quarter to raise the overall and Allied Health G.P.A. to at least 2.000. The decision to readmit the student will be based on the student's past academic performance, the reasons for the current low G.P.A. and the director's prediction of future performance in the program by the student.
 2. If the decision is made to allow the student to continue in the program and if a grade of D+, D, or D- was received in an Allied Health subject (MLTC, DTHY, RDLT, ADNR, PNRS, PTAT, OTAT, or RPTT) or academic courses required for graduation, a decision will be made in an interview informing the student if the course must be repeated and by which method (Course by Arrangement, Credit by Exam, or repeat the course with next year's class.
 3. If the decision is made to allow the student to continue in the program and if a grade of "F" was received in an Allied Health or academic subject, a decision will be made in an interview informing the student how this course will be repeated.
- C. Dismissal from a major program is not the same as dismissal from the College. College dismissal policies are outlined in the College bulletin under the section on academics.

ALLIED HEALTH TECHNOLOGIES

ADMISSION PROCEDURES

All Applicants to Allied Health Programs must submit:

1. Application and non-refundable \$15 Application Fee.
2. High School Transcript by the school or copy of GED with scores forwarded to the Director of Admissions
3. Letters of recommendation from two (2) persons who are not relatives forwarded to the Director of Admissions.

Applicants to Allied Health programs who are currently enrolled at Shawnee State University must obtain a grade point average of 2.0 in courses which are required of the degree program.

Additional requirements by program are:

DENTAL HYGIENE

1. Complete the Autobiography Sheet and return to the Director of Records.
2. High school average of least 2.5 on a 4.0 scale.
3. Complete algebra, biology, and chemistry on high school or college level.
4. A natural science score of at least 16 on ACT (results forwarded to the Director of Records.)
5. Conference with program director when file is complete and criteria is met.
6. After the conference, the student may be required to do a three day observation in a dentist's office and send a summary of the observation to the Director of Dental Hygiene. The Director may also request that an acknowledgement be submitted by the dental office involved.
7. Applicants will be accepted on the condition that the required physical examination is satisfactory. This is to be done by the applicant's physician prior to August 1 with the results forwarded to the Director of Dental Hygiene.

MEDICAL LABORATORY

1. Complete the Autobiography Sheet and return to the Director of Records.
2. High school average of at least 2.5 on a 4.0 scale.
3. Complete algebra, biology, and chemistry on a high school or college level.
4. A natural science score of at least 16 on the ACT (results forwarded to the Director of Records.)
5. Conference with program director when file is complete and criteria is met.
6. Applicants will be accepted on the condition that the required physical examination is satisfactory. This is to be done by the applicant's physician prior to August 1 with the results forwarded to the Director of Medical Lab.

OCCUPATIONAL THERAPY ASSISTANT

1. Complete the Autobiography Sheet and return to the Director of Records.
2. High school average of at least 2.5 on a 4.0 scale
3. Complete algebra and biology on high school or college level. *
4. Previous college grade point of at least 2.0 with a grade of "C" or better in required courses.
5. Two letters of recommendation (preferably employer, teacher, or guidance counselor).
6. Volunteer or work experience in a health care agency serving disabled or handicapped persons. (Statement from volunteer or work supervisor required if not used as a reference.)

7. Conference with program director when file is complete and criteria are met.

8. Applicants will be accepted on condition that the required physical examination is satisfactory. This is to be done by the applicant's physician prior to August 1. Results should be forwarded to Director of Occupational Therapy Assistant.

Applications should be completed by April 1 to be accepted for the Fall class. Both OTAT and general education courses must be taken in sequence after admission to the program.

*Students not meeting these requirements may correct the deficiency by successfully completing courses in the Developmental Studies Program at the college.

PHYSICAL THERAPIST ASSISTANT

1. Complete the Autobiography Sheet and return it to the Director of Records.
2. High school average of at least 2.5 on a 4.0 scale.
3. Complete algebra and biology on the high school or college level. (Students not meeting these requirements may correct the deficiency by successfully completing courses in the Developmental Studies Program at the college).
4. Previous college grade point average of at least 2.0 with a grade of "C" or better in required courses.
5. Two letters of recommendations, preferably employer, teacher, or guidance counselor.
6. Volunteer or work experience in a health care agency serving disabled or handicapped persons. Statement from volunteer or work supervisor required if not used in No. 5.
7. Conference with program director when file is complete and criteria are met.
8. Applicants will be accepted on the condition that the required physical examination is satisfactory. This is to be done by the applicant's physician prior to August 1. Results should be forwarded to the Director of Physical Therapist Assistant Technology.

Applications should be completed by April 1 to be accepted for the Fall class. Both Physical Therapist Assistant and general education courses must be taken in sequence after admission to the program.

Although the ACT is not required for admission to this program, it is recommended that students complete the ACT at the earliest possible date as it may be required for other programs within the college.

PLEASE NOTE: It is very important to understand that fulfilling the criteria does not automatically guarantee the applicant acceptance into the particular program. All interviewed applicants are subsequently ranked. Since the number of qualified applicants may exceed the number of vacancies, the director and admissions committee reserves and exercises the right to select only those applicants that exhibit the most promise of academic and professional success.

RADIOLOGIC TECHNOLOGY OR RESPIRATORY THERAPY TECHNICIAN

1. Complete the Autobiography Sheet and return to the Director of Records.
2. High school average of at least 2.5 on a 4.0 scale.
3. Complete algebra, biology, and chemistry on high school or college level with a "C" average or better.
4. A natural science score of at least 16 on ACT (results forwarded to the Director of Records.)
5. Conference with program director when file is complete and criteria is met.
6. Applicants will be accepted on the condition that the required physical examination is satisfactory. This is to be done by the applicant's physician prior to August 1 with the results forwarded to the Director of the appropriate program (Radiologic or Respiratory.)

ASSOCIATE DEGREE NURSING

1. High school average of at least 2.5 on a 4.0 scale.
2. High school level algebra, biology, and chemistry with a grade of "C" or better.
3. Complete the Autobiography Sheet and return to the Director of Records.
4. ACT scores of 16 or better in English, math, social studies, and natural sciences with a composite of 16 or better (results forwarded to the Director of Records).
5. Conference with the program director when file is complete and criteria is met.
6. Applicants will be accepted on the condition that the required physical examination is satisfactory.

PRACTICAL NURSING

1. High school average of at least 2.0 on a 4.0 scale.
2. Scores above the 40th percentile in all areas of the Entrance Examination.
3. Complete the Autobiography Sheet and return to the Director of Records.
4. Applications will be accepted on the condition that the required physical examination is satisfactory. This is to be done by the applicant's physician during the month preceding the starting date. An appropriate form will be provided.
5. Applicants should have strong background in science and math.
6. Conference with program director when file is complete and criteria is met.

EMERGENCY MEDICAL TECHNICIAN- PARAMEDIC

ENTRANCE REQUIREMENTS FOR EMT-A COURSE

1. Minimum of 18 years of age.
2. Possess a high school diploma or equivalent.
3. Possess a current unconditional drivers license.
4. Complete the Pre-Entrance Medical Record by submitting to a physical examination by a licensed physician and be deemed physically able to participate in EMT-A training.
5. Complete the college application.

ENTRANCE REQUIREMENTS FOR ADVANCED EMT-A COURSE

Numbers 1-5 above and:

6. Possess current certification as an EMT-A in Ohio.
7. Provide evidence of not less than six months experience providing EMT-A level care in the pre-hospital setting.
8. Submit a letter of recommendation from a supervisor of the Emergency Medical Service with which the above requirement was met.
9. Pass a pre-test addressing EMT-A level knowledge with a 75% score or above.
10. Permission for check of applicant with the Bureau of Criminal Investigation (Applicant currently charged with, incarcerated for and/or on parole/probation for a felony charge will not be accepted.)
11. Complete a conference with the Program Director showing evidence of maturity, good judgement and good moral character.

Please Note:

It is important to understand that fulfilling the above criteria does not automatically guarantee the applicant acceptance into the particular program. All interviewed applicants are subsequently ranked. Since the number of qualified applicants exceeds the number of vacancies, the director and admissions committee reserves and exercises the right to select only those applicants that exhibit the most promise of academic and professional success.

DENTAL HYGIENE

Dental hygiene is a vital health service component of dentistry which emphasizes oral health and the prevention of oral diseases.

Most dental hygienists are employed in private dental offices or clinics and work under the supervision of the dentist. The hygienist's main function is performing oral prophylaxis—the scaling and polishing of the patient's teeth to remove soft and hard deposits. They also perform other procedures: dental charting and oral examination, exposing and processing dental radiographs, fluoride treatments, and preliminary impressions for study models. The hygienist also places a great deal of emphasis on dental health education—home care, brushing/flossing, and diet/nutritional counseling.

Accreditation

The Dental Hygiene Program is accredited by the American Dental Association and the Ohio Dental Board.

Job Opportunities

Dental hygienists practice in the following areas:

FOR DENTISTS IN PRIVATE PRACTICES

SCHOOL SYSTEMS—Primarily concerned with the proper care of children's teeth. Inspect student's teeth and reporting findings to a supervising dentist. May also instruct students in proper care of teeth, give demonstrations of the proper use of a tooth brush, and present talks on nutrition and its effects on dental health.

HOSPITALS AND CLINICS—Concerned primarily with the special oral health problems of the bedridden and chronically ill.

Hygienists with advanced degrees may be employed in research or may teach in dental hygiene educational programs that help students to prepare for the profession.

Course No.	Course	Class Hrs	Lab Hrs	Cr Hrs
FIRST QUARTER				
Chem 0121	Inorganic Chemistry	3	3	4
DtHy 0121	Clinical Dental Hygiene I	2	6	4
*Biol 0111	Prin. of Biology	4	2	5
DtHy 0111	Oral Anatomy I	3	0	3
		12	11	16
SECOND QUARTER				
Chem 0122	Organic Chemistry	3	3	4
DtHy 0122	Clinical Dental Hygiene II	2	6	4
*Biol 0115	Human Anatomy & Physiology	4	2	5
DtHy 0101A	Radiology I	2	0	2
DtHy 0112	Oral Anatomy II	3	0	3
		14	11	18
THIRD QUARTER				
DtHy 0202	Periodontics	3	0	3
DtHy 0101B	Radiology II	1	3	2
DtHy 0102	Gen & Oral Histology and Embryology	3	0	3
DtHy 0123	Clinical Dental Hygiene III	1	8	4
Biol 0235	Microbiology	4	3	5
		12	14	17

*Biol 0290 and Biol 0291 may be substituted for Biol 0111 and Biol 0115 if approval is obtained from Dental Hygiene Program Director.

Course No.	Course	Class Hrs	Lab Hrs	Cr Hrs
SUMMER QUARTER				
DtHy 0124	Clinical Dental Hygiene IV	2	12	6
DtHy 0103	Dental Materials	3	6	5
DtHy 0205	Dental Health Education	3	0	3
Engl 0111	Contemp. Writing Skills I	5	0	4
		13	18	18
FOURTH QUARTER				
DtHy 0201	General & Oral Pathology	3	0	3
DtHy 0103	Nutrition	3	0	3
Soci 0101	Sociology	5	0	4
DtHy 0125	Clinical Dental Hygiene V	1	12	5
Engl 0112	Contemp. Writing Skills II	5	0	4
		17	12	19
FIFTH QUARTER				
DtHy 0204	Pharmacology and Anesthesiology	3	0	3
DtHy 0206	Public Health	3	0	3
DtHy 0126	Clinical Dental Hygiene VI	1	12	5
Spch 0103	Public Speaking & Human Comm.	3	0	3
		10	12	14
DtHy 0250*	Expanded Functions I (Laboratory fee required)	2	6	4
SIXTH QUARTER				
DtHy 0127	Clinical Dental Hygiene VII	1	12	5
Psyc 0101	Principles of Psychology	5	0	4
	Electives			3
Engl 0115	Comp. & Literature	5	0	4
		11	12	16
DtHy 0251*	Expanded Functions II (Laboratory fee required)	0	8	2

After the first quarter courses, all subsequent basic and technical courses are closely related and, therefore, must be taken in sequential order.

Please note: Only those students that have been officially accepted into the program or received program director approval may take the courses beginning with the DtHy prefix.

*Expanded Functions Program

The Expanded Functions Program is a two-quarter elective program consisting of DtHy 0250 and DtHy 0251. This program prepares the dental auxiliary to perform placement of restorations, rubber dam, dental bases, and to utilize four-handed dentistry techniques under a dentist's supervision. The student must also file for admission into this program. (See Program Director.) This program series will be offered each winter and spring quarter to a limited class enrollment.

MEDICAL LABORATORY TECHNOLOGY

Associate Degree Program

Medical Laboratory Technology, a medically oriented discipline, occupies an essential and responsible position in laboratory medicine. Physicians rely on the laboratory staff and the results of their analyses to aid them in determining the presence and extent of disease, as well as implications pertaining to the cause of disease. They also provide data needed to evaluate the effectiveness of treatment and patient management. Researchers in the medical sciences also depend on the special skills of medically oriented laboratory workers for analyses and observations which are essential to the progress of their research.

The Associate Degree Medical Laboratory Technician works under the supervision of a pathologist or technologist and is qualified to perform a wide variety of analytical works on patient specimens in the areas of hematology, chemistry, microbiology, immunoserology, immunohematology, and urinalysis. Individuals must be accurate and conscientious, with manual dexterity and an interest in science, have an inquiring mind, and a recognition of their responsibility for human lives.

The Associate Degree Medical Laboratory Technology program is designed to provide basic educational background and the clinical environment in which students can acquire knowledge, skills, and competence to properly perform routine and selected specialized analyses in a clinical laboratory.

The curriculum consists of eight academic quarters, which includes six quarters of general education; general sciences, including clinical laboratory and related subjects; and two quarters of internship in one of the affiliated hospitals.

Certification

Upon successful completion of this program, the student will receive the Associate of Applied Science degree and is eligible to take the American Society of Clinical Pathologist's Board of Registry Examination to obtain certification as a Medical Laboratory Technician MLT (ASCP) or to take the National Certification Agency for Clinical Laboratory Personnel Examination to obtain certification as a Clinical Laboratory Technician CLT (NCA).

Accreditation

The MLT-AD program is fully accredited by the Committee on Allied Health Education and Accreditation of the American Medical Association, in collaboration with the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS).

Employment Opportunities

Positions for certified Medical Laboratory Technicians are available in hospital laboratories, independent laboratories, public health facilities, the armed forces, physicians' offices and clinics, pharmaceutical and industrial firms, research and educational institutions, and as technical and sales representatives for biomedical supplies and instruments.

Scholarships

A Medical Laboratory Scholarship covering two-year tuitions is awarded each year to a high school graduate who demonstrates academic excellence and has been accepted into the Medical Laboratory Technology program.

MEDICAL LABORATORY CURRICULUM

Course No.	Course	Class Hrs	Lab Hrs	Cr Hrs
FIRST QUARTER				
Engl 0111	Contemporary Writing Skills I	5	0	4
* Math	Math	5	0	4
**Chem 0121	Inorganic Chemistry	3	3	4
***Biol0290	Anatomy & Physiology I	4	3	5
MLTC 0111	Med. Tech. Orientation I	1	1	1
		18	7	18

SECOND QUARTER

Engl 0112	Contemporary Writing Skills II	5	0	4
* Math	Math	5	0	4
Chem 0122	Organic Chemistry	3	3	4
***Biol0291	Anatomy & Physiology II	4	3	5
MLTC 0112	Med. Tech. Orientation II	1	1	1
		18	7	18

THIRD QUARTER

Chem 0123	Physiological Chemistry	3	3	4
Biol 0235	Microbiology	4	3	5
MLTC 0209	Hematology I	2	6	4
MLTC 0201	Urinalysis	2	3	3
		11	15	16

FOURTH QUARTER

Engl 0121	Technical Writing	4	0	3
MLTC 0211	Instrumentation	2	6	4
Spch 0103	Pub. Speaking & Human Comm.	3	0	3
MLTC 0207	Clinical Bacteriology	3	6	5
		12	12	15

FIFTH QUARTER

MLTC 0212	Clinical Chemistry I	2	6	4
MLTC 0210	Hematology II	2	6	4
MLTC 0204	Parasitology	1	2	1
MLTC 0202	Immunoserology	3	3	4
Psyc 0101	Principles of Psychology	5	0	4
		13	17	17

SIXTH QUARTER

MLTC 0213	Clinical Chemistry II	2	6	4
Socio 0101	Principles of Sociology	5	0	4
MLTC 0203	Blood Banking	2	6	4
MLTC 0205	Mycology	1	2	1
		10	14	13

SEVENTH & EIGHTH QUARTERS

MLTC 0220	Clinical Practicum	0	40	13
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* Math 101, 155, 108, 109, 130, 131, 201, and 202.

Refer to course descriptions and prerequisites on Page 78. Math sequence is determined by proficiency testing and by approval of program director.

** Students who are planning to continue their education toward a Baccalaureate degree are advised to register for Chem 141, 142.

*** Students may select the Biol 0111 and Biol 0115 series with the approval of the program director.

NOTE:

1. Only those students who have been officially accepted into the program or received program director approval may take the courses beginning with the MLTC prefixes.

Eligibility for clinical practicum, as well as to continue in the Medical Laboratory Technology program, requires that students must maintain a 2.000 accumulative G.P.A. and a minimum of "C" in all MLTC courses.

OCCUPATIONAL THERAPY ASSISTANT

Occupational therapy is a vital health care service, that uses "occupation", meaning purposeful activity, as the basis for treatment of people with a wide variety of physical, developmental and emotional disabilities.

Occupational therapists and occupational therapy assistants help disabled people of all ages acquire or regain the skills they need to live independent, productive and satisfying lives. They work in hospitals, rehabilitation centers, nursing homes, public and private schools and home health agencies.

Occupational therapy assistants work under the guidance of occupational therapists. They may choose or construct equipment that helps people to function more independently; they may carry out treatment activities for individuals or groups of patients; and they work closely with patient's families when preparing to return home.

To become an occupational therapy assistant, you must complete an educational program. The majority of these are two-year associate degree programs such as the one at Shawnee State University. The program includes basic academic subjects, human growth and development, understanding the functioning of the human body and occupational therapy principles and techniques. Each program includes at least two months of supervised practical experience in health care centers.

After successfully completing the educational program, you will be eligible to take the national examination to become a Certified Occupational Therapy Assistant. Many states, including Ohio, Kentucky, and West Virginia, also require that you become licensed by their state to practice Occupational Therapy.

Accreditation

The program is approved by the American Occupational Therapy Association.

OCCUPATIONAL THERAPY CURRICULUM

Course No.	Course	Class Hrs	Lab Hrs	Cr Hrs
FIRST QUARTER (Fall)				
OTAT 0101	Intro to Occupational Therapy	3	3	3
OTAT 0105	Survey of Medical Terminology	2	0	2
Biol 0111	Principles of Biology	4	2	5
Psyc 0101	Principles of Psychology	5	0	4
		14	5	15
SECOND QUARTER (Winter)				
OTAT 0202	Disease Pathology	4	0	4
Biol 0115	¹ Human Anatomy & Physiology	4	3	5
Psyc 0173	Human Growth & Development	4	0	4
Socio 0101	Principles of Sociology	5	0	4
		17	3	17
THIRD QUARTER (Spring)				
OTAT 0102	² Therapeutic Media I	1	6	3
OTAT 0108	Practicum I (FW I)	1	6	2
OTAT 0109	Applied Anatomy & Kinesiology	1	3	2
OTAT 0110	Group Dynamics	1	3	2
Engl 0111	Contemporary Writing Skills I	5	0	4
	¹ Math/Science Elective	4	0	4
		13	20	17
FOURTH QUARTER (Summer)				
OTAT 0204	Practicum II (FW I)	2	6	3
OTAT 0102	² Therapeutic Media I	1	6	3
OTAT 0203	OT in Developmental Disabilities	5	3	6
Engl 0112	Contemporary Writing Skills II	5	0	4
		13	15	16
FIFTH QUARTER (Fall)				
OTAT 0208	Practicum III (FW I)	2	6	3
OTAT 0210	OT in Physical Disabilities	4	6	6
OTAT 0205	³ Therapeutic Media II	1	6	3
Spch 0103	Pub. Speaking/Human Comm.	3	0	3
Engl 0121	Technical Writing	3	0	3
	Psychology/Sociology Elective	4	0	4
		17	18	22

SIXTH QUARTER (Winter)				
OTAT 0211	OTAT Seminar	2	0	2
OTAT 0212	O.T. in Mental Health	3	3	4
OTAT 0106	O.T. in Geriatric Program Planning	3	3	4
OTAT 0206	³ Therapeutic Media II	1	6	3
HPER 0227	⁴ First Aid	4	0	4
		13	12	17

SEVENTH QUARTER (Spring)				
OTAT 0220	⁵ Clinical Application (FW II)	0	40	6
OTAT 0221	⁵ Clinical Application (FW II)	0	40	6
		0	40	12

¹Biol. 0290 Anatomy and Biol 0291 Physiology—may be substituted for Biol 0115, and the Math/Science elective if approval is obtained from the Director of Occupational Therapy Assistant.

²Therapeutic Media I may be taken during either Spring or Summer quarter.

³Therapeutic Media II may be taken during either Fall or Winter quarter.

⁴Students must have current First Aid Certificate Prior to starting Clinical Application (OTAT 0220 & 0221) Spring Quarter. This may be obtained either through HPER 0227 or at another agency.

⁵Students are required to have successfully completed all OTAT and other courses in the curriculum (as indicated by a minimum 2.00 GPA) prior to participating in OTAT 0220 and 0221. OTAT 0220 and 0221 must be completed within 12 months following completion of required courses.

PHYSICAL THERAPIST ASSISTANT

The program is designed over a seven-quarter sequence. The second year includes four quarters of clinical practicums. Upon completion of the program, graduates are eligible to take the State Licensure Examination.

Physical Therapist Assistants work under the supervision of professional physical therapists to help rehabilitate disabled persons so that they may again lead useful and productive lives. They help to restore physical functions and prevent disability from injury or illness.

Expanded physical therapy services planned by hospitals, nursing homes, schools for handicapped children, facilities for mentally retarded and other health and rehabilitation centers are expected to increase the need for physical therapists.

PHYSICAL THERAPIST ASSISTANT CURRICULUM

Course No.	Course	Class Hrs	Lab Hrs	Cr Hrs
FIRST QUARTER				
Biol 0290	Anatomy & Physiology*	4	3	4
Math 0108	Allied Health Math or Math 0130 College Algebra I	5	0	4
Engl 0111	Cont. Writing Skills I	5	0	4
PTAT 0111	Prin. of Phys Therapist Assistant	3	0	3
PTAT 0101	Medical Terminology	2	0	2
		19	3	17
SECOND QUARTER				
Biol 0291	Anatomy & Physiology*	4	3	5
Psyc 0101	Prin. of Psychology	5	0	4
Engl 0112	Cont. Writing Skills II	5	0	4
PTAT 0112	PTA Procedures I	3	6	5
		17	9	18
THIRD QUARTER				
Phys 0110	General Physics	3	3	4
Psyc 0173	Human Growth & Development	4	0	4
Engl 0115	Mass Communication	5	0	4
PTAT 0115	Anatomy & Kinesiology	3	6	5
		16	9	17
FOURTH QUARTER				
Soci 0101	Sociology	5	0	4
PTAT 0113	PTA Procedures II	3	6	5
Spch 0103	Speech	3	0	3
PTAT 0202	P.T. in Physical Dysfunction	3	0	3
PTAT 0216	Clinical Practicum Seminar	1	4	2
		15	10	16
FIFTH QUARTER				
PTAT 0211	Clinical Practicum I	0	12	4
PTAT 0114	PTA Procedures III	3	6	5
PTAT 0231	Rehabilitation Procedures I	3	3	4
Hper 0227	First Aid**	4	0	4
		10	19	13
SIXTH QUARTER				
PTAT 0235	Physical Therapy Trends & Admin. Proc.	2	0	2
PTAT 0232	Rehabilitation Procedures II	3	3	4
PTAT 0212	Clinical Practicum II	0	12	4
	Social Science Electives	3-5	0	3-5
		9-11	15	14-16
SEVENTH QUARTER				
PTAT 0213	Clinical Practicum III	0	38	6
PTAT 0255	PTAT Seminar	2	0	2
		2	38	8

*Biol 0111 and Biol 0200 may be substituted for Biol 0290 and 0291 if approval is obtained from the Director of Physical Therapist Assistant.

**Students must have a current First Aid card prior to enrolling in PTAT 0214.

This can be obtained either through HPER 0227 or at another agency.

RADIOLOGIC TECHNOLOGY

The Radiologic Technology curriculum will prepare the graduate as a Radiographer. The Radiographer works under the supervision of a medical radiologist or physician in hospital radiology departments, clinics, commercial x-ray laboratories, or doctor's offices. The responsibility of the radiographer is to produce a radiographic (x-ray) image of the highest diagnostic quality of any designated area of the human body. It is from this image that the radiologist makes his interpretations.

Curriculum for this program covers eight academic quarters. The first four academic quarters are designed to provide the students with mathematics, basic science, general education courses, supporting technical courses, clinical education, and specialized courses in radiography. The second year of the program consists of additional clinical education scheduled in the affiliated hospitals along with advanced radiologic technology courses.

Experience in the radiology departments of the affiliated hospitals provides the opportunities for the practical application of knowledge learned in the college classroom. This experience in the hospital is a vital part of the program, since it enables the student to assist in the handling of sick and injured patients as they undergo a wide variety of radiographic examinations.

Upon satisfactory completion of the course requirements, the graduate will receive the Associate in Applied Science Degree and is eligible to apply for examination by the American Registry of Radiologic Technologists.

Accreditation

The Radiologic Technology Program is fully accredited by the Committee on Allied Health Education and Accreditation of the American Medical Association, in collaboration with the Joint Review Committee on Education in Radiologic Technology.

RADIOLOGIC TECHNOLOGY CURRICULUM

Course No.	Course	Class Hrs	Lab Hrs	Cr Hrs
FIRST QUARTER				
RDLT 0101	Radiologic Technology I	3	6	3
Math 0108	Allied Health Math I	5	0	4
Biol 0290	Anatomy & Physiology I	4	3	5
RDLT 0200	Basic Patient Care	<u>3</u>	<u>2</u>	<u>3</u>
		15	11	15
SECOND QUARTER				
RDLT 0102	Radiologic Technology II	2	10	3
Psci 0105	Physical Science	4	3	5
Engl 0111	Cont. Writing Skills I	5	0	4
Biol 0291	Anatomy & Physiology II	<u>4</u>	<u>3</u>	<u>4</u>
		15	16	17
THIRD QUARTER				
Engl 0112	Cont. Writing Skills II	5	0	4
RDLT 0103	Radiologic Technology III	3	2	3
RDLT 0110	Radiologic Electricity	3	1	3
RDLT 0201	Radiographic Exposure	3	2	4
RDLT 0211	Clinical Experience I	<u>0</u>	<u>16</u>	<u>2</u>
		14	21	16
FOURTH QUARTER				
RDLT 0104	Radiologic Technology IV	3	2	3
RDLT 0212	Clinical Experience II	<u>0</u>	<u>24</u>	<u>3</u>
		3	26	6

Course No.	Course	Class Hrs	Lab Hrs	Cr Hrs
FIFTH QUARTER				
RDLT 0111	Radiologic Physics	3	2	4
RDLT 0105	Radiologic Technology V	3	0	3
RDLT 0213	Clinical Experience III	0	24	3
Spch 0103	Pub. Speaking & Human Comm.	<u>3</u>	<u>0</u>	<u>3</u>
		9	26	13
SIXTH QUARTER				
Psys 0101	Principles of Psychology	5	0	4
RDLT 0106	Radiologic Technology IV	3	0	3
RDLT 0112	Radiol. & Radiation Protection	2	0	2
Engl 0121	Technical Writing	3	0	3
RDLT 0214	Clinical Experience IV	<u>0</u>	<u>24</u>	<u>3</u>
		13	24	15
SEVENTH QUARTER				
Soci 0101	Principles of Sociology	5	0	4
RDLT 0107	Radiologic Tech. VII	3	0	3
RDLT 0113	Radiographic Processing	2	0	2
RDLT 0215	Clinical Experience V	0	24	3
*Required	Elective	<u>3-4</u>	<u>0</u>	<u>3-4</u>
		13-14	24	15-16
EIGHTH QUARTER				
RDLT 0108	Radiologic Technology VIII	2	0	2
RDLT 0216	Clinical Experience VI	<u>0</u>	<u>32</u>	<u>4</u>
		2	32	6

*Select one of the following electives:

- Psyc 0131 Human Adjustment
- Psyc 0173 Human Growth & Development
- BMNT 0102 Intro. to Business
- BMNT 0201 Principles of Management
- BMNT 0202 Personnel Management
- BMNT 0241 Labor Relations

or Approval of the Program Director.

RESPIRATORY THERAPY TECHNICIAN/TECHNOLOGY PROGRAMS

Respiratory Therapy is an allied health specialty employed under medical direction in the treatment, management, control, diagnostic evaluation, and care of patients with deficiencies and abnormalities associated with the process of breathing. At present the field of respiratory therapy has two levels of practitioners: the therapist and technician levels. The respiratory therapist is a graduate of a two-year educational program, the respiratory therapy technician is a graduate of a one-year program. Respiratory therapists and technicians are respected members of the medical community involved in a wide variety of life-saving and life-supporting situations. Working side by side with physicians, nurses, and others on the health care team they are called upon to treat patients ranging in age from newborns to senior citizens. Their duties range from the daily administration of such therapies as oxygen administration, humidification and nebulization, and postural drainage of lung secretions to the use of highly sophisticated equipment, monitoring devices, and techniques in around-the-clock care of individuals who otherwise would not be able to survive such life-threatening conditions as head injuries and chest wounds. Other practitioners spend all or part of their time working in laboratories where they help evaluate the type and extent of a patient's illness and the effectiveness of the patient's current treatment. Other practitioners work in specialized areas of health care including education, management, home care, sales, research, and specialized areas of patient care such as care of the newborn infant.

Respiratory Therapy Technician Program Description

The one-year (four-quarter) curriculum of the Respiratory Therapy Technician Program is designed to prepare selected individuals to qualify as contributing members of the health care team. Individuals enrolled in the program participate in classroom and laboratory learning experiences at the college in order to gain the conceptual understanding of the practice of respiratory therapy. Students also participate in clinical learning experiences at hospitals in this area to develop their clinical skills through application of these concepts.

After successful completion of the program, graduates are eligible to take the entry-level certification examination administered by the National Board for Respiratory Care. Successful completion of that examination entitles the individual to the Certified Respiratory Therapy Technician (C.R.T.T.) credential.

Respiratory Therapist Program Description

In 1980 the Ohio Board of Regents approved the creation of a second year of formal education in respiratory therapy at Shawnee State University to further the educational opportunities for the qualified respiratory therapy technician. To be considered for admission into the second year of study the applicant must have successfully completed the first four-quarter sequence of study, and received the Certificate of Achievement. The graduate of the two-year (eight quarter) program will receive the Associate of Applied Science degree and become eligible for the registry examinations administered by the National Board for Respiratory Care. Successful completion of these examinations (two) and the entry-level certification examination entitles the individual to the Registered Respiratory Therapist (R.R.T.) credential. Further educational opportunities are also available to the graduate from the Bachelor of Science or Masters degree from Ohio University.

Accreditation

The Respiratory Therapy Technician Programs are fully accredited by the American Medical Association.

Employment Opportunities

Regardless of which level of education or credentialing you choose to pursue, you will find many employment opportunities in the field. The profession has grown so quickly since its inception in the late 1940's that demand for manpower has exceeded supply, making the respiratory care practitioner's talents a precious commodity in most medical institutions. In addition, many clinics, nursing homes, and home care programs are beginning to realize the potential benefits of having a trained respiratory therapist or technician on staff. Coupled with the ever-increasing number of cardiopulmonary disorders being diagnosed, these demands ensure that individuals who enter the profession will enjoy good career opportunities.

RESPIRATORY THERAPY TECHNICIAN/THERAPIST CURRICULUMS

RESPIRATORY THERAPY TECHNICIAN CURRICULUM

Course No.	Course	Class Hrs	Lab Hrs	Cr Hrs
FIRST QUARTER (Summer)				
RpTT 0100	Medical Terminology	1	0	1
RpTT 0101	Basic Patient Care	2	3	3
RpTT 0110	Fundamentals of Respiratory Care I	3	3	4
Biol 0200	Anatomy & Physiology	4	3	5
Math 0101	Basic Algebra	4	0	4
		14	9	17
SECOND QUARTER (Fall)				
RpTT 0140	Clinical Practice I	0	16	4
PSci 0105	Physical Science	4	3	5
RpTT 0111	Fund. of Respiratory Care II	4	1	4
RpTT 0121	Cardio-Pulmonary Anatomy and Physiology	3	0	3
		11	20	16
THIRD QUARTER (Winter)				
RpTT 0141	Clinical Practice II	0	24	6
RpTT 0112	Care of the Artificial Airway	1	0	1
RpTT 0113	Continuous Mechanical Ventilation	2	3	3
RpTT 0122	Pathophysiology	3	0	3
		6	27	13
FOURTH QUARTER (Spring) (Certificate)				
RpTT 0142	Clinical Practice III	0	32	8
RpTT 0114	Pulmonary Rehabilitation and Home Care	1	0	1
RpTT 0115	Pediatric and Neonatal Respiratory Care	2	0	2
RpTT 00116	Pulmonary Function Testing	2	0	2
		5	32	13

Completion of the first four quarters leads to a certificate of completion and eligibility for the national certification board examination.

RESPIRATORY THERAPIST CURRICULUM

Course No.	Course	Class Hrs	Lab Hrs	Cr Hrs
FIFTH QUARTER (Summer)				
	General Studies Electives	4-5	0	4-5
RpTT 0201	Pulm. Func. Testing & Cardio-Vasc.	3	0	3
RpTT 0202	Pediatric and Neonatal Respiratory Care	3	0	3
RpTT 0212	Cardio-Vascular Anatomy and Pathophysiology	3	0	3
Engl 0111	Contemporary Writing Skills I	4	0	4
RpTT 0250	Registry Review (Elec.-Optional)	4	0	4
		17-18	0	17-18
SIXTH QUARTER (Fall)				
Biol 0291	Anatomy and Physiology	4	3	5
RpTT 0203	Pharmacology	3	0	3
RpTT 0211	Respiratory & Renal Anatomy & Pathophysiology	3	0	3
RpTT 0240	Clinical Practice IV	0	24	6
		10	27	17
SEVENTH QUARTER (Winter)				
Engl 0121	Technical Writing	3	0	3
RpTT 0222	Department Management	2	0	2
Biol 0235	Microbiology	4	3	5
	General Studies Electives	4-5	0	4-5
		13-14	3	14-15
EIGHT QUARTER (Spring)				
RpTT 0241	Clinical Practice V	0	16	4
Spch 0103	Pub. Speaking & Human Comm.	3	0	3
Econ 0101	Principals of Economics	4	0	4
RpTT 0250	Registry Review	4	0	4
		11	16	15

Completion of quarters 1 through 8 leads to the Associate of Applied Science degree and eligibility for the national registry examinations.

NOTE: Biol 290 & Biol 0291, in combination only, may be substituted for Biol 0200.
Math 0108 or Math 0130 may be substituted for Math 0101.
Students pursuing the A.A.Sc. degree are advised to substitute one of these higher, transferable level courses for Math 0101.
Chem 0121 or its equivalent may be substituted for PSci 0105.
Completion of both courses is highly recommended for students pursuing the A.A.Sc. degree.
Econ 0102 may be substituted for Econ 0101 as a graduation requirement.

ASSOCIATE DEGREE NURSING

Associate degree nurses graduating from Shawnee State University are qualified to take the Ohio State Board examination * for registered nurses, and after successfully passing this examination are capable of providing nursing care at a beginning level in hospitals, nursing homes, doctors' offices and clinics, and selected public health agencies.

*Felony conviction requires permission from State Board before taking the examination.

Accreditation

The Associate Degree Nursing Program has full approval by the Ohio State Board of of Nursing Education and Nurse Registration and is accredited by the North Central Association of Colleges and Secondary Schools.

ASSOCIATE DEGREE NURSING CURRICULUM

Course No.	Course	Class Hrs	Lab Hrs	Cr Hrs
FIRST QUARTER				
ADNr 0101	Nursing I	5	9	8
Biol 0290	Prin. of Anatomy	4	3	5
*Engl 0111	Contemp. Writing Skills I	5	0	4
		14	12	17
SECOND QUARTER				
ADNr 0102	Nursing II	5	9	8
Biol 0291	Prin. of Physiology	5	0	5
Psyc 0101	Prin. of Psychology	5	0	4
		15	9	17
THIRD QUARTER				
ADNr 0103	Nursing III	4	12	8
Psci 0105	Physical Science	4	3	5
Psyc 0173	Human Growth & Devel.	4	0	4
		12	15	17
SUMMER QUARTER - Optional: The following courses may be taken summer or during second year as designated.				
Biol 0235B	Microbiology I or Fourth Quarter	4	3	5
Soci 0101	Prin. of Sociology or Fifth Quarter	4	0	4
*Engl 0112	Contemp. Writing Skills II or Fifth Quarter	5	0	4
		13	3	13

Course No.	Course	Class Hrs	Lab Hrs	Cr Hrs
FOURTH QUARTER				
ADNr 0201	Nursing IV (5 weeks)	6	12	5
ADNr 0202	Nursing V (5 weeks)	6	12	5
ADNr 0203	Nursing VI	2	0	2
Biol 0235	Microbiology I	4	3	5
		12-wk	15-wk	17
FIFTH QUARTER				
ADNr 0204	Nursing VII	6	12	10
Soci 0101	Prin. of Sociology	5	0	4
*Engl 0112	Contemp. Writing Skills I	5	0	4
		16	12	18
SIXTH QUARTER				
ADNr 0205	Nursing VIII	4	15	9
ADNr 0206	Nursing IX	3	0	3
**Required Elective		4-5		4-5
		11-12	15	16-17

*English sequence for Associate Degree Nursing: English 111, 112, 115, 140 A, B, C, or D; advisor will determine English sequence. Two (2) courses required.

**ONE of the following electives:

Psych 0270
 HPER 0202 or HPER 0227
 Soci 0201 or Soci 0202
 or Soci 0203 or Soci 0205
 or Soci 0210
 or approval of program Director.

Please Note: Only those students that have been officially accepted into the program or received program director approval may take the courses beginning with the ADNr prefix.

All suggested or equivalent courses listed for the first three quarters must be completed prior to continuing into the second year.

Prerequisites for each quarter are identified on page 80 under course descriptions.

Students requesting readmission must do so in writing within one quarter of leaving the program in order to obtain the requirements and forms from the nursing department.

PRACTICAL NURSING

Nursing is considered a personal service to a patient, planned to consider the individual personality as well as the health problem. The focus of practical nursing is to recognize the individual as a unique personality, to maintain body functions and to protect the patient from illness or accident.

The function of the practical nurse is to render personalized bedside patient care and assist with care in complex situations.

Practical Nursing is the entry level into nursing. The curriculum at Shawnee State University is structured to prepare students to take the State Board of nursing examination for licensure.

Accreditation

The Practical Nursing Program has full approval by the State of Ohio Board of Nursing Education and Nurse Registration and is accredited by the North Central Association of Colleges and Secondary Schools.

PRACTICAL NURSING CURRICULUM

Course No.	Course	Class Hrs	Lab Hrs	Clin Hrs	Cr Hrs
FIRST QUARTER					
PNRs 0101	Body Struc. & Function	4	2	0	4
PNRs 0111	Practical Nursing I	6	4	13	10
PNRs 0101	Prin. of Psychology	4	0	0	4
		14	6	13	18
SECOND QUARTER					
PNRs 0110	Nutrition	2	0	0	2
** PNRs 0112	Practical Nursing II	8	6	14	6
** PNRs 0115	Practical Nursing V	8	6	14	6
Soci 0101	Prin. of Sociology	4	0	0	4
		22	12	28	18
THIRD QUARTER					
** PNRs 0113	Practical Nursing III	12	2	14	8
** PNRs 0116	Practical Nursing VI	12	2	14	8
		24	4	28	16
FOURTH QUARTER					
** PNRs 0114	Practical Nursing IV	12	2	21	9
		12	2	21	9

*Felony conviction requires permission from State Board before taking the examination.

**Half-quarter courses.

Please Note: Only those students who have been officially accepted into the program or received program director approval may take the courses beginning with the PNRs prefix.

Students requesting readmission must do so in writing within one quarter of leaving the program in order to obtain the requirements and forms from the nursing department.

EMT-PARAMEDIC PROGRAM

The Paramedic program is designed to prepare persons who can provide life support at the scene of any emergency. The program includes both classroom and hospital experience. In addition to performing functions of an EMT-A, under the revised code of Ohio, the paramedic is further certified to perform the following life support of intensive care techniques: cardiac monitoring, defibrillation, intubation, and administration of appropriate drugs and intravenous fluids. These functions are performed in conjunction with a cooperating licensed medical doctor, doctor of osteopathic medicine and surgery, or a physician advisory board.

Accreditation

The EMT-A program has received full accreditation from Trade and Industry Education, the organization responsible for certification of Ohio's EMT-A's. 052480

Accreditation of the paramedic program is pending.

EMERGENCY MEDICAL TECHNICIAN PARAMEDIC CURRICULUM

Course No.	Course	Class Hrs	Lab Hrs	Clin Hrs	Cr Hrs
FIRST QUARTER (Summer)					
Engl 0111	Contemporary Writing Skills I	5	0	0	4
EMTA 0101	Emergency Victim Care	10	0	0	10
Biol 0290B	Anatomy & Physiology	4	3	0	5
		19	3	0	19
SECOND QUARTER (Fall)					
ENgl 0112	Contemporary Writing Skills II	5	0	0	4
Biol 0291B	Anatomy & Physiology II	4	3	0	5
EMTP 0101	Paramedic Skills I	3	3	4	5
EMTP 0102	Paramedic Skills II	2	3	0	3
		14	9	4	17
THIRD QUARTER (Winter)					
RMMT 0201	Prin. of Management	4	0	0	4
*EMTP 0103	Paramedic Skills III	8	3	4	10
		12	3	4	14
FOURTH QUARTER (Spring)					
	Elective **	3-4	0	0	3-4
*EMTP 0104	Paramedic Skills IV	8	3	4	10
		11-12	3	4	13-14

*Includes on squad experience by arrangement.

**Should be either Speech, Sociology, or Psychology.

ENGINEERING AND INDUSTRIAL TECHNOLOGIES

(ASSOCIATE OF APPLIED SCIENCE DEGREE)

Automotive Technology

Civil Engineering

Diesel Technology

Electro-Mechanical Engineering

Instrumentation Technology

Plastics/Chemical Engineering

Welding Technology

AUTOMOTIVE TECHNOLOGY

Automotive technicians in research and development prepare engines or related equipment for certain tests and evaluation. This often involves calibration and installation of various devices, operation of test equipment and recording of data. Technicians in service and sales advise customers on products best suited for their needs. They instruct owners and dealers in new product changes and maintenance developments, and might diagnose product malfunction and make necessary adjustments. Technicians in related areas work in positions such as service-sales engineers for oil companies, insurance claims adjusters, or other jobs where their understanding of automotive, diesel and gas turbines would be useful. Technicians in service and operation work for dealers, wholesale distributors, or other fleet operations, planning facilities and equipment, organizing shop management, and training personnel. Technicians in manufacturing maintain or operate machines, do quality control work, or supervise production. Prospective automotive technicians must be patient and reliable and keenly interested in engines and why and how each part works.

Job Opportunities

AUTOMOTIVE FIELD TEST TECHNICIAN (manufacturer-field research & development)—Prepares automotive vehicles for road tests in field proving grounds. Installs various test instruments, operates the vehicle according to the test procedure and records data.

ASSOCIATE RESEARCH TECHNICIAN—Prepares automotive and diesel test engines and related instruments for conducting fuel and fuel additive tests in the fuel laboratory section of a petroleum company.

SERVICE MANAGER (dealership)—Plans the automotive service department, selects equipment, organizes and manages shop, selects and trains personnel, assists in diagnosing customer problems and develops an effective service department.

SERVICE TECHNICIAN (dealership)—Utilizes modern test equipment to diagnose and correct malfunctions on the new family of sophisticated automobiles.

MANAGER/TECHNICIAN (self-employed)—Establishes and manages a specialty shop or general service facility.

Course No.	Course	Class Hrs	Lab Hrs	Cr Hrs
SECOND QUARTER				
Audi 0111	Electrical and Fuel Systems I	3	6	5
Engl 0111	Contemporary Writing Skills I	5	0	4
Math 0125	Business Mathematics	5	0	4
BMNT 0101	Introduction to Business	5	0	4
Weld 0103	Basic Combination Welding	1	6	3
		19	12	20
THIRD QUARTER				
Audi 0112	Electrical and Fuel Systems II	3	6	5
Engl 0112	Contemporary Writing Skills II	5	0	4
Engl 0115	Composition and Literature	5	0	4
Econ 0101	Principles of Economics I	5	0	4
		18	6	17
FOURTH QUARTER				
Auto 0201	Power Drive Train	3	4	5
Auto 0223	Air Conditioning & Brake Syst.	2	4	3
EnDr 0101	Engineering Drawing I	1	5	3
RMMT 0223	Sales Promotion	4	2	4
PSci 290D	Topics in Physical Science	5	0	4
		15	15	19
FIFTH QUARTER				
Psyc 0101	Principles of Psychology	5	0	4
Auto 0211	Testing and Repair	4	9	6
Auto 0212	Chassis	3	6	6
Engl 0121	Technical Writing	3	0	3
		15	15	19
SIXTH QUARTER				
Auto 0221	Service Area	0	6	2
Auto 0224	Automatic Transmissions	3	6	5
Auto 0225	Service Management Practices	4	0	4
Spch 0103	Pub. Speaking & Human Comm.	3	0	3
EMng 0206	Hydraulics & Pneumatics	3	2	3
		13	14	17

AUTOMOTIVE CURRICULUM

Course No.	Course	Class Hrs	Lab Hrs	Cr Hrs
FIRST QUARTER				
AuDi 0101	Fuels and Lubricants	2	3	3
AuDi 0102	Basic Electricity	2	5	4
Audi 0121	Principles of Internal Combustion Engines	3	9	6
Math 0101	Basic Algebra	5	0	4
		12	17	17

Students may elect a different sequence of Math with advisor approval.

CIVIL ENGINEERING TECHNOLOGY

The Civil Engineering Technology program prepares a student to become a technician in a field which concerns itself with the planning, design, and construction of both fixed structures and ground facilities for land, sea, or air transportation. It is concerned with the flow and uses of water. It is concerned with protection, in war and peace, against the destructive forces of man or nature. In other words, civil engineers and technicians build airports, bridges, dams, highways, powerhouses, pipelines, and railroads.

Thus, the engineering technician must possess skills, in such a variety of areas as: hydraulics, flood control, irrigation, steel and concrete structural work, field surveying, traffic studies, computations, and the fundamentals of construction. And he is specifically trained to draw up plans and specifications; estimate costs and materials; use the transit, level and other surveying instruments; prepare maps; inspect jobs; and supervise construction.

Job Opportunities

Positions available to the civil engineering technician are:

CONTRACTOR'S AIDE--He prepares plans and detail drawings for elements of construction projects. He is capable of running small areas of larger projects.

ESTIMATOR--He estimates costs, quantities of materials and supplies, and labor for construction projects and bidding.

INSPECTOR--He inspects line and grade references, forms, materials, and construction methods and steel and concrete structures.

SURVEYOR--Surveys earth's surface, oversees engineering survey, partly engaged in determining exact location and measurements of points, elevations, lines, areas, and contours of earth's surface to secure data used for construction, map making, land valuation, mining or other purposes. Calculates information needed to conduct survey from notes, maps, deeds, or other records. Determines coordinates for geographic position, land lines, and land monuments in addition to computing quantities.

DESIGNER--He is capable of aiding in the design of small wood, concrete and steel structures or components.

Other positions are available to the graduate engineering technicians after several years of experience. These include: construction supervisor, highway engineering, supervisor, photogrammetrist, and specifications writer and analyst.

CIVIL ENGINEERING CURRICULUM

Course No.	Course	Class Hrs	Lab Hrs	Cr Hrs
FIRST QUARTER				
ENgl 0111	Contemporary Writing Skills I	5	0	4
Math 0130	College Algebra I	5	0	4
Econ 0101	Economics I	5	0	4
CEng 0101	Intro. to Surveying	2	4	3
EnDR 0101	Engineering Drawing I	1	5	3
		18	9	18
SECOND QUARTER				
ENgl 0112	Contemporary Writing Skills II	5	0	4
Math 0131	College Algebra II	3	0	4
Phys 0201	Physics I (Mechanics)	3	3	4
CEng 0111	Surveying I	3	0	3
EnDR 0102	Engineering Drawing II	1	5	3
		17	8	18
THIRD QUARTER				
ENgl 0115	Comp. & Literature	5	0	4
Math 0132	Trig. & Anal. Geometry	5	0	4
Phys 0202	Physics II (Electricity)	3	3	4
CEng 0112	Surveying II	2	5	4
EnDR 0103	Engineering Drawing III	1	5	3
		16	13	19
FOURTH QUARTER				
Engl 0121	Technical Writing	3	0	3
Phys 0203	Physics III (Heat, Light & Sound)	3	3	4
Psyc 0101	Prin. of Psychology	5	0	4
CEng 0113	Route Surveying I	2	6	4
CEng 0203	Statics	4	0	3
CEng 0208	Soils Materials & Testing	3	3	4
		20	12	22

FIFTH QUARTER				
CEng 0202	Construction Estimating I	2	0	2
CEng 0207	Strength of Materials I	4	2	4
ENGR 0101	First Aid & Safety	1	1	1
Soci 0101	Prin. of Sociology	5	0	4
CEng 0205	Hydraulics for Civil Engr.	2	3	3
CEng 0115	Surveying for Civil Engineers	4	2	4
		18	8	18

SIXTH QUARTER				
CEng 0206	Construction Estimating II	2	3	3
CEng 0204	Construction Supervision	3	0	3
CEng 0201	Concrete Materials & Design	5	2	5
CEng 0212	Structural Steel Design	4	2	4
CEng 0114	Route Surveying II	2	5	4
CADD 0110	Computerized Engineering Design	2	3	3
		18	15	22

Students may elect a different sequence of Math with advisor approval.

CIVIL ENGINEERING TECHNOLOGY WITH A MAJOR IN COMPUTER ASSISTED DESIGN DRAFTING

Course No.	Course	Class Hrs	Lab Hrs	Cr Hrs
FIRST QUARTER				
Engl 0111	Contemporary Writing Skills I	5	0	4
Math 0130	College Algebra I	5	0	4
Econ 0101	Economics I	5	0	4
CEng 0101	Intro. to Surveying	2	4	3
EnDR 0101	Engineering Drawing I	1	5	3
		18	9	18
SECOND QUARTER				
Engl 0112	Contemporary Writing Skills II	5	0	4
Math 0131	College Algebra II	5	0	4
Phys 0201	Physics I (Mechanics)	3	3	4
CEng 0111	Surveying I	3	0	3
EnDR 0102	Engineering Drawing II	1	5	3
		17	8	18
THIRD QUARTER				
Engl 0115	Comp. & Literature	5	0	4
Math 0132	Trig. & Anal. Geometry	5	0	4
Phys 0202	Physics II (Electricity)	3	3	4
CEng 0112	Surveying II	2	5	3
EnDR 0103	Engineering Drawing III	1	5	3
		16	13	18
FOURTH QUARTER				
Engl 0121	Technical Writing	3	0	3
Phys 0203	Physics III (Heat, Light & Sound)	3	3	4
CEng 0113	Route Surveying	2	6	3
GEng 0203	Statics	4	0	3
	Technical Electives	6-7	6-7	6-7
		18-19	15-16	19-20
FIFTH QUARTER				
CEng 0202	Construction Estimating I	2	0	2
CEng 0207	Strength of Materials I	4	2	4
ENGR 0101	First Aid & Safety	1	1	1
Psyc 0101	Prin. of Psychology	5	0	4
CEng 0115	Surveying for Civil Engineers	4	2	4
	Technical Electives	2-3	2-3	2-3
		18-19	7-8	17-18
SIXTH QUARTER				
CEng 0206	Construction Estimating II	2	3	3
Soci 0101	Prin. of Sociology	5	0	4
	Technical Electives	11-12	11-12	11-12
		18-19	14-15	18-19
Technical Electives:				
EnDR 0101	Engineering Drawing I (1 lec. 5 lab, 3 cr.)			
CADD 0101	Introduction to CAD (1 lec. 5 lab, 3 cr.)			
CADD 0102	Mechanical Drawing with 3-D CAD Applications (1 lec. 5 lab., 3 cr.)			
CADD 0103	Electronic Schematics & Wiring Diagrams (1 lec., 5 lab, 3 cr.)			
CADD 0104	Advanced Technical Drawing (1 lec., 5 lab, 3 cr.)			
CADD 0105	Mapping with CADD (1 lec., 5 lab, 3 cr.)			
CADD 0106	Structural Design and Floor Plans (1 lec., 5 lab, 3 cr.)			
CADD 0107	Piping Drawing (1 lec., 5 lab, 3 cr.)			
CADD 0108	Welding Drawings (1 lec., 5 lab, 3 cr.)			
CADD 0109	Casting and Mold Design (1 lec., 4 lab, 3 cr.)			
CADD 0110	Computerized Engineering Principles (2 lec., 2 lab, 3 cr.) (CIVIL MAJORS ONLY)			

DIESEL TECHNOLOGY

Diesel technicians repair and maintain diesel engines that power transportation equipment, such as heavy trucks, buses, boats, and locomotives; and construction equipment, such as bulldozers and cranes. They also service diesel farm tractors and a variety of other diesel-powered equipment, such as compressors and pumps used in oil well drilling and in irrigation.

Before making repairs, diesel technicians inspect and test engine components to determine why an engine is not operating properly. After locating the trouble, they repair or replace defective parts and make adjustments. Preventive maintenance--avoiding trouble before it starts--is another major responsibility. For example, they may periodically inspect, test, and adjust engine components.

Many technicians make all types of diesel engine repairs. Others specialize, for example, in rebuilding engines or in repairing fuel injection systems, turbochargers, cylinder heads, or starting systems. Some also repair large natural gas engines used to power generators and other industrial equipment.

Job Opportunities

SERVICE TECHNICIANS--Many technicians work for distributors and dealers that sell engines, farm and construction equipment, and trucks. Others work for bus lines, construction firms, and government agencies such as State highway departments. Some technicians work for diesel engine manufacturers and independent repair shops that specialize in diesels. They utilize modern equipment to service and repair a variety of malfunctions on diesel engines and heavy-duty drive components.

ENGINEERING TESTER (diesel engine manufacturing firm)--Assists test engineers in recording data obtained from diesel engines running with different fuels and lubricating oils to determine performance and wear characteristics. Learns to operate electric dynamometers and related instrumentation.

LABORATORY TECHNICIAN--Compares fuels by ratings on laboratory test (CFR) engines. Determines knock characteristics of motor fuels and compares diesel fuel on the basis of ignition delay. Also assists in tests to determine characteristics of lubricant deposits on engine parts.

LUBRICATION TECHNICIAN--Prepares lubricant and maintenance procedures and schedules for truck fleet operators, heavy construction equipment, road building concerns, and manufacturing companies. Evaluates failures in equipment due to wear, improper lubrication, corrosion, and other problems. Tests oils and greases and recommends changes in types of lubricants and maintenance procedures.

DIESEL CURRICULUM

Course No.	Course	Class Hrs	Lab Hrs	Cr Hrs
FIRST QUARTER				
AuDi 0101	Fuels and Lubricants	2	3	3
AuDi 0102	Basic Electricity	2	5	4
AuDi 0121	Prin. of Internal Combustion Engines	3	9	6
Math 0101	Basic Algebra	5	0	5
		12	17	17
SECOND QUARTER				
AuDi 0111	Electrical and Fuel Systems I	3	6	5
Engl 0111	Contemp. Writing Skills I	5	0	4
Math 0125	Business Mathematics	5	0	4
BMNT 0101	Introduction to Business	5	0	5
		18	6	17
THIRD QUARTER				
AuDi 0112	Electrical and Fuel Systems II	3	6	5
Engl 0112	Contemporary Writing Skills II	5	0	4
EnDr 0101	Engineering Drawing I	1	5	3
Econ 0101	Principles of Economics I	5	0	5
		14	11	16
FOURTH QUARTER				
DSEL 0202	Diesel Engines I	4	6	6
DSEL 0211	Diesel Fuel Injection	4	6	6
Psci 290D	Topics in Physical Science	5	0	5
		13	12	16
FIFTH QUARTER				
DSEL 0203	Diesel Engines II	4	6	6
DSEL 0222	Heavy Duty Automatic Trans.	2	4	3
Weld 0201	Combined Welding I	1	6	3
Engl 0121	Technical Writing	3	0	3
Psyc 0101	Principles of Psychology	5	0	5
		15	16	19
SIXTH QUARTER				
DSEL 0201	Heavy Duty Drives	4	6	5
DSEL 0221	Service & Maintenance Management	4	0	4
DSEL 0223	Hvy Duty Chassis & Brake Systems	2	5	4
EMng 0206	Hydraulics & Pneumatics	3	2	3
Spch 0103	Pub. Speaking & Human Comm.	3	0	3
		16	13	20

Students may elect a different sequence of math with advisor approval.

ELECTRO-MECHANICAL ENGINEERING TECHNOLOGY

An electro-mechanical engineering technician is a para-professional educated for positions which encompass both electrical and mechanical engineering technologies but which demand more than just a simple combination of the two fields. The electro-mechanical engineering technician, for example, may work in the computer industry in positions which could not be handled by the electrical or mechanical engineering technician.

This field is somewhat new to business and industry; therefore, its potential has merely been scratched. Many of the electro-mechanical graduates are working in business and industry at the present time which indicates the demand for their services is great.

Job Opportunities

Positions available in electro-mechanical technology are almost unlimited. Listed below are some of those positions.

ELECTRO-MECHANICAL INSPECTOR—Inspects and tests electrical components, housings, and finished assemblies of electrical sensing devices.

ELECTRO-MECHANICAL TECHNICIAN—Fabricates, tests, analyzes, and adjusts precision electro-mechanical instruments.

ELECTRO-MECHANICAL ASSEMBLER—Tests assembled electronic components with oscilloscope and voltmeter to detect missing parts, loose wires and defective solder joints.

ELECTRIC AND ELECTRONIC TECHNICIAN—Applies electronic theory, principles of electrical circuits, electrical testing procedures, engineering mathematics, physics, and related subjects to layout, building, testing, trouble-shooting, etc.

ELECTRO-MECHANICAL DESIGN & DEVELOPMENT TECHNICIAN—Develops detailed design drawings and related specifications of mechanical equipment, according to engineering sketches and design proposal specifications.

Other positions are available to the graduate technician after several years of experience, such as: contractor, designer, estimator, and sales representative.

ELECTRO-MECHANICAL ENGINEERING CURRICULUM

Course No.	Course	Class Hrs	Lab Hrs	Cr Hrs
FIRST QUARTER				
Engl 0111	Contemporary Writing Skills I	5	0	4
Math 0130	College Algebra I	5	0	4
Econ 0101	Economics I	5	0	4
EMng 0111	Electrical Fundamentals I	3	3	4
EnDr 0101	Engineering Drawing I	1	5	3
		19	8	19
SECOND QUARTER				
Engl 0112	Contemporary Writing Skills II	5	0	4
Math 0131	College Algebra II	5	0	4
Phys 0201	Physics I (Mechanics)	3	3	4
EMng 0101	Electro-Mechanical Devices	2	3	3
EMng 0112	Elect. Fundamentals II	3	3	4
		18	9	19

Course No.	Course	Class Hrs	Lab Hrs	Cr Hrs
THIRD QUARTER				
Engl 0115	Comp. & Mass Comm.	5	0	4
Math 0132	Trig. & Anal. Geometry	5	0	4
Phys 0202	Physics (Electricity)	3	3	4
EMng 0121	Electronics I	2	5	3
EMng 0103	Electro-Mechanical Drawing	1	3	2
		16	11	17
FOURTH QUARTER				
Engl 0121	Technical Writing I	3	0	3
Phys 0203	Phys. (Heat, Light & Sound)	3	3	4
EMng 0201	Intro. Electro-Mech. Syst.	2	3	3
EMng 0202	Mechanical Systems	2	4	3
EMng 0204	Control Devices	2	3	3
EMng 0122	Electronics II	2	4	3
		14	17	19
FIFTH QUARTER				
Soci 0101	Prin. of Sociology	5	0	4
EMng 0211	Electronic Logic Circuits I	2	5	3
EMng 0209	Robotics	2	3	3
EMng 0205	Automatic Control Systems	3	3	4
EMng 0206	Hydraulics & Pneumatics	3	2	3
Engr 0101	First Aid and Safety	1	1	1
		16	14	18
SIXTH QUARTER				
Psyc 0101	Prin. of Psychology	5	0	4
EMng 0212	Electronic Logic Circuits II	2	5	3
EMng 0207	Electro-Mechanical Design	1	6	3
EMng 0208	Electro-Mechanical Systems	2	4	3
Engr 0209	Industrial Supervision	3	0	3
		13	15	16

Students may elect a different sequence of math with advisor approval.

*Students enrolled in Electro-Mechanical Engineering Technology or Instrumentation Technology may earn a major in Robotics Technology. Students must have advisor approval and must complete 20 credit hours of the following courses.

A MAJOR IN ROBOTICS TECHNOLOGY

Robotics course must be taken in numerical sequence beginning with ROBO 0210.

Robo 0210	Introduction to Robotics (4)
Robo 0211	Robotic Interfacing (4)
Robo 0212	Robotic Applications (4)
Robo 0213	Advanced Robotic Applications (4)
Robo 0214	Robotic Maintenance-Servicing (4)

INSTRUMENTATION TECHNOLOGY

Instrumentation is the technology of creating, constructing, and maintaining the measuring and control devices and systems which equip the manufacturing plants and research so vital to today's rapidly expanding economy.

Instrument technicians may find themselves employed in any of many major industrial groups including aeronautics, chemistry, petroleum, foods, metals, ceramics, pulp and paper, power, textile, instrument and control manufacturing, or in the emerging fields of space, oceanography, air and water pollution, bio-medical instrumentation, and national defense systems.

Depending on ability, and drive, the technician can advance to repair, troubleshooting, and assisting in design. Each of these goals is achieved by combining the technician's general background with specific knowledge about the system apparatus, as follows.

The instrument technician's work consists of electrical and mechanical tests on various equipment. It requires the ability to visualize the functions or malfunctions of various equipment. The work consists of checking out equipment prior to operation, calibrating equipment in operation, rebuilding equipment using standard replacement parts and calibration standards. The technician may find himself in a position of installing the equipment in new facilities doing jobs such as mounting, inter-connecting equipment from blueprints. The technician works with test equipment and requires the use of hand tools in the performance of his duties. He/she requires the ability to read instrumentation and schematic diagrams.

As for the instrumentation technician, his primary functions are to determine the cause of malfunctions in the equipment and to institute the necessary repairs. Such repairs involve individual pieces of equipment that involves pressure, flow, temperature, motion, force, and chemical composition. To perform his duties the technician uses various test equipment, standards and tools to troubleshoot the equipment in and out of control systems. Reassembles instruments and test assembly for conformance with specifications, using instruments such as potentiometer, resistance bridge, manometer, pressure gauges, and precision voltage sources.

The technician will be involved in working with computer control devices in his duties. The modern technician will be installing control systems that contain micro-processing units that do the control. His duty is to install and maintain the units and to do basic programming on the equipment.

Job Opportunities

MAINTENANCE INSTRUMENTATION TECHNICIAN—Performs standard calibrations for production purposes; checks results. May be employed to work on pneumatic, hydraulic, or electrical and/or electronic equipment. Works with hand tools and soldering iron.

INSTRUMENT SALES TECHNICIAN—Works for equipment manufacturing company, analyzing customer needs for specific control instruments; outlines specifications for cost and function of equipment; needs to be capable of doing emergency, goodwill troubleshooting.

PLANT MAINTENANCE ENGINEER—A term applied to one who designs and supervises operation and maintenance of electrical, mechanical, and thermal instruments and control equipment necessary for safe and efficient operation of industrial plants. Studies plant layout and process requirements to determine type and number of items needed. Writes specifications for selection of stock or special instruments from suppliers. Directs installation, calibration, and testing of equipment. Supervises application, inspection, and maintenance of instruments in operation.

INSTRUMENTATION TECHNICIAN—Devises, sets up, and operates electronic instrumentation and related electromechanical or electrohydraulic apparatus involved in operational and environmental testing of machines and electrical equipment, and translates test data for subsequent use by engineering personnel in making engineering design and evaluation decision.

INSTRUMENTATION TECHNOLOGY CURRICULUM

Course No.	Course	Class Hrs	Lab Hrs	Cr Hrs
FIRST QUARTER				
Engl 0111	Contemporary Writing Skills I	5	0	4
Math 0101	Basic Algebra	5	0	4
IMST 0101	DC Circuits and Machines	2	5	4
EnDr 0101	Engineering Drawing I	1	5	3
	*Technical Elective			<u>1-3</u>
		13	10	16-18
SECOND QUARTER				
Engl 0112	Contemporary Writing Skills II	5	0	4
Math 0130	College Algebra I	5	0	4
IMST 0102	AC Circuits and Machines	2	5	4
Phys 0201	Physics (Mechanics)	3	3	4
EnDr 0100	Blueprint Reading	2	0	2
		17	8	18
THIRD QUARTER				
Engl 0115	Comp. and Literature	5	0	4
Math 0131	College Algebra II	5	0	4
IMST 0111	Industrial Electronics	2	5	4
CHem 0202	Process Instrumentation	3	3	4
IMST 0103	Industrial Electricity	2	5	3
		17	13	19
FOURTH QUARTER				
Engl 0121	Technical Writing I	3	0	3
IMST 0201	Instrumentation Electronics	3	6	5
Psyc 0101	Principles of Psychology	5	0	4
IMST 0211	Fluid Mechanics I	3	3	4
Engr 0101	First Aid and Safety	1	1	1
EMng 0206	Hydraulics and Pneumatics	3	2	3
		18	12	20
FIFTH QUARTER				
IMST 0224	Industrial Control I	3	3	4
*IMST 0212	Fluid Mechanics II	3	3	4
Econ 0101	Principles of Economics I	5	0	4
IMST 0221	Instrument Fundamentals I	3	4	4
		14	10	16
SIXTH QUARTER				
Engr 0209	Industrial Supervision	3	0	3
IMST 0222	Instrument Fundamentals II	3	4	4
IMST 0223	Measurement Principles	3	4	4
IMST 0225	Industrial Control II	3	3	4
		12	11	15

Students may elect a different sequence of math with advisor approval.

*Technical Electives with Advisor approval:

IMST 0202 Program Control I (4)
 IMST 0203 Program Control II (4)

Students enrolled in Electro-Mechanical Engineering Technology and Instrumentation Technology (sophomore standing and advisor approval) may earn a major in Robotics Technology. Students must complete 20 credit hours of the following courses to obtain his/her certificate:

Robo 0210 Introduction to Robotics (4)
 Robo 0211 Robotic Interfacing (4)
 Robo 0212 Robotic Applications (4)
 Robo 0213 Advanced Robotic Applications (4)
 Robo 0214 Robotic Maintenance - Servicing (4)

PLASTICS/CHEMICAL ENGINEERING

Due to the close relationship between Plastics engineering and the Chemical Technology Program, it has become desirable to combine them into one program but still allowing students to choose technical electives from either the plastics or chemical field.

Today, plastics is one of the fastest growing industries in the United States. The plastics industry is expanding both in volume and variety of products. Manufacturers are doing extensive research to see how plastics can improve their products, reduce costs, and simplify production.

Plastics led all other industries in projected growth through 1980 in a recent forecast. The percentage of growth of output for plastics over the next fifteen years was set at 722 percent. By comparison, the electric utilities industry was forecast to grow 166 percent; rubber, 154 percent; paper, 102 percent; iron and steel, 156 percent; stone, clay and glass, 75 percent.

The chemical industry is one of the most dynamic in terms of growth. The Ohio River Valley from Pittsburgh to Louisville is perhaps one of the largest chemical producing areas in America, and provides a great employment opportunity for graduates.

The role of the technician in the chemical industry will constantly change as job content, responsibilities, opportunity, and initiative increase. This signifies that technicians' contributions will become an ever stronger part of the very fabric of the industry, building upon the strong base that exists today.

Job Opportunities

Positions available for the Plastics/Chemical graduate might be:

CHEMICAL PRODUCTION TECHNICIAN—Controls operation of chemical production facilities, and is responsible for maintaining high production levels.

CHEMICAL RESEARCH TECHNICIAN—Assists chemists and engineers in the development of new products and processes by designing, constructing, and operating experimental chemical plants or by performing laboratory experiments.

CHEMICAL QUALITY CONTROL TECHNICIAN—Assures a high quality level in products manufactured by performing chemical tests in the laboratory.

POLLUTION CONTROL TECHNICIAN—Takes samples of air and water and analyzes them to assure low pollution levels. Assists in the development of pollution control methods.

CHEMICAL SALES OR TECHNICAL SERVICE REPRESENTATIVE—Aids customers in the choice of the correct product to purchase and assists in solving customer problems.

QUALITY CONTROL TECHNICIAN—Samples raw materials and finished products and performs tests to assure compliance with quality specifications.

PILOT PLANT TECHNICIAN—Assistant to an engineer operates experimental plants. Responsible for taking data and making observations.

APPLICATION RESEARCH TECHNICIAN—Blends and compounds plastics with additives, fillers, colors, etc. Assists in selecting proper plastics for specific products and applications.

PLASTIC ARTICLE PRODUCTION TECHNICIAN—Operates and supervises the operation of commercial equipment used in the production of plastic items, such as extruder, injection molding machine, thermoformer, etc.

SENIOR TECHNICIAN—Supervises other technicians in all operations and takes part in new projects or process evaluation.

TECHNICIAN SERVICE REPRESENTATIVE—As an employee of a plastics resin or equipment manufacturer, aids customers in the proper selection and use of such products, and in solving customer problems.

Other positions would be available upon the attainment of several years of experience. Supervisory level positions are open to the experienced technician with a good technical background as well as the ability and desire to assume responsibility.

Course No.	Course	Class Hrs	Lab Hrs	Cr Hrs
FIRST QUARTER				
Engl 0111	Contemporary Writing Skills I	5	0	4
Chem 0141	Chemistry I	3	3	4
Math 0130	College Algebra I	5	0	4
PEng 0102	Machine Tools	2	4	3
PEng 0101	Intro. to Plastics/Chemical Tech	3	2	3
		18	11	18
SECOND QUARTER				
Engl 0112	Contemporary Writing Skills II	5	0	4
Math 0131	College Algebra II	5	0	4
EnDr 0101	Engineering Drawing I	1	5	3
Chem 0142	Chemistry II	3	3	4
Engr 0209	Industrial Supervision	3	0	3
		17	8	18
THIRD QUARTER				
Engl 0115	Comp. and Literature	5	0	4
Chem 0143	Chemistry III:	3	3	4
Math 0132	Trigonometry & Analytic Geometry	5	0	4
	Technical Elective	6-8	3	6-8
		19-21	6	18-20
FOURTH QUARTER				
Engl 0121	Technical Writing	3	0	3
PEng 0206	Intro. to Chemical Engineering	3	2	3
Phys 0201	Physics (Mechanics)	3	3	4
	Technical Elective	5-6	5-6	7
		14-15	10-11	17
FIFTH QUARTER				
Econ 0101	Prin. of Economics I	5	0	4
Engr 0101	First Aid and Safety	1	1	1
Phys 0202	Physics (Electricity)	3	3	4
	Technical Electives	6-7	5-8	7-9
		15-16	9-12	16-18
SIXTH QUARTER				
Phys 0203	Physics (Heat, Light, Sound)	3	3	4
PEng 0202	Production Control & Planning	3	3	4
PEng 0207	Fundamentals of Process Equip. and Maintenance	2	0	2
	Technical Elective	6-8	6-8	8
		14-16	12-14	18

Students may elect a different sequence of math with advisor approval.
Students who choose plastics courses as electives may choose to take Chemistry 0122 in place of Chemistry 0143 with advisor approval.

Plastics Electives

PEng 0103	Extrusion Molding (3)
PEng 0104	Thermo-Forming (3)
PEng 0105	Injection Molding (3)
PEng 0201	Thermal Molding Machine Control (4)
PEng 0203	Testing of Plastics Materials (3)
PEng 0205	Plant Layout & Materials Handling (3)
PEng 0209	Fabrication and Manufacturing of Plastics Products (4)
PEng 0210	Properties of Materials (4)

Chemical Electives

Chem 0202	Process Instrumentation (4)
Chem 0205	Organic Chemistry (4)
Chem 0206	Organic Chemistry (4)
Chem 0207	Organic Chemistry (4)
Chem 0223	Quantitative Analysis (5)
Chem 0224	Instrumental Analysis (5)
Chem 0225	Instrumental Analysis II (5)

WELDING TECHNOLOGY

Persons planning careers as welders or cutters need manual dexterity, good eyesight, and eye-hand coordination. They should be able to concentrate on detailed work for long periods, and should be free of any physical disabilities that would prevent them from bending, stooping, and working in awkward positions. Courses in mathematics, mechanical drawing, blueprint reading, and physics are also helpful.

New developments are requiring new skills of welders. This is particularly true in fields such as atomic energy or missile manufacturing, which have high standards for the reliability of welds. Before being assigned to work on buildings, bridges, or other jobs where the strength of the weld is highly critical, welders may be required to pass an examination of their welding skills given by an employer or government agency. Welders who pass such examinations are generally referred to as "certified welders."

Promotion opportunities for welders are good. Welding machine tenders may learn skilled welding jobs; skilled welders may be promoted to welding inspectors, technicians, or supervisors. Experienced workers who have obtained college training on the properties of metal are in great demand to develop new applications for welding.

Job Opportunities

Employment opportunities should be especially good for skilled welders in nuclear powerplant, pipeline, and ship construction jobs.

WELDING TECHNOLOGY CURRICULUM Two-Year Associate Degree

Course No.	Course	Class Hrs	Lab Hrs	Cr Hrs
FIRST QUARTER				
Engl 0111	Contemporary Writing Skills	5	0	4
Econ 0101	Principles of Economics I	5	0	4
Math 0125	Business Math	5	0	4
Weld 0101	Weld Symbols & Prints	5	0	4
Weld 0111	Basic Oxy-Acetylene Welding	1	10	4
		21	10	20
SECOND QUARTER				
Engl 0111	Contemporary Writing Skills II	5	0	4
Math 0101	Basic Algebra	5	0	4
BMNT 0101	Introduction to Business	5	0	4
Weld 0102	Templet Layout	4	0	4
Weld 0113	Basic Arc Welding	1	10	4
		20	10	20
THIRD QUARTER				
Engl 0115	Comp. & Mass Comm.	5	0	4
Math 0130	College Algebra I	5	0	4
Weld 0112	Basic Inert Gas	1	6	3
Weld 0114	Advanced Arc Welding	1	18	7
		12	24	18
FOURTH QUARTER				
Spch 0103	Pub. Speaking & Human Comm.	3	0	3
Engr 0209	Industrial Supervision	3	0	3
Weld 0211	Advanced Structural Welding	1	8	4
Weld 0122	Welding Metallurgy	3	0	3
Weld 0214	Advanced Inert Gas Welding	1	5	3
		11	13	16
FIFTH QUARTER				
Engl 0121	Technical Writing	3	0	3
Psyc 0101	Psychology	5	0	4
Weld 0214	Basic Pipe Welding	1	14	6
		10	14	13
SIXTH QUARTER				
Soci 0101	Sociology	5	0	4
Weld 0213	Advanced Pipe Welding	1	18	7
Weld 0216	Certification & Testing	2	2	5
		9	27	16

Students may elect a different sequence of math with advisor approval.

WELDING FABRICATION TECHNICIAN 9 - Month Program Certificate

Course No.	Course	Class Hrs	Lab Hrs	Cr Hrs
FIRST QUARTER (Fall)				
Weld 0101	Weld Symbols & Prints	5	0	4
Weld 0111	Basic Oxy-Acetylene Welding	1	10	4
Weld 0113	Basic Arc Welding	1	10	4
Weld 0122	Welding Metallurgy	3	0	3
*Math 0100A	Fund. Math	4	0	4
		14	20	19
SECOND QUARTER (Winter)				
Weld 0102	Templet Layout	4	0	4
Weld 0112	Basic Inert Gas Welding	1	6	3
Weld 0114	Advanced Arc Welding	1	18	7
**Psyc 0101	Prin. of Psychology	5	0	4
		11	24	18
THIRD QUARTER (Spring)				
Weld 0211	Advanced Structural Welding	1	8	4
Weld 0212	Basic Pipe Welding	1	14	6
Weld 0214	Advanced Inert Gas Welding	1	5	3
*Soci 0101	Principles of Sociology	5	0	4
		8	27	17
FOURTH QUARTER (Summer - Optional 300 hrs.)				

*Students may elect any math with advisor approval.

**Student may elect any academic with advisor approval.

ONE-YEAR CERTIFICATED PROGRAMS

The following one-year certificated programs have been developed to allow students to choose courses that will benefit them in seeking employment or upgrading their present position. Before pursuing these programs students should contact a counselor to discuss the ramifications of each certificate and how it might best be applied.

AUTOMOTIVE TECHNICIAN CERTIFICATE

Course No.	Course	Class Hrs.	Lab Hrs.	Cr. Hrs.
FIRST QUARTER				
AUDI 0201	Power Drive Train	3	4	5
AUDI 0102	Basic Electricity	2	5	4
AUDI 0121	Prin. of Internal Combustion Engine	3	9	6
*Math 0101	Basic Algebra	<u>5</u>	<u>0</u>	<u>4</u>
		13	18	19

SECOND QUARTER

AUDI 0111	Electrical & Fuel Systems I	3	6	5
AUTO 0212	Chassis	3	6	6
*PSYC 0101	Prin. of Psychology	5	0	4
*Soci 0101	Prin. of Sociology	<u>5</u>	<u>0</u>	<u>4</u>
		13	16	18

THIRD QUARTER

AUDI 0112	Electrical & Fuel Systems II	3	6	5
AUTO 0224	Automatic Transmissions	3	6	5
AUTO 0225	Service Management Practices	4	0	4
AUTO 0223	Air Conditioning & Brake Systems	2	4	3
		15	12	12

DRAFTING/DESIGN TECHNICIAN CERTIFICATE

Course No.	Course	Class Hrs.	Lab Hrs.	Cr. Hrs.
FIRST QUARTER				
EXST 0105	Keyboarding	0	2	1
ENDR 0101	Engineering Drawing I	1	5	3
CADD 0101	Introduction to CADD	1	5	3
*Math 0101	Basic Algebra	5	0	4
*ENGL 0111	Cont. Writing Skills I	<u>5</u>	<u>0</u>	<u>4</u>
		12	12	15

SECOND QUARTER

Math 0130	College Algebra I	5	0	4
CADD 0102	Mechanical Drawing w/3D	1	5	3
CADD 0103	Electronic Schematics & Wiring Diagrams	1	5	3
*PSYC 0101	Prin. of Psychology	<u>5</u>	<u>0</u>	<u>4</u>
		12	10	14

THIRD QUARTER

ENDR 0103	Engineering Drawing III	1	5	3
CADD 0104	Advanced Technical Drawing	1	5	3
CADD 0105	Mapping w/CADD	1	5	3
*Soci 0101	Prin. of Sociology	<u>5</u>	<u>0</u>	<u>4</u>
		8	15	13

FOURTH QUARTER

CADD 0106	Structural Design-Floor Plan	1	5	3
CADD 0107	Piping Drawings	1	5	3
CADD 0108	Welding Drawings	1	5	3
CADD 0109	Castings & Mold Design	1	4	3
		4	19	12

ELECTRONIC REPAIR TECHNICIAN CERTIFICATE

Course No.	Course	Class Hrs.	Lab Hrs.	Cr. Hrs.
FIRST QUARTER				
IMST 0101	D.C. Circuits & Machines	3	4	4
*Math 0125	Business Math	4	0	4
*Engl 0111	Cont. Writing Skills I	4	0	4
ERTT 0111	Electronic Repair I	<u>3</u>	<u>10</u>	<u>5</u>
		14	14	17

SECOND QUARTER

ACCT 0100	Basic Accounting	4	0	4
IMST 0102	A.C. Circuits & Machines	3	4	4
ERTT 0102	Electronic Repair II	2	14	5
*Spch 0103	Pub. Speaking & Human Comm.	<u>3</u>	<u>0</u>	<u>3</u>
		12	18	16

THIRD QUARTER

ERTT 0103	Electronic Repair III (Trouble-Shooting/Disassemble)	3	10	5
ERTT 0104	Electronic Repair IV (Reassembly of Major Appliances)	3	10	5
ERTT 0105	Field Experience	<u>0</u>	<u>12</u>	<u>4</u>
		6	32	14

FOREMAN/INDUSTRIAL MANAGEMENT CERTIFICATE

Course No.	Course	Class Hrs.	Lab Hrs.	Cr. Hrs.
FIRST QUARTER				
BMNT 0240	Industrial Relations	4	0	4
BMNT 0201	Prin. of Management	4	0	4
*PSYC 0101	Prin. of Psychology	5	0	4
Engr	Elective	<u>3-4</u>	<u>0</u>	<u>3-4</u>
		16-17	0	11-12

SECOND QUARTER

BMNT 0241	Labor Relations	4	0	4
BMNT 0202	Personnel Management	4	0	4
BMNT 0242	Business Communications	3	2	3
*PSYC 0131	Human Adjustment	<u>3</u>	<u>0</u>	<u>3</u>
		14	2	14

THIRD QUARTER

ENGR 0209	Industrial Supervision	3	0	3
*PSYC 0261	Industrial Psychology	5	0	5
SOCI 0101	Prin. of Sociology	5	0	4
ENGR	Elective	<u>6-7</u>	<u>0</u>	<u>6-7</u>
		19-20	0	18-19

*These courses are recommended; however, other courses may be substituted upon approval by the appropriate advisor.

PLASTICS ONE-YEAR PROGRAM

Course No.	Course	Class Hrs.	Lab Hrs.	Cr. Hrs.
SUMMER QUARTER				
Engl 0100A	Fundamental Writing	4	0	4
Math 0100A	Fundamental Math	4	0	4
Psyc 290B	Study Skills	2	0	2
EnDr 0101	Engineering Drawing I	1	5	3
Engr 0101	First Aid and Safety	1	1	1
		12	6	14
FALL QUARTER				
PEng 0102	Machine Tools	2	4	3
PEng 0101	Intro. to Plastics/Chemical Tech.	3	2	3
IMST 0101	DC Circuits and Machines	2	5	4
PEng 0104	Thermoforming	2	3	3
		9	14	13
WINTER QUARTER				
PEng 0105	Injection Molding	2	3	3
PEng 0203	Testing of Plastics Materials	2	3	3
IMST 0102	AC Circuits and Machines	2	5	4
EnDr 0100	Blueprint Reading	2	0	2
EMng 0206	Hydraulics and Pneumatics	3	2	3
		11	13	15
SPRING QUARTER				
PEng 0103	Extrusion Molding	2	3	3
PEng 0209	Fabrication and Manufacturing of Plastics Products	3	3	4
IMST 0103	Industrial Electricity	2	5	3
IMST 0111	Industrial Electronics	2	5	4
Chem 0202	Process Instrumentation	3	3	4
		12	19	18

SUPERVISOR MANAGEMENT 40-HOUR WORKSHOP

- A) Authority & Responsibility
- B) Leadership Traits
- C) Motivation Theories
- D) Basic Discipline
- E) Handling Complaints
- F) Time Management
- G) Training Methods
- H) Labor Relations
 - 1) Arbitration
 - 2) Handling Grievances
 - 3) Negotiations
 - 4) Counseling

SECRETARIAL SCIENCE CERTIFICATE

Course No.	Course	Class Hrs.	Lab Hrs.	Cr. Hrs.
FIRST QUARTER				
EXST 0101	Typing I	3	2	3
*Acct 0100	Basic Accounting	3	3	4
*EDPT 0101	Intro. to Data Processing	3	2	3
*Math 0125	Business Math	5	0	4
EXST 0120	Business Machines	3	0	3
		14	7	17
SECOND QUARTER				
EXST 0102	Typing II	3	2	3
EXST 0121	Word Processing I	2	3	3
*Acct 0110	Payroll Record/Accounting	2	3	3
*BMNT 0242	Business Communications	3	2	3
*PSYC 0101	Prin. of Psychology	5	0	4
		15	10	16
THIRD QUARTER				
EXST 0103	Typing III	3	2	3
EXST 0222	Word Processing II	2	3	3
EXST 0231	Records Management	3	0	3
EXST 0221	Dictation & Transcription	3	2	3
*Soc 0101	Prin. of Sociology	5	0	4
		16	7	16

WELDING FABRICATION TECHNICIAN CERTIFICATE

Course No.	Course	Class Hrs.	Lab Hrs.	Cr. Hrs.
FIRST QUARTER				
WELD 0101	Welding Symbols & Prints	5	0	4
WELD 0111	Basic Oxy-Acetylene Welding	1	10	4
WELD 0113	Basic Arc Welding	1	10	4
WELD 0122	Welding Metallurgy	3	0	3
*Math 0100A	Fund. Math	4	0	4
		14	20	19
SECOND QUARTER				
WELD 0102	Templet Layout	4	0	4
WELD 0112	Basic Inert Gas Welding	1	6	3
WELD 0114	Advanced Arc Welding	1	18	7
*PSYC 0101	Prin. of Psychology	5	0	4
		11	24	18
THIRD QUARTER				
WELD 0214	Advanced Inert Gas Welding	1	5	3
WELD 0212	Basic Pipe Welding	1	14	6
WELD 0211	Advanced Structural Welding	1	8	4
*Soc 0101	Prin. of Sociology	5	0	4
		8	27	17
FOURTH QUARTER (Summer - Optional 300 hrs.)				

*These courses are recommended; however, other courses may be substituted upon approval by the appropriate advisor.

DEVELOPMENTAL EDUCATION

Courses at the pre-college level are offered to prepare students for college-level coursework at Shawnee. These courses are intended for students who have either had no background in a subject (e.g. biology, chemistry, physics) or inadequate preparation in a subject (e.g. English, math, reading). Students unsure of whether they should take developmental-level courses may request placement testing and advising in the Learning Center.

Math 100A - Fundamentals of Math (4)

This course is designed to provide students with the necessary background in mathematics to take college-level math courses. Basic mathematical concepts and functions include addition, subtraction, division, multiplication, whole numbers, fractions, decimals, and percentages. Students lacking competency in these concepts and functions should take this course before taking higher level math courses.

Chem 100A -- Fundamentals of Chemistry (4)

This course is intended for students who have had little or no background in chemistry. This course is especially important for students without high school chemistry who plan to enter one of the allied health programs. Topics and materials are intended to increase students' familiarity with terms and chemical process.

Biol 100A -- Fundamentals of Biology (4)

This course is designed for those students with an inadequate background in biological science. The course should be taken by those students planning to enter one of the allied health fields who have not had biology on the high school level. Topics and material presented are intended to increase student's familiarity with terms and chemical process.

Phys 100A -- Fundamentals of Physics (4)

This course is intended for students who have little or no background in physics. It acts as an introduction to college level physics. Although students are introduced to basic concepts of physics, prime emphasis in the course is placed on mathematical skills necessary for surviving college-level physics courses.

Engl 100A -- Fundamentals of English (4)

This course focuses on basic English concepts including punctuation, grammar, usage, and spelling. Little or no attention is given to composition. Special emphasis is placed on mastering those concepts tested in the English Department's Essential Skills Test (EST). Students with limited knowledge of the basic standard rules of the English language should take this course before taking English 111.

Engl 0090 -- Vocabulary Development (2)

Emphasis is placed on development of skills necessary for building vocabulary.

Engl 0004 -- Reading Development (3)

Emphasis is placed on improving reading speed and comprehension. Reading problems are identified and attacked: single word fixation, involuntary regression, subvocalization, and inability to concentrate.

Please note that developmental courses do not apply toward an associate degree.

ACCOUNTING

Acct100 -- Basic Accounting (4)

An introduction to fundamental accounting concepts and procedures as required by small businesses. For individuals desiring one course in accounting only. NOT FOR ACCOUNTING MAJORS.

*Acct 0101 -- Accounting I (4)

Introduction to fundamental accounting concepts and the procedures. The accounting cycle: nature of accounts and techniques of recording, classifying, summarizing and analyzing basic financial data. Application of fundamental accounting techniques to partnerships and corporations. Accounting for the formation, operation, and dissolution of business enterprises.

*Acct 0102 -- Accounting II (4)

Prereq. Acct 0101.
Application of fundamental accounting techniques for cash, long term investments, notes and accounts, inventory methods, plant and equipment, and liabilities. Introduction to manufacturing operations, cost methods and management's need of cost data.

*Acct 0103 -- Accounting III (4)

Prereq. Acct 0102.
Reporting and analysis of financial data. Financial statement introduction, analysis and interpretation to meet the needs of modern management. Introduction to accounting techniques applicable to parent and subsidiary companies and departmental and branch operations. Budgeting as an aid to management, and the importance of income tax considerations in financial decision.

Acct 0104 -- Tax Accounting (4)

Prereq. Acct 0102.
Current income tax law and regulations related to business and individual income tax reporting. Practice in preparation of tax returns of businesses and individuals.

Acct 0110 -- Payroll Records/Accounting (3)

Prereq. Acct 0101 or 0100.
A basic course in the maintenance of personnel and payroll records as required by the Fair Labor Standards Act and the various federal and state laws covering the withholding and payment of payroll related taxes.

Acct 0161 -- Accounting with D.P. Application I (4)

Prereq. Acct 0100 or with Acct 0101.
Application of basic accounting procedures to the microcomputer. Emphasizes applications to the IBM microcomputer systems.

Acct 0175 -- Financial Statement Analysis (3)

An introduction to the analysis and interpretation of data contained in financial statements, prepared in accordance with promulgated accounting principles. Measurement of the firms profit ability, solvency and degree of safety.

Acct 0205 -- Principles of Finance (3)

Prereq. Acct. 0103.
Forms of business organization; corporate securities, financing through securities, sources and management of working capital, administration of income, expansion and combination, reorganization, receivership, and dissolution.

*Acct 0211 -- Intermediate Accounting I (4)

Prereq. Acct. 0103.
A more advanced treatment of accounting theory; determination of income realization and cost expiration. Primary emphasis is on asset accounts in order listed on the balance sheet.

*Acct 0212 -- Intermediate Accounting II (4)

Prereq. Acct 0211.
Continuation of Intermediate Accounting I with emphasis on the balance sheet sections dealing with investments, fixed assets and liabilities.

*Acct 0213 -- Intermediate Accounting III (4)

Prereq. Acct. 0212.
Continuation of Intermediate Accounting II with a detailed study of the owner's equity section of the balance sheet and the financial statements presentation and analysis.

*Denotes classes with Lab fees.

*Acct 0221 -- Cost Accounting I (4)

Prereq. Acct 0103
Introduction to cost accounting systems and methods. Cost concepts, classifications, and measurements techniques in relation to their importance in determination, planning and control. Job order and process cost accounting methods.

*Acct 0222 -- Cost Accounting II (4)

Prereq. Acct 0221.
Estimating, planning, and controlling the costs of processes and projects. Standard cost accounting procedures and the analysis of variances. Cost and profit responsibility reporting to management. Uses of cost and profit data in project selection, product pricing, and other functions of management.

Acct 0203 -- Accounting Projects I (3)

Prereq. Departmental Permission (See Accounting Advisor).
A special course designed to permit the accounting student to work on special projects under the supervision of an instructor with expertise in the area of the student's project. The special projects course will enable the accounting student to apply the accounting theory as covered in other courses.

Acct 0231 -- Governmental Accounting (4)

Prereq. Acct 0211.
Governmental Accounting is a basic introduction to the accumulation and use of accounting information in non-profit organizations. General principles applying to budgets and funds are examined rather than specific application. The course should be especially useful for non-accounting (and accounting) students who will be employed in governmental units where budgeting and accounting are required.

Acct 0240 -- Accounting Projects II (3) Prereq. Departmental Permission (See Accounting Advisor).

A special course designed to permit the accounting student to work on special projects under the supervision of an instructor with expertise in the area of the student's project. The special projects course will enable the accounting student to apply the accounting theory as covered in other courses.

Acct 0241 -- Auditing (3)

Prereq. Acct 0212 and 0222.
Independent audits, professional ethics, legal liability, internal control, auditing standards, work sheet applications and procedures. Concern will be given for audit evidence, the auditor's approach and techniques, summary reports, statistical sampling, and role of advisory services to management.

Acct 0261 - Accounting with D.P. Applications II (4)

To have the students understand the need for accounting and how it relates to Data Processing. To show how a computer can be used to aid the accountant. To have the students understand that the computer is a tool to be used in accounting and to point out ways it can be used to aid accounting.

Acct #0291 -- Advanced Accounting I (4)

Prereq. Acct 0213
The course is a continuation of financial accounting theory as applied to special corporation problems including parent-subsidiary structures requiring consolidated reporting.

Acct 0292 -- Advanced Accounting II (4)

Prereq. Acct 0291
A continuation of financial accounting theory as applied to special situations such as partnerships, estates and trusts, and special sales contracts.

Acct 0310 -- Field Experience (3)

Prereq. AICPA Level II Achievement Test with equivalent of college senior or Accreditation Council of Accountancy Examination (see accounting advisor).
Provides qualified students with professional business training and experience in an actual job environment.

Acct 0311 -- Field Experience II (3)

Prereq. Acct 03410 and AICPA Level II Achievement Test with Equivalance of college senior or Accreditation Council of Accountancy Examination (see accounting advisor).
Provides qualified students with professional business

ANTHROPOLOGY

Anth 0201 -- Introduction to Anthropology (5) W.
Origin of Man. Survey of evidence and interpretation structures of human biological evolution. Emphasis on fossil, record, comparative primate behavior studies, and selected archaeological culture sequences.

Anth 0250--Principles of Cultural Anthropology (4) F. Sp.
Prereq. 0201
Varieties and range of human behavior as revealed through comparative study of cultures in all parts of the world. Included consideration of kinship, ideology, politics, economics, and ecological adaptations.

****Anth 0290A--Topics in Anthropology (3)**
****Anth 9290B--Topics in Anthropology (4)**
Prereq. Permission of instructor is required.
Topics of special interest to students are investigated under the direction of the anthropology staff. This course may be repeated but not exceed a total of eight hours.

ART

Arts 0101-- Studio Foundations I (5) F
No Prereq.
This course is required of all freshmen with an art concentration. The focus of the course will be on the basics of drawing and two-dimensional design.

Arts 0102 -- Studio Foundations II (5) W
No Prereq.
This course is required of all freshmen with an art concentration. The focus of this course will be color and color theory.

Arts 0103 -- Studio Foundations III (5) Sp
No Prereq.
This course is required of all freshmen with an art concentration. The focus of this course will be three-dimensional design, introduction of materials and techniques of sculpture.

****Arts 0104--Terminology, Tools & Materials for the Graphic Designer (5) F**
The goal of this course is to make students familiar with the "building blocks" used by graphic designers. Hands-on experience with many of the tools used in this profession is important. Emphasizes the basics of using T-squares, triangles, technical pens, and demonstrate modern graphic computers. Introduces the many types of materials involved such as rubber cement, acetate, papers, etc.

Arts 0201 -- Art for the Elementary School I (3) F
This course will be concerned with presenting art methods and ideas specifically geared to those teachers in elementary education.

Arts 0202 -- Art for the Elementary School II (3) W
Continuation of modern art approaches in the elementary school.

****Arts 0205--Graphic Design Production Techniques (4) W**
The purpose of this course is to familiarize the graphic design student with the various methods of reproducing the finished art work. We will discuss various methods of printing, color separation, and electronic media. Lectures, demonstrations, field trips, and studio work will be involved.

Arts 0210 -- Photography I (4) F. W. Sp.
Introduction to art and techniques of photography.

Arts 0211 -- Photography II (4) F. W. Sp.
Prereq. Arts 0210.
Continuation of Arts 0210 (offered on demand only).

Arts 0212 -- Photography III (4) F. W. Sp.
Prereq. Arts 0211.
Continuation of Arts 0211 (offered on demand only).

****Arts 0215 -- Photography for the Graphic Designer (4) Sp.**
The purpose of this class is to provide a basic knowledge of photography for the graphic designer. It will cover the basics of setting up, lighting, and designing photo compositions.

*Denotes classes with Lab fees.
**Offered on demand only.

Arts 0221 -- Painting I (40 F. W. Sp.
Pre req. Art 101, 102.
The main concern of this course will be concentrated on the use of oils and synthetic painting media.

Arts 0222 -- Painting II (4) F. W. Sp.
Pre req. Arts 202.
A continuation and expansion of ideas and concepts gained through Art 202.

Arts 0223 -- Painting III (4) F. W. Sp.
Prereq. Art 203.
A further expansion of ideas and concepts combined with technical insights through the previous two courses.

****Arts 0224 -- Watercolor I (4) F**
The focus of this course will be on the use of watercolor as an expressive media.

****Arts 0225 -- Watercolor II (4)**
Prereq. Arts 0224
A continuation and expansion of ideas and concepts gained through Arts 0224.

*** Arts 0231 -- Ceramics I Hand Built (4) F. W. Sp.**
The focus of this course will be clay as the craftsman conceptualizes it. Work in all types of handbuilt pottery, raku pottery, clays and glazes.

*** Arts 0232 -- Ceramics II Wheel Throwing (4) W. Sp.**
Prereq. Arts 0231.
This course will be a continuation of Art 231 but introducing the potter's wheel as a means of utilizing clay. Glaze formulation and usage will be covered briefly.

*** Arts 0233 -- Ceramics III Wheel Throwing (4) W. Sp.**
Prereq. Art 232.
This course will be a more in-depth continuation of the previous ceramics courses with more stress being placed on the craftsmanlike development and conceptualization of clay as a medium.

****Arts 0241 -- Sculpture I**
This course is designed to develop the student's ability to conceive and build various medium forms (plaster, clay, wood, metal, etc.) in three dimensions. The aim is to develop an understanding of shapes and mass, acquaintance with tools, techniques and materials for expression.

****Arts 0243 -- Sculpture II**
Intermediate sculpture is designed to further a student's skill in three dimensional work. Technical procedures will include advanced woodcarving, clay molding, stone carving, and various direct over armature methods.

****Arts 0243 -- Sculpture III**
This will involve studio problems based on concepts applied to various three dimensional materials. Advanced sculpture places special emphasis on the development of individual expression in the student's chosen medium.

****Arts 0245 -- Printmaking I (4)**
Pre req. Art 101, 102, 103.
An introduction to basic intaglio techniques. Emphasis will be on mastering techniques so that they can be used to develop personal imagery.

****Arts 0246 -- Printmaking II (4)**
Prereq. Arts 245.
An introduction to basic lithographic technique and printing. Emphasis is placed on mastering techniques so that they can be used to further personal aesthetic goals.

****Arts 0247 -- Printmaking III (4)**
Prereq. Arts 246.
An introduction to the basic silk screen techniques. Emphasis will be on mastering techniques so they may be used to develop personal imagery.

****Arts 0248 - Relief Printing (4)**
Prereq. Arts 0247.
An introductory course employing the range of graphic possibilities in the relief printing process.

****Arts 0251 -- Techniques in Illustration & Design I: Typography for the Graphic Designer (4) F**
This studio course will start with some basic background in type design and theory and will work through its use in modern graphic design. We will cover the use of transfer lettering, type sizing and specification in graphic design.

****Arts 0252 -- Techniques in Illustration & Design II:**

Basic Illustration (4) W

This studio course will start with design basics and integrate these basics into illustration techniques for the graphic designer. This class will start with black and white graphics and work through color techniques.

****Arts 0253 -- Techniques in Illustration & Design III: Illustration and Specialty Design (4) Sp**

This studio course will integrate the knowledge gained in the two previous techniques courses (1 & 11). We will study basics of package design, fashion design, and industrial design. The last few weeks of this course will be reserved for developing a portfolio of the students work for use in admission to various junior year programs in those schools offering a Bachelor of Fine Arts in graphic design.

****Arts 0261 -- Art History I (4) F**

Beginning with the art of prehistoric man, covering Egyptian, Ancient Near East, Aegean, Greek, Etruscan, Roman and Early Christian and Byzantine Art.

****Arts 0262 - Art History II (Med. & Renais.)(4) W**

Beginning with medieval art and architecture in the West, covering Romanesque, Gothic and late Gothic. Emphasis on Italian renaissance sculpture, painting, and architecture through Baroque of 17th centuries.

****Arts 0263 -- Art History III (The Modern World) (4) Sp**

Beginning with Neoclassicism and Romanticism, covering Realism, Impressionism, Post Impressionism, and Twentieth Century Painting, Sculpture, Architecture and Photography.

Arts 0271 -- Life Drawing I (4) W. Sp.

Prereq. Art 101.

Drawing the human figure in various media

Arts 0272 -- Life Drawing II (4) W. Sp

Prereq. Art 2781.

A continuation of Art 271.

Arts 0273 -- Life Drawing III (4)W, Sp

Prereq. Art 272.

A continuation of Art 272.

****Arts 0280A -- Topics in Art (2) F, W, Sp**

****Arts 0280B -- Topics in Art (3) F, W, Sp**

Study of the various art topics otherwise not available to students.

****Arts 0290 -- Weaving I (4) F**

Prereq. Arts 101, 102, 103.

Introduction to weaving techniques through the construction and use of a simple loom and the use of the table or floor loom.

****Arts 0291 -- Weaving II (4) W**

Prereq. Arts 290.

Further examination and use of the 4-harness loom (2 credits). Off loom fibre techniques and the design, construction and use of hand looms (2-4 credit).

****Arts 0292 -- Fabric Design (4)**

Prereq. Arts 0291.

Exploration of methods of printing and dyeing fabric as well as other methods of design application with cloth. Students will be encouraged to then use the fabric to make functional and nonfunctional objects.

AUTOMOTIVE TECHNOLOGY

***AuDi 0101 -- Fuels and Lubricants (3)**

A Lecture-Laboratory course involving a study of the chemical structure of petroleum based fuels and lubricants and how they meet the operational demands of diesel and gasoline engines and power transmission components. Failures caused by fuel and lubricant breakdown are given special attention along with exhaust emission problems.

***Denotes classes with Lab fees**

****Offered on demand only.**

***AuDi 0102 -- Basic Electricity (4)**

A Lecture-Laboratory course designed to familiarize the student with the fundamentals of electrical theory, circuits, motors, generators, and alternators. The laboratory will provide an opportunity to construct several automotive electrical circuits and use electrical measuring instruments. This course is an introductory experience designed to provide a foundation for advanced work. Basic hand tools are required.

***AuDi 0111 -- Electrical and Fuel Systems I (5)**

Prereq. AuDi 0102.

A Lecture-Laboratory course designed to provide the student with an opportunity to apply electrical and electronic fundamentals to the operation of automotive-diesel charging systems, starting systems, lighting and accessory circuits. Carburetion fundamentals are explored in depth and emission control systems are introduced. Basic hand tools are required.

***AuDi 0112 -- Electrical and Fuel Systems II (5)**

Prereq. AuDi 0111.

A Lecture-Laboratory course emphasizing the theory and testing of breaker point and electronic ignition systems. Electronic fuel injection and turbocharging are introduced. Basic hand tools are required.

***AuDi 0121 -- Prin. of Internal Combustion Engines (6)**

A Lecture-Laboratory course emphasizing the design, construction and operation of modern internal combustion engines. Four stroke cycle, two stroke cycle, diesel, rotary and turbine engines will be included. Basic hand tools are required

***AUTO 0201 -- Power Drive Train (5)**

A Lecture-Laboratory Course covering the theory, disassembly, inspection, reassembly and adjustment of differentials, three and four speed manual transmissions and four speed manual transaxles. Related drive train components are also discussed. Basic hand tools are required.

***AUTO 0211 -- Testing and Repair (6)**

Prereq. AuDi 0101, AuDi 0102, AuDi 0111, AuDi 0112, AuDi 0121.

A Lecture-Laboratory experience designed for the advanced student. Correct diagnosis of difficult electrical and fuel system malfunctions are practiced utilizing all laboratory resources. Basic hand tools are required.

***AUTO 0212 -- Chassis (6)**

A Lecture-Laboratory course including contemporary front and rear suspension systems. Steering system geometry is discussed and front and alignments are performed. Basic hand tools are required.

***AUTO 0221 -- Service Area (2)**

Prereq. AuDi 0101, AuDi 0102, AuDi 0111, AuDi 0112, AuDi 0121, AUTO 0201, AUTO 0212, AUTO 0223.

A service area program designed to provide the student with field-type service work in a controlled instructional setting. The student is given the opportunity to make practical application of the technical material presented in previous courses. Special emphasis is placed on the vehicle service needs which are most frequently requested in modern commercial service centers. Basic hand tools are required.

***AUTO 0223 -- Air Conditioning and Brake Systems (3)**

A Lecture-Laboratory course including heating and air conditioning theory as applied to modern passenger car systems. Diagnostic procedures are emphasized and common service operations are performed. The course also includes a study of the design, theory of operation, and service procedure on passenger-car disc and drum brake systems. Basic hand tools are required.

***AUTO 0224 -- Automatic Transmission (5)**

A Lecture-Laboratory course emphasizing the design, construction and operation of passenger-car automatic transmissions and transaxle assemblies. Students disassemble, inspect, and reassemble selected General Motors, Chrysler, and Ford units demonstrating correct troubleshooting and service procedures. Basic hand tools are required.

AUTO 0225 -- Service Management Practices (4)

A Lecture-Discussion course covering the principles involved in management of automotive service facilities. Content includes establishing objectives, organizational problems, personnel management, merchandising, pricing, warranty claims, and customer relations.

AUTO 0225 -- Service Management Practices (4)

A Lecture-Discussion course covering the principles involved in management of automotive service facilities. Content includes establishing objectives, organizational problems, personnel management, merchandising, pricing, warranty claims, and customer relations.

AUTO 0226 - Topics in Automotive Technology (1-4)

This course is designed to teach recently developed automotive systems and serves to update students on a variety of new devices and service procedures.

BIOLOGICAL SCIENCES**Biol 100A -- Fundamental Biology (4) F, W, Sp, S**

This course is designed for those students with an inadequate background in biological science. The course should be taken by those students planning to enter one of the allied health fields that have not had biology on the high school level. Topics and material presented are intended to increase the student's familiarity with terms and chemical process.

***Biol 0105 -- Field Biology (3) F**

An introduction to basic life processes including the structure and function of plants and animals. Laboratory work emphasis is on the identification and natural history of local flora and fauna, with special attention to trees and shrubs. 2 lec. 4 lab.

***Biol 0111 -- Principles of Biology (5) F, W, Sp**

Introduction to principles and concepts of life; emphasis on inter-relationships of structural, functional, reproductive, evolutionary and ecological principles related to cells and organisms. 4 lec. 2 lab.s

***Biol 0112 -- Plant Biology (5) W, Sp**

Prereq. Biol 111
Morphology and anatomy of seed plants as related to function. Survey of plant kingdom with emphasis on evolutionary relationships and life histories of selected plant groups. 4 lec. 2 labs.

***Biol 0113 -- Animal Biology (6) Sp**

Prereq. Biol. 111.
Principles of development, anatomy, physiology, behavior and laboratory survey of major phyla. Designed primarily for majors in the sciences and preprofessional students. 4 lec. 4 labs.

***Biol 0115-- Human Anatomy and Physiology (5)**

A general survey of the structure and function of the human body. Not applicable for students requiring Biol 0290 and 0291. 4 lec. 2 labs.

****Biol 0210 -- Trees and Shrubs (5) F**

Prereq. Biol 112.
Collection, identification, nomenclature, classification, ecological relationship of native, introduced and cultivated woody plants. 3 lec. 4 labs. 2 Saturday field trips.

****Biol 0211 -- Spring Flora (5) Sp**

Prereq. Biol 112.
Identification, nomenclature, classification of spring flowering plants. Origin and evolution of flora of Ohio. 3 lec. 4 labs.

Biol 0212 -- Forestry Mangement and Practices (4)

This course investigates the development and the existing practices of modern forestry in the United States. Basic Mangement practices are discussed with laboratory exercises designed to improve forest management skills. 3 lec. 3 lab.

***Biol 0215 -- Ecology (3)**

A study of the interrelationships among the many elements in an environment. A historical approach looks at the concept of evolution, man's impact upon the environment, and common ecological problems faced by society. Labs introduce common and basic ecological techniques. 2 lec. 3 lab.

Biol 0220 -- Wildlife Mangement (4)

Prereq. or concurrent: Field Ornithology
A study of the ecological principles of the management of wild animals, both game and non-game species. The economic importance of wildlife and the role of various wildlife agencies will also be considered. 3 lec. 3 lab.

*Denotes classes with lab fees.

**Offered on demand only.

Biol 0225 -- General Genetics (5) Sp

Prereq. Biol 111
Principles and concepts of genetics as revealed by classical and modern investigation. 5 lec.

Biol 0226 -- Genetics Lab (2) Sp

Prereq. Biol. 0225
Principles and concepts of genetics as revealed by laboratory study with the fruit fly, *Drosophila melanogaster* and human traits where applicable. 4 lab hrs.

***Biol 0235 -- Microbiology (5)**

Prereq. Biol 111 or permission.
A survey of representative types of micro-organisms. Emphasis is placed on cellular structure and physiology, nutritional and environmental requirements and methods of reproduction. Introduction to the role of pathogenic organisms in carrying diseases and infections. Principles of immunity and resistance to disease. Laboratory includes methods of sterilization, culture, staining and identification. 4 lec. 3 labs.

***Biol 0271 -- Field Ornithology (4) Sp**

Prereq. or concurrent or permission of instructor. Ecology or Fundamentals of Biology.
A study of the classification, adaptations, and habitat requirements of the higher animals with particular emphasis on Ohio species. Field identification of mammals, birds, reptiles, amphibians, and fish will be done in lab with emphasis on the birds. 3 lec. 3 lab.

***Biol 272 -- Ohio's Natural Heritage (3) Sp**

An exploration of the natural history of Ohio. Arranged field trips will visit all five of Ohio's physiographic regions. 2 lec. 3 lab arranged.

***Biol 0290 -- Principles of Anatomy (5)**

Prereq. Biol 0111 or permission.
An introduction to morphology of cells, tissues and systems of the human body. 4 lec. 3 lab.

Biol 0291 -- Principles of Human Physiology (5)

Prereq. Biol 0290
An introduction of human cellular and systems physiology. 5 lec.

***Biol 0292 -- Human Anatomy (3)**

Prereq. Biol 0290
A sectional approach to the anatomy of the human body utilizing cadaver dissection. 1 lec. 4 lab.

****Biol 0299A -- Special Topics in Biology (2)******Biol 0299B -- Special Topics in Biology (3)******Biol 0299C -- Special Topics in Biology (4)**

Prereq. Biol 111 or permission of instructor.
Individual or small-group study, under supervision of instructor, of topics not otherwise available to students.

BUSINESS MANAGEMENT**BAFT 0101 -- Principles of Banking and Finance (3)**

Monetary standards, commercial and central banking. Federal Reserve functions and statements, monetary and income theory, problems of monetary and fiscal stabilization, international payments, and the International Bank and Monetary Fund.

BAFT 0102 -- Introduction to Commercial Lending (4)

An overview of the commercial lending function. Four sections cover commercial lending overview, the lending process, portfolio management, and regulation and business development. Specific contents include the commercial loan customer, types of commercial loans, the loan decision process, cost analysis, control and profitability, and the regulatory and legal environment.

BAFT 0105 -- Installment Credit (4)

Procedures, forms, government regulations, delinquency and collections, interest rates, background of installment credit.

BAFT 0106 -- Principles of Bank Operations (4)

Basic course stating a history of banking, developing of Federal Reserve System; three main duties, safekeeping, transfer of funds, lending. Examination and governmental examination. Field work and problems concerning the operation of commercial bank and savings and loan institutions. On the job visitation to various banks.

BAFT 0202 -- Home Mortgage Lending (4)

A course covering the basic principles of home mortgage lending. A study of the procedures used from the opening to closing of mortgages. A complete study of all necessary forms, rules, and regulations the buyer should know in obtaining a loan.

BAFT 0204 -- Investments I (4)

A course consisting of assignments dealing with the various investment alternatives, as well as general and specific information that must be considered before thought is directed toward particular industries and companies. Also included are the tools and sources that are needed for analysis necessary before making wise investment decisions.

BMNT 0101 -- Introduction to Business (3)

A survey course of the basic functions of American business, with an emphasis upon the responsibility of businesses as a vital segment of society. The course introduces the American economic system and the role of profits as the motivating force behind U.S. business activity.

BMNT 0102 -- Marketing (4)

A study of marketing fundamentals, consumption and consumer behavior, retailing and wholesaling structures; and the functions performed in marketing, marketing policies and a critical appraisal of the field of marketing.

BMNT 0201 -- Principles of Management (4)

An introductory course into management concepts, organization and principles with a detailed analysis of the management functions of planning, organizing, staffing, directing and controlling. Communications, decision making and motivation are emphasized as intricate concepts in performing the management functions.

BMNT 0202 -- Personnel Management (3)

The philosophy, principles, and methods of personnel management; organizational structure, areas of responsibility and authority, policy making, procurement and placement, training, evaluation, wage and salary administration and benefit programs.

BMNT 0240 -- Industrial Relations (4)

The methods of employer-employee relations, emphasizing the position of the employer; personnel policies and practices, compiances with law and regulations with labor unions.

BMNT 0241 -- Labor Relations (4)

This course is concerned with collective bargaining, contract or labor agreements, workmen's compensation laws, apprentice training, and jurisdictional disputes.

BMNT 0242 -- Business Communications (3)

Principles and techniques of effective letter writing; letter mechanics; writing of personal business letters including application letters; methods of writing business reports and letters--internal and external report as means of communication.

REST 0210 -- Real Estate Principles and Practices (4)

A basic course designed as an introduction to real estate economics and administration, to develop professional real estate business and to obtain basic knowledge about real estate for their own benefit in handling real estate problems. The course covers the elementary physical, legal, locational and economical characteristics of real estate; real estate markets; and national, regional and local economic influences on real estate values. It also provides a foundation for further study and serves as a preparation for securing a license.

REST 0211 -- Real Estate Brokerage (4)

A basic course in real estate economics, brokerage and administration, designed for the professional development of real estate personnel and to serve those who are not in the real estate business but desire to learn about real estate for their general knowledge and private business arrangements.

REST 0212 -- Real Estate Law (4)

Real estate Law includes all of the areas of law commonly concerned with the typical real estate practitioner and investor-consumer. Among topics covered in this course is the law of agency as applied to real estate brokers and salesmen, law of fixtures, estates (including leases), conveyancing of real estate, real estate managers, license laws of Ohio, zoning, cooperatives and condominiums.

REST 0213 -- Real Estate Finance (4)

Real Estate Finance includes information concerning the institutions, methods, instruments and procedures involved in the financing of real estate. It includes the nature and characteristics of the mortgage loans, government influence on real estate finance, and the nature of the mortgage market. Effects of monetary and fiscal policies on real estate financing are considered.

REST 0214 -- Real Estate Appraisal (4)

The course in Real Estate Appraisal stresses the methodology of appraising urban real property and the theory underlying appraisal techniques. The three basic techniques of appraising...market comparison, penalized cost of replacement, and income capitalization, are covered in depth. A term project is assigned to give the student practical experience in applying these techniques.

REST 0215 -- Special Topics in Real Estate (4)

Special Topics or Seminar in Real Estate (title may vary from institution to institution) includes areas requiring specialized knowledge such as taxation, investment analysis, industrial real estate, commercial real estate, and other types of income producing property. Current issues and problems facing the real estate business are also considered. This course should be offered to those persons who have previously completed the necessary basic courses. This course is designed to cover specialized material not covered in the other five courses as well as the current real estate market, legislative activities, and long-range planning for the future of real estate. Recommended prerequisites for this course are: Principles and Practices I, Real Estate Law, Real Estate Finance, Real Estate Appraisal, Real Estate Brokerage.

RMMT 0103 -- Introduction to Retailing (4)

Principles and methods of retail management, including organization, policy making, location, operation, selling services, records, inventory, expense control, insurance and the coordination of a store.

RMMT 0104 -- Salesmanship (3)

A course structured to acquaint the student with the basic concepts of personal selling at both the industrial and retail level including preparation for selling, sales processes, and an introduction to sales management. Emphasis on retail selling. Students are made aware of the wide variety of careers open to them in retail selling.

RMMT 0223 -- Retail Buying (4)

Prereq. Marketing or permission from instructor. This course will provide a basic understanding of the retail buyer's responsibilities and functions and will create an awareness of the complexity of the buyer's job. Students will learn how to determine what and how much to buy and how to price merchandise. A good portion of this class is devoted to enhancing the students merchandising math skills.

RMMT 0225 Marketing Case Studies (4)

Prereq. Marketing or Permission of Instructor. To give the student an opportunity to report and discuss marketing problems in a group situation. Problems discussed are concerned with areas of marketing management, production planning and development, marketing research, industrial buying behavior, market segmentation, price objectives, advertising, and international marketing environment.

***RMMT 0233 -- Sales Promotion (4)**

Prereq. Marketing or permission. An in depth study of basic communication theory and principles applied to marketing and promotional problems. The course stresses analysis of source credibility, message structure, appeals, consumer behavior theory in solving marketing communication problems. Also included are basic concepts of display, sales promotion techniques and publicity.

*Denotes classes with Lab fees.

**Offered on demand only.

***RMT 0235 -- Advertising (3)**

Prereq. Marketing or permission of instructor.
Ay of the principles of advertising stressing the history and development of advertising; its relation to the marketing effort of a firm; its relation to consumers and society in general; the major groups of media used by the advertiser; the creation, plan and management of advertising.

RMT 0236 -- Special Topics in Retailing (3)

An independent research study of a particular area of the retailing industry which interest the student.
Prereq. Sophomore standing, permission of full-time retail instructor and Introduction to Retailing.

BUSINESS LAW

BusL 0250 -- Business Law I (4)

An introduction to the legal environment of business based on the uniform commercial code including the forms and classifications of law, an overview of the court systems and court procedure, social forces and the law, torts and crimes, and the principles of contract laws.

BusL 0260 -- Business Law II (4)

A continuation of Business Law 0250 including the study of the law covering sales, agency and employment, commercial paper and personal property and bailments.

CADD

***CADD 0101 -- Introduction to Cad (3)**

This course explores the fundamental concepts and commands of a computer aided design system. Topics include: reasons for using CAD; hardware/software of the system; graphical data bases; coordinate systems; productivity techniques; CAD application. The lab will prepare students to operate both two-dimensional and three-dimensional systems. 1 lec. 5 lab.

***CADD 0102-Mech. Drawing with 3-D Cad Applications (3)**

This course will consist of an introduction to the specialized areas of drafting and will utilize the CAD system to introduce three-dimensional Descriptive Geometry Applications. Prereq. CADD 0101. 1 lec. 5 lab.

***CADD 0103-Electronic Schematics & Wiring Diagrams (3)**

This course will consist of making schematic, wiring and printed circuit board diagrams using CADD. Prereq. CADD 0102. 1 lec. 5 lab.

***CADD 0104 -- Advanced Technical Drawing (3).**

This course will consist of an introduction to the specialized areas of drafting and an in-depth analysis of the fundamentals of practical descriptive geometry. Prereq. CADD 0102. 1 lec. 5 lab.

***CADD 0105 -- Mapping with CADD (3)**

The student will draw plats from deed descriptions using CADD. Routes will be mapped and revised. Prereq. CADD 0104. 1 lec. 5 lab.

***CADD 0106 -- Structural Design and Floor Plans (3)**

Floor plan layouts, structural details, and revisions will be done using CADD. Each will be plotted. Prereq. CADD 0104. 1 lec. 5 lab.

***CADD 0107 -- Piping Drawing (3)**

A variety of fittings, joints, and valves will be designed into piping assembly drawings. Symbol diagrams will also be made. Prereq. CADD 0104. 1 lec. 5 lab.

***CADD 0108 -- Welding Drawings (3)**

Welding fabrication drawings will be made using many weld symbols. Template layout drawings will be made. Prereq. CADD 0104. 1 lec. 5 lab.

***CADD 0109 -- Casting & Mold Design (3)**

Castings and molds for pouring castings will be designed using CADD. Prereq. CADD 0104. 1 lec. 4 lab.

*Denotes classes with Lab fees.

**Offered on demand only.

***CADD 0110 -- Computerized Engineering Design (3)**

Prereq. All previous and Sixth Quarter Civil Engineering Courses, or Equivalent Experience approved by the Advisor.
This course is designed to provide hands-on experience in computer solutions of technical subjects. Almost all of the previous and sixth quarter subjects will be studied in their relationship to the computer solution of specific problems. This is not a course in basic computer operation, except as it applies to problem solution. It will deal with the parameters and technical data that must be fed into a computer in order to obtain computer solutions of technical problems. In essence, it will provide a review of almost every technical course the student is taking or has taken.

CHEMISTRY

Chem 100A -- Fundamental Chemistry (4) F,W, Sp, S

This course is designed for those students with an inadequate background in chemistry. It should be taken by students planning to enter one of the allied health fields or plastics engineering that have not had high school chemistry. Topics and material presented are intended to increase student's familiarity with terms and chemical process.

***Chem 0121 -- Intro. to Inorganic Chemistry (4) F,W, S1**

An introductory course in fundamental chemical concepts and laboratory techniques. Atomic structure, periodic classification of elements, chemical equations, chemical calculations, solutions, acids and bases, oxidation, reduction, reactions, and the gas laws. 3 lec. 3 lab. Recommended for students in allied health technologies and university parallel programs requiring general chemistry or physical science elective (s).

***Chem 0122 -- Intro. to Organic Chemistry (4)W,SP,S2**

Prereq. Chem 0121.
A course in fundamental organic chemistry. The study of carbon compounds; aliphatic hydrocarbons, alcohols, ethers, aldehydes, ketones, organic acids, esters, amines, and aromatic compounds. 3 lec. 3 lab.

***Chem 0123 -- Physiological Chemistry (4) Sp**

Prereq. 0122.
This course is an introduction to physiological chemistry. Organic chemistry and metabolism of carbohydrates, lipids, and proteins is discussed with emphasis on metabolic pathways, enzymes, hormonal control of metabolism, metabolic energy for muscular work, composition of body fluids, and metabolic relationships among major organs. Pathological conditions related to metabolism are discussed. Recommended for students in technical programs in allied health fields (except nursing). 3 lec. 3 lab.

***Chem 0141 -- General Chemistry I (4) F, W**

Prereq. High school algebra and high school chemistry or Chem 100A.

An introduction to chemistry through the study of fundamental chemical concepts, atomic structure, periodic classification, mole concept, stoichiometry with problem solving, chemical bonding, and chemical reactions in water solution.

Recommended for students in plastics technology, chemical technology, and transfer programs requiring three quarters of freshman chemistry (medicine, optometry, microbiology, dentistry, forestry, pharmacy, veterinary, engineering, medical technology, botany, zoology, physics, science education, etc.)

***Chem 0142 -- General Chemistry II (4) W, Sp**

Prereq. Chem 0141.
An introduction to states of matter, properties of solutions, chemical thermodynamics, and nuclear chemistry.

***Chem 0143 -- General Chemistry III (4) Sp**

Prereq. Chem 0142.
An introduction to chemical kinetics, acid-base theory, ionic equilibria, electrochemistry, and coordination compounds.

***Chem 0202 -- Process Instrumentation (4) Sp**

Introduction to measurement and control systems for temperature pressure, and fluid flow. Dynamic response characteristics of instruments and calibration methods.

- **Chem 0205 -- Organic Chemistry (4) F**
Prereq. Chem 0143
A course for students wishing to acquire a sound knowledge of classical and modern organic chemistry. 3 lec. 3 lab.
- *Chem 0206 -- Organic Chemistry (4) W**
Prereq. Chem 0205.
Continuation of 205. See 205 course description. 3 lec. 3 lab.
- *Chem 0207 -- Organic Chemistry (4) Sp**
Prereq. Chem 0206
Continuation of 205-206. See 205 description. 3 lec. 3 lab..
- *Chem 0223 -- Quantitative Analysis (5) F**
Prereq. Chem 0143
An introduction to methods of chemical analysis by classical gravimetric and volumetric techniques colorimetry with emphasis on solution equilibria and stoichiometric calculations. 3 lec. 6 lab.
- *Chem 0224 -- Instrumental Analysis I (5) W**
Prereq. Chem 0143.
An introduction to methods of chemical analysis by spectrophotometry. The topics include U.V./visible, infrared, atomic absorption, flame emission, and X-ray methods. 3 lec. 6 lab.
- *Chem 0225 -- Instrumental Analysis II (5) Sp**
Prereq. Chem 0224.
An introduction to methods of chemical analysis by chromatography and electroanalytical chemistry. Topics include solvent extraction; various types of chromatography including gas, liquid, ion exchange, thin layer, and paper; potentiometric, coulometric, and amperometric titrations; electrodeposition; and polarography. 3 lec. 6 lab.

CIVIL ENGINEERING

- CEng 0101 -- Introduction to Surveying (3)**
History and background of surveying; the acceptable surveying method. Introductory topics in plane geometry, trigonometry and computations necessary for surveying. The preparation of proper field notes, hands-on use of surveying equipment together with its proper care, adjustment and cleaning. The running of simple traverses, curves, level circuits and turning of angles will be practiced as an introduction to higher levels of calculation and field practices.
- *CEng 0111 -- Surveying I (3)**
Prereq. CEng 0101 or advisor approval.
Using simple traverses and other field exercises conducted in CEng 0101, closed traverses will be calculated, errors adjusted and areas of surveys calculated by DMD and coordinates. Four types of angles used in surveying will be studied and their inter-relationship developed. Latitudes and departures will be computed and adjusted according to normal procedures. Circular curves will be developed in three ways, as will parabolic or vertical curves and the introduction to compound curves and spirals will begin.
- *CEng 0112 -- Surveying II (3)**
Prereq. CEng 0111 or advisor approval.
Field exercises will include the layout of curves, spirals and open and closed traverses. Simulations of property surveys will be practiced, with property descriptions by metes and bounds. Line and grade will be established for construction surveys, including batter-board erection and level controls. Introduction will be made to more sophisticated equipment; theodolites and self-leveling levels. Topographic surveying (stadia) providing data for map plotting and various calculations, such as, mass excavation.
- *CEng 0113 -- Route Surveying (3)**
Prereq. CEng 0112 or advisor approval.
The refinement of all previous surveying field methods, techniques and application together with mathematical techniques for high level controls and adjustment. The study of route considerations for highways, power transmission lines, railroads, pipelines, etc., based on topographic maps and photogrammetric maps. Use of the EDM and one second theodolite and demonstration of computer solutions to previous problems. Discussions will be held on Deed and Title searches.
- CEng 0114 -- Route Surveying II (4)**
Prereq. CEng 0113 & CEng 0115
Primarily, this course is designed to provide the student with a review of all of the techniques he or she has learned to date. Also, it will cover any new subjects necessary to prepare them for a surveying career. It will combine approximately equal field and classroom time, though leaning toward the one requiring the most work. Students will be exposed to the latest equipment available and will be made aware of the latest technical advances in Surveying.
- CEng 0115 -- Surveying for Civil Engineers (4)**
Prereq. CEng 0113 or advisor approval.
Advanced surveying applications. Boundary surveys, United States Public Land Surveys, fundamental survey control and the state coordinate systems, celestial observations, mine surveys and city surveys. Riparian rights and other legal aspects will be discussed, as they regard the surveyor or engineer.
- CEng 0201 -- Concrete Materials & Design (5)**
Prereq. CEng 0207 or advisor approval.
The theory of modern concrete. Practices of making, placing, forming and curing Portland Cement concrete. Design of batches and testing of concrete specimens, Designs of concrete members, such as footings, columns, beams, slabs and retaining walls. Inspection practices prior to placing, after stripping forms and on older concrete in regard to needed repair. Finishing of concrete surfaces and various types of finish.
- CEng 0202 -- Construction Estimating I (2)**
Introduction to estimating. Familiarization with project plans and specifications. Extraction of biddable quantities from plans and specifications. Units of measure consistent with estimating. Category outlines and detailed outlines. Introduction to the quantity take-off, construction sequences and terminology. Mechanical and Electrical estimates are considered briefly.
- CEng 0203 -- Statics (3)**
Prereq. Math 0132.
Statics is the study of external forces acting on rigid bodies in equilibrium. The study includes types of forces, reactions, vectors, moments. The laws governing the actions and resolutions of these forces.
- CEng 0204 -- Construction Supervision (3)**
Provide a basically brief but comprehensive understanding of setting up and controlling a construction project. Introduce contract documents and discuss their legal aspects. Review construction project organizations, both simple and complex, and duties of each individual or department. Develop the role of the Engineer in construction projects. The practical aspects of forming, concrete placement, steel erection, coordinating subcontractors, etc.,--or--how to run a construction project at various levels.
- *CEng 0205 -- Hydraulics for Civil Engineering (2)**
Prereq. Math 0131 and Phys 0201.
This course is oriented toward water supply and distribution. Topics include Pascal's Law, Bernoulli's Theorem and weir flow. Run-off, collection, flow of water in pipes, distribution systems and pumps will be covered.
- CEng 0206 -- Construction Estimating II (3)**
Prereq. CEng 0202 or advisor approval.
Actual hands-on estimating for persons more familiar with construction, its terminology and approach. Estimates from square footage and building types to line-item estimates based on detailed quantity take-offs. Breakdowns of T&I, Overhead and Profit and the final estimate and project costs. Mechanical and Electrical estimates will be considered in the overall project cost as lump sums or percentages. Legal aspects of bidding will be covered.
- CEng 0207 -- Strength of Materials (4)**
Prereq. Math 0132 and CEng 0203.
Location of the centroids or areas and their moments of inertia. The study of tension, compression, shear and torsion in engineering materials. Resultant stress and strain from internal and external forces.

*Denotes classes with Lab fees.

***CEng 0208 -- Soil Materials and Testing (2)**
Engineering tests of soils for design and control to meet ASTM Standards. Testing for moisture content, standard compaction, proctor penetration, sieve analysis, hydrometer analysis, and unconfirmed compression..

CEng 0211 -- Highway Construction (4)
Prereq. CEng 0112. Coreq. CEng 0113.
Highway economics and finance, planning, geometric design, drainage and drainage structures. Traffic survey, driver and vehicle characteristics together with traffic routing and safety. Earthwork operations and equipment; thickness design of flexible pavements and bases; soil aggregate roads and stabilization; bituminous surface treatments and highway maintenance.

CEng 0212 -- Structural Steel Design (4)
Prereq. CEng 0207 or advisor approval.
The design of structural steel. Design will include bridges, towers and buildings. Forces acting on these structures, resultant stresses and their affect. Beams, columns, bracing and connections will be studied. Bolted, riveted and welded connections as well as stiffening will be considered. Working stresses will be applied and ultimate stress design will be considered. Inspection of steel structures will be covered.

COMPARATIVE ARTS

ComA 0101 -- Survey of the Arts (4) F
Analysis of form, media, and content of major arts stressing interrelationships of architecture, dramatic art, music, literature, and painting through recognition of common art factors. Use of tapes, slides, and recordings. Three quarter sequence.

ComA 0102 -- Survey of the Arts (4) W
Analysis of form, media, and content of major arts stressing interrelationships of architecture, dramatic art, music, literature and painting through recognition of common art factors. Use of tapes, slides, and recordings.

ComA 0103 -- Survey of the Arts (4) Sp
Analysis of form, media, and content of major arts stressing interrelationships of architecture, dramatic art, music, literature and painting through recognition of common art factors. Use of tapes, slides and recordings.

DATA PROCESSING

***EDP T 0101 -- Introduction to Data Processing (3)**
Historical background, computer applications, social implications, data representation, numbering systems, file organization, flow charting, and a survey of programming languages. Data Processing major may not use this course as credit toward their degree.

***EDPT 0102 -- BASIC and Assembler Programmer (3)**
The assembly language instructions and coding techniques are introduced with programs written using auxiliary storage, interrupt processing, and table processing. All programs are tested and thoroughly documented.

***EDPT 0103 -- BASIC Languages I (3)**
Prereq. EDPT 0102 for DP majors or EDPT 0101 for non DP majors. This course provides an introduction to data processing and the programming language BASIC. Some knowledge of basic algebra is necessary to understand the use of mathematical expressions in the BASIC language. Practical examples and exercises will teach the student the capabilities of BASIC and how to write functional BASIC program.

***EDPT 0104 -- BASIC Language II (3)**
Prereq. EDPT 0103.
This course teaches advanced BASIC programming techniques under the RSTS/E system. Students will learn how to use system function calls and how to optimize file creation and access. Students will be trained to write programs using terminal Input/Output features and to perform interjob communication.

*Denotes classes with Lab fees.

***EDPT 0105 -- COBOL Programming I (4)**
Prereq. EDPT 0104.
The student will study in depth the COBOL language. Use of files on disks, print routines, use of terminals, and documentation will be stressed. Many problems will be assigned to move theory into practice.

***EDPT 0106 -- COBOL Programming II (4)**
Prereq. EDPT 0105.
A deeper study of COBOL. More complex problems will be assigned using tables and various utility programs available from the manufacturer. New instructions and different ways of using them will be examined.

***EDPT 0107 -- RPG II Language (4)**
Prereq. EDPT 0102 for DP majors or EDPT 0101 for non DP majors.
This is another computer language. It is a fast way to program. Normally used to produce reports for management. All rules of programming apply, but various forms are required to produce output and care must be used to fill in exact details.

***EDPT 0201 -- Systems Analysis & Design (4)**
Prereq. EDPT 0104, 0107, 0206.
Basic concepts and standard conventions concerning system design and analysis including problem definition, information requirements, system flow charting, system study, and various documentation techniques. Structured systems and centralized-decentralized approaches..

***EDPT 0202 -- Computer Operations Management (3)**
Prereq. Two programming languages and sophomore status.
Personnel policies, computer management procedures, equipment acquisition, and management of resources as it relates to data processing. Instruction of basic management principles to effectively manage a computer system, computer personnel, and resources.

***EDPT 0203 -- Business Computer Projects I (4)**
Prereq. Two programming languages or department permission.
Students will work in groups to do a complete systems proposal, design testing debugging, and implementation.

***EDPT 0204 -- Computer Applications (4)**
Prereq. one computer language or department permission.
study of the various types of software available for use on microcomputer systems including but not limited to: Data Base Management, Word Processing, Spreadsheets, Business Graphics, Data Communications, and integrated packages. This study will include research into what packages are available and the use of at least one of them.

***EDPT 0205 -- Business Data Systems & Comm. (3)**
Prereq. one computer language or department permission.
A study of man-machine interactions through teleprocessing and telecommunication systems. Emphasis of correct time-sharing languages and data base, and management information systems (MIS). Laboratory project included.

***EDPT 0206 -- FORTRAN IV (4)**
Prereq. DEPT 0103 and EDPT 0107.
A basic course in FORTRAN, FORTRAN arithmetic, formats, do loops, arrays, program flow charting, testing, debugging, and documentation will be discussed and implemented using the computer. The student will write several programs to solve statistical math and business problems.

***EDPT 0207 -- PASCAL Language (4)**
Prereq. EDPT 0101 - 0108
This course provides an introduction to the programming language PASCAL. Some knowledge of basic algebra is helpful in understanding the rules that govern the formation and use of mathematical expressions in the PASCAL language. Use of Input/Output statements, loops, subprograms, arrays and files are covered.

***EDPT 0208 -- DATA BASE Management (4)**
Prereq. EDPT 0107, 0104, 0206, 0106.
A study of data base design, implementation and access using fourth generation programming languages and relational data base.

DENTAL HYGIENE

DtHy 0101A -- Radiology I (2)

Didactic instruction in the history and development of the dental x-ray. Emphasis on the nature and properties of the x-ray, MA, KVP, exposure time, target film distance, film speed, shortcone, longcone, XCP instrumentation, etc. Theory of the fundamentals of oral radiographic techniques. Regulations and safety precautions, as well as the uses of X-ray in dentistry.

DtHy 0101B -- Radiology II (2)

Continuation of Radiology I. Emphasis on technique, film placement, tube angulation, exposure, "bisect the angle" and XCP techniques. Darkroom instruction—processing and duplication, adverse factors affecting darkroom procedures. Mounting of films, examining radiographs and recognizing normal landmarks, as well as abnormalities. Laboratory instruction will be in depth as to technique. Throughout the second year, specific minimum numbers and types of radiographs will be required clinically.

DtHy 0102 -- General and Oral Histology and Embryology (3)

Study of the development of tissues and structures from a histological and embryological basis. Emphasis is on development of tissues of the teeth and the periodontal supporting structures.

*DtHy 0103 -- Dental Materials (5)

Physical properties of materials used in dentistry and basic principles of their preparation and use. Techniques for using restorative materials, impression materials, and laboratory procedures. In a laboratory setting, students learn techniques in working with the various types of dental materials.

DtHy 0111 -- Oral Anatomy I (3)

A study of tooth form, function and occlusion including the supporting tissues of the teeth and oral environment, emphasis on dental vocabulary, terminology, and the relationship of the permanent and deciduous dentition to Clinical Dental Hygiene.

DtHy 0112 -- Oral Anatomy II (3)

Detailed study of the anatomy of the head and neck. Special emphasis is made toward the face and jaws. Cranial skeleton with emphasis on facial bones. Muscles of the head and neck: functions, nerve supply and blood supply. Detailed study of the topographical and functional anatomy of the oral cavity and pharynx.

*DtHy 0121 -- Clinical Dental Hygiene I (4)

The introduction to the profession, including history and development of dental hygiene. The course will familiarize the student with medicodental terminology and deal with the etiology of deposit formation such as plaque, calculus and stains. The principles of preventive dentistry will be discussed in relationship to deposits, dental caries and gingival inflammation. Oral physiotherapy and methods of motivating patients to practice good oral hygiene will be discussed. The importance of complete patient records and screening techniques will be covered. Techniques for prevention of disease transmission will be followed. Guidelines for professional appearance will be outlined. Patient/operator positioning and basic instrumentation principles will be given, followed by lab practice on typodonts for manual dexterity in the control and use of instruments, and then transferring these acquired skills to a living patient.

*DtHy 0122 -- Clinical Dental Hygiene II (4)

This course will be a continuation of Clinic I, providing the student with knowledge concerning the hygienist's role in dental hygiene patient care and the objectives for the practice of dental hygiene care. A reinforcement of general clinic routines for collection of diagnostic data, including intra/extra oral exams and dental/periodontal charting. Skill practices will include reviewing detection of hard and soft deposits, then more in-depth attention to scaling and polishing techniques and periodontal evaluation with probing. Importance of fluorides to dental health and techniques for application will be covered. All skills will be transferred from manikin to patient.

*Denotes classes with Lab fees.

*DtHy 0123 -- Clinical Dental Hygiene III (4)

A continuation and application of previously learned techniques and procedures of dental hygiene care and services, performed in the clinic atmosphere as they would be in practice. Advanced skills include desensitization techniques of hard and soft tissues, and principles and techniques for instrument sharpening. Techniques of sequencing treatment planning for individual patients and importance of educating patients in prevention of oral disease.

*DtHy 0124 -- Clinical Dental Hygiene IV (6)

A continuation of Clinic III techniques and procedures. An in-depth study of medical emergencies in the dental office, their treatment and prevention.

*DtHy 0125 -- Clinical Dental Hygiene V (5)

A continuation of clinic procedures and practices with emphasis on the practical patient and patient education. Advanced clinical skills include: Use of radiographs in evaluation and charting, use of the ultrasonic scaler, amalgam polishing, and fabrication of study models. Study in treatment planning for the periodontal disease patient includes subgingival scaling and root planing, curettage and wound healing, and periodontal packs and sutures. Covers topics for the prevention of dental disease through oral health counseling, nutritional counseling, pit and fissure sealants, and nutritional guidance for patients with gingival/periodontal disease.

*DtHy 0126 -- Clinical Dental Hygiene VI (5)

A continuation of clinic procedures with emphasis on nutritional counseling and the trial state board patient. Discussion in ethics, jurisprudence, laws, and the A.D.H.A. structure and how these influence the dental hygiene profession. Study in myofunctional therapy, exfoliative cytology and oral cancer. Career placement is considered through the development of a resume, review of interviewing techniques, and job selection through the exploration of employment opportunities. National board reviews are also included.

*DtHy 0127 -- Clinical Dental Hygiene VII (5)

Complete dental hygiene care involving the use of advanced skills, practice management and independent study are included. Special topics of patient treatment, practice management, and career development are explored.

DtHy 0201 -- General and Oral Pathology (3)

An introduction to pathology. Process of inflammation, necrosis, retrograde changes, and wound healing are discussed. Etiologies, diagnosis, treatment, and prognosis of oral lesions are discussed. Clinical pathology of diseases affecting teeth and their supporting structures. Visual aids are used to study oral lesions and their clinical manifestations.

DtHy 0202 -- Periodontics (3)

A study of the periodontal supporting structures of the teeth. Etiologies and classifications of periodontal disease are discussed. The treatment of periodontal disease is discussed in relation to the etiologies.

DtHy 0203 -- Nutrition (3)

A study of general nutrition and its role in promoting health. Includes composition and functions of nutrients and their digestion and metabolism. Nutritional deficiencies and diseases are covered. The importance of nutrition throughout the life cycle is discussed. The student is exposed to topics such as energy balance, weight control, "health foods", meals on a budget, nutritional labeling, breast feeding, and current concerns in world nutrition. Emphasis is placed on planning nutritious diets.

DtHy 0204 -- Pharmacology and Anesthesiology (3)

Drugs and anesthetics used and encountered in dentistry. Discussion of the origin, physical and chemical properties, effects on body systems, indications and contraindications for use, and methods of administration and elimination.

***DtHy 0205 – Dental Health Education (3)**

Analysis of concepts, techniques of presentation, and goals of Dental Health Education. Major emphasis is placed on preparation and use of lesson plans and instructional materials for teaching dental education. Classroom instructions of dental health in Elementary and Secondary Schools.

DtHy 0206 – Public Health (3)

An introduction to the broad field of public health with emphasis on the development of dental public health programs. A simplified approach to the knowledge of those public health tools needed by the dental professional to assist in designing and operating a dental public health program. Participation in a dental public health project is included in this course.

DtHy 0250 -- Expanded Functions I (4)

To introduce the student to the restoration of cavity preparations with amalgam and tooth-colored materials in a simulated clinical environment. The student will be evaluated on performance immediately following the completion of the clinical procedure.

DtHy 0251 -- Expanded Functions II (2)

To give the student practice in the restoration of cavity preparation in a real clinical environment. The student will complete a sufficient number of restorations to qualify them for expanded functions in the dental office under the supervision of a dentist.

DIESEL

***DSEL 0201 -- Heavy Duty Drives (6)**

A comprehensive study of typical heavy-duty power transmission units used in trucks, tractors, and crawlers. Units include clutches, transmissions, differentials, drive axles, track drives, propeller shafts, universal joints, power take-offs, and winches. Basic hand tools are required.

***DSEL 0202 -- Diesel Engines I (6)**

A Lecture-Laboratory course emphasizing the design, construction, and operation of two and four stroke cycle diesel engines. A turbo-charged engine is completely disassembled, inspected, reassembled, and adjusted to satisfactory running condition. Basic hand tools required.

***DSEL 0203 -- Diesel Engines II (6)**

Prereq. DSEL 0202.
A Lecture-Laboratory course with special emphasis on fuel injection systems. A supercharged diesel engine is disassembled, inspected, reassembled, and adjusted to satisfactory running condition. Basic hand tools are required.

***DSEL 0211 -- Diesel Fuel Injection (6)**

This course is a lecture and laboratory combination including a study of diesel fuels, primary and secondary fuel distribution and injection systems. Instruction is provided on common rail systems, unit injectors, and primary pump systems as used on trucks and heavy equipment applications. Basic hand tools are required.

DSEL 0221 -- Service and Maintenance Management (4)

A Lecture-Discussion course designed to provide practical orientation to the management functions of heavy equipment and trucking service centers. Accent is placed on the following topics: preventive maintenance records, equipment control records, inventory control, vehicle operational costs, part procurement procedures and shop supervision. Information is presented on the rules and regulations pertaining to equipment maintenance as prescribed by the Department of Transportation.

***DSEL 0222 -- Heavy Duty Automatic Transmission (3)**

A Lecture-Laboratory course including the theory of torque converters, power transmission, planetary systems and hydraulic controls. Students participate in the disassembly, inspection adjustment, and reassembly of modern heavy duty automatic transmissions. Basic hand tools are required.

*Denotes classes with lab fees.

***DSEL 0223-Heavy Duty Chassis & Brake Systems (4)**

A Lecture-Laboratory course including the study of suspension systems, tires, wheels, rims, and axles. Several brake systems such as engine, air, power assist, cam and wedge, and disc are discussed. Basic hand tools are required.

ECONOMICS

Econ 0101 – Principles of Economics I (4) F, W, Sp

Introduction to basic economic issues, terminology, and theory. Macro economics: including national income analysis, business cycles, role of institutions, and economic growth.

Econ 0102 – Principles of Economics II (4) W, Sp

A study of individual economic decision making theories including a detailed analysis of demand and supply, elasticity, economic cost, various forms of competition, international trade and payments, input factors and income distribution.

EDUCATION

Educ 0101 – Introduction to Education (4) F, W, Sp

An introductory study of the broad and complex field of education. Emphasis on professional and personal requirements for successful teaching.

ELECTRO-MECHANICAL ENGINEERING

EMng 0096 -- Electro Concepts (4)

A survey course in the basic concepts of electricity and electronics. Basic DC circuits are studied as the concepts of Ohm's Law, resistance, capacitance, inductance, power, and energy are introduced. AC circuits involving reactance, impedance, phasors, and power factors are studied. DC and AC rotating machines are surveyed. A superficial study of elementary solid state electronics is offered. This course is not for Electro-Mechanical majors and is not applicable toward an Associate degree.

***EMng 0101 – Electro-Mechanical Devices (3)**

Prereq. EMng 0112 concurrently or advisor approval.
An introduction to devices where both electrical and mechanical principles are utilized. The course content includes DC motors and generators, 3-phase circuits, transformers, induction motors, alternators, and synchronous motors.

***EMng 0103 – Electro-Mechanical Drawing (2)**

Prereq. EnDr 0101 or advisor approval.
The study of mechanical drawing of both electrical and electronic circuits and components using electrical and electronic symbols. Drawing assignments include power distribution, logic diagrams, printed circuits, and schematics and pictorial views.

***EMng 0111 – Electrical Fundamentals I (4)**

Prereq. Math 0130 concurrently or advisor approval.
An introductory course in the study of electricity. Basic definitions of energy and electricity are introduced which lead to studies of resistance, Ohm's law, series and parallel circuits, magnetism, simple meters, inductance, and capacitance. Direct current effects only are studied.

***EMng 0112 – Electrical Fundamentals II (4)**

Prereq. EMng 0111 or advisor approval.
Simple inductance-resistance and capacitance-resistance transient circuits are initially studied. Studies of alternating current fundamentals, phasor algebra, AC circuit analysis, power factor, and resonance complete the course.

***EMng 0121 - Electronics I (3)**

Prereq. EMng 0112 or advisor approval.
A modern introduction to discrete, bipolar solid state electronic devices and basic electronic circuits including small signal amplifiers, transistor biasing, equivalent circuits, electronic unregulated DC power supplies, and special solid state devices.

***EMng 0122 – Electronics II (3)**

Prereq. EMng 0121 or advisor approval.
Continuation of Electronics I. Frequency response, decibels, cascaded amplifiers, feedback amplifiers, power amplifiers, field effect amplifiers, unijunction transistors, control circuits, regulated DC power supplies, and solid state oscillators.

***EMng 0201 – Intro. Electro-Mechanical Systems (3)**

Prereq. EMng 0112, 0101, 0121, Concurrent 0122.
An introduction to systems which use both electrical and mechanical principles. Thermal, hydraulic, pneumatic, vacuum, magnetic and optic systems are utilized to stress the coordinated combination of previously learned concepts. A key course in the program.

EMng 0202 – Mechanical Systems (3)

Prereq. Math 0132 and Phys 0201 or advisor approval.
A study of the fundamental laws of rpm, torque, and displacement in a wide variety of gearing applications along with the analysis of forces or loads acting upon the system. Analysis of stress and strain, strength of materials, friction, torsion and moment of inertia is made.

EMng 0204 – Control Devices (3)

Prereq. EMng 0122 concurrently or advisor approval.
A study of control devices responding to a variety of inputs. These include temperature changes, pressure variations, rates of flow, potentials generated by light energy, moisture conditions, or any one of a number of physical conditions.

***EMng 0205 – Automatic Control Systems (4)**

Prereq. EMng 0204, EMng 0122, EMng 0206 concurrently or advisor approval.
A study of complete electro-mechanical open and closed loop analog and digital systems. The microcomputer and programmable controller are used to interface input and output transducers to build complete automatic control systems. Emphasis is placed on the understanding of interfacing feedback signals to the process control.

***EMng 0206 – Hydraulics and Pneumatics (3)**

A study is made of the function of various basic components of hydraulic and pneumatic sub-systems and methods of combining them to build various systems. The emphasis is on the use of hydraulic and pneumatics for power transmission and for control purposes.

***EMng 0207 – Electro-Mechanical Design (3)**

Prereq. EMng 0101, 0122, 0201, 0204, 0205, 0212 concurrently or advisor approval.
A course to exercise the student's knowledge of electro-mechanical technology. It provides the time and opportunity for students to work on the design, fabrication, assembly and testing of electro-mechanical devices or systems. The purpose is to promote independent study, initiative, and creativity by requiring the student to develop the design with minimal staff supervision.

EMng 0208 – Electro-Mechanical Systems (3)

Prereq. EMng 0101, 0122, 0201, 0204, 0205, 0206, 0211, or advisor approval.
Electro-Mechanical systems are analyzed in detail to show that there are only a few principles involved in extremely complex systems. This course embodies all of the principles which have been considered previously in the program. Thorough understanding of the applied principles is the aim of the course.

EMng 0209 – Robotics (3)

Prereq. EMng 0122, EMng 0202, EMng 0204, and EMng 0205, EMng 0206 concurrently or advisor approval.
A survey course in Robotics. The course studies the types of industrial robots, control schemes, and applications.

***Denotes classes with Lab fees.**

***EMng 0211 – Electronics Logic Circuits I (3)**

Prereq. EMng 0121 or advisor approval.
An introduction to solid state, integrated electronic logic. Practical applications of Boolean algebra, logic gates, binary pulse circuits, number systems, and computer arithmetic.

***EMng 0212 – Electronic Logic Circuits II (3)**

Prereq. EMng 0211 or advisor approval.
Continuation of Logic Circuits I. Integrated circuit applications which include: combinational and sequential logic, printed circuits, counters, registers, decoders, signal converters, and microprocessor based microcomputers.

ROBOTICS TECHNOLOGY (Major)

Robo 0210 – Introduction to Robotics (4)

Introduction to applications in industry; emphasis on types, classifications, types of motion, economic impacts, and safety.

Robo 0211 – Robotic Interfacing (4)

Study of hardware and software for connecting a programmable controller or microprocessor to a robotic arm and interfacing to peripheral machines and equipment.

Robo 0212 – Basic Robotic Applications

In-depth study of low and medium-technology robot concepts, principles, functions, design parameters, and applications with emphasis on developing the technical skills required to specify, install, program and operate point-to-point and controlled path robot systems.

Robo 0213 – Advanced Robotic Applications (4)

Advanced study and training in high-technology robot operations and applications with emphasis on continuous and controlled path robots, programmable logic control systems, and production welding systems and operations. Extended practice in off-line programmable set-up, adjustment, and operation of robotic work cells and materials handling systems.

Robo 0214 – Robotic Maintenance-Servicing

Instruction in servicing and troubleshooting robotic and peripheral automated systems; emphasis on mechanics, hydraulics and associated electrical and electronics.

EMERGENCY MEDICAL TECHNICIAN-PARAMEDIC

EMT-A 0101 – Emergency Victim Care (10)

This is the State of Ohio EMT-A course. Instruction involves assessment of patients suffering from various emergency conditions and techniques used by the EMT-A to manage these conditions. Topics include anatomy and physiology, familiarization with emergency vehicles and equipment, examination techniques, CPR, oxygen therapy and the management of emergencies including shock, medical problems, childbrith, fractures, pediatric and environmental emergencies, bandaging and burn care. Successful completion of this course enables the student to take the State of Ohio EMT-A examination.

***EMTP 0101 – Paramedic Skills I (5)**

This course is designed to take the basic skills and knowledge gained in the basic EMT-A course and expand them in the areas of shock and fluid therapy, body systems and patient assessment, and respiratory emergencies. Advanced skills taught in this course include IV therapy, esophageal obturator airway insertion, and MAST. This course includes DOT Paramedic Program Modules I (Role of EMT), II (Human Systems and Pt. Assessment), III (Shock and Fluid Therapy), and V (Respiratory System) and the administration of subcutaneous epinephrine for allergic reactions to insect stings.

***EMTP 0102 – Paramedic Skills II (3)**

This course emphasizes gaining access to, rescuing and transporting a patient. The recognition and control of certain hazards, such as explosive material, downed electrical wires, toxic gasses, and radiation, are included. This course also deals with FCC regulations with respect to the use of radio equipment, protocols, and procedures for the transfer of information to the supervising physician. This course includes DOT Paramedic Program Modules XIV (Extraction and Rescue Techniques) and XV (Telemetry & Communication).

EMTP 0103 -- Paramedic Skills III (10)

This course has an intensive emergency coronary care emphasis. Although much of the emphasis is placed on rhythm interpretation, this course also deals with pathophysiology, symptomatology, and emergency treatment of coronary artery disease, MI, angina pectoris, congestive heart failure, and any other cardiac emergency. This course is also designed to introduce the student to the general groups of drugs and the classification of each. Therapeutic effect, indications, contraindications, correct dosage, and side effects of specific drugs used in emergency situations is taught with emphasis placed on those drugs used in cardiac emergencies. This course includes DOT Paramedic Program Modules IV (General Pharmacology), V (Advanced Airway Management), and VI (Cardiovascular System).

EMTP 0104 -- Paramedic Skills IV (10)

This course is designed to take basic skills and knowledge already acquired by the student and build on them in the areas of Medical Emergencies, Obstetric/Gyn Emergencies, Musculoskeletal and Soft Tissue Injuries, and Pediatrics and Neonatal Transport. Emphasis is also placed on clinical and on-squad experience where the student will be able to interrelate all he has learned. This course includes DOT Paramedic Program Modules VII (Central Nervous System), VIII (Soft Tissue Injuries), IX (Musculoskeletal System), X (Medical Emergencies), XI (Obstetric/Gyn Emergencies), XII (Pediatrics & Neonatal Transport), and XIII (Emergency Care of Emotionally Disturbed).

ENGINEERING***Engr 0101 -- First Aid & Safety (1)**

The Standard and Personal Safety American Red Cross first aid course, involving CPR, bleeding control, poisoning treatment, proper methods of transportation, bandaging and splinting. The course involves lectures, practical work and group work. The standard certificate is granted if at least 20 hours of classwork is completed and all requirements met.

Engr 0209 -- Industrial Supervision (3)

Prereq. Second year course only or advisor approval. Training in the methods of handling management problems, setting policies, personnel problems, etc. To equip the student for possible supervisory positions.

ENGINEERING DRAWING**EnDr 0100 -- Blueprint Reading (2)**

This course is designed to provide the student with fundamental knowledge of blueprints and engineering drawings and some skill in the reading and interpretation of drawings. It includes engineering drawings and blueprints; mechanical drawings; lines used on drawings; scales; dimensions; fits and finish marks; surface roughness and lay, threads, rivets; tapers; and examples of blueprint reading.

***EnDr 0101 -- Engineering Drawing I (3)**

This is a basic course for students who have had little or no experience in engineering drawing. The principle objective is to acquire a basic understanding of fundamental principles of engineering drawing through actual experience in both freehand sketching and scaled machine drawings. Subject areas relating to this include orthographic, multiview, drawings, geometric constructions, dimensioning practice, sectional views, and auxiliary views.

***EnDr 0102 -- Engineering Drawing II (3)**

Prereq. EnDr 0101 or advisor approval.

The student is introduced to the techniques and principles employed in structural drawing, including structural-steel, timber construction, quantity takeoff, topographic work with emphasis on contour platting. The course is intended to train the student in the drafting methods used in civil engineering.

***EnDr 0103 -- Engineering Drawing III (3)**

Prereq. EnDr 0101 and 0102 advisor approval.

The purpose of this course is to enable the student to apply basic principles of engineering drawing, which were learned in prior courses to solve practical problems encountered in civil engineering. Applied descriptive geometry is used to determine the relationship between points, lines and surfaces in space. Study areas also include revolutions, vector geometry, and intersections of lines and surfaces.

ENGLISH

Students enrolled in programs leading to the Associate Degree of Applied Business or the Associate Degree of Applied Science must take 3 courses (12 credit hours) from the following courses:

English 0111, 0112, 0115, 0140A, 140B, 140C, and 140D.

In addition, Technical Writing and Speech may be required in some technical programs.

Students enrolled in programs leading to the Associate of Arts Degree or the Associate Degree of Individualized Studies must complete 2 courses (8 credit hours) from the following courses:

English 0111, 0112, 0115, 140A, 140B, 140C and 140D.

In addition, 3 hours of speech is required for students completing the Associate of Arts Degree or the Associate of Science Degree.

Students with serious deficiencies in reading and composition should take Engl 0100A before taking English 0111, 0112, 0115, 140A, 140B, 140C, and 140D.

Engl 0004 -- Reading Development (2) F, W, Sp

Emphasis is placed on improving reading speed and comprehension. Reading problems are identified and attacked: single word fixation, involuntary regression, subvocalization, and inability to concentrate. (2 hr. lec. per wk for 5 wks.)

Engl 0090 -- Vocabulary Development (2) F, W, Sp

Emphasis is placed upon development of skills necessary for building vocabulary.

Engl 0100A -- Fundamental Writing (4) F,W, Sp,S

This is a transitional course for students who feel they have a basic weakness in reading or writing skills or who have been away from classroom work for a number of years and recognize the need for a better foundation for more advanced classroom work. Areas of concentration are (1) reading comprehension, (2) vocabulary development, (3) sentence and paragraph structure.

***Engl 0111 -- Contemporary Writing Skills I (4)**

F,W,Sp,S

This course introduces students to the demands of an approaches to narration, description, exposition, and argumentation. Key concepts of unity, coherence, language choice, and development are emphasized. Students are asked to write well-developed paragraphs and essays.

SPECIAL REQUIREMENTS: Before students can receive passing grades for English 0111, they must score 65 on the Essential Skills Test, a one-hundred item test covering basic grammatical and sentence structure concepts. Students scoring 50 or below on the first Essential Skills Test will NOT be permitted to take English 0111. Students scoring between 51 and 64 will have two additional attempts to pass the test during the quarter. **BECAUSE OF THE IMPORTANCE OF THIS TEST, THE ENGLISH DEPARTMENT STRONGLY RECOMMENDS THAT STUDENTS TAKE THE ESSENTIAL SKILLS TEST IN THE LEARNING CENTER PRIOR TO ENROLLING FOR ENGLISH 0111.**

*Denotes classes with Lab fees.

ENgl 0112 -- Contemporary Writing Skills II(4)F,W,Sp,S

This course continues the emphasis on basic skills for writing clearly and effectively. This course assists the student in understanding the rhetorical devices which contribute to good writing. Fundamentals of writing research papers are included. (4 lec. 1 lab.)

Engl 0115 -- Composition and Literature (4) F,W,Sp,S

This writing course requires that students write essays in which topics are generated by a general study of literary genres. Students will read short stories, poetry, drama, and novels; they will then be required to write about ideas found therein as well as to analyze certain basic aspects of the literary work. The course aims to polish student writing skills, to develop their analytical abilities, and to acquaint them with a wide variety of literary works.

Engl 0121 -- Technical Writing (3) F,W,Sp,S

Prereq. Sophomore Standing in a Technical Program. Technical Writing stresses clarity in technical communications with emphasis on the improvement of writing style and the mastery of exact organization. Types of writing include reports (formal and informal), proposals, resume, and specifications. **BECAUSE OF THE TEXTBOOK AND SPECIFIC WRITING ASSIGNMENTS, THIS COURSE IS NOT OPENED TO LIBERAL ARTS STUDENTS.**

Engl 0140 -- Topics in English Language and Literature

F, W, Sp, S
Fr. and Soph. Each course focuses on literature, mostly literature of the 20th century considering humanistic problems, themes, or issues important today. Each course includes several literary genres (novels, short stories, poems, plays, and essays). The aims are to improve the students abilities in appreciative and analytical reading, clear thinking, discussion, careful persuasive, and imaginative writing. 4 lec. 1 lab.

- 140-A Literature of Initiation and Experience F,W 4 hrs.
- 140-B Feminine Images of Literature F,W,Sp 4 hrs.
- 140-C Literature of Imagination F,W 4 hrs.
- 140-D Literature of Black Authors Sp 4 hrs.

****Engl 0200 -- Introduction to Literature (4) Sp**

This course introduces the student to the three genres of literature: fiction, poetry, and drama. It emphasizes skills, techniques, and the language of interpretation of literature. It provides students with information which will help them in further literature courses or in other purposeful or pleasurable reading.

Engl 0201 -- Introduction to Fiction (4) F

Prereq. 4 hrs. above 100.
This course provides a study of the forms and techniques of the novel, novella, and the short story.

****Engl 0202 -- Introduction to Poetry (4)**

Prereq. 4 hrs. above 100.
The course requires an intensive reading of selected poems from all periods of English and American Literature and the study of poetic forms and techniques.

- 202-A Survey of British Poetry: Part I 4 hrs.
- 202-B Survey of British Poetry: Part II 4 hrs.
- 202-C Survey of American Poetry: F Part I 4 hrs.
- 202-D Survey of American Poetry: Part II 4 hrs.

****Engl 0203 -- Introduction to Drama (4) F**

Prereq. 4 hrs. above 100.
Modern dramatic forms are analyzed. Selections include translations of world masterpieces as well as English and American drama.

****Engl 0204 -- Comparative Literature I (4)**

Prereq. 4 hrs. above 100.
Selected classical texts as well as modern writings in the classical style are used. The purpose is to recognize and define classical sensibility in western literature.

****Engl 0205 -- Comparative Literature II (4) Sp**

Prereq. 4 hrs. above 100.
This course deals with the aesthetic and philosophical concepts that distinguish the Romantic tradition in western literature. Primarily the works of German, English and French authors are studied.

****Engl 0206 -- Comparative Literature III (4) W**

Prereq. 4 hrs. above 100.
Selected literary works are used which provide background for and examples of modern writing in today's world.

****Engl 0225 -- Introduction to American Literature (4)**

Prereq. 8 hrs. above 100.
Themes and ideas in 19th and 20th centuries of American literature are studied.

****Engl 0226 -- Intr. to English Literature (4) W, Sp**

Prereq. 8 hrs. above 100.
Themes and ideas in 19th and 20th Centuries of American literature are studied.

****Engl 0232 -- Creative Writing -- Poetry (3 hrs) F,Sp.**

Prereq. 8 hrs. above 100.
Creative writing -- Poetry is a course for students interested in learning the techniques of poetic expression. Students will have experiences writing conventional blank and free verse forms. (Not offered Winter Qtr.)

****Engl 0240 -- Screenwriting (3)**

The course will teach the basic elements of writing for the movies with a focus on either adaptation or original screenplays. Students will write a screenplay as well as study professional screenplays.

****Engl 0245 -- Fiction Writing (3)**

The course will teach the basic elements of fiction writing. Students will write several short stories as well as study the works of professional writers.

Engl 0250 - Advanced Composition (4)

Prereq. (8 hours from either English 0111, 0112 or the 140 series)
The purpose of this course is to increase understanding and applied skills in the writing of exposition. Essential concepts of rhetoric and style will be emphasized.

****Engl 0288 -- Poetry Workshop (3) W**

Prereq. Engl 0232.
Poetry Workshop is an advanced course in the writing of poetry. The emphasis will be placed on critiquing the writing of students in the class and on marketing for publication. (Offered winter and summer quarters.)

****Engl 0290A -- Topics in English (2)**

Study of various topics in English otherwise not available to students.

****Engl 0290B -- Topics in English (3)**

Study of various topics in English otherwise not available to students.

FRENCH

****Fren 0111 -- Elementary French I (4) F**

Beginning course of a three quarter, first year sequence. Basic grammatical concepts and patterns. Emphasis on development of reading, listening, comprehension, speaking, and writing skills. Basic text and workbook used.

****Fren 0112 -- Elementary French II (4) W**

Prereq. Fren 0111.
Continuation of Fren 0111. Basic text, workbook, and readings used.

****Fren 0113 -- Elementary French II (4) Sp**

Prereq. Fren 0112.
Continuation of Fren 0112. Basic Text, workbook, and readings used.

****Fren 0211 -- Intermediate French I (4)**

Prereq. Fren 0113.
Includes an intensive review of grammar and sentence structure, and introduces the student to selected readings in French literature. Oral expression is stressed.

****Fren 0212 -- Intermediate French II (4)**

Prereq. 0211 or instructor's approval.
Continued intensive review of grammar is given. Sight translation is stressed. Conversational drills include advanced idiomatic expressions.

****Fren 0213 -- Intermediate French III (4)**

Prereq. 212 or instructor's approval.
Advanced vocabulary and sentence structure are stressed. Emphasis is on writing and free composition.

*Denotes classes with Lab fees.

**Offered on demand only.

GEOGRAPHY

- Geog 0101 – Physical Geography (5) F**
Systematic survey of earth-sun relationships, land forms, climate, soils and natural vegetation. 4 lec. 2 labs.
- Geog 0121 – Cultural Geography (4) F,W,Sp**
Systematic survey of settlement, population, and economic activities that are significant to man.
- Geog 0130 – Economic Geography (4) W**
Systematic survey of locational economic patterns and their interrelationships.
- Geog 0201 – Environmental and Man (4) F**
Geographic survey of environmental changes caused by man's activities. Focus on pollution of air and water and destruction of plant and animals communities.
- **Geog 0230 – Urban Geography (4) F,W**
Study of city function, patterns, past and current problems confronting the city including planning, zoning, housing, and urban renewal.
- **Geog 0240 – Geography of Eastern United States (3)**
Systematic and regional survey of Eastern United States. Emphasis on cultural and economic development.
- **Geog 0241 – Geography of Western United States**
Systematic and regional survey of Western United States. Emphasis on cultural and economic development.
- Geog 0242 – Geography of Ohio (4) Sp**
Detailed regional study of physical background, settlement, and economic development.
- Geog 0243 – Geography of Appalachia (4) Sp**
A study of Appalachia from a geographical approach including a detailed examination of physical aspects (climate, soil, vegetation, minerals, and water resources), historical development both past and present, settlement patterns, and economic patterns of the region.

GEOLOGY

- *Geol 0101 – Physical I (4) F**
A study of the Earth's basic materials and their formation. Volcanism, Metamorphism, and sedimentation, with the rocks evolving from each of these processes and the natural resource minerals associated with each process. 3 lec. 3 lab.
- *Geol 0102 – Physical II (4)**
Continuation of 101 as a study of the process affecting each of the above including crystallization, mapping, weathering, erosion, transportation of materials, glaciation, and mountain building. 3 lec. 2 lab.
- *Geol 0103 – Historical I (4) Sp.**
Basic study of the Earth's history of formation. Paleo studies of plants, animals and landforms associated with each Geologic age. 3 lec. 2 lab
- *Geol 0201-Common Rock, Minerals & Fossils (4)F,W,Sp**
Identification of rocks, minerals and fossils can only be encountered on field trips, vacations, and in the immediate area of Scioto County. Not open to students with credit in 101 or 102. 4 lec.

GOVERNMENT

- Govt 0101 – National Government (4) F**
Constitutional basis and development; political processes, structures, and functions of the national government.
- Govt 0102 – National Policy Issues (4) W,Sp**
Study of the national government's policies in certain key areas—income support, health care, civil rights, national defense, etc.

*Denotes classes with Lab fees.

**Offered on demand only.

Govt 0103 – The United States in World Affairs (4)

This course introduces students to some major world political, military, and economic problems confronting the United States. The course examines the historical development and current status of these problems.

**Govt 0201 – Urban Politics (4)

Prereq. 101 or permission.
Impact of urbanization on structure and functions of municipalities; emphasis on utilization of the political processes to resolve community conflict.

**Govt 0203 – Politics in the American States (4)

Prereq. 101 or permission.
Comparative analysis of state political systems; emphasis on structure and process of policy making of the states within the federal context.

**Govt 0205 – Politics of Appalachia (4)

Prereq. 101 or permission.
Analysis of political processes in Appalachia; emphasis on the relationship between politics and economic development of the region. Major policies considered; mining and its regulation; War on Poverty in Appalachia; politics of taxation in the region.

**Govt 0290 – Pro Seminar in Practical Politics (4)

Structure and operations of American political organizations; techniques of political campaigning.

**Govt 0299A – Current Political Topics (3-4)

Prereq. 12-15 hrs. govt. or permission.
Special topics in selected policy areas, to be announced.

**Govt 299B – Current Political Topics (4)

Prereq. 12-15 hrs. govt. or permission.
Special topics in selected policy areas, to be announced.

HEALTH, PHYSICAL EDUCATION & RECREATION

HPER – Physical Education Activities (1)F,W,Sp,S

Basic rules and fundamentals for each activity are stressed. Special emphasis on strategies, team, and individual play. An appreciation of each of the activities is developed to carry over into later life.

- | | |
|----------------------------|-----------------------------|
| 110-A Archery | 0111 Advanced Tennis |
| 110-B Badminton | 111-A Begin. Racquetball |
| 110-C Basketball | 111-B Intermed. Racquetball |
| 110-D Bowling | 111-C Adv. Racquetball |
| 110-E Condit. & Wt. Train. | 111-F Yoga |
| 110-F Begin. Golf | 111-G Sailing |
| 110-G Intermed. Golf | 111-I Judo |
| 110-H Caving | 111-J Women's Self-defense |
| 110-I Karate | 111-O Water Volleyball |
| 110-J Billiards | 111-U Life Guard Training |
| 110-K Dance | 111-V Fitness Swimming |
| 110-L Canoeing | 111-W Swimmercize |
| 110-M Begin. Tennis | 111-X Water Safety Inst. |
| 110-N Intermed. Tennis | 111-Y Adv. Swimming |
| 110-O Volleyball | 112 Aerobic Dance/Swim |
| 110-P Backpacking | |
| 110-Q Cycling | |
| 110-R Rock Climbing | |
| 110-S Softball | |
| 110-T Orienteering | |
| 110-U Skiing | |
| 110-V Swimming | |
| 110-W Intermed. Swimming | |
| 110-X Life Saving | |
| 110-Y Jogging | |
| 110-Z Diving | |

HPER 0200 – Introduction to Recreation F

A study of the general concepts of recreation including definitions, history, legal basis, current development, and present importance of recreation in our society. Management and Administration of Parks and Recreation organizations is also examined. Laboratory work introduces the students to a number of recreation experiences 3 lec. 3 lab.

HPER 0202- Personal & Community Health (4) F,W,Sp

Fundamentals, practices and appreciation of healthful living. Designed to incorporate the principles of scientific health information and promote desirable attitudes and practices for individuals, parents, and teachers.

HPER 0204 -- Drugs, Alcohol, and Tobacco (4) F,W,Sp
In-depth study of contemporary issues--drugs, alcohol, and tobacco. The nature of the action and motivational forces that influence their use and procedures to provide effective education in the school and the home.

HPER 0227 -- First Aid (4) F,W,Sp
The Standard and Personal Safety American Red Cross first aid course, involving CPR, bleeding control, poisoning treatment, proper methods of transportation, bandaging and splinting. The course involves lectures, practical work and group work. The standard certificate is granted if at least 20 hours of classwork are completed and all requirements are met.

HPER 0234-Laboratory Experience in Phys. Ed. (2) F,W,Sp
Prereq. P.E. Majors.
Observation and research in physical education in the elementary and secondary levels.

HPER 0235 -- Orientation to Recreation Employment(1) W
Job application, resume writing, interviewing, and contact follow-up are techniques for securing employment that this course presents. Other elements presented include letter writing, job hunting strategies, and potential employers. 1 lec. 1 lab.

HPER 0236 -- Field Experience in Recreation (2-6)
Designed to provide the recreation student with a supervised work experience while gaining skills and knowledge in the field of recreation.

HPER 0239 -- Athletic Officiating - Football (3) F
Rules, mechanics, and procedures in officiating. Practice under actual game conditions. State certification upon successful completion of state examination. OHSAA fee for certification and books.

HPER 0240 -- Athletic Officiating - Basketball (3) F
Rules, mechanics, and procedures in officiating. Practice under actual game conditions. State certification upon successful completion of state examination. OHSSA fee for certification and books.

HPER 0241 -- Athletic Officiating -- Baseball (3) Sp
Rules, mechanics, and procedures in officiating. Practice under actual game conditions. State certification upon successful completion of state examination. OHSAA fee for certification and books.

HPER 0250 -- Recreation Leadership (4) F,Sp
Lectures, discussion and group dynamics in social recreation. Dynamics involved include games, sports skills, dance, arts and crafts, nature studies, setting up various types of tournaments and practical work in community organizations.

****HPER 0255 -- Aquatic Recreation Leadership (4) S**
Study of water-related recreational facilities such as marinas, swimming areas, and fishing. Consideration will be given to boating laws, operation, and safety and all forms of water recreation. 2 lec. 6 lab.

HPER 0260 -- Outdoor Recreation (4)
Prereq. or concurrent or permission of instructor. Intro. to Recreation.
This course presents several aspects of outdoor recreation. Included in lecture material are concepts of feasibility, interpretation, and personal recreation equipment use and care. Laboratory exercises introduce the student and improve his skills, in each of the areas of study. 2 lec. 6 lab.

HPER 0261 -- Intro. to Phys. Education & Health (2) F
Prereq. P.E. Majors/Minors
Lectures, discussion, and visual aids pertaining to scope and content of a professional physical educator.

*Denotes classes with Lab fees.

**Offered on demand only.

HPER 0270 -- Physical Education for the Elementary Classroom (4) F,W, Sp
Lab and lecture experience for teaching physical education in the elementary schools. Lab experience revolves around methods of presenting movement education in the primary grades and the use of games, self-testing activities, rhythmic and innovative devices in helping to meet general and specific objectives in the intermediate grades. Designed for elementary education majors.

HPER 0281 -- Admin. of Intramural Athletics (4)W,Sp
Prereq. Ed. & P.E. Majors/Minors.
Organizing and administering a program of intramural sports of all age levels. Designed especially for elementary and secondary teachers.

HPER 0295 -- Independent Study (2) F,W,Sp
Prereq. P.E. Majors
Study, observation and research in selected physical education fields. Under the direction of HPER faculty member.

HISTORY

Hist 0111 -- American History to 1828 (4) (F)
Exploration and colonization; political, social and economic life of the English colonies to 1763; struggle for independence; constitutional development and the Federalist era; Jeffersonian democracy and the War of 1812; rise of Jackson.

Hist 0112 -- American History, 1828-1900 (4) W
Jacksonian democracy; territorial expansion; growth of sectionalism; Civil War; reconstruction; impact of expanded Industrial Revolution.

Hist 0113 -- American History Since 1900 (4) Sp
Progressive movement, WWI; Republican prosperity; the Great Depression and the New Deal; WW II and problems of the cold war era; turmoil and reform in the 1960's; crisis of confidence in the 1970's and renewal in 1980's

Hist 0201 -- Western Civilization from Antiquity to the Renaissance (4)
Birth of civilization in Near East; culture of Greece and Rome; establishment of Christianity; formation and evolution of medieval European society; Renaissance.

Hist 0202 -- Western Civilization from the Renaissance to the French Revolution (4) F
Renaissance; rise of nation state system; Reformation; commercial and scientific revolution; absolutism and constitutionalism; Enlightenment and the French Revolution.

Hist 0203 -- Western Civilization from 1815 to Present(4)W
Industrial Revolution; spread of liberalism, nationalism and socialism; rise and fall of German bid for power in two world wars; Russian and Chinese revolutions and international communism; collapse of European empires in Africa and Asia; Cold War and the new Europe.

****Hist 0290A -- Topics in History (2)**

****Hist 0290B -- Topics in History (3)**

****Hist 0290C -- Topics in History (4)**

This course will provide students and the instructor the opportunity to explore topics of special interest to them. Depending on enrollment, the course may be conducted as a traditional lecture/discussion class, special projects or directed readings.

HUMANITIES

Humn 0101 -- Tradition of Great Books (4) F
Classics of ancient Greek, Roman and Hebrew are studied to give an understanding of western European cultural heritage. There is discussion, practice in critical thinking and in reading and writing about these great works.

Humn 0102 -- Tradition of Great Books (4) W
Classics studied are from the ancient world, the middle ages, the age of reason, and the Romantic period. See Humn 101 for further description.

Humn 0103 -- Tradition of Great Books (4) Sp
Classics of the ancient world, the middle ages and writings of more recent times including the present are studied. See Humn101 for further details.

INSTRUMENTATION

***IMST 0101 – DC Circuits and Machines (4)**

An introduction to electricity. Course content includes resistance, voltage, current, Ohm's Law, series and parallel circuits, magnetism, meters, power, inductance, and capacitance. DC motors and generators are also studied.

***IMST 0102 – AC Circuits and Machines (4)**

Prereq. DC Circuits and Machines
Basic R-L, R-C transient circuits are initially studied. Alternating current fundamentals, AC circuit analysis, power factor and AC power, and AC machines comprise the major content of the course.

***IMST 0103 – Industrial Electricity (3)**

Prereq. IMST 0101 and IMST 0102.
This course is designed to familiarize the student with the National Electrical Code, to familiarize the student with practice used in industry to installing conduit, conduit fittings, electrical conductors, switching equipment, overload protection, and equipment.

IMST 0111 – Industrial Electronics (4)

Prereq. IMST 0101, 0102.
This course is designed to familiarize the student with industrial electronic circuits and includes bipolar electronic devices, amplifiers, DC power supplies, and integrated circuits.

***IMST 0201 – Instrumentation Electronics (5)**

Prereq. IMST 0111.
This course is designed to familiarize the student with the electronic equipment and devices found in electronic instrumentation. It usually includes grid-controlled rectifiers, nuclear particles, radiation detectors, radiation detector characteristics, high voltage power supplies, commercial scalars, input and output transducers, recording devices, ultrasonics, mechanical linkages, synchros, positions detectors and controls, carrier current transmission, telemetering and remote control.

***IMST 0202 – Programmable Controllers I (4)**

Prereq. IMST 0111 and advisor approval.
The student is introduced to basic industrial control circuits and schemes using the programmable controller as a control device. The student will be instructed on the proper methods of programming the controller for the desired scheme. 5 lab hrs.

***IMST 0203 – Programmable Controllers II (4)**

Prereq. IMST 0202.
This is a continuation of Programmable Controllers I. This course will teach the student more advanced control using the controller as a proportional controller. The student will learn the proper methods of interfacing to the programmable controller to the controlled device and peripheral devices. 5 lab hrs.

IMST 0211 – Fluid Mechanics I (4)

Prereq. Math 0101, Physics 0201.
This course acquaints the student with the physical properties of gases and liquids and their behavior under various conditions. It includes atmospheric pressure; intensity of pressure; energy of liquids; properties of gases and liquids; various laws and principles governing gases and liquids; and pneumatic and hydraulic machines and devices.

IMST 0212 – Fluid Mechanics II (4)

Prereq. IMST 0211.
This is a continuation of Fluid Mechanics I and stresses the application of working formulas such as the Bernoulli and momentum equations as they relate to the physical properties of gases and liquids; the flow of fluid in pipes; the measurement of fluid flow; the multiplication of fluid force; and the calculation of pipe sizes, pressures developed, and pump deliveries.

IMST 0221 – Instrument Fundamentals I (4)

This course is designed to provide the student with a basic knowledge of instruments. It includes an introduction to the field of work, shop and industrial safety practices; instrument cleaning and lubricating; care and use of small hand and power tools; soldering techniques; instrument charts; and types of instruments used in industry.

IMST 0222 – Instrument Fundamentals II (4)

Prereq. IMST 0221.
This is a continuation of Instrument Fundamentals I. It includes reading and interpreting instrumentation drawings; fundamentals of measurement and control devices; final control elements; and an introduction to standards and calibration.

IMST 0223 – Measurement Principles (4)

This course introduces the student to industrial methods of measuring pressure and temperature with various types of gauges and other devices. It includes the basic theory of operation, construction, installation, normal care and handling, operational checks and calibration of gauges, manometers, and nonelectric thermometers.

IMST 0224 – Industrial Control I (4)

Prereq. IMST 0221, 0211.
The student is introduced to basic industrial control circuits and schemes. This course includes pneumatic, hydraulic, electrical, and electronic control.

IMST 0225 – Industrial Control II (4)

Prereq. IMST 0224.
This course is to familiarize the student on the procedures of changing the PC10 process plant from analog to digital control, using a programmable controller as the digital control device.

JOURNALISM

****Jour 0105 – Introduction to Mass Communications (4)**

Introduces all forms of mass communication including newspapers, magazines, radio-television, book publishing, public relations, advertising and photojournalism. Begins with an analysis of communication process and ends with media career opportunities.

****Jour 0231 – News Reporting (4) F,W,Sp**

Prereq. Typing proficiency, passage of English proficiency test. Methods of gathering and evaluating news and writing typical news stories. Practice work covering assignments and preparing copy.

Jour 0289 – Magazine Feature Writing (4)

The course covers writing and marketing freelance magazine articles of various types including personal, narrative, informative, how-to, historical, personality sketch, investigative and interpretative. Students learn how to generate ideas, get photos, propose article ideas to editors and survey regional and specialty magazine markets.

Jour 0290 – Topics in Journalism (3)

Study in various topics in journalism otherwise not available to students.

LINGUISTICS

Linq 0270 – The Nature of Language (5) F,Sp

Nontechnical investigation into basic nature of human language.

MATHEMATICS

Three Track System in Mathematics for Engineering Technology Students

Engineering technology students who haven't had high school algebra or with a low ACT score in mathematics should take Math 100A to give them background for the required sequence of Math 0130, 0131, and 0132. A student with high school algebra and geometry and an average ACT score in mathematics should take Math 0130, 0131, and 0132. A student with three or four years of high school mathematics and an ACT score above the 75th percentile of the national norm may have prerequisites for Math 0130, 0131, 0132, or 0201 waived, with the approval of the math department and start at the level appropriate for him.

Students who are unsure of their mathematics aptitude should see the Director of the Learning Center, Business Annex, to make arrangements to take a mathematics assessment test before enrolling in a mathematics class. Prerequisites should be followed for courses in sequence.

*Denotes classes with Lab fees.

**Offered on demand only.

Math 0100A -- Fundamental Math (4) F,W,Sp,S

A brief review of the fundamentals used in arithmetic including addition, subtraction, multiplication, and division as applied to integers and rational numbers. An introduction to the elementary concepts of basic algebra with emphasis on manipulations of algebra expressions, solutions to all types of equations, graphs and formula rearrangements. (Does not count toward a degree).

****Math 0100B -- Math Appreciation (4) F
Offered on demand only.**

A course for students who do not need mathematics as a tool. Its purpose is to foster an appreciation of mathematics through involvement in areas of mathematics not ordinarily covered in more rigorous courses. Brain teasers, probability, topology, mathematics in art and history are possible topics but topics may vary with the instructor.
*Check transferability of credit.

Math 0101 -- Basic Algebra (4) F,W,Sp

This course is for students with a good background in arithmetic but little or no background in algebra. It includes operations with integers, numbers, properties, scientific notation, solving and graphing linear equations and inequalities, operations with polynomials, laws of exponents, and laws of radicals.

Math 0108 -- Allied Health Math I (4) F

Basic properties of Integers, Basic Algebra, Linear equations one-unknown, Exponents and Logarithms, Right Triangle Trigonometry, Graphing Linear Equations.

Math 0109 -- Allied Health Math II (4) W

Ratios and Proportions, Arithmetic and Geometric Progressions, Quadratic Equations and Graphing Quadratic Functions, Basic Statistical Concepts, Introduction to micro-computer programming.

Math 0120 -- Elementary Topics in Math I (5) F,Sp

Prereq. 2 yrs. h.s. math.
Sets; concepts of logic; mathematical systems; systems of numeration; basic ideas about integers, rational numbers and real numbers.

Math 0121 -- Elementary Topics in Math II (5) W

Prereq. 2 yrs. h.s. math., including algebra.
Basic algebraic work with equations and inequalities in one and two unknowns; nonmetric and metric geometry; coordinate geometry; introduction to statistics and probability.

Math 0125 -- Business Mathematics (4) F,W, Sp

Brief review of arithmetic with emphasis on estimating answers. Simple algebra skills. Applications in the personal and business world including reconciliation of a checking account, markup, real estate taxes, depreciation, payroll, and payroll deductions, inventory valuation, and simple and compound interest on investments and loans. Use of calculators and microcomputers.

Math 0130 -- College Algebra I (4) F,W,Sp

Prereq. Mastery of at least 1 year of h.s. algebra or Basic Algebra.
Integers; Powers of Ten; Scientific Notation; Review of Algebraic Expressions and Operation; Dimensional Analysis; Linear Equations in one and two variables, including graphing; Exponents and Radicals; Right Triangle Trigonometry; Law of Sines and Law of Cosines Applications; Basic Properties of Vector.

Math 0131 -- College Algebra II (4) F,W,Sp

Prereq. Mastery of Algebra I or equivalent.
Quadratic Equations, one unknown; Graphing Quadratic Equations, Identification and Approximation of Roots; Exponentials and Logarithms; Binomial Expressions and Progressions; The j-operator Vectors; Review Oblique Triangle Solutions.

Math 0132 -- Trigonometry & Analytic Geometry (4)F,W,Sp

Prereq. Mastery of Algebra II or h.s. equivalent.
Solving inequalities, linear and quadratic; Graphing Trigonometric Functions; Polar Coordinates; Trigonometric Identities; Trigonometric Equations; A study of the basic properties of the conic sections.

*Denotes classes with Lab fees.

**Offered on demand only.

Math 0150 -- Elementary Statistics for the Social & Behavioral Sciences (4) F,W

Prereq. 3 yrs. of h.s. math or Algebra I and either Govt. 101, Psy. 101, or Soc. 101. (Not for mathematics majors).
Treatment and presentation of quantitative social and behavioral data; measures of central tendency; data distribution; association and correlation; sampling, estimations, and simple tests of significance.

Math 0155 -- Business Statistics (4) W,Sp

Prereq. Math 0101 or permission.
An introduction to the vocabulary, concepts, presentation, and formulas of statistics as applied to business. Calculators and computers are incorporated into the course. Averages, measures of dispersion, understanding proper and improper uses of statistics, and probability and sampling theory, including tests of significance.

Math 0201 -- Calculus I (5) F,W,Sp

Prereq. 4 years of high school math (including trigonometry) or Math 130, Math 131, and Math 132.
Functions and graphs; simple sequences; limits; differentiation and integration of algebraic functions; mean-value theorem; maxima and minima.

Math 0202 -- Calculus II (5) F,W,Sp

Prereq. Calculus I.
Differentiation and integration of logarithmic, exponential, trigonometric and hyperbolic functions; techniques of integration; applications of the definite integral; L'Hospital's rule; improper integrals.

Math 0203 -- Calculus III (5) Sp

Prereq. Calculus II.
Sequences and series; Taylor series; vectors; vector calculus; functions of several variables; partial derivatives; gradients; multiple integrals.

MEDICAL LABORATORY TECHNICIAN**MLTC 0111 -- Medical Laboratory Orientation I (1)**

To introduce the student to the profession of medical laboratory technology and to the medical terminology associated with medical laboratory sciences. 1 lec. 1 lab.

MLTC 0112 -- Medical Laboratory Orientation II (1)

Prereq. MLTC 0111.
Introduction to basic laboratory procedures. Emphasis will be placed on laboratory safety, bookkeeping, blood collection, pipetting and the use of basic laboratory instruments, such as microscope, centrifuge, analytical balance, spectrophotometer, etc. 1 lec. 1 lab.

***MLTC 0201 -- Urinalysis (3)**

Physical, chemical and microscopic examination of urine. Theory and applications of various laboratory tests in relation to kidney function. Brief discussion of other important body fluids. 2 lec. 3 lab.

***MLTC 0202 -- Immunoserology (4)**

Prereq. Biol 0235A.
Introduction to basic immunology with emphasis on the principles and applications of serological techniques in diagnostic tests. 3 lec. 3 labs.

***MLTC 0203 -- Blood Banking (4)**

Prereq. MLTC 0202.
Lectures and laboratory procedures in blood banking. Principles of blood grouping and human blood groups inheritance. Routine procedures for pretransfusion testing, antibody screening and identification. Donor selection, blood collection and processing will be discussed. Hemolytic diseases of the newborn, preparations of blood components, their storage and utilization will also be introduced.

***MLTC 0204 -- Parasitology (1)**

Prereq. Biol 0235A.
Introduction to medically important human parasites. Emphasis will be placed on collection, preservation and laboratory identification. 1 lec. 2 lab.

***MLTC 0205 -- Mycology (1)**

Prereq. Biol 0235A.
Introduction to medically important fungi, the diseases they cause, and their laboratory diagnosis. 1 lec. 2 lab.

- *MLTC 0207 – Clinical Bacteriology (5)**
Prereq. Biol 0235A
Diagnostic procedures for identification of medically important bacteria. Emphasis will be placed upon staining, cultural, biochemical and serological characteristics of various pathogenic bacteria. 3 lec. 6 lab.
- *MLTC 0209 – Hematology I (4)**
Basic laboratory methods in hematology, including cell counting, hemoglobinometry, cell morphology, etc. Detailed studies of blood cell maturation and development, abnormalities in peripheral blood and in bone marrow with emphasis on red cells and anemias. 2 lec. 6 lab.
- *MLTC 0210 – Hematology II (4)**
Prereq. MLTC 0209.
Continuation of Hematology I with emphasis on white cells, leukemias and special procedures in the study of blood diseases. Detailed study of hemostatic mechanism and hemorrhagic disorders, as well as their laboratory evaluations, are included. 2 lec. 6 lab.
- *MLTC 0211 – Instrumentation (4)**
Prereq. Chem 0123.
Introduction to instrumentation in the clinical laboratory. Emphasis is placed upon the theory of operation, essential components, mechanism of operation and applications of various laboratory instruments such as spectrophotometer, fluorometer, atomic absorption spectrophotometer, flame emission photometer, coulometric titrator, automated analyzer, etc. 2 lec. 6 lab.
- *MLTC 0212 – Clinical Chemistry I (4)**
Prereq. MLTC 0211.
Principles, practices and techniques of analysis of chemical components in serum, as well as other body fluids are studied. Emphasis is placed on the specific chemical reactions and/or analytical principles, sources of error, quality control, practical application and theoretical aspects of the above procedures as related to normal and abnormal states. 2 lec. 6 lab.
- *MLTC 0213 – Clinical Chemistry II (4)**
Prereq. MLTC 0212.
Continuation of Clinical Chemistry I, MLTC 0212, 2 lec. 6 lab.
- *MLTC 0220 – Clinical Practicum (13)**
Prereq. Completion of all required MLT courses with a minimum of "C" in each course and a minimum of 2.000 accumulative grade point average.
Two quarters (22 weeks) of internship providing a practical application of the skill and knowledge learned during the previous six quarters of the curriculum. Students are assigned to accredited hospital laboratories as trainees. The rotation schedule consists of four weeks in Hematology - Coagulation; six weeks of Chemistry; four weeks in Immunohematology-Immunoserology; four weeks in Microbiology; two weeks in Urinalysis; two weeks of electives.

MUSIC

- Musi 0120 -- Introduction to Music Literature (3) F**
Development of listening skills for understanding elements of musical style in historical perspective and significance of music as a fine art.
- **Musi 0121 – Introduction to Baroque Music (3)**
Prereq. 120 or permission.
Study of selected works from Baroque style periods through readings, tapes, recordings and other media.
- **Musi 0122 -- Introduction to Music of the Classical & Romantic Periods (3)**
Prereq. 120 or permission.
Study of selected works from the Classical and Romantic style periods through readings, tapes, recordings, and other media.

*Denotes classes with Lab fees.
**Offered on demand only.

- **Musi 0123 -- Introduction to 20th Century Music (3)**
Prereq. 120 or permission.
Study of selected works of 20th Century, both traditional and electronics, through readings, scores, tapes, and recordings.
- Musi 0160 -- Fundamentals of Music (3) F,Sp**
Principles of notation, meter, major and minor scales, rhythmic and melodic reading, singing and keyboard.
- Musi 0161 -- Music for the Classroom Teacher (3) W**
Prereq. Music. Fund. with minimum grade of C.
Methods of teaching elementary music, with emphasis on singing, playing instruments, and rhythmic body movements.
- Musi 0170A,B,C -- Class Voice (3 qtrs., 1 cr.Hr.per qt.) F,W,Sp**
Prereq. Music Reading (must be taken in sequence or by permission).
Basic techniques of voice production; breathing, diction, projection, tone-color, and interpretation.
- Musi 0180 A,B,C – College Chorus (2)F,W,Sp**
Prereq. Permission of instructor (audition); 4 lab hrs.
- Musi 0181 – College Band (2)**
Prereq. Permission (audition) 4 lab hrs.
- **Musi 0185 -- College Ensemble (2)**
Prereq. Permission of instructor (audition) 4 lab hrs.
- Musi -0230 -- Music - Theater (3)**
Participation in selected musical theater projects. Participation may be through production or performance.
- Musi 0270 A,B,C – Intermediate Voice (1)**
Prerequisite: Permission of the instructor.
Continuation of the 170 series.
- Musi 0280 A,B,C – Intermediate Chorus (2)**
Prerequisite: Permission of the instructor
Continuation of 180 series.
- **Musi 0290A -- Topics in Music (2)**
Study of various music topics otherwise not available to students: folk and country music, rock forum, etc.
- **Musi 0290B -- Topics in Music (3)**
Study of various music topics otherwise not available to students.

NURSING -- ASSOCIATE DEGREE

Only students officially accepted into the program or those with approval of the Program Director may take the courses with the ADNr prefix. All ADNr courses must be taken in sequence.

- *ADNr 0101 -- Nursing I -- Fundamentals I (8)**
Prereq. Admission to the Associate Degree Nursing program.
Introduction to the use of nursing process system to enable individuals to maintain or regain ability to meet daily living needs regardless of age. Emphasis will be placed on the assessment components of the nursing process. Fundamental skills and related scientific principles of nursing are presented. Laboratory practice provides the opportunity to develop beginning skills in both technical and interpersonal aspects of nursing. 5 lec. 9 lab.
- ADNr 0102 -- Nursing II -- Fundamentals II (8)**
Prereq. 2.0 average or better in courses required for fall quarter of first year. Development of basic nursing skills will be continued. A beginning study of medical-surgical nursing concepts relevant to all age groups will be presented. Utilization of all components of the nursing process is introduced.
- ADNr 0103 -- Nursing III-Nursing of Adults & Children I (8)**
Prereq. 2.0 average or better in courses required in winter quarter of first year. Focuses on implementing the nursing process in meeting basic needs of the adult or child experiencing stressors related to safety and security, activity and rest, and sexual role satisfaction. Further development of technical skills will be included. 4 lec. 12 lab.

ADNr 0201 -- Nursing IV-OB Maternal-Newborn Nursing (5)

Applies the nursing process in the study of the normal aspects of the maternal cycle and the normal, newborn infant. Common recurring stressors related to the maternal-newborn cycle are presented. Skills needed to provide family-centered nursing in normal and stress situations will be introduced. 6 lec. 12 lab.

ADNr 0202 -- Nursing V-Mental Health & Illness (5)

Presents concepts of mental health and selected deviant emotional and mental responses to stress. Provides the student with the opportunity to increase self-awareness and develop beginning skills in the use of self. Application of the nursing process in providing nursing care for clients with specific behavior patterns is included. 6 lec. 12 lab. (5-week course).

ADNr 0203 -- Nursing VI - Trends (2)

Concerns of nursing, past, present, and future are explored. Relationships of technical nurse to health professions and community are considered. Future personal development of individual technical nurses is discussed. Legal and ethical implications for nursing practice are examined. 3 lec. 0 lab.

ADNr 0204 -- Nursing VII-Nursing of Adults & Child. II (10)

Applies the nursing process in caring for adults and children experiencing stressors affecting oxygen transport and fluids and electrolytes balance 6 lec. 12 lab.

ADNr 0205 -- Nursing VIII-Nursing of Adults & Child. III (9)

Prereq. ADNr 0201, 0202, 0203, 0204
Systematically apply the nursing process in caring for groups of patients. Synthesizes previous knowledge for utilization of the nursing process with adult and child clients experiencing stressors affecting nutrition and elimination. 4 lec. 15 lab.

ADNr 0206 -- Nursing IX - Nursing Seminar (3)

The knowledge base essential to the practice of nursing is enlarged to include the role of the technical nurse as a member of the health team. A theoretical and practical approach to assessment and setting nursing care priorities will be explored. Transition from student role to graduate role will be explored. 3 lec. 0 lab.

NURSING - PRACTICAL

PNRs 0101 -- Body Structure and Function (4)

This course provides basic study of the structural organization and function of the body. Emphasis is on the interrelation of the systems. Anatomical charts and models are used.

PNRs 0110 -- Nutrition (2)

Prereq. LPNr 0101 & 0111
This course is designed to introduce basic nutrition principles to the student practical nurse. Included are the sources and contribution of the various nutrients and the importance of nutrition in health. Diet therapy is introduced by way of modifying a normal diet to meet specific dietary needs.

***PNRs 0111 -- Practical Nursing 1 (10)**

The course is an introduction to the care of the patient with emphasis on the basic nursing principles and skills commonly employed at the bedside. The fundamental, intellectual, interpersonal and psychomotor abilities necessary for health maintenance in the health care system are emphasized.

PNRs 0112 -- Practical Nursing II (6)

Prereq. LPNr 0101 & 0111
This course is a continuation of Practical Nursing I with additional units included to provide the complete basic fundamentals of skilled practical nursing. The use of the nursing process and importance of correct documentation are emphasized for high quality patient care in the implementation of nursing skills. Specific medical/surgical conditions are studied.

PNRs 0113 -- Practical Nursing III (8)

Prereq. LPNr 0110, 0112, & 0115
Medical/Surgical nursing is the focus. Individualized care designed to meet a particular patient's needs is emphasized. Included in this course are the concepts of safe handling and administration of medications.

PNRs 0114 -- Practical Nursing IV (8)

Prereq. LPNr 0113 & 0116
This course is a continuation of Practical Nursing III with additional units to complete basic medical-surgical theory for the beginning practical nurse. Principles of diet therapy and drug therapy are integrated throughout medical-surgical nursing.

PNRs 0115 -- Practical Nursing V (6)

Prereq. LPNr 0101 & 0111
This course examines the stages of growth and development through the childhood years. It envelopes the historical changes in pediatric nursing, the common problems/disorders of each state of development, as well as basic needs pertinent to these stages. It is the goal of this course to provide to students, on completion, the ability to plan appropriate nursing interventions for a child of any age.

PNRs 0116 - Practical Nursing VI (8)

Prereq. LPNr 0110, 0112 & 0115.
This course explores family-centered maternity/newborn care. It emphasizes individualized care noting family rights/responsibilities. It envelopes the historical changes in maternity care, basic anatomy and physiology of the reproductive system, the antepartal, intraparta, and postpartal family in the normal pregnancy, the newborn, as well as problems/disorders associated with each stage of pregnancy. It is the goal of this course to provide to students, on completion, the ability to give appropriate nursing interventions for a family during any stage of pregnancy, either normal or complicated

OCCUPATIONAL THERAPY ASSISTANT

OTAT 0101 -- Intro. to Occupational Therapy (4) F

Prereq. Enrollment in OTAT Program.
Introduction to the profession of occupational therapy, the roles and functions of occupational therapy personnel, the areas of occupational performance and the theoretical basis of using goal-directed activities.

***OTAT 0102 -- Therapeutic Media I (3) Sp,S**

Prereq. OTAT 0202.
Introduction to the analysis and therapeutic application of activities. Includes skill development in selected activities, instruction of peers in an activity, and participation in proper care and maintenance of equipment and supplies.

OTAT 0105 -- Survey of Medical Terminology (2) F

Prereq. Enrollment in OTAT program.
An introduction to medical terminology commonly used in health occupations. Emphasis will be on prefixes, suffixes, root words, anatomical points of reference, abbreviations and symbols.

OTAT 0106 -- Occupational Therapy in Geriatric Program Planning (4) W

Introduction to and application of occupational therapy in the treatment of the older adult. Emphasis is on developing and implementing both activity and rehabilitative programs in agencies serving the elderly.

OTAT 0108 -- Practicum I (2) S (other quarters by arrangement)

Prereq. OTAT 0202
Supervised clinical experience under the direction of qualified personnel in a variety of settings including hospitals, day care centers, MR facilities, mental health facilities, schools, nursing homes, and convalescent centers. Emphasis will be on developing professional communication skills, learning to accurately document observations, developing an understanding of other health care professionals, and instructing a small group in an activity (See note.)

OTAT 0109 -- Applied Anatomy and Kinesiology (2) S

Prereq. OTAT 0202; Bio. 0111, 0115 or 0290 & 0291.
Study and application of human anatomy and basic movement principles as used in occupational therapy.

OTAT 0110 -- Group Dynamics (2) S

Prereq. OTAT 0202, Psyc. 0101; Soci. 0101.
Study of group behavior. Practice in leading groups, observing group interactions and participating in various types of groups.

*Denotes classes with Lab fees.

OTAT 0202 -- Disease Pathology (4) W

Prereq. OTAT 0101, 0105; Biol. 0111.
 Discussion of both physical and psychosocial dysfunctions commonly referred to occupational therapy. Includes the symptoms, etiology and treatments of various diseases.

OTAT 0203 -- Occupational Therapy in Developmental Disabilities (6) S

Prereq. OTAT 0108, 0109, 0110; Psyc. 0101 & 0173.
 Study of conditions which interfere with normal growth and development. Introduction to the application of occupational therapy in the treatment of developmental disabilities. Emphasis on the role of the O.T. Assistant in treatment particularly in the public school setting.

OTAT 0204 -- Practicum II (3) S

Prereq. OTAT 0108, 0109, and 0110.
 Similar to Practicum I (OTAT 0108) but will be in a different type of setting. (See Note).

***OTAT 0205 -- Therapeutic Media II (93) F,W**

Prereq. OTAT 0101.
 Analysis, adaptation, and therapeutic application of weaving and woodworking.

OTAT 0208 -- Practicum III (3) F

Prereq. OTAT 0204.
 Supervised clinical experience under the direction of qualified personnel in a variety of settings. Continuation of skill development of Practicum I with additional emphasis on case study, treatment planning and occupational therapy treatment techniques. (See Note).

***OTAT 0210 -- Occupational Therapy in Physical Disabilities (6) F**

Prereq. OTAT 0102, 0203, 0204; Biol. 0111, 0115 or 0290 & 0291.
 Exploration of occupational therapy theories in the evaluation and treatment of physically disabling conditions. Lab emphasis is on instruction of activities of daily living, work simplification, energy conservation, and fabrication of orthotic and adaptive devices.

OTAT 0211 -- OTAT Seminar (2) W

Prereq. OTAT 0208 and 0210.
 Discussion of the professional roles and responsibilities of the Occupational Therapy Assistant. Includes orientation to licensure, certification, legal and ethical issues, peer review and other current professional issues.

OTAT 0212 -- Occupational Ther. in Mental Health (4) W

Prereq. OTAT 0208, 0210; Psyc. 0101, 0173; Soci. 0101.
 Exploration of Occupational Therapy theories in the evaluation and treatment of psychosocial dysfunction. Lab emphasis is on the development of observation skills, group dynamics, group leadership, effective communication, and therapeutic use of self.

OTAT 0220 & 0221 -- Clinical Application (3) ea. S

Prereq. Successful completion of all OTAT and other required courses.
 Supervised fieldwork placement experience in and responsibility for delivery of service to patients/clients. Emphasizes the application of academically acquired knowledge leading to the performance level of an entry-level occupational therapy assistant. (Each course is 6 wks. in length.)

(Note: Student must have maintained a 2.00 GPA and receive a "C" or better in all OTAT classes to participate in OTAT 0108, 0204, 0208, 0220, and 0221).

PHARMACY**Phar 0101 -- General Pharmacology (4)**

Introduction to the General principles of pharmacology. Calculations, drug classification, and the sites and mechanisms of drug action.

PHILOSOPHY**Phil 0101 -- Fundamentals (4) F**

Survey of basic problems, concepts and methods in philosophy.

*Denotes classes with Lab fees.

**Offered on demand only.

Phil 0102 -- Introduction to Logic (4) W

Use of evidence in establishing reliable conclusions.

Phil 0103 -- Moral Philosophy (4) F,W,Sp

Discussion of classic and/or modern philosophical views of human values, ideas and morality. Provides an introductory survey of some of the main problems, concepts and results of ethics including selected philosophies of past and present.

PHYSICAL SCIENCE**PSci 100A -- Topics in Science (4)*****PSci 0101 -- Physical World (4) F,Sp**

Designed for nonscience majors. Fundamental ideas of meteorology and geology. Topics in meteorology include atmosphere, winds, clouds, storms and weather. Topics in geology include rocks and minerals, gradation, earthquakes, continental drift and the ocean. 3 lec. 3 lab.

***PSci 0102 -- Physical World (4)**

Designed for nonscience majors. Fundamental ideas of atomic physics and chemistry. Topics in chemistry include classification of elements, molecules, chemical reactions, solutions and large molecules, including plastics and DNA. 3 lec. 3 lab.

***PSci 0103 -- Physical World (4) W**

Designed for nonscience majors. Fundamental ideas of energy. Topics include heat, light, sound, electricity, solar energy, and nuclear energy. 3 lec. 3 lab.

***PSci 0104 -- Physical World (4) Sp**

Designed for nonscience majors. Fundamental ideas of astronomy. Topics include the solar system, stars, galaxies, black holes and the history of ideas about the universe. 3 lec. 3 lab.

PSci 0105 -- Physical Science (5) F,W,Sp

A course designed for students of nursing and other health technologies, stressing the principles of physics and chemistry relevant to the health sciences. Meaningful applications in common experiences also are noted, so that the course should be worthwhile for students in other fields who would like a health-science emphasis. 4 lec. 3 lab.

****PSci 0290A -- Topics in Physical Science (1)******PSci 0290B -- Topics in Physical Science (2)******PSci 0290C -- Topics in Physical Science (3)******PSci 0290D -- Topics in Physical Science (4)**

Study of topics otherwise unavailable to students.

PHYSICAL THERAPIST ASSISTANT**PTAT 0111 -- Principles of Physical Therapist Asst. (3)**

Prereq. Acceptance into the Physical Therapist Assistant Program.

The purpose, philosophy, history and development of the physical therapy profession, including the function of the American Physical Therapy Association. The development of the Physical Therapist Assistant, his duties, function, legal responsibilities and limitations, including medical ethics. Three lectures hours per week.

PTAT 0101 -- Medical Terminology for PTA (1)

Prereq. Acceptance into the Physical Therapist Assistant Program.

Structure of medical words, including spelling and definitions, common prefixes, suffixes and root words and how to combine them to form medical terms. Patient records will be introduced, as well as anatomical body parts, diseases, operations, and drugs which are emphasized by analysis of the terms and structure of the words. One lecture hour per week.

PTAT 0112 -- Physical Therapist Assist. Procedures I (5)

The first of three sequential physical therapist assistant procedure courses. Basic physiology and theory of heat, hydrotherapy, cold, and massage. Body mechanics, burns, isolation techniques, patient positioning, and traction. Student has the opportunity to develop skills in the therapeutic application of these modalities. 3 lec. 6 lab.

PTAT 0113 -- Physical Therapist Assist. Procedures II (5)

Theory and therapeutic application of modalities, such as low and high frequency currents, biofeedback, TENS, Jobst extremity pump and diathermy. 3 lec. 6 lab.

PTAT 0114 -- Physical Therapist Assist. Procedures III (5)

Principles of muscle testing, goniometry, joint range of motion, flexibility, coordination, gait training, and endurance exercise programs. Exercises for specific joints, diseases, and medical conditions. 3 lec. 6 lab.

PTAT 0115 -- Anatomy and Kinesiology (5)

Advanced anatomy course designed specifically for the Physical Therapist Assistant. Bone and muscular structure in detail as well as locomotion, work and force. 3 lec. 6 lab.

PTAT 0202 -- P.T. in Physical Dysfunction (3)

Discussion of physical dysfunctions commonly referred to physical therapy. Includes symptoms, etiology and treatments of various diseases. 3 lec.

PTAT 0211 -- Clinical Practicum I (4)

Second experience in clinical settings in which the student will perform theories and techniques for patient care under close supervision of a licensed physical therapist. Twelve contact hours per week in the clinical setting.

PTAT 0212 -- Clinical Practicum II (4)

Intermediate experience in clinical settings performing previously learned theories and techniques under supervision of a licensed physical therapist. Twelve contact hours per week in the clinical setting.

PTAT 0213 -- Clinical Practicum III (10)

Advanced experience in clinical settings. Thirty-eight hours per week in the clinical setting.

PTAT 0216 -- Clinical Practicum & Seminar (1)

Introductory experience in clinical settings in which students will perform theories and techniques of patient care under close supervision of licensed physical therapist. Procedures and techniques discussed in seminar. Four contact hours per week.

PTAT 0231 -- Rehabilitation Procedures (4)

Rehabilitation skills relating to orthopedic and cardiac principles. Includes study of prosthetics, orthotics, fractures and postural deviations, and cardiac rehabilitation. 3 lec. 3 lab.

PTAT 0232 -- Rehabilitation Procedures II (4)

Rehabilitation skills needed for treatment of central nervous system, peripheral nervous and respiratory systems. Included is stroke rehabilitation, spinal cord injuries, pediatrics and postural drainage. 3 lec. 3 lab.

PTAT 0235 -- Physical Therapy Trends and Administrative Procedures (2)

Identification of concepts, techniques, and administrative skills used in the efficient operation of a Physical Therapy Department. Special emphasis on establishing and maintaining patient records. 2 lec.

PTAT 0257 -- PTA Seminar (2)

Students will present case studies of patients treated in their clinical assignments. Special procedures and techniques seen in Physical Therapy will be discussed as well as problems encountered. 2 lab hrs. per week.

PHYSICS

Phys 0100A -- Fundamental Physics (4) F,W,Sp,S

This course is designed for those students with an inadequate background in math or physics. This course should be taken by those students before taking physics 0201. Several physics topics and the mathematical methods to study these topics are covered. Topics include metric system, unit conversion, and vector analysis of forces and motion. An introduction to laboratory procedures and report writing is included.

***Phys 0201 -- Physics (Mechanics) (4) F,W,Sp**

Prereq. Math 0103 or Math 0108 or Equiv.
Basic measuring systems, methods and conversions and calculations for physics. Properties of solids, liquids, and gases. Statics and motion. Friction. Work, power, and energy. Simple machines. Laboratory and demonstrations related to lecture. 3 lec. 3 lab.

***Phys 0202 -- Physics (Electricity) (4) F,W, Sp**

Prereq. PPhysics 0201.
An introduction to electrical circuitry with emphasis on the concepts of electrical physics. The nature of magnetism and electrostatics, electrical units. Basic direct-current circuits, Ohm's law, electrical measurement. Sources and effects of electrical current. Electric power and energy. Electromagnetism and electromagnetic induction. Properties of alternating current, simple A-C circuits. Generators and motors. 3 lec. 3 lab.

***Phys 0203 -- Physics (Heat, Light, Sound) (4) F,W,Sp**

Prereq. Physics 0201.
Fundamental Properties and basic principles of heat, light, and sound. 3 lec. 3 labs.

PLASTICS/CHEMICAL

***PEng 0101 -- Introduction to Plastics/Chemicals (3)**

Covers a description of the different plastics, beginning with a brief outline of polymer chemistry. Discussion will cover different types of plastic, identification tests, polymerization, molecular growth, and molecular weight. Laboratory experiences in extrusion, injection molding, thermoforming, compression molding, and other fabrication operations. Introduction to test methods.

***PEng 0102 -- Machine Tools I (3)**

Safety, measuring tools, bench work, drill press, lathe, forge work, shaper, planer, milling machine, grinding machine, hydraulic power transmission, metal band saws, properties and uses of ferrous and non-ferrous alloys, cutting fluids, welding and foundry practices.

***PEng 0103 -- Extrusion Molding (3)**

Prereq. PEng 0101 or advisor approval.
Techniques of plastics extrusion operations and blow molding; Pipe, sheet, film blowing, extrusion coating, wire and cable covering, thread (monofilaments), bottle blow molding. Laboratory involves operating extrusion equipment and blowing molding equipment.

*Denotes classes with Lab fees.

**Offered on demand only.

***PEng 0104 -- Thermo-Forming (3)**
Prereq. PE 0101, 0102, EnDR 0101 or Advisor Approval.
Discussion will cover thermo-forming processes and thermoforming equipment. Thermo-forming will be introduced with special emphasis on vacuum forming equipment and processes. Characteristics of common plastics used in thermoforming. Numerous laboratory projects.

***PEng 0105 -- Injection Molding (3)**
Prereq. PEng 0101, 0102, EnDR 0101 or Advisor Approval.
Various types of injection molding processes will be studied: (Reciprocating Screw, Plunger, Cone, Preplasticizers, Screw Pot, RIM< etc.) Laboratory operations involves the actual operation of injection molders, field trips, and the designing and fabricating of an injection mold.

***PEng 0201 -- Thermal Molding Machine Control (4)**
Prereq. PEng 0101, 0102, EnDR 0101 or advisor approval.
The student will study the industrial control mechanisms important to the molding machines and processes. This course includes; basic pneumatic, hydraulic electrical, electronic, and thermal control systems encountered in most plastics plants.

PEng 0202 -- Production Control and Planning (4)
Basic concepts of production planning and control methods. Inventory planning, facilities design, capacity considerations. Actual planning and scheduling exercises on an individual basis.

***PEng 0203 -- Testing of Plastic Materials (3)**
Prereq. Math 0131.
Study is made of the mechanical, electrical, optical, and environmental characteristics of different plastics, impact testing, chemical testing, heat stability testing, hardness testing, and electrical testing. Conducting experiments and writing of technical reports on the property changes of plastics under various conditions. Statistical quality control methods as related to testing.

PEng 0205 -- Plant Layout and Materials Handling (3)
Prereq. EnDR 0101.
Principles of plant layout to obtain the most effective utilization of men, materials, and machines, as related to space and costs. Selection and use of modern equipment and methods for handling materials in industrial processes.

***PEng 0206 -- Introduction to Chemical Engineering (3)**
Prereq. Chem 0121 and Math 0131.
Introduction to the practices of chemical engineering. Stoichiometry, heat and material balances, heat, mass, and momentum transfer. Industrial problems and applications.

***PEng 0207 -- Fundamentals of Processing Equipment & Maintenance (2)**
Piping diagrams, heat exchangers, reactors, etc. commonly used in the chemical industry. Emphasis on maintenance problems and methods.

***PEng 0209 -- Fabrication & Finishing of Plastics Prod. (4)**
Prereq. PEng 0101, 0102, 0103, 0104, 0105.
Study of industrial manufacturing methods for plastics products not encountered in the previous courses. Areas covered will include: printing, cementing, electroplating, metallizing, hot stamping, polishing, welding, engraving, machining. Special emphasis will be placed on compression, transfer, SMC, BMC, TMC, and FRP processes.

PSYCHOLOGY

Psyc 0100A -- Learning Orientation (4) F,W
Techniques for learning definitions, vocabulary, lists, etc. to assist in academic achievement. (The 4 hours of credit do not apply toward the associate degree, but do apply toward total hours accumulated at the college.)

Psyc 0100B -- Pre-Anatomy (4)
Students are prepared for anatomy by learning medical roots, muscles, bones, body planes, and medical abbreviations. (The 4 hours of credit do not apply toward the associate degree, but do apply toward total hours accumulated at the college.) This is a special course developed primarily for allied health related programs.

***Denotes classes with Lab fees.**

Psyc 0101 -- Principles of Psychology (4) F,W,Sp
Introduction to psychology. A study of the individual in terms of maturational, learning, thinking, emotional, motivational, sensory and perceptual processes.

Psyc 0105 -- Career Planning (4) F,W, Sp
An exploratory investigation of career planning.

Psyc 0131 -- Human Adjustment (3) F,W,Sp
Prereq. Psyc 0101.
A consideration of conflicts and problems of adjustment in modern society.

Psyc 0173 -- Human Growth & Development (4) F,W,Sp
Prereq. Psyc 0101.
A study of the factors affecting human growth and development through the life cycle.

Psyc 0261 -- Industrial Psychology (5) Sp
Prereq. Psyc 0101 and Math 0150.
Applications of psychology in business and industry.

Psyc 0270 -- Abnormal Psychology (5) F,W,Sp
Prereq. Psyc. 0101.
Studies behavior disorders, their cause and effects on person, family and society.

Psyc 0275 -- Educational Psychology (5) F,W,Sp
Prereq. Psyc 0101.
Psychological foundations of education with emphasis upon learning, transfer, motivation, and evaluation.

***Psyc 0290A--Topics in Psychology (1)**
***Psyc 0290B--Topics in Psychology (2)**
***Psyc 0290C--Topics in Psychology (3)**
Prereq. Permission of instructor is required.
Topics of special interest to students are investigated under the direction of the psychology staff. This course may be repeated but not to exceed a total of six -credit hours.

QUANTITATIVE METHODS

QMet 0201 -- Intro. to Probabilities & Statistics W
Prereq. 0155 (Bus. Stat.)
Sample designs, sampling distribution of sample statistics, and estimation (point and interval) of parameters. Bayesians and classical (hypothesis testing) decision theory, contingency table analysis and analysis of variance (prereq. Math 155. Regression and correlation analysis.

RADIOLOGIC TECHNOLOGY

***RdIT 0101 -- Radiologic Technology I (3)**
Prereq. Admission to Radiologic Technology Program.
This course is designed to acquaint the new student with the goals, philosophies, and organizations of the radiography program and Radiology Department. Medical ethics, medicalegal considerations, elementary radiation protection, fundamentals of radiographic exposure, and radiographic positioning of the chest and abdomen are covered. An orientation and tour of the clinical facility and department of radiology; selected clinical observations and experiences are included.

***RdIT 0102 -- Radiologic Technology II (3)**
Prereq. RdIT 0101, RdIT 0200.
This course concentrates on radiographic positioning of the appendicular skeleton with application of theory in the laboratory. Selected clinical experiences are planned to reinforce learning and provide the student with the opportunities to apply principles and techniques.

RdIT 0103 -- Radiologic Technology III (3)
Prereq. RdIT 0102.
This course concentrates on radiographic positioning of the appendicular skeleton with application of theory in the laboratory. Selected clinical experiences are planned to reinforce learning and provide the student with the opportunities to apply principles and techniques.

RdIT 0104 -- Radiologic Technology IV (3)
This course concentrates on radiographic procedures using contrast media, radiographic practices for surgery, pediatric radiography, and other specialized areas of radiography.

RdIT 0105 -- Radiologic Technology V (3)
Prereq. RdIT 0104.
Continuation of 104 emphasizing vascular and neurological examinations with analysis of equipment used.

RdIT 0106 -- Radiologic Technology VI (3)
Prereq. RdIT 0105.
This course examines advanced radiographic techniques and imaging modalities, including technic charts, automatic exposure control, fluoroscopy, image intensifiers, conventional tomography, stereoscopy, xeroradiography, computer literacy, computed tomography and other specialized areas of imaging.

RdIT 0107 -- Radiologic Technology VII (3)
Prereq. RdIT 0106.
A series of lectures on pathologic conditions and their impact on the radiographic process. Includes student participation in film evaluation and discussion of related journal articles.

RdIT 0108 -- Radiologic Technology VIII (2)
Prereq. RdIT 0107, 0113.
This course is designed as a self assessment of the independent cognitive areas utilized in the clinical situation.

RdIT 0110 -- Radiologic Electricity-electronics (3)
Prereq. Math 0108.
A study of the basic electrical-electronic principles associated with radiography. Topics include electrostatics, DC and AC currents, Ohm's Law, series and parallel circuits, magnetism, electromagnetic induction, transformers, and basic electronics.

RdIT 0111 -- Radiologic Physics (4)
Prereq. RdIT 0110.
A study of the fundamental methods of x-ray generators, basic x-ray circuits, interaction of radiation with matter, and units of measurement. Special attention will be given to related quality control testing.

RdIT 0112 -- Radiobiology and Radiation Protection (2)
Prereq. RdIT 0111.
A study of the radiobiological areas of radiation interactions, radiosensitivity, radiation dose/response relationships, early and late radiation effects, radiation protection and health physics.

RdIT 0113 -- Radiographic Processing (2)
Prereq. RdIT 0201.
Includes discussions of film characteristics, artifacts, film storage and handling, processing room design and function, methods, principles and chemistry of processing systems, and silver reclamation and quality control.

RdIT 0200 -- Basic Patient Care (3)
Prereq. Admission to Radiologic Technology Program.
The content of this course provides the student with knowledge and basic skills necessary for care of the patient. Includes medical and professional ethics, medical terminology and interpersonal relationships.

***RdIT 0201 -- Radiographic Exposure (4)**
Prereq. RdIT 0102.
Lectures on establishing and manipulating radiographic exposure factors and on the proper utilization of accessory devices such as grids, intensifying screens, and beam limitation devices. The concentration is on overall image quality, as well as factors affecting patient exposure. Special attention will be given to related quality control testing.

RdIT 0211 -- Clinical Experience I (2)
Prereq. RdIT 0102.
Practical application of radiologic technology principles, positioning and techniques with emphasis on upper and lower extremity examinations in the radiology departments of affiliate hospitals. Includes film critique sessions.

**Denotes classes with Lab fees.

RdIT 0212 -- Clinical Experience II (3)
Prereq. RdIT 0212.
Practical application of radiologic technology principles, positioning and techniques with emphasis on spine and skull examinations in the radiology departments of affiliate hospitals. Includes film critique sessions.

RdIT 0213 -- Clinical Experience III (3)
Prereq. 0212
Practical application of radiologic technology principles, positioning and techniques with emphasis on urographic, biliary and gastrointestinal examinations in the radiology departments of affiliate hospitals. Includes film critique sessions.

RdIT 0214 -- Clinical Experience IV (3)
Prereq. RdIT 0213.
Practical application of radiologic technology principles, positioning and techniques with emphasis on gastrointestinal, portable and advanced bonework examinations in the radiology departments of affiliate hospitals. Includes film critique sessions.

RdIT 0215 -- Clinical Experience V (3)
Prereq. RdIT 0215.
Practical application of radiologic technology principles, positioning and techniques with emphasis on headwork, surgery and advanced radiographic examinations in the radiology departments of affiliate hospitals. Includes film critique sessions.

RdIT 0216 -- Clinical Experience VI (4)
Prereq. RdIT 0215.
Continuation of RdIT 0215 with practical application of radiologic technology principles, positioning and techniques in advanced imaging modalities. Includes film critique sessions.

RESPIRATORY THERAPY

RpTT 0100 -- Medical Terminology (1)
An introductory level course designed to acquaint the student with the terminology commonly encountered in the medical, nursing, and allied health professions. Emphasis is placed through programmed instruction, on Latin and Greek prefixes, suffixes, combining forms, and the art of building and analyzing medical terms.

RpTT 0101 -- Basic Patient Care (3)
An introductory level course in the common basic skills required of all health care practitioners involved in direct patient care. Included in this course is an introduction to the respiratory therapy profession and the health care system of the U.S.

RpTT 0110 -- Fundamentals of Respiratory Care I (4)
An introductory level course in the principles and practice of ambient pressure respiratory care procedures and the use, principle of operation, and care of respiratory care equipment associated with the administration of these procedures.

RpTT 0111 -- Fundamentals of Respiratory Care II (4)
An introductory level course in the classification, maintenance, principle of operation, and use of positive pressure ventilators and the principles and practice of I.P.P.B. therapy. This course shall include an overview of common pharmacologic agents with an emphasis on those agents directly administered by the respiratory therapy technician and the fundamental concepts of microbiology, sterilization, and disinfection.

RpTT 0112 -- Airway Management (1)
This course is devoted to the establishment, care, and maintenance of the airway with emphasis on the artificial airway. Theoretical aspects of this course are designed to enhance related clinical practice in RpTT 0141.

RpTT 0113 -- Continuous Mechanical Ventilation (3)
An introductory level course in the role and responsibility of the respiratory care practitioner in the intensive/coronary care unit. Emphasis is placed on the technical aspects of continuous mechanical ventilation from initiation through termination.

- RpTT 0114 – Pulmonary Rehabilitation & Home Care (1)**
This course is designed to provide the student with an understanding of the health care delivery system as it relates to the respiratory care of a patient in the home. The course will vary in emphasis and utilize several guest instructors to explore the multi-dimensional aspects of home health care delivery and the rehabilitation of the patient with pulmonary disease.
- RpTT 0115 – Pediatric & Neonatal Respiratory Care (2)**
An introductory level course designed to provide a basic overview of the role of the respiratory therapy technician in the care of the child and newborn infant with respiratory disease. The scope of this course shall include embryology, pathophysiology, and respiratory care procedures for the newborn and child.
- RpTT 0116 – Pulmonary Function Testing (2)**
This course is designed to provide the student with the fundamental concepts of pulmonary function testing. Emphasis is placed in the area of spirometry and the basic physiology of each diagnostic procedure.
- RpTT 0121 – Pulmonary and Cardio-Vascular Anatomy and Physiology (3)**
This course consists of a series of lectures on the anatomical and physiological concepts and principles related to normal and abnormal lung function. Emphasis is placed on the application of these concepts to the clinical practice of respiratory care.
- RpTT 0122 – Pathophysiology (3)**
This course consists of a series of lectures focused on the most commonly encountered cardio-pulmonary diseases. Emphasis is placed on the pathophysiology and clinical presentation of each disorder and the application of respiratory care.
- RpTT 0140 – Clinical Practice I (4)**
This course serves as an introduction to the clinical practice of fundamental concepts of respiratory care. Emphasis is placed on application and practice of those concepts presented in RpTT 0110 and RpTT 0111.
- RpTT 0141 – Clinical Practice II (6)**
This course serves as an introduction to the clinical practice of respiratory care procedures specific to the intensive/coronary care unit and the critically ill patient. Emphasis is placed on clinical practice in the areas of continuous mechanical ventilation and the establishment and care of the artificial airway.
- RpTT 0142 – Clinical Practices III (8)**
An introduction to the practice of respiratory care in several specialty areas including the pulmonary function diagnostic laboratory, the pediatric and neonatal intensive care units, the EKG laboratory, and the bronchoscopy laboratory.
- RpTT 0201 – Pulmonary Function Testing and Cardio-Vas., Evaluation & Testing (3)**
This course shall consist of a series of lectures focused on advanced concepts of pulmonary function testing and cardiovascular evaluation and testing. Emphasis is placed on data interpretation, the clinical administration of advanced diagnostic procedures, and the relationship of the data to the pathophysiology of the disorder.
- RpTT 0202 – Pediatric and Neonatal Respiratory Care (3)**
A sophomore level study of the pathophysiology of pediatric and neonatal cardio-pulmonary disorders and the principles and practice of respiratory care for the child and newborn infant.
- RpTT 0203 – Pharmacology (3)**
A sophomore level study of the general principles of pharmacology including drug types, dispensing, dosage, and effects including contraindications and regulations. Drug groups related to respiratory therapy will be emphasized to include bronchodilators, wetting agents, detergents, mucolytics, proteolytics, antibiotics, muscle relaxants, and corticosteroids.

*Denotes classes with Lab fees.

- RpTT 0211 – Respiratory and Renal Anatomy & Pathophysiology (3)**
An advanced level study of the anatomy and pathophysiology of the respiratory and renal systems with clinical applications to the field of respiratory care.
- RpTT 0212 – Cardio-Vascular Anatomy and Pathophysiology (3)**
An advanced level study of the anatomy, physiology, and pathophysiology of the cardio-vascular system with applications in the area of hemodynamic monitoring, EKG studies, and recognition of cardiac arrhythmias.
- RpTT 0222 – Departmental Management (2)**
This is an introductory level course in the organization and management of a respiratory care department. Emphasis will vary in accordance with current events affecting the management of a respiratory care department.
- RpTT 0240 – Clinical Practice IV (6)**
This course offers the student advanced clinical practice in the specialty areas of the neonatal intensive care unit, the pulmonary function and cardio-vascular diagnostic laboratory, and advanced clinical practice in the intensive/coronary care unit.
- RpTT 0241 – Clinical Practice V (4)**
This course provides the student with the opportunity to develop additional clinical practice skills in a specialty area of the students selection. Emphasis and course objectives will vary in accordance with the specialty area selected. Not required for those students successfully completing RpTT 0142.
- RpTT 0250 – Registry Review (4)**
This course provides the sophomore level student with a pre-graduation review of the principles and practice of respiratory care with emphasis on the N.B.R.C. examinations. Emphasis is placed on the actual participation of simulated national examinations and an analysis of the students' performance.

SECRETARIAL

- *ExST 0101 – Typing I (3)**
Typing I is a study of the touch system of typewriting with emphasis on development of speed and accuracy and the production of simple problems such as personal notes, letters, outlines, short tabulated reports, and manuscripts.
- *ExST 0102 – Typing II (3)**
Prereq. Typing I.
Typing II is a continuation of Typing I with students applying basic typing techniques to increasingly more difficult problems.
- *ExST 0103 – Typing III (3)**
Prereq. Typing I & II.
Typing III is a continuation of Typing II with emphasis on developing the student's ability to produce mailable copy of technical reports, drafts, business correspondence, etc. All students will study the uses of the electronic typewriter.
- *ExST 0104 – Typing IV (3)**
Prereq. Typing I, II, and III.
Typing IV consists of a production typing practice set.
- ExST 0105 – Keyboarding (1)**
This course will enable a student to learn to keyboard by touch the alphabetic and numeric keys on a typewriter or computer.
- ExST 0111 – Shorthand I (3)**
The student is taught to read and write Gregg shorthand and develop the nonshorthand elements of transcription which includes vocabulary development, spelling, punctuation, and grammar.
- ExST 0112 – Shorthand II (3)**
Prereq. Shorthand I
A continuation of Shorthand I designed to perfect Shorthand theory, phonetics, word families, brief forms and phrases, and penmanship. Students are encouraged to raise speed and accuracy levels.

ExST 0113 -- Shorthand III (3)
Prereq. Shorthand I and II.
A continuation of Shorthand II with greater emphasis on building speed and accuracy and producing mailable copy.

ExST 0214 -- Shorthand IV (3)
Prereq. Shorthand I, II, and III>
Emphasizes speed building and increasing mailable copy rate.

ExST 0215 -- Shorthand V (3)
Prereq. Shorthand I, II, III, and IV.
Further emphasizes speed in taking dictation and an increased mailable copy rate.

ExST 0216 -- Shorthand VI (1)
Prereq. Shorthand I, II, III, IV, and V.
A course designed to increase each student's ability to take dictation at high rates of speed and transcribe into mailable copy.

***ExST 0120 -- Business Machines I (3)**
A course designed to develop the student's ability to use electronic calculators.

***ExST 0121 -- Word Processing I (3)**
Prereq. Minimum typing speed of 40 wpm and the ability to set up letters, memos, reports, and tabulations. Word processing concepts and skills will be presented to the person with no previous training in word processing.

***ExST 0222 -- Word Processing II (3)**
Prereq. Word Processing I. This course will be a continuation of Word Processing I with more advanced applications of the capabilities of the equipment.

***ExST 0221 -- Dictation and Transcription (3)**
Prereq. Typing I, II, and III.
A course designed to develop the student's ability to transcribe business documents into mailable copy form using transcription equipment.

ExST 0231 -- Records Management (3)
A comprehensive course dealing with the creation, distribution, retention, utilization, storage, retrieval, protection, preservation, and final disposition of all types of records within an organization.

***ExST 0241 -- Secretarial Practices I (3)**
Prereq. Typing I, II, and III; Shorthand I, II, and III, or three basic business electives for general majors; and Dictation and Transcription. This class is designed to emphasize the responsibilities and opportunities of a secretarial position. It encompasses a variety of secretarial duties such as using word processing equipment, using transmittal services, assisting with travel arrangements, planning meetings, and presenting business data. The personal qualities of a professional secretary and job opportunities available to the college-trained secretary are also discussed.

***ExST 0242 -- Secretarial Practices II (3)**
Prereq. Secretarial Practices I, Typing IV, and Shorthand IV or business elective.
This class is an executive secretarial simulation project.

***ExST 0243 -- Secretarial Practices III (5)**
Prereq. All classes in major that are required for graduation. General secretarial majors must have completed all basic business electives required in place of shorthand. This class allows the student to assume the role of a medical secretary, a legal secretary, and a word processing specialist in three simulation projects completed in the classroom.

MdST 0111 -- Medical Shorthand I (3)
Designed to give advanced shorthand students practice in note taking and transcription of medical reports, diagnosis, case histories, and correspondence.

MdST 0112 -- Medical Shorthand II (3)
Prereq. Medical Shorthand I.
A continuation of Medical Shorthand I. This course is designed to develop skill in writing and transcribing shorthand notes containing words and phrases commonly used in the language of medicines.

*Denotes classes with Lab fees.

***MdST 0221 -- Medical Dictation & Transcription I (3)**
Prereq. Typing I, II, & III and Shorthand I, II, and III.
Emphasis is on the development of mailable transcription from a transcribing machine, medical vocabulary building, and a review of punctuation and spelling.

***MdST 0222 -- Medical Dictation & Transcription II (3)**
Continuation of MdST 0221. Emphasis is on mailable transcription to meet medical office standards.

MdST 0223 -- Medical Terminology I (3)
Prereq. Shorthand I, II, & III
Develops skill in writing and transcribing words and phrases occurring in the spoken and written language of medicine.

MdST 0224 -- Medical Terminology II (3)
Continuation of MdST 0223.

MdST 0241 -- Medical Secretarial Practices I (3)
Prereq. Typing I, II, and III, Shorthand I, II, & III, Records Management, Business Machines, Dictation and Transcription.
An introduction to the general responsibilities required by a medical secretary, including the preparation of medical documents and development of competent medical vocabulary.

MdST 0242 -- Medical Secretarial Practices II (2)
Prereq. Medical Secretarial Practices I.
A continuation of MdST 0241. In addition, a general background in basic diagnostic test, techniques, and assisting with patients is provided.

LgST 0111 -- Legal Shorthand I (3)
Designed to give practice in note taking and transcription to advanced shorthand students. Preparation of legal correspondence, pleadings, testimonies, and depositions.

LgST 0112 -- Legal Shorthand II (3)
Prereq. Legal Shorthand I.
This course is designed to develop skill in writing and transcribing shorthand notes containing words and phrases commonly recurring in the spoken and written language of law.

***LgST 0221 -- Legal Dictation and Transcription I (3)**
Prereq. Typing I, II & III and Shorthand I, II & III.
Emphasis is on the development of mailable transcription from a transcribing machine, legal vocabulary building and a review of punctuation.

***LgST 0222 -- Legal Dictation and Transcription II (4)**
Continuation of LgST 0221. Emphasis is on mailable transcription to meet legal office standards.

LgST 0223 -- Legal Terminology & Judicial Procedures I (3)
Prereq. Shorthand I, II, & III.
A study of customary terms and practices in law offices, legal departments of business organizations, and courts.

LgST 0224 -- Legal Terminology & Judicial Procedures II (3)
Continuation of LgST 0223.

LgST 0241 -- Legal Secretarial Practices I (3)
Prereq. Typing I, II & III, Shorthand I, II & III, Records Management, Business Machines, Dictation and Transcription.
An introduction to the general responsibilities required by a legal secretary, including the preparation of legal documents and the development of a competent legal vocabulary.

SOCIAL WORK

****SoWr 0101 -- Intro. to Social Welfare & Social Work (3) F,W**
Overview of field of social welfare with equal emphasis on fundamental concepts and services in social welfare and current and emerging tasks in profession of social work.

SOCIOLOGY

- Soci 0101 -- Principles of Sociology (4) F,W,Sp**
Nature of human society and factors affecting its development. Fundamental concepts of sociology: culture, collective behavior, personality, groups, institutions.
- Soci 0201 -- Current Social Problems (4) F,W,Sp**
Prereq. Soci 0101.
An examination of the ways in which society comes to define certain conditions as social problems, a descriptive survey of the nature and distribution of contemporary American social problems, and a discussion of the various theoretical orientations used in classifying social problems. Problems under study would include crime and juvenile delinquency, alcoholism and drug abuse, poverty, mental disorder, family disintegration, and problems arising out of discrimination against ethnic minorities and women in American culture.
- Soci 0202 -- Marriage and Family Sociology (4) W,Sp**
Special emphasis is placed upon the American family experiences. Of central concern is the contemporary marriage process and context, family relationships, sexuality, family dysfunctions, and changes.
- Soci 0203 -- Introduction to Social Psychology (4) Sp**
Prereq. Soci 0101.
Patterning of conduct through social interaction; functional analysis of individual-group relationships in various organizational contexts; current theory and research in the field.
- Soci 0205 -- Sociology of Appalachia (4) F,Sp**
Prereq. Soci 0101.
Intensive study of Appalachia from sociological perspective. Emphasis on population of Appalachia (number and distribution of inhabitants, characteristics of population, vital processes and migration), "culture of rural poverty," acceptance of innovation and social change in Appalachia, major social institutions in the area and community power structure in Appalachia.
- Soci 0210 -- Women in Society (4) F**
A study of women's role in society from a historical and sociological perspective.
- Soci 0211 -- Human Sexuality (4) W,Sp**
An in-depth view of the current status of human sexuality in the United States. Examined are sexual perspectives; current research; modes of sexual expression and enhancement; physiological, sociological and psychological basis of human sexuality; sexual variations, and sex ethics.
- Soci 0224 -- Urban Sociology (4) F,W,Sp**
Examines the structure and nature of social organization from a sociological perspective. Ecological and nonecological theories are used to study the processes of urbanization and the involvements and problems of the urban community.
- **Soci 0227 -- Sociology of Education (4)**
This course consists of a series of lectures on the anatomical and physiological concepts and principles related to normal and abnormal lung function. Emphasis is placed on the application of these concepts to the clinical practice of respiratory care.
- Soci 0229 -- Minority Groups (4) F**
Basic approaches are used to analyze American minority groups and their contemporary situation. Special emphasis is placed on patterns of prejudice and discrimination as well as the dynamics of race relations.
- Soci 0234 -- Sociology of Aging (4) Sp**
Various aspects of aging are examined with special emphasis upon social theories of aging, demographics, physical, psychological, and sociological aspects of the aging process.
- **Soci 0261 -- Social Deviance (4)**
Traditional and nontraditional theories are used to present the nature of deviance and its consequences. A variety of deviant patterns of behavior are examined such as sexual deviance, drugs, violence, amateur crime, criminal subculture and organizations, white-collar and government crime, and cognitive deviance.
- *Denotes classes with Lab fees.
**Offered on demand only

- **Soci 270 -- Complex Organizations (4)**
Examines the nature and types of organizational environments, behavior, theory, and issues.
- **Soci 275 -- Sociology of Occupations & Professions (4)**
Sociological analysis of contemporary occupations and professions in the United States, social stratifications in the work place, technology, and the individual in the work place.
- **Soci 0290A -- Topics in Sociology (2)**
****Soci 0290B -- Topics in Sociology (3)**
****Soci 0290C -- Topics in Sociology (4)**
Prereq. Permission of instructor is required.
Topics of special interest to students are investigated under the direction of the sociology staff. This course may be repeated but not to exceed a total of six hours.

SPANISH

- **Span 0111 -- Elementary Spanish (4) F**
Development of comprehension, speaking and reading skills. Basic grammar. Lab required. Beginning course of 3-yr. 1st yr. sequence.
- **Span 0112 -- Elementary Spanish (4) W**
Prereq. 0111.
Continuation of 0111.
- **Span 0113 -- Elementary Spanish (4) Sp.**
Prereq. 0112.
Continuation of 0112.
- **Span 0211 -- Intermediate Spanish I (4) F**
Prereq. Span 0113 or instructor's approval.
Reviews grammar. Offers selected readings in Hispanic literature. Oral expression is emphasized.
- **Span 0212 -- Intermediate Spanish II (4) W**
Prereq. 0211 or instructor's approval.
Emphasizes oral and written expression. Continues intensive review of grammar. Selected readings in Hispanic literature are stressed.
- **Span 0213 -- Intermediate Spanish II (4) Sp**
Prereq. Span 0212 or instructor's approval. Emphasizes the building of more advanced vocabulary and sentence structure through more difficult prose. Increasing emphasis is placed on conversation and free composition.
- *Denotes classes with Lab fees.
**Offered on demand only.

SPEECH

- Spch 0103 -- Public Speaking & Human Communications (3)**
F,W,Sp,S
Principles of public speaking, practice in presenting informative and persuasive speeches with emphasis on the human communication process.
- **Spch 0105 -- Introduction to Mass Communication (4)**
Study of all forms of mass communication including newspapers, magazines, radio-television, book publishing, public relations, advertising, and photojournalism. Begins with an analysis of communication process and ends with media career opportunities.
- **Spch 0215 -- Group Discussion (4)**
Study of structure and internal dynamics of small groups. nature and functions of leadership and group participation. problem solving and decision making; frequent participation in group discussion activities.
- **Spch 0220 -- Oral Interpretation of Literature (4)**
Techniques of oral interpretation and development of adequate intellectual and emotional responsiveness to meaning of literature.
- **Spch 0290A -- Topics in Communications (1)**
****Spch 0290B -- Topics in Communications (2)**
****Spch 0290C -- Topics in Communications (3)**
Study of various topics otherwise not available to students.

THEATER

- *Thar 0105 -- Practicum in Management (2-4) F,W,Sp**
Supervised lab practice in problems of theater publicity, finance, and house management. May be repeated.
- *Thar 0110 -- Introduction to Performance (4) F,W,Sp**
Introductory study of acting and actor. Emphasizes preparation of self and text, exploration of space, development of physical and vocal freedom through improvisation and theater games.
- *Thar 0135 -- Practicum in Production Design (2-4) F,W,Sp**
Supervised lab practice in design and execution of scenery, lighting, costumes, properties, and sound. May be repeated.
- *Thar 0170 -- The Theater Experience (4) F,W,Sp**
Exploration of nature and function of theater as art form through exploration of performer/space/audience interrelationship. Attendance at selected rehearsals and performances. Theater productions augment lecture and discussion sessions. Attendance at selected professional theatrical performances may be included.
- *Thar 0201 -- Children's Theatre (5) F,W, Sp**
A course designed to cover dramatic compositions and practical production procedures.
- *Thar 0205 -- Practicum in Management (2-4) F,W,Sp**
Supervised lab practice in problems of theater publicity, finance, and house management. May be repeated.
- *Thar 0210 -- Acting I (4) F,W,Sp**
Prereq. Thar 0110 or instructor permission
Principles and techniques of acting with major emphasis on developing trust and freedom. Warm-up techniques, theater games, improvisation, monologue exercises, and preliminary scoring techniques underline this introduction to work of actor.
- *Thar 0215 -- Practicum in Acting (2-4) F,W,Sp**
Prereq. Instructor permission.
Supervised lab practice in rehearsal and public performance of roles. May be repeated.
- *Thar 0220 -- Oral Interpretation (3) F,W,Sp**
Techniques in oral interpretation and development of intellectual and emotional responsiveness to meaning of literature.
- *Thar 0235 -- Practicum in Production Design (2-4) F,W,Sp**
Prereq. Instructor permission.
Supervised lab practice in design and execution of scenery, lighting, costumes, properties, and sound. May be repeated.
- *Thar 0237 -- Basic Makeup (1) F,W,Sp**
Prereq. Theater or instructor permission.
Theory and practice of stage makeup.

WELDING

- Weld 0101 -- Welding Symbols and Prints (4)**
A study of blueprint reading and weld symbols designed for welding students, about the details of how structures are to be made, weld locations, types of joints, correct size and amount of weld to be deposited.
- Weld 0102 -- Templet Layout (4)**
Designed for students majoring in welding technology to give a working knowledge of templet development.
- *Weld 0103 -- Basic Combination Welding (3)**
AUTO-DIESEL STUDENTS ONLY!
Designed for Automotive and Diesel Technology students to learn the basic procedures and techniques of oxy-acetylene cutting, welding, brazing and Shielded Metal Arc Welding processes. Emphasis is placed on welding safety, cutting and welding ferrous metals and preparing joints for fillet welds and groove welds in all positions. Brazing is also included.

- *Weld 0111 -- Basic Oxy-Acetylene Welding (4)**
A course designed for the beginning welding student to learn the procedures and techniques of oxy-acetylene welding and cutting. Emphasis is placed on welding safety, cutting and welding ferrous metals and preparing joints for fillet welds and groove welds in all positions. Brazing is also included.
- *Weld 0112 -- Basic Inert Gas Welding (3)**
Prereq. Weld 0111 and Weld 0113.
Designed for welding students to learn the fundamentals and techniques of "Gas Metal Arc Welding" (Mig) and "Gas Tungsten Arc Welding" (Tig). Emphasis is placed on plate welding ferrous metals with these processes.
- *Weld 0113 -- Basic Arc Welding (4)**
Prereq. Weld 0111.
Designed for the beginning welding student to learn the basic techniques of the Shielded Metal Arc Welding (stick) process. Emphasis is placed on learning to properly strike the arc, weld beads and weaves in all positions, proceeding on to fillet welds in all positions on T-joints and lap joints using 6010, 7018, and 7024 electrodes.
- *Weld 0114 - Advanced Arc Welding (7)**
Prereq. Weld 0111 and Weld 0113.
Designed for the intermediate welding student to gain experience and confidence in the more complex welding joints. Emphasis is placed on preparing, welding and bend testing open butt, V-groove welds on plates, in all positions, using 6010 and 7018 electrodes, S.M.A.W. process.
- Weld 0122 -- Welding Metallurgy (3)**
A lecture course designed for welding students to study ferrous and non-ferrous metals used in the welding industry. Emphasis is placed on metal identification, heat treatment procedures, alloying elements, and properties of metals.
- *Weld 0211 -- Advanced Structural Welding (4)**
Prereq. Weld 0114.
Designed for the advanced welding student to gain more experience. Emphasis is placed on structural type joints in all positions, using larger electrodes and S.M.A.W. (stick) and S.A. W. (submerged arc welding) processes. Air arc cutting process is also emphasized, cutting and gouging different type joints.
- *Weld 0212 -- Basic Pipe Welding (6)**
Prereq. Weld 0114 and Weld 0211.
Designed for the advanced welding student to learn how to prepare and weld pipe for all positions. Emphasis is placed on 6" schedule 80 pipe using the S.M.A.W. (stick) process on open butt V-groove pipe welds.
- *Weld 0213 -- Advanced Pipe Welding (7)**
Prereq. Weld 0102 and Weld 0212.
Designed for the advanced student to gain confidence on how to fabricate the different fittings using 8", 6" and 4" pipe; such as Turns, Branch and Headers, Laterals, and Reducers. Emphasis is also placed on preparing and welding the difficult 5G and 6G positions using S.M.A.W., Mfg, and Tig processes.
- *Weld 0214 -- Advanced Inert Gas Welding (3)**
Prereq. Weld 0112.
Designed for the advanced welding student to gain experience and confidence using the G.M.A.W. (Mig) and G.T.A.W. (Tig) processes. Emphasis is placed on Mig welding 8" carbon steel pipe and Tig welding aluminum, plates, pipe and Tig welding carbon steel and stainless steel pipe.
- *Weld 0216 -- Certification and Testing (5)**
Prereq. Weld 0213 and Weld 0214.
This course is designed for the advanced welding student to see if he/she is ready to compete in the welding industry. A series of welding tests will be given on plate and pipe. Emphasis will be placed on bend tests using the S.M.A.W., Tig and Mig processes. Each student will be awarded certification papers showing each bend test that he/she successfully passed.

*Denotes classes with Lab fees

**INTER-INSTITUTIONAL ADVANCED
STUDY
(OHIO UNIVERSITY COURSES)**

Shawnee State has entered into an agreement with Ohio University for the purpose of offering junior, senior, and graduate courses on the Shawnee State campus. Under the agreement, students may take Ohio University courses on the Shawnee State campus during or following their course work at Shawnee State. For additional information about opportunities in Ohio University baccalaureate and graduate programs, a student should see his Shawnee State counselor or the Ohio University counselor, whose office is on the Shawnee State Campus.

SIX DEGREES

Through the combined efforts of Shawnee State University and Ohio University, students can complete six degree programs at the Shawnee State Campus. These programs are:

1. Elementary Education
2. General Business
3. Nursing
4. Accounting
5. General Studies
6. Computer Systems in Business

The first two years of these programs are offered by Shawnee State University. The last two years will be offered by Ohio University. (Courses are available as long as student registration is great enough to justify offering them.)

ASSOCIATE OF INDIVIDUALIZED STUDIES DEGREE

The Associate of Individualized Studies Degree (AIS) at Shawnee State University has been designed for the primary purpose of allowing students the option of formulating his/her own individualized program of study. The philosophical basis of the degree is predicated upon the assumption that the student may be unable to achieve his/her personal educational goals through one of the more formalized two-year degree structures offered at Shawnee State. This is especially true for those students interested in concentrating or combining a selected mixture of courses encompassing both academic as well as technical offerings in a manner which may not meet the degree requirements of Shawnee State's Associate of Arts, Associate of Applied Science, or Associate of Applied Business Degrees. With the awarding of the AIS, students thus have an opportunity to formulate their own program of study relevant to personal/educational goals.

A demand exists among students for certification of two years of post secondary education. With approval, students may formulate a curriculum designed for transfer into a four-year program at a baccalaureate institution or formulate a program designed for immediate employment. There are those students who may also pursue the degree for general or personal enrichment.

Admission Requirements

The AIS Degree is available to any student admitted to Shawnee State whose educational objectives and interests cannot be met through one of the more structured degree programs. The student must make formal application by completing the AIS application. The application outlines the student's course of study and intended area of concentration. The student must also explain his reason for pursuing the degree. Two resource faculty or staff members must be consulted in preparation of the program, one of whom must be from the student's stated area of concentration. Both resource members must sign the application before submission for approval to the Vice President of Technical Programs or the Vice President of Academic Programs depending upon the area of concentration.

The student may submit his application at anytime; however, the student must complete 30 quarter hours of credit after admission into the AIS program. If an application is submitted within the first 10 class days of the quarter, the credits earned that quarter will be included in the 30 credits required after admission to the program.

Once the program receives approval, it should represent a firm contract between the student and faculty/staff involved. Some flexibility and minor alterations should be written into it, but if the major emphasis of the program is changed by the student, it must have written consent of the advisors and approval of the appropriate Vice President.

Graduation Requirements

Upon completion of 90 quarter hours of credit with a cumulative grade point average of 2.00, the student may be awarded the AIS Degree. Sixty hours must be completed after admission to the program. The Office of Records will handle individual graduation checks.

Counseling Procedure

Given the individualistic nature of the degree, it is understood that extensive academic counseling is necessary for each student pursuing this particular program. Each admitted student will be consulting with two resource personnel, particularly the advisor representing the proposed area of concentration. Although the degree is awarded based upon a program of study designed by the student along with consultation and advice from faculty or administrative advisors, the student has ultimate responsibility for his/her program. Each student will be encouraged to discuss their program with prospective employers or other relevant nonacademic personnel.

Since the AIS Degree is an individually designed program geared to meet specific educational objectives, it would not be recommended to those students whose interests and/or goals can be better met through one of the more conventional degree offerings at Shawnee State.

Curricular Structure

The AIS program is not expected to have any particular impact on the curricular offerings at Shawnee State as it does not require the development of new courses. The program does, however, allow the student greater flexibility in designing a program that would meet his/her educational needs. The student will be able to design both specialized and interdisciplinary programs with no restrictions on the number of academic or technical courses included in the student's planned program. The only limitations on the amount of credit granted for Advanced Placement, College Level Examination Programs, Course Credit by Examination, Independent Study, Correspondence Study, etc., are those normally applied to the Associate Degree Programs at Shawnee State and the agreement made in the original AIS contract (application).

Grading policies applicable to all other programs at Shawnee State are also applicable to the AIS Degree. To the extent that policies and procedures are developed for examining accomplishments and competencies of life or other creditable experience for all degree students at Shawnee State, they will also be available to AIS Degree students.

Students may modify their programs so long as the major emphasis and direction of the program is not changed. If the major emphasis of the program is altered, it must have the written consent of the advisors. Subject to all requirements of the program to which they transfer, students may transfer to any other degree program at Shawnee State when they choose.

Interinstitutional Cooperation

Relative to interinstitutional cooperation, the AIS Degree can be awarded to students who transfer credits from other institutions. Shawnee State University adheres to state articulation guidelines adopted by the Ohio Board of Regents.

SHAWNEE STATE UNIVERSITY

Board of Trustees

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John A. Boggess, M.A.	Controller

Student Services Staff

Dotty Welch, M.A.	Counselor, Director of Admissions
Richard T. Davidson, M.A.	Counselor, Director of Employment Placement
Paul D. Crabtree, Ph.D.	Counselor, Director of Transfer Placement
Frederick Chrisman, Jr., M.Ed.	Counselor, Director of Student Activities
Mary Beaumont, M.A.	Counselor, Director of Special Needs Program
Eugene Wilson, M.A.	Veteran's Coordinator/Director of Financial Aid
Paul Dawson	Director of Administrative Data Processing
Kenneth Crusan	Administrative Data Processing Programmer
Barbara Vansickle	Administrative Data Processing Programmer
Gene Beckett, M.A.	Director of Developmental Education

Library/Media Services Staff

Teresa D. Midkiff, MLS	Director of Library and Media Services
Louisa Straziuso, MLS	Reference Librarian
William P. Duncan, B.S.C.	Media Services Coordinator

Continuing Education

Danny L. Evans, M.A.Ed.	Director/Evening Program Coordinator
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Ohio Technology Transfer Organization

Gary Gulker, M.Ed.	Coordinator
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S.O.C.F. Coordinator

Paul Fowler, B.S.C., LL.B., J.D.	Coordinator
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Public Relations

Susan Warsaw	Director/Coordinator
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Sports Facilities

Harry E. Weinbrecht, M.S.PE.	Athletic Director/Director of Sports Facilities
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Special Programs

David L. Gleason, Ph.D.	Director/Special Programs
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FACULTY

HUMANITIES/SOCIAL SCIENCES

Shirley Crothers, Music -- B.S., Ohio State University; M.A. Ohio University
Barbara Edwards, English -- B.A., University of Kentucky; M.A., Marshall University
James Flavin, English -- B.A., M.A., Kansas State; Ph.D., Miami University
Emily Gulker, Speech/Theater -- B.S. Ed., Ohio State University; M.A., Marshall University
Robin Hagen-Smith -- B.S., Physical Education/Health, Rio Grande College, M.A., Education/Physical Education, Xavier University.
Betty Hodgden, English -- B.A., Otterbein College; M.A., Marshall University
Jack James -- B.A., Houghton College; M.S., Alfred University; M.Div., Colgate Rochester Divinity School.
John Kelley, History/Government -- B.A., Marian College; M.A. History, Indiana University; Additional Graduate Work, Indiana University.
Shannon Kiser, Coordinator, English -- B.S., Morehead State University; M.A., University of Kentucky.
Eleanor Marsh, Sociology/Anthropology -- B.A., M.A., Washington State University.
Edward Minor, Sociology -- A.B., Youngstown State; M.A., Ph.D., Kent State University.
Kathleen Simon, English -- A.B., M.A., Eastern Kentucky University.
Thomas D. Stead, Art -- B.F.A., M.F.A., Ohio University
Jerry Walke, Psychology -- B.S. Capital University; M.A., Ohio University; Ph.D., Ohio State University.
Betty Waller, Physical Education -- B.S.Ed., Miami University; M.S. Marshall University
Robert L. Wilson, English -- B.S., Kent State University; M.Ed., Xavier University; Ph.D., Florida State University.

MATH/SCIENCE

Julia Basham, Biology -- B.A., B.S. Ed., M.S. Ed., University of Cincinnati
Trudy Bostick, Math -- B.S., Ohio University; M.S. Wright State
R. Thomas Frazee, Chemistry -- B.S., Marshall University; M.S., Iowa State
Gary Gemmer, Physics -- B.A., Morehead State University; M.A.T., Miami University
Sibylle Herrmann, Biological Science -- B.S., Ohio University; M.S., University of Michigan
Phyllis Kegley, Mathematics -- B.S., Ohio State University; M.A. Marshall University
Scott Oliver, D.D.S., Biological Science -- B.A., Ohio University; D.D.S., Ohio State University.
John Shupert, Mathematics B.S., Ohio University; M.A., Louisiana State University; M.A., University of Illinois.
David Todt, Coordinator, Parks & Recreation/Biological Science - B.S., M.A., Miami University

TECHNICAL FACULTY

ALLIED HEALTH TECHNOLOGIES

Associate Degree Nursing

Joanne Abel, Director -- B.S., Nursing, Alderson-Broaddus College; M.A. Behavioral Disorders and Special Education, West Virginia College of Graduate Studies
Mary Dillon, R.N. -- BSN, Ohio University
Anna Gamp, R.N. -- BSN, Ohio State University; M.Ed., Ohio University
Gayle Massey, R.N. -- BSN, Catherine Spalding College
Jane Mayo, R.N. -- BSN, University of Kentucky
Sharon Scott, R.N. -- B.S., Bowling Green University; M.Ed., Ohio University
Becky Thiel, R.N. -- BSN, Ohio State University.
Dental Hygiene
James R. Kadel, D.D.S., Director -- B.A., Ohio State University, M.Ed., Cleveland State University -Vocational Education; M.B.A., Ohio University; D.D.S., Ohio State University College of Dentistry
Sheryl Allison -- Certificate of Graduate Dental Hygienist, B.S., A.Q.P., Ohio State University; M.Ed., Ohio University
Elizabeth A. Gowdy -- A.A.S., Dental Hygiene, Scioto Technical College; B.S. Community Health, Ohio University; M.Ed. Higher Education, Ohio University
Barbara S. Mullens -- A.A.S. Dental Hygiene, Scioto Technical College; B.S. Community Health, Ohio University; M.Ed. Higher Education, Ohio University
Linda Nickel -- A.A.S. Dental Hygiene, Scioto Technical College; B.S. Health Education, Ohio University; M.Ed. Higher Education, Ohio University

Emergency Medical Technician -- Paramedic

Melvin Hatfield, R.N., EMT-P, Director -- A.A.S. in Nursing, Otterbein College; Paramedic Certification, Columbus Technical Institute.

Medical Laboratory Technology

Frederick W. Law, Director -- B.S., MT (ASCP), CLS (NCA), University of Wisconsin-Madison; M.S., West Virginia University
Brenda F. Pinkerman -- B.S., MT (ASCP), Marshall University; M.S., Marshall University

Occupational Therapy

Valerie J. Kramer, Director - B.S., Ohio State University

Physical Therapist Assistant

Patricia Lawson, Director - B.S., University of Kansas

Practical Nursing

Brenda Horr, R.N., Director -- A.D.N., Ohio University-Portsmouth; BSN, Ohio University

Debbie Bihl, R.N., BSN -- Ohio University

Mary Lynd, R.N. -- B.S., Ohio University

Linda Wooddell, R.N. -- B.S. University of Alabama, School of Nursing; M.Ed., Ohio University

Radiologic Technology

William Sykes, Director -- A.A.S., Central Technical College; B.S., Ohio State University

Jack Thomas, Clinical Coordinator -- B.S., Ohio State University

Respiratory Therapy

Priscilla Strunk, Clinical Coordinator -- A.A.S., Shawnee State Community College

Colleen White, Clinical Coordinator -- B.S., Wheeling College

BUSINESS TECHNOLOGIES

Accounting

Larry C. Essman, Chairperson -- B.B.A., Ohio University; M.B.A., Ohio University; C.P.A.

Loretta Jenkins -- A.A.S., Shawnee State Community College; B.B.A., Ohio University; M.Ed., Ohio University

Business Management

Robbie Burke -- B.A., West Virginia Wesleyan College; M.S., Marshall University

Larry Estep -- B.B.A., Ohio University; M.A. Marshall University

Data Processing

Gerald Barry -- B.A., Ohio University

Mike Gamp -- M.B.E., Morehead State University

Anita Gilmer -- B.S., Indiana University - Pennsylvania; M.Ed., Ohio University

Secretarial Technology

Catherine Chaffin -- M.B.E., Morehead State University

Joyce Kiser -- B.A., M.B.E., Morehead State University

Peggy Jenkins -- B.S., Rio Grande College; M.Ed., Ohio University

ENGINEERING AND INDUSTRIAL TECHNOLOGIES

Automotive Technology

Rankin E. Barnes -- A.A.S., Shawnee State Community College

Thomas K. Charles -- B.S., M.A., Western Michigan University

Civil Engineering

Richard Hevenor -- B.S., University of Virginia

Diesel Technology

Oliver Carver - Non-degree

Electro-Mechanical Engineering

C. Ray Irwin, Chairperson -- B.S.E.E., Ohio University; M.Ed., Ohio University

Ken Warfield -- A.A.S., Shawnee State Community College

Carl Prlode -- A.A.S., Shawnee State Community College

Instrumentation Technology

Edmon Scott -- B.S. Bowling Green University

William Penn -- B.S. Mechanical Engineering Technology, Miami University; M.Ed., Ohio University

Plastics/Chemical Engineering

Lyle Smith -- B.S., Ohio University

George Trampe -- B.S., University of Illinois; Ph.D. Chemistry, Purdue University

Welding Technology

Robert Humble -- Ohio University (N.G.)

PUBLIC SERVICE TECHNOLOGY

Social Services Technology

Paul Fowler -- B.S.C. Business Administration, Ohio State University; LL.B., Ohio State University of Law; J.D., Ohio State University of Law

SHAWNEE STATE UNIVERSITY

Calendar for 1986-1987

Fall Quarter 1986

May 11 - July 23 (Noon)
 July 28-August 11
 August 12, 13
 September 1
 September 2

September 3

September 4-5
 September 8
 September 12
 September 19

September 22-26

October 13
 Oct. 20 - Nov. 14 (Noon)

November 11
 November 19
 November 27, 28
 November 27

November 28
 December 1-6
 December 8
 December 25, 26
 January 1

Fall Quarter Walk-in Registration
 Fall Quarter advising
 Registration for Fall Quarter
 Labor Day - College Closed
 Last day to pay fees (\$20 late fee after this date)
 Late registration (\$25 late fee required if enrolled during Summer Quarter)
 Faculty in-service days
 First day of classes
 Last day to add a class
 Last day to apply for pass/fail
 Last day for full refund upon withdrawal or change order
 50% refund of instructional fees upon withdrawal
 Columbus Day - College open
 Winter Quarter walk-in registration.
 Veteran's Day - College closed
 Early registration for Winter Qtr.
 Thanksgiving Holiday-College closed
 Last day to drop a class or apply for non-credit
 Quarter ends.
 Finals
 Grades due to ADP by 12 noon
 Holidays-Christmas observed
 Holiday - New Year's Day observed

Spring Quarter 1987

March 27

March 30

March 31

April 3

April 3

April 14, 15, 16, 17

April 27-May 15 (Noon)

April 27-July 10 (Noon)

May 25

May 27

June 3

June 4

June 5, 6, 8, 9, 10

June 11

June 12

June 15

Last day to pay fees (late fee of \$20 after this date)
 Late registration for Spring Qtr. (\$25 late fee if enrolled during Winter Quarter)
 First day of evening classes
 First day of classes
 Last day to add a class
 Last day to apply for pass/fail
 Last day for full refund upon withdrawal or change order
 50% refund of instructional fees upon withdrawal
 Walk-in registration for Summer Quarter
 Walk-in registration for Fall Quarter
 Memorial Day - College closed
 Early registration for Summer Qtr.
 Last day to drop a class or apply for non-credit
 Quarter ends
 Finals
 Grades due to ADP by 12 noon
 Graduation practice
 Graduation
 Late Registration

Winter Quarter 1987

January 2

January 5

Fall Quarter)

January 6

January 12

January 19

January 20

January 21, 22, 23, 26

Feb. 2 - Feb. 26 (Noon)

February 16

March 4

March 12

March 13

March 15-20

March 23

Last day to pay fees (late fee of \$20 after this date)
 Late registration for Winter Quarter (\$25 late fee if enrolled during Fall Quarter)
 First day of evening classes only
 First day of classes
 Martin Luther King Day - College closed.
 Last day to add a class or apply for pass/fail
 Last day for full refund upon withdrawal or change order.
 50% refund of instructional fee upon withdrawal.
 Walk-in registration for Spring Qtr.
 President's day - College open
 Early registration for Spring Qtr.
 Last day to apply for non-credit or drop a class.
 Quarter ends
 Finals
 Grades due to ADP by 12 noon

Summer Quarter 1987

June 15

June 16

Late Registration for Summer Qtr. (\$25 late fee if enrolled during Spring Quarter)
 First day of evening classes
 First day of classes

Shawnee State University

APPLICATION FOR ADMISSION

Complete this application and return it with the non-refundable \$15 application fee to the Office of Admissions at Shawnee State. Please have your high school transcript or general equivalence certificate (GED) also mailed to the same office. If you have attended another college or university, please have the registrar mail an official college transcript to the Admissions Office.

PERSONAL DATA

NAME: ^{Mr.} ^{Mrs.} ^{Miss} _____
Last First Middle/Maiden

LOCAL ADDRESS: _____
Street & Number City State Zip Code County

PERMANENT OR PARENTS' ADDRESS: _____
Street & Number City State Zip Code County

PLACE OF BIRTH: _____ DATE OF BIRTH: _____
State County

HOME PHONE: _____ SOCIAL SECURITY NUMBER: _____

HIGH SCHOOL ATTENDED: _____ YR. OF GRAD.: _____ GED TEST: _____
Date Received

HIGH SCHOOL ADDRESS: _____
Street & Number City State Zip Code County

SEX: (1) Male (2) Female MARITAL STATUS: (1) Married (2) Single (3) Divorced (4) Widowed

Resident Status for Past 12 Months:

- 0-Resident of Scioto County
- 1-Resident of Ohio, Not Scioto County
- 2-Resident of Another State
- 3-Other National
- 4-Foreign

Race/Ethnic:

- 1-Black/Negro
- 2-American Indian or Alaskan
- 3-Asian or Pacific Islander
- 4-Hispanic
- 5-Caucasion/White
- 6-Non-Resident Alien

Housing/Living Arrangements:

- 1-Commuter (drive from home)
- 4-Other

TRANSFER INFORMATION (Required only if you have previous college work)

Previous College Attended: _____

Degree Earned: _____ Dates Attended: _____ to _____

Are you transferring college credit to this institution? Yes No

Did you receive financial aid? Yes No

Did you receive veterans benefits? Yes No

STUDENT INTENT IN ENROLLING:

- A. Work toward an Associate Degree (2 year degree)
- B. Gain qualifications and skills for employment (non-degree)
- C. Taking course for personal enrichment (non-degree)
- D. Complete course for transfer to another institution (non-degree)
- E. Work toward a Bachelor's Degree (4 year degree)
- F. Work toward a one year certificate

How did you hear about Shawnee State? _____

I AM MAKING APPLICATION FOR THE FOLLOWING MAJOR:

- | | | |
|--|---|---|
| <ul style="list-style-type: none"> <input type="checkbox"/> 01 Accounting <input type="checkbox"/> 02 Business Management Major in: <ul style="list-style-type: none"> <input type="checkbox"/> Banking & Finance <input type="checkbox"/> Business Management <input type="checkbox"/> Real Estate <input type="checkbox"/> Retail Marketing Mgt. <input type="checkbox"/> 03 Data Processing <input type="checkbox"/> 05 Secretarial <input type="checkbox"/> 06 Plastics/Chemical Engineering <input type="checkbox"/> 07 Civil Engineering Major in: <ul style="list-style-type: none"> <input type="checkbox"/> CADD <input type="checkbox"/> 08 Electro-Mechanical Engineering Major in: <ul style="list-style-type: none"> <input type="checkbox"/> Robotics <input type="checkbox"/> 09 Instrumentation Technology <input type="checkbox"/> 10 Automotive Technology <input type="checkbox"/> 11 Diesel Technology <input type="checkbox"/> 12 Welding Technology <input type="checkbox"/> 16 Dental Hygiene <input type="checkbox"/> 17 Associate Degree Nursing | <ul style="list-style-type: none"> <input type="checkbox"/> 18 Medical Laboratory <input type="checkbox"/> 19 Radiology (X-ray) Technology <input type="checkbox"/> 20 Practical Nursing (one year) <input type="checkbox"/> 28 Physical Therapist Assistant <input type="checkbox"/> 29 Occupational Therapy Assisting <input type="checkbox"/> 21 Respiratory Therapist Technician (one year) <input type="checkbox"/> Respiratory Therapist (two year) <input type="checkbox"/> 22 Emergency Medical Technician - Paramedic (one year) <input type="checkbox"/> 23 Teacher Education <ul style="list-style-type: none"> <input type="checkbox"/> Elementary Education <input type="checkbox"/> Secondary Education _____ Major <input type="checkbox"/> Special Education <input type="checkbox"/> Arts/Humanities/Social Sciences <ul style="list-style-type: none"> <input type="checkbox"/> Art <input type="checkbox"/> Business Administration <input type="checkbox"/> Communication (General) <input type="checkbox"/> Comparative Arts <input type="checkbox"/> English <input type="checkbox"/> Government <input type="checkbox"/> History | <ul style="list-style-type: none"> <input type="checkbox"/> Journalism <input type="checkbox"/> Pre-Law <input type="checkbox"/> Psychology <input type="checkbox"/> Social Work <input type="checkbox"/> Sociology <input type="checkbox"/> Theater <input type="checkbox"/> 26 Mathematics/Sciences <ul style="list-style-type: none"> <input type="checkbox"/> Botany <input type="checkbox"/> Chemistry <input type="checkbox"/> Dentistry <input type="checkbox"/> Pre-Engineering <input type="checkbox"/> Forestry <input type="checkbox"/> Pre-Medical Technology <input type="checkbox"/> Medicine <input type="checkbox"/> Microbiology or Public Health and San. <input type="checkbox"/> Optometry <input type="checkbox"/> Pharmacy <input type="checkbox"/> Recreation Studies <input type="checkbox"/> Veterinary <input type="checkbox"/> Zoology <input type="checkbox"/> Individualized Studies |
|--|---|---|

Quarter and year you plan to enter: Fall _____ Winter _____ Spring _____ Summer _____

I certify that the statements included in this application are accurate and true to the best of my knowledge.

SIGNATURE OF APPLICANT

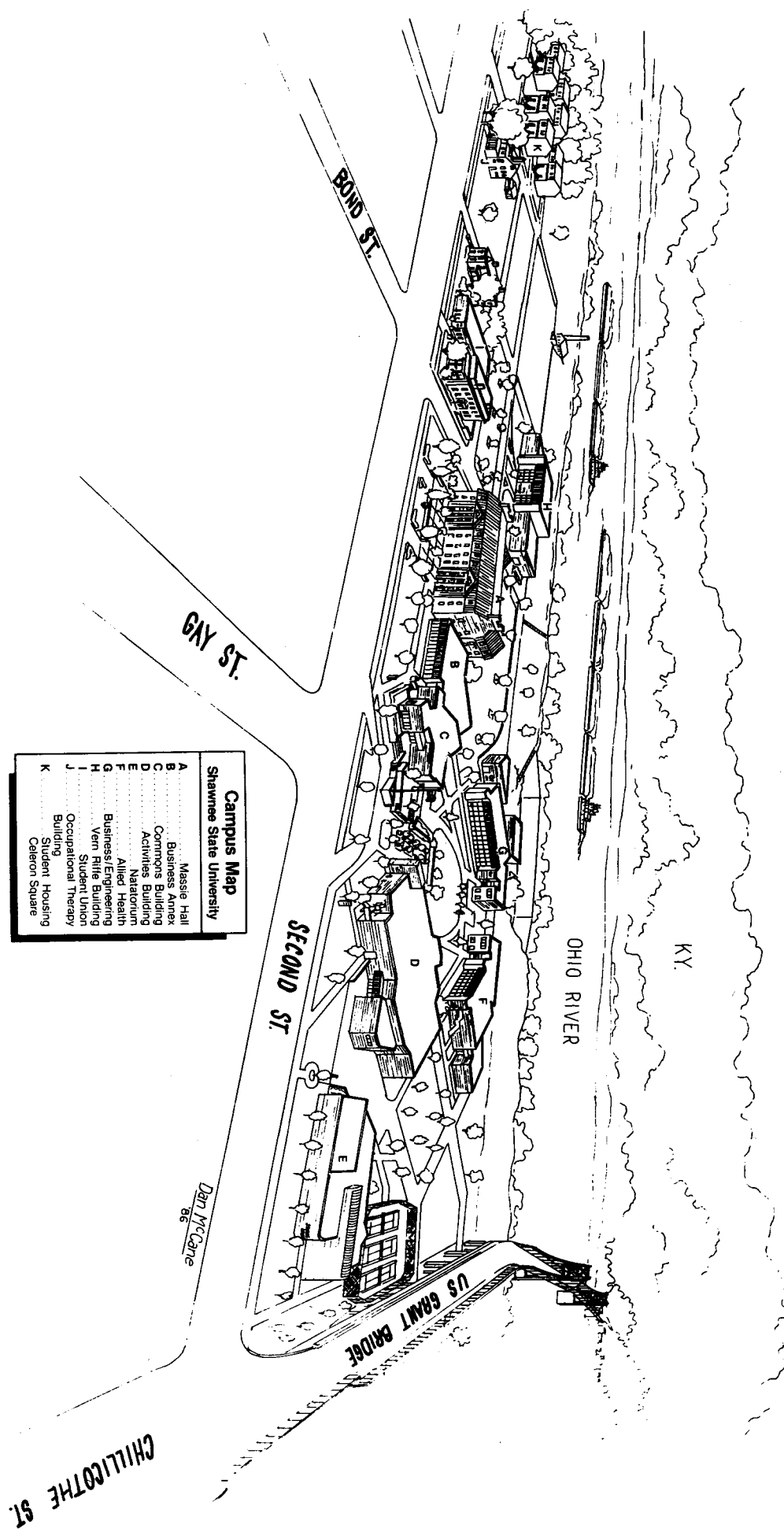
Please return the completed application and a non-refundable \$15 check or money order made payable to Shawnee State University to:

Admissions Office
SHAWNEE STATE UNIVERSITY
 940 Second Street
 Portsmouth, Ohio 45662

PLEASE NOTE: All applicants to the following Allied Health Programs must submit the test results of the American College Test (ACT): Dental Hygiene, Medical Laboratory Technology, Associate Degree Nursing, Radiologic Technology, and Respiratory Therapy. It is suggested that applicants have the ACT results submitted to the college before March 1.

*** THIS INSTITUTION DOES NOT DISCRIMINATE WITH REGARD TO RACE, COLOR, RELIGION, OR NATIONAL ORIGIN; THE INFORMATION REQUESTED IS FOR STATE AND FEDERAL REPORTS ON EQUAL OPPORTUNITY FOR EDUCATION OR EMPLOYMENT.**

**** THIS INSTITUTION, IN COMPLIANCE WITH SECTION 504 OF THE 1973 REHABILITATION ACT, DOES NOT DISCRIMINATE AGAINST HANDICAPPED PERSONS.**



Campus Map	
Shawnee State University	
A	Massie Hall
B	Business Annex
C	Commons Building
D	Activities Building
E	Natorium
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