

**FULTON-MONTGOMERY
COMMUNITY COLLEGE**

Johnstown, New York 12095

(518) 762-4651

A Unit of the State University of New York
Sponsored by the Counties of Fulton and Montgomery

1993-95

SCANNED

Fulton-Montgomery Community College is an equal opportunity, affirmative action institution. Programs and services at Fulton-Montgomery Community College are open to all without regard to sex, race, color, national origin or disability.

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The cost of non-credit courses varies according to the hours of instruction. Courses are offered at both on and off campus locations at selected times.

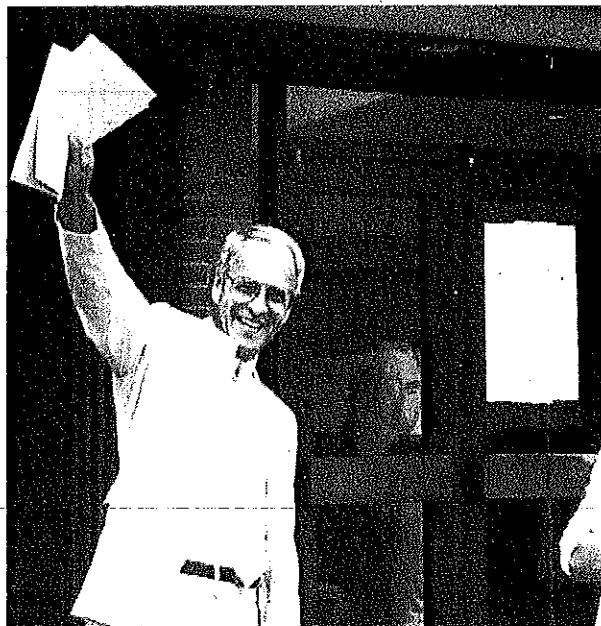
On-Site Training for Business and Industry

The Continuing Education's Business Development Center staff stands ready to work with Business and Industry in providing training programs. These programs are designed in concert with individual or groups of businesses to meet their special needs. The basic goal of the Business Development Center is to aid local business and industry in maintaining their competitive edge in a constantly changing marketplace. Contact the Continuing Education-Business Development Center for information.

Living Independently for Tomorrow (LIFT)

LIFT is a Displaced Homemakers Program that provides individuals a training period to assess their skills and interest, learn about the educational and training opportunities available in this community, and brush up skills or develop new ones.

LIFT is also a time for individuals to sort out their problems, set their goals, and grow in confidence and a time to help the displaced homemaker to become an independent and self-sufficient person ready to go to work.



REGULATIONS

Academic

The College has full sets of academic regulations available for perusal at the circulation desk in the Educational Resources Building and in the offices of the College.

The ultimate responsibility for fulfilling graduation requirements rests with the individual student. Students should regularly review their academic programs with their advisors to make certain that requirements for their degrees are being met.

Audit Policy

Students upon approval and completion of the Audit Option Form may use the option of taking courses for an audit grade. Any student who completes a course by auditing will receive the grade AU on his/her record in place of credit grades. He/she may not receive credit for an audited course unless he/she re-registers for the course and receives a passing grade.

Students who register in a course for audit are expected to have the necessary prerequisites. In this respect, students are encouraged to make full use of the College's counseling services, but the ultimate decision whether to enroll for audit shall be the student's responsibility. This decision is an irrevocable one.

Full-time students may audit courses with no additional charge. For part-time students the regular tuition schedule applies. New York State residents who are 60 years of age or older may audit courses without charge on a space available basis.

DEFINITION OF GRADING SYSTEM GRADE POINTS

A	Superior Achievement	4
B	Above Average Achievement	3
C	Average Achievement	2
D	Minimal Passing	1
F	Below Minimal Passing	0
W	Withdrawal	*
I	Incomplete	*
IP	Course in Progress	*
S	Satisfactory	*
U	Unsatisfactory	*
AU	Audit	*
N	Non-Attendance (Mid Semester Grade Only)	*
NE	No Evaluation Has Been Made At this Time (Mid Semester Grade Only)	*

*Special Grades. No grade points assigned. Not computed in cumulative grade point average.

Dean's List

In recognition of superior achievement, students who attain a minimum grade point average of 3.20 in any one semester and meet the criteria set forth in the Academic Regulations will be placed on the Dean's List.

Required Immunization Against Measles, Mumps, and Rubella

N.Y.S. law 2165 REQUIRES all students attending college in the state to provide documentation by a health practitioner of immunity against measles, mumps and rubella. ALL STUDENTS registered for 6 or more credits must comply.

The only exemptions from this requirement are for:

- a. Those with documentation they were born BEFORE
January 1, 1957.
OR
- b. Those with physician's documentation that specific immunizations would pose a serious and specific health hazard. Immunization must be completed for those which do not pose a health hazard.
OR
- c. Those with specific documentation that such immunization is contrary to their sincere and genuine beliefs of their religion.

All students registering for 6 or more credits must submit at the time of their registration or within four (4) weeks of the beginning of classes the required immunization documentation from a health practitioner OR documentation of an exemption. Those NOT providing an exemption must document the following:

For MEASLES:

~~two~~ doses of measles vaccine both given after 1967 and the 1st dose given on or after the 1st birthday, OR physician documented history of disease, OR serologic evidence of immunity.

AND

For RUBELLA:

One dose of rubella vaccine on or after the 1st birthday, OR serologic evidence of immunity.

AND

For MUMPS:

one dose of mumps vaccine on or after the 1st birthday, OR physician documented history of disease, OR serologic evidence of immunity.

Students not complying with this law can be withdrawn from all courses. Refunds will not be issued for withdrawals after the College's normal refund period.

Immunization records will be stored as part of each student's file in the Registrar's Office. The same fee charged for an academic transcript will be charged for an immunization transfer record.

Information on suspected and/or confirmed cases must be immediately reported to the Dean of Student and Community Services who will report them to the Public Health Offices in Fulton and Montgomery counties. In case of an outbreak of these diseases, students not immunized for any reason may be excluded from the campus.

Discipline

The laws of the local community are enforced on the campus of the College by the peace officers of the courts. Conduct which constitutes violation of law is punishable by the courts. In general, the College will not add its sanction to any imposed by a court. However, should the President judge that the continued presence of a student constitutes a danger for the College community, the President may suspend or dismiss that student. Suspension and dismissal may also be imposed for serious breaches of academic discipline such as cheating, dishonesty, malicious abuse or damage. Policies of the College provide procedures for hearing, sanction, and appeal.

The effect of the College open-admission policy is that an eligible student may enroll as often and for as long as that student wishes. While the policy encourages persistence and perseverance toward academic goals, it is no guarantee against poor performance. There is no formal academic probation. Nor is academic performance grounds for dismissal. However, those students whose grades are low (below 2.00 on a scale of 0 to 4.00) are officially encouraged to consult with an academic advisor to review their course selections and their commitment to academic programs.

Attrition/Retention Data

Of the 376 first-time, full-time students who entered Fulton-Montgomery Community College in the Fall of 1987, 84 had formally finished a program of study prior to the Fall of 1989. Of the remainder, 22 were enrolled in the College during the Fall, 1990 semester, while 83 had transferred prior to receiving a formal award.

COURSE OF STUDY

LIBERAL ARTS

HONORS PROGRAM

Program Description

The Honors program is designed to meet the needs of those students who, because of high academic ability, preparation and motivation, are ready to undertake rigorous and challenging academic work that exceeds those offered in regular courses. The program provides the kinds of academic challenges which will enable students to develop to their fullest potential. The program includes special Honors Sections of regular courses, Honors Options within regular courses and a unique interdisciplinary Honors Seminar. The program enriches rather than accelerates the learning process. Those successfully completing all the Honors Program requirements will have their transcripts stamped "Honors Concentration Degree."

Admission Criteria

To be considered for admission to the Honors Program, a student must meet the following requirements: Submit letter of application for admission to the Honors Program; One academic letter of reference supporting the student's candidacy for the Honors Program; approval of the Honors Program Committee.

Program Requirements

Requirements for all Honors Concentration Degrees in Liberal Arts and Sciences: Admittance into the Honors Program; Three courses with Honors Sections or Options from at least two different Academic Divisions; Honors Seminar; 3.5 cumulative grade point average; Satisfy all the requirements for the A.A. degree in Humanities and Social Science OR the A.S. degree in Mathematics and Science OR the A.A. degree in General Studies.

GENERAL STUDIES (A.A.) APC — 0250

This program is a university parallel program designed for students who intend to transfer to a four year institution. This program can be used either by students who are unsure of their plans and need maximum flexibility to explore their options or by students who wish to develop their curriculums within the requirements of the four year institution to which they intend to transfer.

FIRST YEAR

First Semester

EN 125 Freshman English I	3
Social Science Elective	3
Mathematics Elective	3-4
Liberal Arts Elective*	3
Elective	3
Physical Education	1
	<u>16-17</u>

Second Semester

EN 126 Freshman English II	3
Social Science Elective	3
Science Elective	3-4
Liberal Arts Elective*	3
Elective	3
Physical Education	1
	<u>16-17</u>

SECOND YEAR

First Semester

Humanities Elective	3
Math/Science Elective	3-4
Liberal Arts Electives*	6
Elective	3
	<u>15-16</u>

Second Semester

Humanities Elective	3
Social Science Elective	3
Liberal Arts Electives*	6
Electives	3
	<u>15</u>

*Liberal Arts electives should be selected so as to produce a balance among the areas of Humanities, Social Sciences, and Math/Science.

Communications Advisement Track

This advisement track within the General Studies (A.A.) degree program is recommended for students who plan to transfer to a four-year college to pursue their studies in areas such as print journalism, broadcast journalism, or public relations leading to a Bachelor's degree.

FIRST YEAR

First Semester

EN 125 Freshman English I	3
Social Science Elective*	3
Mathematics Elective	3-4
Liberal Arts Elective	3
Elective	3
Physical Education	1
	<u>16-17</u>

Second Semester

EN 126 Freshman English II	3
CO 171 Intro. to Mass Communications	3
Social Science Elective*	3
Science Elective	3-4
Liberal Arts Elective	3
Physical Education	1
	<u>16-17</u>

SECOND YEAR

First Semester

EN 231 Masterpieces of World Lit. I or	
EN 233 American Lit. II	3
Communications Elective**	3
Math/Science Elective	3-4
Liberal Arts Elective	3
Elective	3
	<u>15-16</u>

Second Semester

EN 232 Masterpieces of World Lit. or	
EN 234 American Lit. II	3
Communications Elective**	3
Social Science Elective*	3
Electives	6
	<u>15</u>

*Recommended Social Science Electives: SS 183, 184, 283, 284, 291, 282, 383, 278, 281.

**Communications Electives: CO 220, 231, 254, 264, EN 132.

Electives should be selected to conform to the program requirements of the College to which the student plans to transfer. Suggested electives include BU 170, ER 101, AR 150.

A student who wishes to seek employment with the two-year Associate degree should consider gaining field experience through at least one semester of Internship (IN 299) for elective credit.

A student could develop a communications Advisement Track within the requirements of the Humanities (A.A.) degree program.

The particular course sequence listed above is within the requirements of the General Studies (A.A.) degree program and is for advisement purposes only. Communications is NOT a major for which, in itself, a two-year degree may be earned; the two-year A.A. degree major is General Studies.

Early Childhood Education Advisement Track

This advisement track within the General Studies (A.A.) degree program is recommended for students who plan to transfer to a four-year college to pursue the baccalaureate degree toward teacher certification.

FIRST YEAR

First Semester

EN 125 Freshman English I	3
SS 291 General Psychology	3
Mathematics Elective	3-4
Liberal Arts Elective*	3
Elective	3
Physical Education	1
	<u>16-17</u>

Second Semester

EN 126 Freshman English II	3
ED 171 Intro. to Early Childhood Ed.	3
SS 298 Child Development	3
Science Elective	3-4
Liberal Arts Elective*	3
Physical Education	1
	<u>16-17</u>

SECOND YEAR

First Semester

SS 281 Intro. to Sociology	3
Humanities Elective	3
Math/Science Elective	3-4
Education Elective**	3
Liberal Arts Elective*	3
	<u>15-16</u>

Second Semester

Humanities Elective	3
Education Elective**	3
Liberal Arts Elective*	3
Electives	6
	<u>15</u>

*HE 135, SS 294, and HD 221 are recommended.

**Education Electives: ED 225, 250, 275. Students are advised to select the electives so as to meet the requirements of the particular four-year institution to which they intend to transfer.

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The particular course sequence listed above is within the requirements of the General Studies (A.A.) degree program and is for advisement purposes only. Early Childhood Education is NOT a major for which, in itself, a two-year A.A. degree may be earned; the two-year A.A. degree major is General Studies.

Elementary/Secondary Education Advisement Track

This advisement track within the General Studies (A.A.) degree program is recommended for students who plan to transfer to a four-year college to pursue the baccalaureate toward teacher certification.

FIRST YEAR

First Semester

EN 125 Freshman English I	3
SS 291 General Psychology	3
Mathematics Elective	3-4
Liberal Arts Elective*	3
Elective	3
Physical Education	<u>1</u>
	16-17

Second Semester

EN 126 Freshman English II	3
SS 297 Developmental Psychology	3
Science Elective	3-4
Liberal Arts Elective*	3
Elective	3
Physical Education	<u>1</u>
	16-17

SECOND YEAR

First Semester

Literature Elective	3
Math/Science Elective	3-4
American History Elective	3
Liberal Arts Elective*	3
Elective	<u>3</u>
	15-16

Second Semester

SS 281 Intro. to Sociology	3
Philosophy Elective	3
Liberal Arts Electives*	6
Elective	<u>3</u>
	15

*Liberal Arts courses should be selected so as to produce a balance among the areas of Humanities, Social Sciences, and Math/Science.

Colleges of Education generally expect an extensive and intensive liberal arts preparation. Those planning to teach at the secondary level should use the electives to build a Advisement Track in their particular subject area of interest. Students are advised to select electives in accordance with the requirements of the College to which they plan to transfer. Suggested electives: AR 100, CS 110, EN 132, SS 284, 183,

184, 294, Economics, foreign Language, Literature, Mathematics, Political Science, Science.

The particular course sequence listed above is within the requirements of the General Studies (A.A.) degree program and is for advisement purposes only. Elementary/Secondary Education is NOT a major for which, in itself, a two-year degree may be earned; the two year A.A. degree major is General Studies.

Health Education Advisement Track

This advisement track within the General Studies (A.A.) degree program is designed for students who plan to transfer and continue their studies in health education or related allied health fields.

FIRST YEAR

First Semester

EN 125 Freshman English I	3
HE 135 Personal Health	3
PE 201 Intro. to H.P.E.R.	3
Social Science Elective	3
Science or Math Elective*	3
PE Activity	<u>1</u>
	16-17

Second Semester

EN 126 Freshman English II	3
HE 136 Safety & First Aid	3
Social Science Elective	3
Science or Math Elective*	3-4
Elective	3
PE Activity	<u>1</u>
	16-17

SECOND YEAR

First Semester

SS 291 General Psychology	3
BI 181 Anatomy & Physiology	4
HE 235 Community Health	3
Humanities Elective	3
Elective	<u>3</u>
	16

Second Semester

BI 182 Anatomy & Physiology	4
Social Science Elective	3
Humanities Elective	3
Health Elective	3
Elective	<u>3</u>
	16

*Must include at least 3 semester hours of mathematics.

A minimum of 64 semester hours are required to complete this program Advisement Track.

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Students are advised to select the electives based on the requirements of their transfer institutions.

The particular course sequence listed above is within the requirements of the General Studies (A.A.) degree program and is for advisement purposes only. Health Education is not a major for which, in itself, a two-year A.A. degree may be earned; the two-year A.A. degree major is General Studies.

Physical Education Advisement Track

This advisement track within the General Studies (A.A.) degree program is designed for students who plan to transfer and continue their studies in physical education or related recreation fields. Preparation for a variety of careers such as the teaching professions, athletic training/sports medicine, coaching, fitness consultants or sports/recreation administration may be initiated with this Advisement Track.

FIRST YEAR

First Semester

EN 125 Freshman English I	3
HE 135 Personal Health	3
PE 201 Intro. to H.P.E.R.	3
Social Science Elective	3
Science or Math Elective*	3-4
PE Elective 140 or 160 Series	<u>1</u>
	16-17

Second Semester

EN 126 Freshman English II	3
HE 136 Safety & First Aid	3
PE 250 Lifetime Sports Series	2
Social Science Elective	3
Science or Math Elective*	3-4
PE Elective 140 or 160 Series.	<u>1</u>
	15-16

SECOND YEAR

First Semester

SS 291 General Psychology	3
BI 181 Anatomy & Physiology	4
PE 250 Lifetime Sports Series	2
Humanities Elective	3
Elective	3
PE 241 General Aquatics for P.E. Majors	<u>1</u>
	16

Second Semester

BI 182 Anatomy & Physiology II	4
Social Science Elective	3
Humanities Elective	3
H.P.E.R. Electives	6-8
	16-18

*Must include at least 3 semester hours of mathematics

A minimum of 63 semester hours are required to complete this program. Students are advised to select

the electives based on the requirements of their transfer institutions. Those who wish to seek employment with the two-year Associate degree should consider gaining field experience through at least one semester of Internship (IN 299) for elective credit.

The particular course sequence listed above is within the requirements of the General Studies (A.A.) degree program and is for advisement purposes only. Physical Education is not a major for which, in itself, a two-year degree may be earned; the two-year A.A. degree major is General Studies.

Special Education Advisement Track

This advisement track within the General Studies program is recommended for students who plan to transfer to a four-year college to pursue the baccalaureate degree toward teacher certification.

FIRST YEAR

First Semester

EN 125 Freshman English I	3
SS 291 General Psychology	3
SS 281 Intro. to Sociology	3
Mathematics Elective	3-4
Liberal Arts Elective*	3
Physical Education	<u>1</u>
	16-17

Second Semester

EN 126 Freshman English II	3
SS 297 Developmental Psychology	3
ED 171 Intro. to Early Childhood Ed.	3
Science Elective	3-4
Liberal Arts Elective*	3
Physical Education	<u>1</u>
	16-17

SECOND YEAR

First Semester

HS 251 Intro. to Developmental Disabilities	3
Humanities Elective	3
Math/Science Elective	3-4
Education Elective**	3
Elective*	<u>3</u>
	15-16

Second Semester

SS 292 Abnormal Psych.	3
Humanities Elective	3
Education Elective**	3
Electives*	<u>6</u>
	15

*HE 135, SS 294, and HD 221 are recommended. Students are advised to select the electives so as to meet the requirements of the particular four-year college to which they plan to transfer.

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**Education Electives: ED 225, 250, 275.

The particular course sequence listed above is within the requirements of the General Studies (A.A.) degree program and is for advisement purposes only. Special Education is NOT a major for which, in itself, a two-year degree may be earned; the two-year A.A. degree major is General Studies.

Theater Advisement Track

This advisement track within the General Studies (A.A.) degree program is recommended for students who plan to transfer to a four-year college to pursue their studies in Theater leading to a Bachelor's degree.

FIRST YEAR

First Semester

EN 125 Freshman English I	3
Theater Elective*	3-4
Social Science Elective	3
Mathematics Elective	3-4
Elective	3
Physical Education	<u>1</u>
	16-18

Second Semester

EN 126 Freshman English II	3
Theater Elective*	3-4
Social Science Elective	3
Science Elective	3-4
Elective	3
Physical Education	<u>1</u>
	16-18

SECOND YEAR

First Semester

Theater Elective*	3-4
Music Elective**	3
Humanities Elective***	3
Math/Science Elective	3-4
Elective	<u>3</u>
	15-17

Second Semester

Theater Elective*	3-4
Music Elective**	3
Humanities Elective***	3
Social Science Elective	3
Elective	<u>3</u>
	15-16

*Theater Electives: TH 101, 102, 105, 136, 201, 202.

**Music Electives: MU 101, 102, 201.

***Suggested Humanities Electives: EN 132, 235, 239, 243, 245, AR 150.

A student could develop a theater Advisement Track within the requirements of the Humanities (A.A.) degree program.

The particular course sequence listed above is within the requirements of the General Studies (A.A.) degree program and is for advisement purposes only. Theater is NOT a major for which, in itself, a two-year degree may be earned; the two-year A.A. degree major is General Studies.

HUMANITIES (A.A.)

APC -- 0201

This program is designed primarily for those students who plan to transfer to four year colleges in programs leading to Bachelor's degree in English, Foreign Languages, Theater, Communications, Philosophy, or in other related fields.

FIRST YEAR

First Semester

EN 125 Freshman English I	3
SS 183 Western Civilization I or	
SS 283 American History I	3
Foreign Language*	3
Mathematics or Science	3-4
Elective	3-4
Physical Education	<u>1</u>
	16-18

Second Semester

EN 126 Freshman English II	3
SS 184 Western Civilization II or	
SS 284 American History II	3
Foreign Language*	3
Mathematics or Science	3-4
Elective	3-4
Physical Education	<u>1</u>
	16-18

SECOND YEAR

First Semester

Literature Elective	3
Social Science Elective	3
Foreign Language* or	
Elective	3-4
Mathematics or Science	3-4
Humanities Elective**	<u>3-4</u>
	15-18

Second Semester

Literature Elective	3
Social Science Elective	3
Foreign Language* or	
Elective	3-4
Mathematics or Science	3-4
Humanities Elective**	<u>3-4</u>
	15-18

*At least 2 courses at the intermediate level in a foreign language are recommended.

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**At least one course with AR, HU, MU, or TH designator is required.

A minimum of 62 semester hours are required to complete this program. All students must complete a minimum of 6 semester hours in Mathematics and 6 semester hours in Science. Students are advised to select the electives based on the requirements of their transfer institutions. Students are advised to take, as additional electives, microcomputer applications courses recommended by the Humanities faculty.

Students may, based on their area of interest and requirements of the transfer institution, develop Advisement Tracks in English, Foreign Language, Theater or Communications. Recommended Advisement track courses are given below:

ENGLISH

Literature Elective, Humanities Electives, and Electives: EN 231-232, 233-234, 235, 239, 245, 257, 200, 132

COMMUNICATIONS

Humanities Electives, Social Science Elective, Electives: EN 132, AR 150, CO 171, 220, 231, 254, 264, SS 291, 281, 282

FOREIGN LANGUAGE

Minimum 12 semester hours in a foreign language, including 2 courses at the intermediate level or higher. Literature Elective: EN 231-232; Social Science Elective: SS 294, 297

THEATER

Humanities Electives and Electives: TH 101, 105, 201, 202, MU 101, 102, 201; EN 132, 243, 245

SOCIAL SCIENCE (A.A.)

APC — 0212

This program is designed primarily for students who plan to transfer to four year colleges to pursue their studies in any branch of Social and Behavioral Sciences including history, political science, pre-law, public affairs, sociology, psychology, and counseling.

FIRST YEAR

First Semester

EN 125 Freshman English I	3
Social Science Elective*	3
Foreign Language	3
Mathematics or Science	3-4
Elective	3-4
Physical Education	1
	16-18

Second Semester

EN 126 Freshman English II	3
Social Science Elective*	3
Foreign Language	3

Mathematics or Science	3-4
Elective	3-4
Physical Education	1
	16-18

SECOND YEAR

First Semester

Literature Elective	3
Social Science Elective*	3
Foreign Language or Elective	3-4
Mathematics or Science	3-4
Social Science Elective	3
	15-17

Second Semester

Literature Elective	3
Social Science Elective*	3
Foreign Language or Elective	3-4
Mathematics of Science	3-4
Social Science Elective	3
	15-17

*Two courses must be from History and/or Political Science; two courses must be from Psychology and/or Sociology.

A minimum of 62 semester hours are required to complete this program. All students must complete a minimum of 6 semester hours in Mathematics and 6 semester hours in Science. Students are advised to select the electives based on the requirements of their transfer institutions. Students are advised to take, as additional electives, microcomputer applications courses recommended by the Social Science faculty.

Students may, based on their area of interest and requirements of the transfer institution, develop Advisement Tracks in History, Political Science/Public Affairs, Psychology, or Sociology. Recommended Advisement Track courses are given below:

HISTORY

Social Science should include: SS 183-184, 283-284. Literature Elective: EN 231-232 or 233-234. Suggested Electives: EC 281-282.

PSYCHOLOGY

Social Science Elective: SS 291, 292, 297, 281. Math Elective: MA 160. Science Elective: SC 141 or BI 171, and SC 142 or BI 173.

Suggested Elective: FL 143-144, 243-244.

POLITICAL SCIENCE/PUBLIC AFFAIRS

Social Science should include: SS 283-284, 282, and 278 or 383.

Literature Elective: EN 231-232 or 233-234.

Math Elective: MA 160.

Suggested Electives: EC 281-282.

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SOCIOLOGY

Select three Sociology courses from: SS 281, 264, 294, 386, 387, 382.

Select three Soc. Sci. courses from: SS 183-184, 283-284, 293, 291, 282.

Literature Elective: EN 231-232 or 233-234.

Math Elec.: MA 160.

EARLY CHILDHOOD (A.A.S.)

APC — 0605

This program is designed for students who plan to seek employment as educators and caregivers at institutions and agencies serving young children.

In addition to providing for the student's own intellectual and personal development, the course work under this program provides a broad understanding of the psychological, emotional, intellectual, and developmental needs of children and the skills necessary for meeting those needs. Graduates may find employment opportunities with various types of institutions and agencies serving young children — Day Care Centers, Nursery Schools, Pre-Kindergarten Programs, Head Start, Day Camps, Recreational Centers, and Social Service Agencies serving children.

FIRST YEAR

First Semester

EN 125 Freshman English I	3
SS 291 General Psychology	3
ED 171 Intro. to Early Childhood Ed.	3
Mathematics or Science*	3-4
Elective**	3
Physical Education	<u>1</u>
	16-17

Second Semester

EN 126 Freshman English II	3
SS 298 Child Development	3
ED 185 Early Childhood Curriculum	3
Mathematics or Science*	3-4
Elective**	3
Physical Education	<u>1</u>
	16-17

SECOND YEAR

First Semester

SS 281 Sociology	3
ED 298 Early Childhood Internship	4
ED Elective***	3
Humanities Elective**	3
Elective**	<u>3</u>
	16

Second Semester

ED Elective***	3
ED 299 Early Childhood Internship	4
Humanities or Soc. Sci.**	3

Mathematics or Science*	3-4
Elective**	<u>3</u>
	16-17

*Must include at least 3 semester hours of Mathematics and at least 3 semester hours of Science.

**HE 135, 136, SS 292, 294, HD 221, HS 251, FL 143, 144, 243, 244 are recommended.

***ED Electives: ED 225, 250, 275.

A minimum of 62 semester hours are required to complete this program.

HUMAN SERVICES (A.A.S.)

APC — 0604

The Human Services program is designed to prepare students for the helping profession. The program is appropriate for current agency employees seeking to upgrade their skills and for students preparing for future careers as human service workers. The program combines academic course work with human service field experience through internships. This approach prepares students to move directly into employment upon graduation. The program is flexible so that students may choose courses and field work experience in accordance with their area of interest and particular career goals.

This program also is appropriate for students planning to transfer to four-year human service related programs. However, students planning to transfer to a Baccalaureate Social Work program may want to consider the A.A. degree program in Social Science.

FIRST YEAR

First Semester

EN 125 Freshman English I	3
SS 291 General Psychology	3
Elective*	3
SS 141 Intro to Biology or	
BI 181 Anatomy & Physiology	3-4
HS 110 Intro to Human Services	3
Physical Education	<u>1</u>
	16-17

Second Semester

EN 126 Freshman English II or	
EN 127 Technical English	3
HS 111 Human Service Interventions	3
SS 281 Intro to Sociology	3
SS 297 Developmental Psychology	3
Elective*	3
Human Services Elective**	3
Physical Education	<u>1</u>
	16-17

~ continued ~

SECOND YEAR

First Semester

HS 298 Human Services Internship	4
MA 160 Statistics or	
Math Elective	3-4
Elective*	3
Human Service Elective**	3
Psychology/Sociology Elective***	3
	16-17

Second Semester

HS 299 Human Services Internship	4
HD 221 Human Relations and Group	
Dynamics	3
Psychology/Sociology Elective***	3
Electives*	6
	16

*Suggested Electives: Foreign Languages, Early Childhood Education, Health Education, Criminal Justice, Ethics, SS 383, 282, EC 180.

**Human Service Electives: HS 211, 231, 251, 265.

***SS 292, 298, 384, 264, 294, 387, 386

A minimum of 64 semester hours are required for graduation.

Students planning to transfer to four year programs are advised to select the electives based on the requirements of their transfer institutions.

FINE ARTS (A.A.)

APC — 0664

This program is designed for students who wish to transfer and continue their studies in Visual Fine Arts leading to the Bachelor's degree, or for students seeking immediate employment. The opportunity is provided to develop basic concepts and skills in a wide variety of media while concentrating on the field of Art.

FIRST YEAR

First Semester

EN 125 Freshman English I	3
AR 210 Drawing I	3
AR 150 2D Design	3
Social Science Elective	3
Science Elective	3-4
Physical Education	1
	16-17

Second Semester

EN 126 Freshman English II	3
AR 211 Drawing II	3
AR 160 3D Design	3
Social Science Elective	3
Mathematics Elective	3-4
Physical Education	1
	16-17

SECOND YEAR

First Semester

AR 220 Painting	3
Humanities Elective	3
Math/Science Elective	3-4
Art Elective	3
Elective*	3
	15-16

Second Semester

AR 300 Art Seminar	3
Social Science Elective	3
Art Elective	3
Electives*	6
	15

*Electives should be selected to conform to the program requirements of the College or university to which the student plans to transfer.

CRAFTS MANAGEMENT (A.A.S.)

APC — 0417

The Crafts Management program is designed for students who wish to learn how to design, produce, and sell quality craft products. This program also provides the flexibility to allow students to transfer to baccalaureate degree programs in related fields. This program will meet the needs of the student that desires to achieve the background necessary to begin their own business in any artistic venture, i.e., craft shop, pottery shop, print-making shop, etc.

FIRST YEAR

First Semester

EN 125 Freshman English I	3
AR 210 Drawing I	3
AR 150 2D Design	3
Social Sciences Elective	3
Science Elective	3-4
Physical Education	1
	16-17

Second Semester

EN 126 Freshman English II	3
BU 103 Math of Business Finance	3
AR 211 Drawing II	3
AR 160 3D Design	3
Social Science Elective	3
Physical Education	1
	16

SECOND YEAR

First Semester

BU 121 Accounting	3
Elective*	3

~ continued ~

Elective*	3
Mathematics Elective	3-4
Elective*	3
	<u>15-16</u>

Second Semester

BU 165 Small Business Management	3
BU 171 Business Law	3
Elective*	3
Elective*	3
Elective	3
	<u>15</u>

*Four Electives must be selected from the following: AR 100, 200, 220, 221, 275, 300, ER 101, 102, 103, 150, 151.

**Suggested Elective: BU 140, 141, or 137.

BUSINESS ADMINISTRATION (A.S.)
APC — 0671

This program is designed to prepare students to transfer to a four-year institution to complete a baccalaureate degree in business. The flexibility of this program permits students to meet the requirements of their intended transfer institutions.

Students transferring to four-year institutions may specialize there in a particular field such as finance, marketing, business management, or business education.

FIRST YEAR

First Semester

EN 125 Freshman English I	3
BU 121 Principles of Accounting I	4
Mathematics Elective**	3-4
Social Science Elective	3
Business Elective	3
	<u>16-17</u>

Second Semester

EN 126 Freshman English II	3
BU 122 Principles of Accounting II	4
Science Elective	3-4
Liberal Arts Elective	3
Business Elective	3
	<u>16-17</u>

SECOND YEAR

First Semester

BU 171 Business Law I	3
Economics Elective*	3
Business Elective(s)	4
Liberal Arts Elective	3
Physical Education	1
	<u>14</u>

Second Semester

BU 172 Business Law II	3
Computer Information Systems Elective	3
Liberal Arts Elective(s)	6

Elective***	3
Physical Education	1
	<u>16</u>

*EC 282 recommended.

**MA 154 Pre-calculus math level or higher.

***May need to be Liberal Arts for 30 credit total.

A minimum of 62 semester hours are required to complete this program.

Business and other electives should be chosen on the basis of the requirements of the four-year institution to which transfer is anticipated. EC 281 and EC 282 are strongly recommended.

COMPUTER SCIENCE (A.S.)
APC — 0532

Business Advisement Track

The two-year Computer Science (Business Advisement Track) Program is designed for students who plan to transfer and continue their studies in programs leading to the Bachelor's degree or who plan to seek immediate employment. The program emphasizes a theoretical understanding of computers in combination with business oriented languages and applications.

FIRST YEAR

First Semester

EN 125 Freshman English I	3
CS 110 Intro. to Computers or	
Computer Elective*	3
Microcomputers	3
MA 157 Ana. Geometry/Calculus I	4
Science Elective	3-4
	<u>16-17</u>

Second Semester

EN 126 Freshman English II	3
CS 121 Programming COBOL	3
Electives**	3
MA 158 Ana. Geometry/Calculus II	4
Science Elective	3-4
	<u>16-17</u>

SECOND YEAR

First Semester

CS 133 Advanced Programming Tech.	3
MA 257 Ana. Geometry/Calculus III or	
Mathematics Elective**	3-4
Social Science Elective	3
Physical Education	1
Electives**	6
	<u>16-17</u>

~ continued ~

<i>Second Semester</i>	
CS 135 Systems Analysis & Design	3
CS 113 Programming Assembler	3
Electives**	6-7
Social Science Elective	3
Physical Education	<u>1</u>
	16-17

*CS elective may be taken upon documented CS 110 or equivalent experience per computer faculty guidelines.
 **Refer to transfer institution requirements.

A minimum of thirty credits of liberal arts are required.

Recommended electives include: BU 101, 121, 122, 141, 152, 160, 179, EC 282, 283, EL 232, 236, CS 120, 122, 124, 130, 151, 202, 203, MA 160.

Mathematics/Science Advisement Track

The two-year Computer Science (Mathematics/Science Advisement Track) program is designed for students who wish to transfer and continue their studies in programs leading to the Bachelor's degree, or who wish to seek immediate employment. The program provides a theoretical understanding of computers, while emphasizing mathematical and scientific applications. Computer languages appropriate to those areas are also studied.

FIRST YEAR

<i>First Semester</i>	
EN 125 Freshman English I	3
CS 110 Intro. to Computers or Computer Elective*	3
MA 157 Ana. Geometry/Calculus I	4
Social Science Elective	3
Science Elective**	<u>3-4</u>
	16-17

<i>Second Semester</i>	
EN 126 Freshman English II	3
CS 113 Programming Assembler	3
MA 158 Ana. Geometry/Calculus II	4
Social Science Elective	3
Science Elective**	<u>3-4</u>
	16-17

SECOND YEAR

<i>First Semester</i>	
CS 120 Programming FORTRAN or CS 124 Programming Pascal**	3
CS Elective**	3
MA 257 Ana. Geometry/Calculus III	4
Physical Education	1
Electives**	<u>6-8</u>
	17-19

<i>Second Semester</i>	
CS Electives**	6-7

Mathematics Elective**	3-4
Physical Education	1
Electives**	<u>6-8</u>
	16-20

*CS elective may be taken upon documented CS 110 or equivalent experience per computer faculty guidelines.

**Refer to transfer institution requirements.

Recommended electives include: CS 101, 104, 106, 121, 122, 123, 130, 133, 135, PH 171, 172, EC 281, 282, EL 232, 236, MA 258, 259.

**MATHEMATICS AND SCIENCE (A.S.)
 APC — 0645**

This program is designed for students who plan to transfer and continue their studies in programs leading to Bachelor's degree with particular emphasis on advanced study in the sciences and mathematics. Preparation for the professional fields of mathematics, the sciences, medicine and dentistry as well as teaching science and mathematics on the elementary and secondary levels can be initiated with this program.

FIRST YEAR

<i>First Semester</i>	
EN 125 Freshman English I	3
Social Science Elective*	3
Foreign Language	3
Mathematics	3-4
Science	3-4
Physical Education	<u>1</u>
	16-18

<i>Second Semester</i>	
EN 126 Freshman English II	3
Social Science Elective*	3
Foreign Language	3
Mathematics	3-4
Science	3-4
Physical Education	<u>1</u>
	16-18

SECOND YEAR

<i>First Semester</i>	
Mathematics	3-4
Science	3-4
Foreign Language or Elective	3
Electives	<u>6</u>
	15-17

<i>Second Semester</i>	
Mathematics	3-4
Science	3-4
Foreign Language or Elective	3
Electives	<u>6</u>
	5-17

~ continued ~

*Social Science elective may be postponed until the second year.

**Prerequisite courses available.

All students must complete 12 semester hours of Humanities (EN 125, 126, and 6 semester hours of foreign language), 6 semester hours of social science, 4 mathematics courses, 4 science courses, and 2 semester hours of physical education, and additional electives to total 62 semester hours. At least 48 semester hours must be selected from the liberal arts and sciences.

MATHEMATICS (A.S.)
APC — 0221

This program is designed for students who plan to transfer and continue their studies in mathematics leading to a Bachelor's degree. Preparation for the professional field of mathematics leading to a variety of careers in industry, government, research, or teaching can be initiated with this program.

FIRST YEAR

First Semester

EN 125 Freshman English I	3
MA 157 Ana. Geometry/Calculus I*	4
Foreign Language	3
Science**	4
Physical Education	<u>1</u>
	15

Second Semester

EN 126 Freshman English II	3
MA 158 Ana. Geometry/Calculus II	4
Foreign Language	3
Science**	4
Physical Education	<u>1</u>
	15

SECOND YEAR

First Semester

MA 257 Ana. Geometry/Calculus III	4
Science**	3-4
Humanities Elective	3
CS Elective***	3
Social Science Elective	<u>3</u>
	16-17

Second Semester

MA 258 Differential Equations	4
MA 259 Linear Algebra	3
Science**	3-4
Humanities Elective	3
Social Science Elective	<u>3</u>
	16-17

*Prerequisite courses available.

~ continued ~

**PH 171-172 and two additional science courses with ES, PH, CH, and/or BI designations required.

***One computer programming course such as CS 120, 123, 124, or equivalent required.

A minimum of 62 semester hours are required for graduation. Students are advised to select the electives based on the requirements of their transfer institutions.

SCIENCE (A.S.)
APC — 0220

This program is designed for students who plan to transfer and continue their studies in any branch of science leading to a Bachelor's degree. Preparation for the professions in biological sciences, physical sciences, medicine, dentistry, and education for a career in industry, research, or teaching can be initiated with this program.

FIRST YEAR

First Semester

EN 125 Freshman English I	3
Social Science Elective*	3
Foreign Language	3
Mathematics**	3-4
Science***	3-4
Physical Education	<u>1</u>
	16-18

Second Semester

EN 126 Freshman English II	3
Social Science Elective*	3
Foreign Language	3
Mathematics**	3-4
Science***	3-4
Physical Education	<u>1</u>
	16-18

SECOND YEAR

First Semester

Mathematics**	3-4
Science***	3-4
Humanities Elective	3
Elective****	3
Science	<u>3-4</u>
	15-18

Second Semester

Mathematics**	3-4
Science***	3-4
Humanities Elective	3
Electives	<u>6</u>
	15-17

*Social Science elective may be postponed until the second year.

~ continued ~

**Mathematics courses must be selected from the following: MA 154, 160, 157, 158, 257, 258, 259.

***At least four science courses must be those with BI, CH, ES and/or PH designators.

****A computer programming course is recommended.

A minimum of 62 semester hours are required for graduation. Students are advised to select the electives based on the requirements of their transfer institutions. Students are also advised to take, as additional electives, microcomputer applications courses recommended by their science faculty.

Students may, based on their area of interest and requirements of the transfer institution, develop Advisement Tracks in Biology, Chemistry, Pharmacy, Pre-med, or Physics. Recommended Advisement Track courses are given below.

BIOLOGY

BI 171, 172, 173, 176 CH 173, 174 MA 154, 157, 158, 160

PHYSICS

PH 171, 172, 271, ES 236 or 281, CH 173, 174 MA 157, 158, 257, 258; Suggested Electives; CS 120, 123 or 124, MA 259

CHEMISTRY

CH 173, 174, PH 171, 172, BI 171, MA 157, 158, 160, 257; Suggested Elective: MA 258

PRE-MED/PHARMACY

BI 171, 173; CH 173, 174, PH 171, 172; MA 154, 157, 158, 160 Suggested Electives: BI 181, 182, 282

Students planning to transfer to pharmacy programs are advised to take organic chemistry before they begin their junior year.

ENGINEERING SCIENCE (A.S.)

APC — 0530

The Engineering Science Program closely parallels the first two years of the four-year college and university program in engineering. This fact enables graduates of the program to transfer, at the junior level, to such institutions and to specialize in any field of engineering. The strong emphasis placed on mathematics and physics also makes the Engineering Science Program the most appropriate course of study for those who wish to transfer and continue their studies in physics and applied mathematics.

Interest and motivation of the student are of paramount importance for succeeding in the program. A strong background in high school mathematics and physics is recommended for entrance to the program.

FIRST YEAR

First Semester

PH 171 Physics I	4
MA 157 Ana. Geometry/Calculus I	4
CH 173 Chemistry I	4
EN 125 Freshman English I	3
Physical Education	1
	<u>16</u>

Second Semester

PH 172 Physics II	4
MA 158 Ana. Geometry/Calculus II	4
CH 174 Chemistry II or Elective*	3-4
EN 126 Freshman English II	3
CS 120 Computer Programming (FORTRAN)**	3
	<u>17-18</u>

SECOND YEAR

First Semester

ES 235 Mechanics: Statics	3
ES 251 Materials Science	3
PH 271 Physics III	4
MA 257 Ana. Geometry/Calculus III	4
Social Science Elective***	3
Physical Education	1
	<u>18</u>

Second Semester

EN 236 Mechanics: Dynamics	3
ES 281 Electric & Electronic Circuits	4
MA 258 Differential Equations	4
MA 259 Linear Algebra or Elective*	3-4
Social Science Elective***	3
	<u>17-18</u>

*If two electives are chosen, at least one must be from the following: MD 171, MD 174, BI 171, BI 172, BI 181-182

**May be postponed till the second year.

***May be taken during the first year.

Students are advised to select electives which are appropriate to the field of engineering in which they plan to major, and which meet the requirements of the College to which they plan to transfer.

A minimum of 68 semester hours are required to complete the program which must include 3 engineering science courses, 3 physics courses, 4 calculus courses, 1 computer programming course, 1 chemistry course, 2 English courses, 2 social science courses, 2 physical education courses, and at least two electives.

HEALTH, PHYSICAL EDUCATION AND RECREATION (A.S.)

[Pending Approval]

This program is designed for students who plan to transfer and continue their studies in health, physical education, recreation and related fields. Preparation for a variety of careers such as the teaching professions, athletic training/sports medicine, coaching, fitness consultant, recreation/sports management, sports administration, physical therapist and occupational therapist may be initiated with this program.

FIRST YEAR

First Semester

EN 125 Freshman English I	3
PE 201 Intro. to H.P.E.R.	3
HE 135 Personal Health	3
SS 291 General Psychology	3
Science or Math Elective	3-4
PE Activity	1
	<u>16-17</u>

Second Semester

EN 126 Freshman English II	3
PE 250 Series or Elective*	2-4
PE Activity	1
HE 136 Safety & First Aid	3
Social Science Elective	3
Science or	
Math Elective	3-4
	<u>15-18</u>

SECOND YEAR

First Semester

PE 250 Series or HE 235 or	
Elective*	2-4
BI 181 Anatomy & Physiology**	4
Social Science Elective	3
Humanities Elective	3
Elective	3
	<u>15-18</u>

Second Semester

PE Activities or HE Elective or	
Elective*	3
BI 182 Anatomy & Physiology**	4
Elective	3
Humanities Elective	3
Elective	3-4
	<u>16-17</u>

*If electives are chosen, two must be from the following: MA 160, 154, 157, HD 221.

**May be taken during the first year.

A minimum of 62 semester hours are required to complete this program. Students are strongly advised to select the electives based on their area of interest and the requirements of the transfer institutions.

A student could develop a Advisement Track in physical education/fitness/recreation or health within the requirements of the General Studies (A.A.) degree program.

Students may, based on their career goals and requirements of the transfer institution, prepare for transfer to upper division majors in Physical Education, Health Ed. or Health/Wellness, Recreation/Leisure Studies, Sports/Exercise Studies, Physical Therapy, or Occupational Therapy. Recommended courses for preparation for such transfer are given below.

PHYSICAL EDUCATION

Two courses from PE 250 series; One Aquatics course; one course from PE 160 series; Three additional PE activity Credits; EN 132

HEALTH ED. OR HEALTH/WELLNESS

HE 235, 121, 237

RECREATION/LEISURE STUDIES

MA 160, EN 132, HD 221 and four PE Activity Credits; Social Science Elective: SS 281, 383; Additional Electives from Art, Music, Theater, EC 281, or EC 282, CO 220, 231 Suggested

SPORTS/EXERCISE STUDIES

MA 160; CH 173-174, PH 171-172; HD 221, HE 121; EN 132

PHYSICAL THERAPY

MA 157 or MA 154; CH 173-174, PH 171-172; Social Science Electives: SS 297; MA 160 and BI 171-173 Suggested

OCCUPATIONAL THERAPY

BI 171-173; HD 221, HU 250; Social Science Elective: SS 281, 292



BUSINESS

Accounting (A.A.S.) APC — 0630

The accounting program provides the basic principles and procedures which are readily applicable to the problems students will meet in the business world of accountants and cost analyst trainees in numerous areas such as industry, finance, insurance, banking and government on the junior-management level.

FIRST YEAR

First Semester

EN 125 Freshman English I	3
BU 101 Principles of Business	3
BU 103 Mathematics of Business Finance	3
BU 121 Principles of Accounting I	4
Microcomputers	<u>3</u>
	16

Second Semester

EN 126 Freshman English II	3
BU 122 Principles of Accounting II	4
EC 180 Intro. to Economics	3
Social Science Elective	3
Mathematics Elective*	<u>3-4</u>
	16-17

SECOND YEAR

First Semester

BU 221 Intermediate Accounting I	4
BU 171-172 or 254 Law	3
BU 224 Cost Accounting	3
Elective*	3
Elective	3
Physical Education	<u>1</u>
	17

Second Semester

BU 222 Intermediate Accounting II	4
Science Elective	3-4
Liberal Arts Elective	3
Electives*	4
Physical Education	<u>1</u>
	15-16

*It is strongly recommended that more than one mathematics course be taken in this program.

A minimum of 64 semester hours are required to complete the program, which must include a minimum of 15 semester hours of accounting courses. There is a minimum of 20 semester hours from liberal arts and sciences which must include EN 125, EN 126; 3 semester hours in the social sciences; 3 semester hours of mathematics other than business mathematics; 3 semester hours of science; 3 semester hours in

economics, and an additional course in the liberal arts and sciences. Two semester hours of physical education are also required. EC 281 and EC 282 are strongly recommended for transfer students.

BUSINESS ADMINISTRATION (A.A.S.) APC — 0632

The Business Administration Program is designed to provide an exposure to various areas of business-related operations. It also allows for Advisement Tracks as desired in Retailing, Mid-management, General Finance, or Basic Business. The course Advisement Tracks provide a foundation for middle management positions in the field of insurance, retailing, banking, civil service, finance, sales, and administrative management in various types of organizations.

FIRST YEAR

First Semester

EN 125 Freshman English I	3
BU 101 Principles of Business	3
BU 103 Mathematics of Business Finance	3
BU 121 Principles of Accounting I	4
Microcomputers	<u>2</u>
	15

Second Semester

EN 126 Freshman English II	3
BU 122 Principles of Accounting II	4
Social Science Elective	3
Mathematics Elective	3
Elective**	<u>3</u>
	16

SECOND YEAR

First Semester

EC 180 Intro. to Economics	3
Science Elective	3
BU Course Option*	6
Elective**	3
Physical Education	<u>1</u>
	16

Second Semester

Liberal Arts Elective	3
BU Course Option*	6
Electives**	7
Physical Education	<u>1</u>
	17

*Business Administration majors should take four courses in one of the following Advisement Tracks:

RETAILING

BU 141, 170, (171, 172, or 254,) 243

GENERAL FINANCE

BU 160, 164, (171, 172, or 254,) 262, CS Elective

~ continued ~

MANAGEMENT

BU 151, 152, (171, 172, or 254,) 261, 179

RECOMMENDED ELECTIVES

OT 133, 134, BU 250, 165

**A minimum of 64 semester hours are required to complete this program, which must include a minimum of 20 semester hours in liberal arts and science (this includes those specified above), plus physical education.

Students planning to transfer should select their liberal arts and sciences to meet the requirements of the four-year institutions which they plan to attend. EC 281 and EC 282 are strongly recommended. Also see A.S. program.

American Institute of Banking Advisement Track

This advisement track is an articulated program through which American Institute of Banking studies may be combined with college courses and lead to an Associate's degree in business.

FIRST YEAR

First Semester

EN 125 Freshman English I	3
BU 101 Principles of Business	3
BU 121 Principles of Accounting I	4(A)
BU 103 Math of Business Finance	3
Microcomputers	<u>2</u>
	15

Second Semester

EN 126 Freshman English II	3
BU 122 Principles of Accounting II	4(A)
EC 180 Principles of Economics	3
EN 132 Speech	3
Business Elective	<u>3</u>
	16

SECOND YEAR

First Semester

Social Science Elective	3
Mathematics	3
Advisement Track Electives*	6
Elective	3
Physical Education	<u>1</u>
	16

Second Semester

Science Elective	3
Advisement Track Electives*	6
Electives	7
Physical Education	<u>1</u>
	17

*30 FMCC credits minimum (13 credits in Business, remaining credits in LA and PE, 2 credits); therefore, a maximum of 34 AIB credits are allowed.

(A) Version 2 will be accepted for 4 credits, version 1 for 3 credits, therefore, version 1 may require a 1 credit directed study or placement test. (see regents guidelines)

Contact the College for AIB and FMCC Business and Advisement Track course recommendations.

COMPUTER INFORMATION SYSTEMS

(A.A.S.)

APC - 0581

This curriculum is structured along the lines of career interests and job skills required by students who plan to enter the field of computer information systems.

The courses emphasize intensive practical problem solving skills, use of computers and business-oriented programming languages to solve business, government, and administrative problems, development of written and oral communication skills, and a core of business courses to achieve a well-rounded business and financial background.

The contents of this curriculum follow the guidelines for the CIS Programming Track suggested by the DPMA Education Foundation, October 1985.

Graduates will have sufficient knowledge to function as applications programmers, programmer/analysts, junior systems analysts and CIS management trainees.

FIRST YEAR

First Semester

EN 125 Freshman English I	3
CS 110 Intro. to Computers or	
CS Elective	3
CS Microcomputers	3
BU 101 Principles of Business	3
Mathematics Elective	<u>3-4</u>
	15-16

Second Semester

EN 126 Freshman English II	3
CS 121 Programming COBOL	3
CS 122 Programming RPG	3
BU 121 Accounting I	4
Liberal Arts Elective	3-4
BU Electives	<u>3</u>
	17-19

SECOND YEAR

First Semester

BU 122 Accounting II	4
CS 133 Advanced Programming Techniques	3
Science Elective	3-4

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Liberal Arts Elective	3
CS Elective*	2-3
Physical Education	1
	<u>16-17</u>

Second Semester

CS 135 Systems Analysis & Design	3
CS 113 Programming Assembler	3
Social Science Elective	3
Electives**	6-7
Physical Education	1
	<u>16-17</u>

*Recommended electives: CS 101, 151, 120, 124, 125, 130, BU 141, 152, 160, 173, 179, 221, 224, EC 180, and MA 157.

CS elective may be taken upon documented CS 110 or equivalent experience per computer faculty guidelines.

OFFICE TECHNOLOGY: ADMINISTRATIVE (A.A.S.)

APC — 0625

The Office Technology: Administrative Program provides the necessary foundation for positions as administrative assistants, secretaries, stenographers, and receptionists in support positions in computerized offices in business, government, and industry. Advisement Tracks may be elected in Medical, Legal, or Desktop Publishing.

FIRST YEAR

First Semester

EN 125 Freshman English I	3
OT 131 Beginning Shorthand or Electives	5
OT 133 Beginning Keyboarding or	
OT 134 Intermediate Keyboarding*	3
Mathematics or Science	3-4
Microcomputers	2
	<u>16-17</u>

Second Semester

OT 183 Intermediate Shorthand	4
BU 137 Business Communications	3
OT 239 Intro. to Office Systems & Technology	3
OT 134 Intermediate Keyboarding	0-3
Social Science Elective	3
Business Elective	3
	<u>16-19</u>

SECOND YEAR

First Semester

OT 233 Advanced Shorthand or	
Advisement Track	4
OT 235 Administrative Support Procedures I	3
OT 240 Word Processing Applications I	3
Advisement Track***	2-3

Liberal Arts Elective	3
Physical Education	1
	<u>16-17</u>

Second Semester

OT 236 Administrative Support Procedures II or	
Advisement Track***	3
OT 230 Machine Transcription	3
Advisement Track***	3
Liberal Arts Electives	7-8
Physical Education	1
	<u>17-18</u>

*Depending on preparation-completion of OT 134 required for graduation.

**A biological science course is recommended for those students planning to take the medical advisement track and who have not completed a high school biology course.

***Office Technology majors who wish to concentrate in one of the following areas, should take 12 credits from the courses identified below:

LEGAL

OT 273, 274, 275, 276, BU 125, 171, 172

MEDICAL

OT 283, 285, 287, 288, BI 181

DESKTOP PUBLISHING

GA 101, 104, OT 241, 249, BU 299

A minimum of 65 semester hours are required for graduation, including 20 semester hours of liberal arts and science courses in addition to 2 semester hours of physical education.

OFFICE TECHNOLOGY:

WORD/INFORMATION PROCESSING (A.A.S.)

APC — 0694

The Office Technology: Word/Information Processing Program provides the necessary foundation for positions in offices with modern computer-oriented, word/information processing systems in business, government, and industry.

Program prerequisite: OT 133 Beginning Keyboarding or equivalent.

FIRST YEAR

First Semester

EN 125 Freshman English I	3
OT 134 Intermediate Keyboarding	3
OT 239 Intro. to Office Systems & Technology	3
Microcomputers	3
Business Elective	3
Physical Education	1
	<u>16</u>

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<i>Second Semester</i>	
English Elective	3
BU 137 Business Communications	3
OT 240 Word Processing Applications I	3
Liberal Arts Electives	6
Physical Education	<u>1</u>
	16

SECOND YEAR

<i>First Semester</i>	
OT 235 Administrative Support Procedures I	3
OT 241 Word Processing Applications II	3
OT 230 Machine Transcription	3
HD 221 Human Relations & Group Dynamics	3
Mathematics or Science	<u>3-4</u>
	15-16

<i>Second Semester</i>	
OT 236 Administrative Support Procedures II	3
OT 259 Office Systems Supervision	3
OT 249 Word Processing Practicum or	
BU 299 Internship	3
Electives	<u>5</u>
Social Science Elective	<u>3</u>
	17

A student must have completed OT 133 or equivalent.

Suggested Electives: CS 110, GA 104.

TECHNOLOGIES

AUTOMOTIVE TECHNOLOGY (A.A.S.)
APC — 0525

Automotive Technology Program is designed to produce persons who, in addition to being knowledgeable in their chosen field, will have a basic background in the Arts and Sciences. Students in this program are expected to provide their own safety footwear, limited hand tools, and other personal items appropriate for automotive laboratory classes.

FIRST YEAR

<i>First Semester</i>	
AT 121 Intro. to Automotive Function**	3
AT 122 Theory of Internal Combustion Engines**	3
AT 124 Automotive Electrical Systems	3
SC 161 Intro. to Physics I	3
Mathematics*	<u>3-4</u>
	15-16

<i>Second Semester</i>	
AT 123 Internal Combustion Engine Support Systems**	3
SC 162 Intro. to Physics II	3
EN 125 Freshman English I	3

Mathematics or Elective*	3-4
Social Science Elective	3
Microcomputers	<u>2</u>
	17-18

SECOND YEAR

<i>First Semester</i>	
AT 225 Automotive Chassis Systems**	3
EN 126 Freshman English II or	
EN 127 Technical English	3
Electives	<u>6</u>
Social Science Elective	3
Physical Education	<u>1</u>
	16

<i>Second Semester</i>	
AT 227 Electronic Engine & Chassis Analysis**	3
AT 288 Consumer Relations & Services	3
AT 266 Power Trains — Design Features and Analysis	3
Electives	<u>6</u>
Physical Education	<u>1</u>
	16

*Math placement depending upon preparation, competence at level of MA 142 or higher required.
 **Course meets at the Vo-Tec Center. Students make own transportation arrangements.

Suggested Electives: BU 101, 103, EL 125, HD 150, MA 144, MD 171.

Minimum of 64 semester hours required for graduation, including 2 hours of physical education.

COMPUTER TECHNOLOGY (A.A.S.)
APC — 0559

The Computer Technology Program offers students training in electronics, computer hardware, and software programming areas. The program is designed to allow a graduating student to transfer to a four-year institution for further training in Computer Technology. This program is the combination of hardware and software study required by industry for computer designer and computer engineering personnel.

FIRST YEAR

<i>First Semester</i>	
EN 125 Freshman English I	3
EL 125 Electricity I	4
MA 161 Mathematics for Electrical Technology or	
MA 157 Calculus I	4
SC 161 Intro. to Physics I or	
PH 171 Physics I	<u>3-4</u>
EL 127 Instrumentation	2
Microcomputers	<u>2</u>
	18-19

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<i>Second Semester</i>	
EN 126 Freshman English II or	
EN 127 Technical English	3
EL 126 Electricity II	4
EL 232 Digital Electronics	3
MA 162 Mathematics for Electrical Technology or	
MA 158 Calculus II	4
SC 162 Intro. to Physics II or	
PH 172 Physics II	3-4
	17-18

SECOND YEAR

<i>First Semester</i>	
EL 236 Intro. to Microprocessors	4
TC 229 Electronics for Computer Technology	4
MD 176 Electrical Graphics	3
CS 124 Pascal	3
Social Science Elective	3
Physical Education	1
	18

<i>Second Semester</i>	
TC 237 Advanced Microprocessors	4
Computer Science Elective*	3
TC 238 Computer Peripherals and	
Data Communications	3
Elective*	3
Social Science Elective	3
Physical Education	1
	17

*Computer Technology students should check with the four year college to determine which computer science courses are appropriate for transfer.

Computer Science Electives may include: CS 113 Programming Assembler, CS 120 Programming Fortran.

**CONSTRUCTION TECHNOLOGY (A.A.S.)
APC — 0540**

The Construction Technology curriculum is designed to prepare technicians to secure gainful employment with contractors, engineers, architects, public works departments, and material manufacturers. The technical education offered in this curriculum contains a well-designed balance of theories and laboratory studies, providing a graduate with a broad knowledge of the construction field. Students in this program are expected to provide their own safety footwear, limited hand tools and personal items appropriate for construction technology laboratory classes.

FIRST YEAR

<i>First Semester</i>	
CT 121 Intro. Building Trades & Construction	
Materials	3
CT 124 Blueprint Reading	3
MD 171 Engineer Graphics	3

EN 125 Freshman English I	3
Mathematics*	3-4
	18-16

<i>Second Semester</i>	
CT 122 Lt. Frame I	3
CT 225 Masonry, Con. & Steel	3
CT 230 Principles/ Soils	1
EN 126 Freshman English II or	
EN 127 Technical English	3
Math or Elective*	3-4
Social Science Elective*	3
Microcomputers	2
	18-19

SECOND YEAR

<i>First Semester</i>	
CT 123 Light Frame II	3
CT 226 Plumbing & Climate Control	3
CT 229 Electrical Wiring	3
SC 161 Intro. to Physics I*	3
Elective*	3
Physical Education	1
	16

<i>Second Semester</i>	
CT 228 Estimating	3
SU 101 Surveying	3
MD 180 Arch. Drafting	3
Social Science Elective	3
Elective*	3
Physical Education	1
	16

*Math placement depending upon preparation, competence at level of MA 142 or higher required.

**Course meets at sites other than main campus. Students make own transportation arrangements.

Minimum of 65 semester hours required for graduation, including 2 hours of physical education.

Suggested Electives: BU 101, 103, 121, 171, HD 150, MA 144, 151, EL 125, CT 243, 245, 250.

**CRIMINAL JUSTICE (A.A.S.)
APC — 0640**

This program is designed to prepare students for careers with federal, state, county and local enforcement organizations. The courses are concerned with fulfilling the educational needs of students, both male and female, aiding them in becoming efficient and knowledgeable criminal justice personnel. The program is open, as well, to those who are currently employed in law enforcement.

STUDENTS PLEASE NOTE: Many criminal justice agencies require applicants to meet qualifying

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entrance requirements. Students pursuing careers in these agencies should be aware of conditions that may disqualify applicants for employment, based on health, physical conditions, or character.

FIRST YEAR

First Semester

EN 125 Freshman English I	3
CJ 106 Intro. to Criminal Justice	3
SS 281 Intro. to Sociology	3
CJ 103 Criminal Law I	3
Elective or Science (SC 130 suggested)	<u>3-4</u>
	15-16

Second Semester

EN 126 Freshman English II	3
CJ 104 Criminal Law II	3
CJ 105 Fund. of Criminal Investigation	3
SS 291 General Psychology	3
Mathematics (MA 160 suggested)	3-4
Microcomputers	<u>2</u>
	17-18

SECOND YEAR

First Semester

CJ 112 Intro. to Police Organization & Management	3
CJ Elective	3
EN 132 Speech	3
CJ 109 Criminology	3
Elective or Science (SC 130 suggested)	<u>3-4</u>
Physical Education	<u>1</u>
	16-17

Second Semester

HU 258 Ethics or Liberal Arts Elective	3
CJ 107 Police Community Relations	3
CJ 111 Intro. to Public Administration	3
Social Science Elective	3
Elective	3
Physical Education	<u>1</u>
	-16

Recommended Electives: CJ 108, 113, 118, 121, 299.

Minimum of 64 semester hours required for graduation, including 2 hours of physical education and a minimum of 3 hours of science.

**ELECTRICAL TECHNOLOGY (A.A.S.)
APC — 0555**

This program is designed for those students who plan to seek employment after two years at Fulton-Montgomery Community College as engineering technicians, electrical draftsmen, lab assistants and service technicians. The program also prepares students for transfer into Bachelor of Technology programs. An interest in electricity and

electronics and a degree of manual dexterity are assets. Students in this program may be required to provide their own electronic calculators and small hand tools.

Prerequisite: High school algebra. Trigonometry and physics are desirable. If a student's math-science level of competence does not equal or exceed the prerequisite, that student should consider a pre-technology course of study.

FIRST YEAR

First Semester

EN 125 Freshman English I	3
EL 125 Electricity I	4
MA 161 Mathematics for Electrical Technology or MA 157 Calculus I	4
SC 161 Intro. to Physics I or PH 171 Physics I	3-4
EL 127 Instrumentation	2
Microcomputers	<u>2</u>
	18-19

Second Semester

EN 126 Freshman English II or EN 127 Technical English	
EL 126 Electricity II	4
EL 232 Digital Electronics	3
MA 162 Mathematics for Electrical Technology or MA 158 Calculus II	4
SC 162 Intro. to Physics II or PH 172 Physics II	3-4
Physical Education	<u>1</u>
	18-19

SECOND YEAR

First Semester

EL 236 Intro. to Microcomputers	4
EL 229 Electronics I	5
EL 231 Electrical Machines	3
MD 176 Electrical Graphics	3
Physical Education	<u>1</u>
	16

Second Semester

EL 230 Electronics II	5
EL 234 Telecommunications	3
EL 235 Industrial Electronics and Robotics	3
Social Science Electives	<u>6</u>
	17

Students planning to transfer should see an advisor for appropriate course selection. The following courses are recommended by most four-year institutions for students in Electrical Technology: MA 157, MA 158, PH 171, PH 172, and Computer Programming as available.

Minimum of 69 semester hours required for graduation including 2 hours of physical education.

FOOD SERVICE ADMINISTRATION (A.A.S.)
APC — 0570

The Food Service Administration curriculum is designed to develop technical competence and prepare students for supervisory trainee positions in the food processing, restaurant and related industries. It also allows for an advisement track in Institutional Foods, Restaurant Management, or Diet and Nutrition. Students in the program are expected to provide their own white uniforms and other appropriate items for use in food service laboratory classes. Uniform specifications will be provided by the instructor.

FIRST YEAR

First Semester

FS 101 Intro. to Food Service	1
FS 111 Intro. to Safety & Sanitation	2
FS 122 Food Preparation I**	3
HE 121 Nutrition	3
EN 125 Freshman English I	3
SC 141 Intro. to Biology I, BI 171, or BI 181	3-4
	<u>15-16</u>

Second Semester

EN 126 Freshman English II or EN 127 Technical English	3
FS 123 Food Purchasing**	3
FS 124 Food Preparation II**	3
BU 103 Math of Business Finance	3
HE 125 Advanced Nutrition or	3
Liberal Arts Elective	3
Microcomputers	2
	<u>17</u>

SECOND YEAR

First Semester

FS 244, 254, 264 Hospitality**	3
FS 245, 255, 265 Cost Control**	3
Social Science Elective	3
Advisement Track Electives*	6
Physical Education	1
	<u>16</u>

Second Semester

FS 227 Food Service Organization & Management**	3
FS 248, 258, 268, or 240, 280 Seminar*	3
FS 298 Internship	3
Advisement Track Elective*	3
Liberal Arts Elective	3
Physical Education	1
	<u>16</u>

*Food Service Majors should take courses in one of the following Advisement Track areas:

INSTITUTIONAL FOODS

FS 226, FS Elective, HD 100, 221

DIET & NUTRITION

FS 126, FS Elective

RESTAURANT MANAGEMENT

BU 121, BU Elective, BU/FS/CS Elective, HD 221, 100, SC/BI/CH Elective

Recommended Electives: BU 101, 122, 171, 153, 140, 137 FS 126, 130, 226 MA 150, 160 SC 131, 172, BI 181, 182

**Course may meet at site other than main campus. Students make own transportation arrangements. Students are required to purchase and maintain supportive utensils and clothing.

Minimum of 64 semester hours required for graduation, including 2 hours of physical education, plus 20 semester hours of Liberal Arts.

LEATHER TECHNOLOGY (A.A.S.)

APC — 0454

This program is designed to prepare students for careers in the leather industry. The courses are concerned with fulfilling the educational needs of students, aiding them in becoming efficient, knowledgeable, and skilled leather personnel.

The program is offered evenings to serve those who are currently employed in the local leather industry. Available evenings, part-time only.

FIRST YEAR

First Semester

EN 125 Freshman English I	3
LT 101 Intro. to Leather Technology I	3
BU 101 Principles of Business	3
Mathematics Elective	3-4
Chemistry	3-4
	<u>15-17</u>

Second Semester

English Elective (EN 126, 127, or 132)	3
LT 102 Intro. to Leather Technology II	3
Math/Science Elective	3-4
Liberal Arts Elective	3-4
Business Elective	3
Microcomputers	2
	<u>17-18</u>

SECOND YEAR

First Semester

LT 221 Principles of Leather Technology (Pre-tanning)	3
LT 222 Leather Tanning and Coloring	3

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Leather Technology Elective	3
Business Elective	3
Elective	3
Physical Education	<u>1</u>
	16

Second Semester

LT 223 Leather Finishing	3
Leather Technology Elective	3
Social Science Elective	3
Business Elective	3
Elective	3
Physical Education	<u>1</u>
	16

Suggested Electives: Biology, BI 282, Chemistry, BU 121, 122, 151, 153, 224, EC 180, NR 126, LT 130, 224, or 230.

Minimum of 64 semester hours required, including 2 hours of Physical Education and a maximum of 20 semester hours in Liberal Arts and Science.

NATURAL RESOURCES CONSERVATION (A.A.S.)

APC — 0617

The Natural Resources Conservation curriculum is designed to provide students with the educational background required to actively seek employment from government and private agencies in the areas of lands, parks and wildlife management. The program has developed a close working relationship with the NYS Department of Environmental conservation and additional work experience-related independent study credits are available during summers, winter inter-session and fall and spring semesters. The program can also provide the flexibility to allow students to transfer to baccalaureate degree programs in conservation.

The SUNY College of Environmental Science and Forestry, and the SUNY College at Plattsburgh provide upper division transfer programs in Environmental and Resource Management. In addition, Haywood Technical College (Clyde, North Carolina) provides the following certificate programs: Sawyer, Saw Filer, and Lumber Specialists. Students planning to transfer to these institutions must consult with their Instructor or see a Counselor before they begin their study at Fulton-Montgomery Community College.

FIRST YEAR

First Semester

NR 223 Forest Management I**	3
SC 131 Environmental Physics	3
EN 125 Freshman English I	3
SC 141 Intro. Biology I or	

BI 171 Modern Biology***	3-4
Mathematics or Elective*	<u>3-4</u>
	15-17

Second Semester

NR 224 Forest Management II**	3
SC 170 Intro. Chemistry or	
CH 173	<u>3-4</u>
EN 126 Freshman English II or	
EN 127 Technical English	3
Mathematics	4
Elective***	3
Microcomputers	<u>2</u>
	18-19

SECOND YEAR

First Semester

NR 241 Water Resource Mgmt. I**	3
NR 250 Solid & Hazardous Waste	3
SC 143 Earth Systems, BI 172 or	
BI 173**	<u>3-4</u>
Mathematics	3-4
Social Science Elective	3
Physical Education	<u>1</u>
	16-18

Second Semester

NR 242 Water Resource Mgmt. II**	3
NR 126 Principles of Soil & Water**	3
BI 176 Ecology	3
SU 101 Surveying	3
Social Science Elective (SS 282 Rec)	3
Physical Education	<u>1</u>
	16

*Math placement depending upon preparation, must include MA 142 or higher (statistics recommended). MA 151-154 recommended for transfer.

**Classes may meet at sites other than main campus. Students make own transportation arrangements. Overnight and weekend trips may be required in NR courses.

***BI 171, BI 172, BI 173, CH 173 recommended for transfer. Students taking BI 172 or BI 173 (offered Spring only) should take second semester elective in the third semester.

TEXTILE TECHNOLOGY (A.A.S.)

APC — 0434

This program is designed to prepare students for careers in the Textile industry. The courses are concerned with fulfilling the educational needs of students, aiding them in becoming efficient, knowledgeable, and skilled textile personnel.

The program is offered evenings to serve those who are currently employed in the local textile industry. Available evenings, part-time only.

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FIRST YEAR

First Semester

BN 125 Freshman English I	3
TT 101 Intro. to Textile Technology I	3
EC 180 Intro. to Economics	3
Mathematics Elective	3-4
Chemistry Elective	<u>3-4</u>
	15-17

Second Semester

TT 102 Intro. to Textile Technology II	3
English Elective*	3
Math/Science Elective	3-4
Social Science Elective	3
Business Elective	3
Microcomputers	<u>2</u>
	17-18

SECOND YEAR

First Semester

TT 201 Textile Technology	3
TT 202 Textile Dyeing	3
TT 204 Textile Finishing	3
Business Elective	3
Elective	3
Physical Education	<u>1</u>
	16

Second Semester

TT 203 Advanced Textile Dyeing	3
TT 205 Advanced Textile Finishing	3
Liberal Arts Elective	3
Business Elective	3
Elective	3
Physical Education	<u>1</u>
	16

*Choose from EN 126, 127 or 132

Minimum of 64 semester hours required for graduation, including 2 hours of Physical Education and a minimum of 20 semester hours in Liberal Arts and Science.

VISUAL COMMUNICATIONS TECHNOLOGY (A.A.S) GRAPHIC ARTS APC — 0677

The Visual Communications Technology curriculum is designed to prepare students to seek employment as technicians and entry level supervisors in the printing and publishing industries. Emphasis is directed toward acquiring contemporary job skills and knowledge in the areas of layout and design, digital typesetting, desktop publishing, paste-up and copy preparation, reproduction photography, film assembly, offset platemaking, presswork, finishing and related areas.

Special emphasis is on the development of problem-solving ability and skills in the areas of offset lithography, reproduction photography, typesetting and film assembly.

FMCC prepares students to enter into the many technical and career opportunities existing in the commercial printing, publishing, newspaper, books and the advertising field. Other specialty areas include in-plant printing, supply, paper sales, customer service and other allied industries.

Technical knowledge of science-oriented areas, such as chemistry, physics and mathematics are developed. A balance of practical application and theory will enable the individual to enter the job market immediately after graduation or continue to develop their career through higher education. The program is designed to provide some flexibility for transfer to schools offering baccalaureate-related degrees in graphic communications.

FIRST YEAR

First Semester

GA 101 Intro. to Graphic Communications Technology**	3
AR 150 Basic Design	3
ER 101 Principles of Photography	3
EN 125 Freshman English I	3
Keyboarding/Microcomputers**	3
Physical Education	<u>1</u>
	16

Second Semester

GA 103 Advanced Graphic Communications Technology	3
GA 104 Composition & Desktop Publishing Systems	3
EN 126 Freshman English II or EN 127 Technical English	3
Mathematics*	3-4
Elective	3
Physical Education	<u>1</u>
	16-17

SECOND YEAR

First Semester

GA 105 Graphic Arts Layout & Design	3
GA 106 Graphic Arts Production**	3
SC 170 Intro. Chemistry	3
Elective	3
Social Science Elective	<u>3</u>
	15

Second Semester

GA 107 Production Management**	3
ER 102 Advanced Photography	3
SC 162 Physics	3
Elective	5-6
Social Science Elective	<u>3</u>
	17-18

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*Mathematics placement dependent upon preparation, competence at level of MA 142 or higher required.

**Laboratories meet at Vo-Tec Center. Students make own transportation arrangements.

***Three credits of course work to be selected from: BU 100, 113, 123, 133, CS 101, and microcomputers.

Suggested electives: BU 170, GA 108, ER 150, 151, AR 200.

A minimum of 64 semester hours required for graduation, including 2 hours of physical education.

NURSING

NURSING (A.A.S.) APC — 0622

The Nursing Science Program offers a four-semester curriculum which provides a balance of Liberal Arts and nursing as illustrated below. The nursing courses provide theoretical knowledge combined with clinical experience in a variety of hospital settings and community agencies. Graduates of this program are prepared to take the New York State licensing examinations to become Registered Nurses (R.N.) and are qualified to assume beginning staff nurse positions in five major clinical areas: Medical, Surgical, Maternity, Pediatric, and Psychiatric Nursing.

Prerequisites: High School Biology or equivalent, medical examination. Algebra and chemistry are recommended. Students are required to carry their own liability insurance.

Because of the large number of applications to the Nursing Program, it is recommended that applications for admission be on file by December 1. The final date for receipt of applications is listed in the College calendar.

FIRST YEAR

First Semester

BI 181 Anatomy & Physiology I	4
SS 291 General Psychology	3
NU 105 Nursing Science I*	7
Physical Education	1
	15

Second Semester

EN 125 Freshman English I	3
BI 182 Anatomy & Physiology II	4
SS 297 Developmental Psychology	3
NU 106 Nursing Science II*	7
Physical Education	1
	18

SECOND YEAR

First Semester

BI 282 Microbiology	4
NU 105 Nursing Science III*	9
EN 126 Freshman English II	3
	16

Second Semester

NU 206 Nursing Science IV*	9
SS 281 Sociology	3
Elective	3-4
	15-16

*To qualify for the next sequential nursing course, the student must earn a grade of C or higher in nursing and pass the clinical laboratory. Students are expected to provide uniforms to wear in laboratory periods. Some courses meet at sites other than main campus. Students make their own transportation arrangements. Students will be responsible for all fees for nursing tests taken in their second year.

A minimum of 64 semester hours required for graduation, including 2 hours of physical education.

A four-week preceptorship is required for graduation and is included in NU 206.

INDIVIDUAL STUDIES (A.O.S.)

Associate in Occupational Studies

Individual Studies can be of three types:

- one-semester (12-18 credits)
- one-year certificate (24-36 credits)
APC — 987
- two-year degree (A.O.S.) (60-62 credits)
APC — 688

Individual Studies will be designed to provide specialized study for students with clearly identified career goals or special educational needs which cannot be met by existing programs. Specific studies will be developed individually by the student and three faculty members.

Individual studies will include regular courses, independent and directed study, field work, prior educational experience, and prior work experience. Distribution of credits in these areas will follow existing college policy. In addition, at least half of the credits must be directly related to the students career goal or special educational needs.

Procedures to be followed in the development of individual studies are as follows: consultation with three faculty mentors to review the student's academic

background and career and educational goals, development of a detailed proposal in which the proposed individual study and its relationship to the student's career goals or special educational needs are described, approval by mentors, and approval by the Dean for Career Education or Dean for Liberal Arts and Sciences.

The purpose of individual studies is to provide greater curriculum flexibility, breadth, and depth in response to individual student career objectives or special educational needs which cannot be met by existing programs, to provide opportunity for students to explore fields at the College before making a more definite educational choice, to provide greater advanced placement opportunity, and to provide for articulated study which encourage individuals to return to college for short term updating or retraining (one-semester) as well as for additional specialization provided by the one-year certificate and two-year degree.

For further information contact the Admissions Office.

Individual Studies Certificate
APC — 0987
Technical Career Preparation Advisement Track

This advisement track is designed to develop academic background and provide an articulated program of study leading to a certificate and/or associate degree. An individualized plan of study can be developed based on the modules outlined below. The student, academic advisor, and career education faculty members will provide input into the plan of study.

Career Education Module (Pre-Testing & Placement Required)

SC 121 Basic Skills for Science and Technology	3
CL 199 Professional Career Preparation	1
Career-Related Elective* or	
HD 100 Studies of the Person	3
HD 150 Reading and Study Skills**	3
EN 124 Basic English***	3
	13

Technical Module (Career Education Module or H.S. Diploma Required)

MA 147 Algebra or	
MA 141 Technical Mathematics	3-4
Science Elective****	3-4
EN 125 Freshman English***	3
Career Elective*	3
	12-14

*Based on program instructor recommendation. May include: AR 150, AT 121, AV 101, BU 100, 101,

103, OT 133, CJ 106, Microcomputers, CT 121, EL 127, ER 101, FS 121, GA 101, and HE 136.

**Based on test results, an elective may be substituted.

***Based on test results, a higher-level course may be substituted.

****Biology, Chemistry, Physics, or Science must be selected.

Upon completion of both modules a Career Studies/Individual Studies Certificate will be awarded.

Individual Studies Certificate
APC — 0987
Collaborative Career Learning

In this innovative approach to career learning, students learn career skills in fields in which jobs are available locally. Although similar to cooperative education and internship programs, COCAL requires that students learn basic career skills at job sites without pay. Students learn from practicing professionals who follow competency guidelines prescribed by the College and based on Dictionary of Occupational Titles specifications, National competency catalogs, and employer input. Students combine collaborative career learning with 12-18 credits of related college course work to earn a one-year certificate in Individual Studies.

Students include displaced homemakers, young high school graduates interested in "hands-on" learning and immediate employment, as well as students interested in career exploration prior to committing themselves to four years of college. The primary goal of COCAL is employment upon graduation. Enrollment is competitive.

The following is an example of a COCAL sequence of course requirements:

EKG TECHNICIAN

First Semester

CL 191	
180 hrs of hands-on, off-campus learning	8
BI 181 Anatomy and Physiology I	4
OT 283 Medical Terminology	3
Approved Electives	

Second Semester

CL 192 180 hrs of hands-on, off-campus learning	8
CL 200 Professional Career Preparation*	1
BI 182 Anatomy & Physiology II	4
SC 141 Intro. to Biology	4
Approved Electives	

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Program Total — 33-34 credits
 Approved Electives: CS 104
 CPR course required at hospital

*CL 200 — Professional Career Preparation provides the tools of resume writing, interviewing and job-search skills.

Fields of study which may lead to a Certificate* **

- Accounting Clerk
- Banking
- Chiropractic Assistant
- Computer Operator
- Dental Assistant
- EKG Technician
- Floral Design/Retail Management
- Electrical Repair
- Hotel/Motel Operations
- Insurance Office Assistant
- Manual Machine Operator
- Medical Assistant
- Medical Records Clerk
- Pharmacy Technician
- Phlebotomist
- Physical Therapy Aide
- Printing/Graphic Arts
- Respiratory Therapy Aide
- Retail Management
- Travel

*Certificate fields of study may change from semester to semester. Contact the Individual Studies/COCAL office for current listings.
 **A.O.S. degree option available

Courses to be selected from college course offerings with the approval of the COCAL staff.

**Individual Studies (A.O.S.)
 APC — 0688
 COCAL Advisement Track**

This two-year advisement track is a recommended individualized sequence of study designed to combine COCAL certificate study with additional study in career-related areas. AOS COCAL advisement tracks cannot duplicate existing Career Education programs. An Associate in Occupational Studies degree can be achieved upon completion of a minimum of 60 credits.

COCAL Modules:

- COCAL I & Related Electives 12-15
- COCAL II & Related Electives* 12-15

AOS Modules:

- Related Electives** 12-13
- Related Electives** 12

*Individual Studies certificate awarded upon completion. All credit can be applied toward an AOS degree.

**Related electives must include all applicable recommended electives in the COCAL certificate and additional career education and liberal arts and science courses as approved by the faculty mentor committee and Dean of Career Education.

For additional information contact the Admissions Office.

**Individual Studies (A.O.S.)
 APC — 0688
 Air Science Advisement Track**

This two-year advisement track in Air Science is a special individualized program leading to an Associate in Occupational Studies Degree. It is designed to combine general education, air science ground school, electives, and off-campus flight experience at FAA 141 approved schools and building a unique degree to meet individual needs and goals.

Four levels of training are included: Private Pilot, Instrument Rating, Commercial, and Flight Instructor.

Graduates may be employed as pilots or instructors. Industry, the military, private corporations, airlines, and government agencies have a need for highly skilled college trained pilots.

FIRST YEAR

First Semester

EN 125 Freshman English I	3
AV 101 Air Science I	3
SC 161 Intro. to Physics or	
PH 171 General Physics	3-4
Mathematics	3-4
Physical Education	<u>1</u>
	13-15

Second Semester

EN 126 Freshman English II or	
EN 127 Technical English	3
AV 102 Air Science II	3
Social Science Elective	3
Elective	3
Physical Education	<u>1</u>
	13

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(SUMMER FLYING EXPERIENCE WILL BE REQUIRED)

SECOND YEAR

<i>First Semester</i>	
AV 201 Air Science III*	3
Social Science Elective	3
Electives	<u>11</u>
	17
<i>Second Semester</i>	
AV 202 Air Science IV*	3
Humanities Elective	3
Electives	<u>11</u>
	17

*Private Pilot Rating is a pre-requisite for these courses.

A minimum of 60 semester hours required for graduation, including 2 hours of Physical Education (30 semester hours must be earned at FMCC) AND successful-flight experience (FAA certification through flight instructor rating). FAA required written examinations are available through the College.

The cost of flight experience (off campus) is not included in the estimated costs listed in this catalog. Flight costs are established by the flight school involved and are paid directly to the flight school. The College does not provide flight experience. A list of FAA 141 approved flight schools is available upon request.

ONE-PLUS-ONE TRANSFER DEGREE PROGRAMS

In cooperation with the State University Colleges of Technology at Canton and at Cobleskill, and with the College of Environmental Science and Forestry, Fulton-Montgomery Community College offers "one-plus-one" programs in the following areas:

with Canton:

- Industrial Technology
- Mortuary Science
- Science Laboratory Technology
(Biology Advisement Track)
- (Chemistry Advisement Track)
- (Milk & Food Quality Control)

with College of Environmental Science & Forestry:
Forest Technology

with Cobleskill:

- Biological Technology
- Chemical Technology

- Floriculture
- Public Health
- Technology
(Environmental Health)
- Medical Laboratory Technology
- Histotechnology

A student in a one-plus-one program spends the first year at Fulton-Montgomery taking courses prescribed for the program. Upon successful completion of this first year (minimum of 1.75 average), the student is guaranteed transfer into the program at Canton, Cobleskill or Forestry for the final year of the program and the award of the Associate degree. A second application is necessary during the first year (except Forest Technology which requires admission by ES&F before starting at FMCC). The Office of Career Planning assists students with the transfer process.

**SCIENCE LABORATORY TECHNOLOGY (A.A.S.)
APC — 0584**

Milk & Food Quality Control Advisement Track

**FIRST YEAR — FULTON-MONTGOMERY
COMMUNITY COLLEGE**

<i>First Semester</i>	
EN 125 Freshman English I	3
BI 171 Modern Biology or	
SC 141 Intro. to Bio. I	3-4
CH 173 Fund. of Chemistry I	4
Social Science Elective	3
Mathematics	<u>3-4</u>
	16-18

<i>Second Semester</i>	
EN 126 Freshman English II or	
EN 127 Technical English	3
BI 282 Microbiology	4
CH 174 Fund. of Chemistry II	3
Social Science Elective	3
Physical Education	<u>1</u>
	14

**SECOND YEAR — CANTON COLLEGE OF
TECHNOLOGY**

<i>First Semester</i>	
10301 Dairy & Food Science I	3
10220 Careers	1
10201 Principles of Environmental Health	3
10210 Dairy & Food Micro.	4
10304 State Lic. for Milk	3
10212 Field Bio. & Ecol. or	
10109 An. Science or	
19213 Freshwater Bio.	<u>3-4</u>
	17-18

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Second Semester

10302 Dairy & Food Sci. II	3
10303 Food Prod. Eval.	2
10306 Elem. of Food Sanitation	4
10305 Water Supplies & Sewage Treatment	3
10211 Envir. Microbiology	3
10307 Dairy Lab Instrumentation	<u>2</u>
	17

A minimum of 64 semester hours are required to complete this program.

**INDUSTRIAL TECHNOLOGY (A.A.S.)
APC — 0583**

**FIRST YEAR — FULTON-MONTGOMERY
COMMUNITY COLLEGE**

First Semester

EN 125 Freshman English I	3
PH 171 Physics I	4
EL 125 Electricity	4
MA 151 Inter. Algebra or MA 142 Technical Mathematics	4
MD 171 Engineering Graphics	3
Physical Education	<u>1</u>
	19

Second Semester

EN 126 Freshman English II, or EN 127 Technical English	3
PH 172 Physics II	4
EL 126 Electricity	4
MA 154 Mathematics or MA 151 Intermediate Algebra	4
Physical Education	<u>1</u>
	16

**SECOND YEAR — CANTON COLLEGE OF
TECHNOLOGY**

First Semester

30310 Strength of Materials	4
40614 Basic Calculus	4
Technical Electives*	<u>8</u>
	16

Second Semester

30421 Electronics	4
30621 Fluid Power Systems	4
Social Science	3
Technical Electives*	<u>5-6</u>
	16-17

*Technical Electives:

- 30604 Manufacturing Processes I
- 30202 Automotive Welding
- 30303 Elementary Surveying
- 30304 Construction I
- 30624 Shop Practice
- 30605 Engineering Drawing II
- 30607 Manufacturing Processes II

- 30307 Construction Drafting
- 30306 Hydraulics
- 30117 Intro. to Alternate Energy
- 30108 Plumbing Design
- 30314 Project Management
- 30614 Work Simplification & Measurement
- 30118 Active & Passive Energy Systems I
- 30619 Quality Control
- 30620 Production Planning
- 30119 Active & Passive Energy Systems II
- 30002 Computer Applications

A total of 64 semester hours are required to complete this program.

**MORTUARY SCIENCE (A.A.S.)
APC — 0599**

**FIRST YEAR — FULTON-MONTGOMERY
COMMUNITY COLLEGE**

First Semester

EN 125 Freshman English I	3
BU 101 Principles of Business	3
BU 171 Business Law	3
SS 291 General Psychology	3
BI 181 Anatomy & Physiology I	<u>4</u>
	16

Second Semester

EN 126 Freshman English II or EN 132 Speech	3
BI 182 Anatomy & Physiology II	4
BU 121 Accounting I	4
BU 165 Small Business Management	3
Introductory level Computer Course	3
Physical Education	<u>1</u>
	18

**SECOND YEAR — CANTON COLLEGE OF
TECHNOLOGY**

First Semester

105011 Funeral Traditions: Past & Present	3
105120 Funeral Home Management	3
105110 Embalming & Aseptic Techniques	4
102109 Pathology	3
410070 Sociology of Death and Dying	<u>3</u>
	16

Second Semester

10504 Clin. Theory, Pract. & San. II	4
10506 Senior Seminar	3
10508 Restorative Art	4
10509 Mort. Hyg. & San. Sci.	3
Social Science Elective	<u>3</u>
	17

Summer

10507 Clinical Practicum	2
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A minimum of 69 semester hours are required to complete this program.

**SCIENCE LABORATORY TECHNOLOGY
(A.A.S)
APC — 0584**

Biology Advisement Track

**FIRST YEAR — FULTON-MONTGOMERY
COMMUNITY COLLEGE**

First Semester

EN 125 Freshman English I	3
BI 171 Modern Biology	4
CH 173 Fund. of Chemistry I	4
Mathematics Elective	4
Physical Education	<u>1</u>
	16

Second Semester

EN 126 Freshman English II	3
BI 172 Plant Biology	4
CH 174 Fund. of Chemistry II	4
BI 282 Microbiology	4
Social Science Elective	<u>3</u>
	18

**SECOND YEAR — CANTON COLLEGE OF
TECHNOLOGY**

First Semester

10220 Careers	1
Social Science	3
Electives (4)	
40109 Quantitative Analysis (Strongly rec.)	4
10212 Field Bio. & Ecol.	3
10201 Princ. of Env. Health	3
10210 Dairy & Food Micro.	4
10101 Soil Science	3
10301 Dairy & Food Sci. I	3
10213 Freshwater Biology	<u>4</u>
	16

Second Semester

Electives (4-5)

40111 Biochemistry	3
10223 Microtechniques	3
40110 Instru. Analysis	3
10107 Land Mgmt. & Conservation	3
10211 Env. Microbiology	3
10711 Research An. Handling Skills	1
10305 Water Supplies & Sewage Treatment	3
10207 Human Anat. & Phys.	4
40615 Statistics	3
10412 Medical Microbiology	3
10402 Hematology	<u>2</u>
	16

A minimum of 64 semester hours are required to complete this program.

**BIOLOGICAL TECHNOLOGY (A.A.S.)
APC — 0614**

**FIRST YEAR — FULTON-MONTGOMERY
COMMUNITY COLLEGE**

First Semester

EN 125 Freshman English I	3
CH 173 Fund. of Chemistry I	4
BI 171 Modern Biology	4
Mathematics (MA 154 suggested)	3-4
Physical Education	<u>1</u>
	15-16

Second Semester

EN 126 Freshman English II or EN 127 Technical English	3
CH 174 Fund. of Chemistry II	4
BI 173 Animal Biology	4
Mathematics (MA 160 suggested)	3-4
SS Elective	<u>3</u>
	17-18

**SECOND YEAR — COBLESKILL COLLEGE OF
TECHNOLOGY**

First Semester

BIOL 219 Microbiology	4
SOSC, PSYC, or HIST Electives	3
Specialization Electives*	6
Electives	<u>3-5</u>
	16-18

Second Semester

CHEM 244 Instrumental Analysis or BIOL 264 Adv. Biol Methods	3-4
PHED Physical Education	1
BIOL 158 Human Physiology or BIOL 117 Botany II or BIOL 136 Vert Biology	3
Specialization Elective*	3
Electives	<u>5-7</u>
	16-18

A minimum of 66 semester hours are required to complete this program. Thirty-three semester hours to be completed on the Cobleskill campus.

*SPECIALIZATION ELECTIVES: 8-9 semester hours of courses with BIOL, CHEM, ENHT, MATH, or PHYS numbers offered on the Cobleskill campus other than BIOL 111-112, CHEM 111-112, CHEM 121-122, BIOL 158, BIOL 117, BIOL 136, BIOL 264, CHEM 244 or their equivalents at FMCC. Students must take a minimum of 8 semester hours of specialization elective (9 s.h. will be required of students who take BIOL 264).

CHEMICAL TECHNOLOGY (A.A.S.)
APC — 0535

**FIRST YEAR — FULTON-MONTGOMERY
COMMUNITY COLLEGE**

First Semester

EN 125 Freshman English I	3
CH 173 Fund. of Chemistry I	4
Mathematics*	3-4
Elective	2-3
Social Science Elective	3
Physical Education	1
	<u>16-18</u>

Second Semester

EN 127 Technical English or	
EN 126 Freshman English II	3
CH 174 Fund. of Chemistry II	4
Mathematics*	3-4
Social Science Elective	3
Elective	3
Physical Education	1
	<u>17-18</u>

**SECOND YEAR — COBLESKILL COLLEGE OF
TECHNOLOGY**

First Semester

CHEM 231 Organic Chemistry I	4
CHEM 241 Quantitative Analysis	4
Specialization Electives**	2-4
	<u>16-18</u>

Second Semester

CHEM 232 Organic Chemistry II	4
CHEM 244 Instr. Analysis	4
CHEM 130 Computer Applications in Nat. Science or	
COMP 150	3
Specialization electives**	4
Electives	0-2
	<u>15-17</u>

*Mathematics placement dependent upon preparation, competence in intermediate algebra required.

**Courses chosen from biology, chemistry, physics, math, data processing, or physical science.

A minimum of 66 semester hours are required to complete this program. Thirty-three semester hours to be completed on the Cobleskill campus.

FLORICULTURE (A.A.S.)
APC — 0643

**FIRST YEAR — FULTON-MONTGOMERY
COMMUNITY COLLEGE**

First Semester

EN 125 Freshman English I	3
BI 171 Modern Biology	4
Social Science Elective	3

Electives	6
Physical Education	1
	<u>17</u>

Second Semester

EN 127 Technical English or	
EN 126 Freshman English II	3
BI 172 Plant Biology	4
Social Science Elective	3
Electives	6
Physical Education	1
	<u>17</u>

**SECOND YEAR — COBLESKILL COLLEGE OF
TECHNOLOGY**

First Semester

OH 111 Floral Design I	3
OH 131 Floriculture	3
PH 113 Plant Science Laboratory Techniques	1
PH 141 Nursery Management I	3
PH 181 Plant Pathology	3
OH 200-210 Plant Science Occupational Experiences	1
OH 251 Greenhouse Management	3
	<u>17</u>

Second Semester

OH 172 Flower Shop Management	3
OH 186 Entomology	3
PH 114 Plant Science Laboratory Techniques	1
OH 212 Floral Design II	3
OH 200-210 Plant Science Occupational Experiences	1
PH 232 Floriculture II	3
AG 111 Intro. to Soil Science	3
	<u>17</u>

A minimum of 68 semester hours are required to complete this program.

PUBLIC HEALTH TECHNOLOGY (A.A.S.)
APC — 0624

Environmental Health Advisement Track

**FIRST YEAR — FULTON-MONTGOMERY
COMMUNITY COLLEGE**

First Semester

EN 125 Freshman English I	3
CH 173 Fund. of Chemistry I	4
BI 171 Modern Biology	4
Mathematics*	3-4
Physical Education	1
	<u>15-16</u>

Second Semester

EN 127 Technical English or	
EN 126 Freshman English II	3
CH 174 Fund. of Chemistry II	4

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BI 173 Animal Biology	4
BI 282 Microbiology	4
Mathematics*	3-4
	18-19

SECOND YEAR — COBLESKILL COLLEGE OF TECHNOLOGY

First Semester

ENHT 207 Milk and Food Sanitation	3
PHYS 111 or	
PHYS 211 Physics I	4
ENHT 109 Water Supply	3
SOSC, PSYC, or HIST Elective	3
Electives	3-4
	16-17

Second Semester

ENHT 101 Intro. to Environmental Health	3
SOSC, PSYC, or HIST	3
Electives	9-10
PHED Physical Education	1
	16-17

*Mathematics placement dependent upon preparation, competence at level of MA 154 or higher required.

A minimum of 66 semester hours are required to complete this program. Thirty-three semester hours to be completed on the Cobleskill campus.

MEDICAL LABORATORY TECHNOLOGY (A.A.S)
APC — 0600

Histotechnology Advisement Track

FIRST YEAR — FULTON-MONTGOMERY COMMUNITY COLLEGE

First Semester

EN 125 Freshman English I	3
CH 173 Fund. of Chemistry I	4
BI 171 Modern Biology	4
Mathematics*	3-4
Physical Education	1
	15-16

Second Semester

EN 127 Technical English or	
EN 126 Freshman English II	3
CH 174 Fund. of Chemistry II	4
BI 173 Animal Biology	4
Mathematics*	3-4
Electives**	3
Physical Education	1
	18-19

SECOND YEAR — COBLESKILL COLLEGE OF TECHNOLOGY

First Semester

BIOL 251 Vertebrate Histology	3
BIOL 259 Vertebrate Anatomy	3

SOSC, PSYC, or HIST	3
BIOL 114 Med. Orient.	1
Science Elective***	4
Electives	3
	17

Second Semester

BIOL 158 Human Physiology	3
BIOL 268 Microtechniques	3
BIOL 255 Animal Pathology	2
SOSC, PSYC, or HIST	3
Electives	5
	16

Summer Semester

BIOL 275 Supervised Clinical Experience in Histotechnology (twelve weeks)****	4
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*Mathematics placement dependent upon preparation, competence of level of MA 154 or higher required.

**May be Microbiology

***Science Elective: Any BIOL, CHEM, ENHT, MATH, or PHYS course. Suggested electives include: Organic Chemistry, Microbiology, Advanced Biological Techniques, Biochemistry, Medical Laboratory Practice, and Instrumental Analysis.

****Completion of this course is required in order to take the American Society of Clinical Pathology registry examination for Histologic Technician. BIOL 275 is not a degree requirement but may be applied toward the degree credits. If that is done, the degree will be received in August.

A minimum of 66 semester hours are required to complete this program. Thirty-three semester hours to have be completed on the Cobleskill campus.

FOREST TECHNOLOGY (A.A.S)
APC — 0620

FIRST YEAR — FULTON-MONTGOMERY COMMUNITY COLLEGE

First Semester

EN 125 Freshman English I	3
BI 171 Modern Biology or	
SC 141 Intro. Biology I	3-4
EC 180 Intro. to Economics	3
Mathematics*	3-4
Elective	3
	15-17

Second Semester

EN 126 Freshman English II	3
BI-172 Plant Biology or	
BI 173 Animal Biology or	
SC 142 Intro. Biology II	3-4
Mathematics*	3-4
Electives	6
	15-17

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SECOND YEAR — RANGER SCHOOL
WANAKENA CAMPUS

Courses in area of specialization.

*Mathematics placement dependent upon preparation; competence in algebra and trigonometry, or higher mathematics required.

Concurrent application to Fulton-Montgomery and to the College of Environmental Science and Forestry is required. Decisions on admission to the Forest Technology program are rendered by the College of Environmental Science and Forestry.

CERTIFICATE PROGRAMS

EARLY CHILDHOOD APC — 0968

The Early Childhood certificate program is designed for those who want to learn the skills and develop the attitudes that are needed for entry-level positions at institutions and agencies serving young children and for in-service personnel who want to upgrade their skills, but do not want to undertake many of the supporting academic courses required for the two-year Associate in Applied Science degree. The program is flexible so that the students may choose the courses and field experiences that are most appropriate to his/her interests and career goals.

FIRST YEAR

Summer Session

ED 171 Intro. to Early Childhood Ed.	3
SS 291 General Psychology*	3
	6

First Semester

EN 125 Freshman English I	3
SS 298 Child Development*	3
ED 185 Early Childhood Curriculum	3
ED 298 Early Child Internship	4
	13

Second Semester

SS 281 Sociology*	3
ED Elective**	3
ED Elective**	3
ED 299 Early Child Internship	4
	13

*Students may take EN 125 during the Summer, SS 291 and 281 during the first semester, and 298 during the second semester.

**ED Electives: ED 225, 250, 275

GENERAL EDUCATION APC — 0985

The General Education curriculum is a one-year program leading to a certificate of completion. This program may be useful to the student who wishes to strengthen an academic background before embarking on a program of study leading to the Associate degree. It also offers the student with limited or unsettled educational goals the opportunity for a year of broadly-based study and exploration. A minimum of 27 semester hours must be completed.

First Semester

EN 124 Basic English*	3
MA 147 Algebra or	
MA 150 Survey of Mathematics	3-4
HD 150 Reading and Learning Skills	3
HD 100 Studies of the Person	3
Physical Education	1
Exploratory Elective — Technical,	
Vocational, Liberal Arts	2-4
	15-18

Second Semester

English Elective	3
Exploratory Electives — Career	
Education, Liberal Arts &	
Sciences	9-12
	12-15

*Students may take more advanced courses with approval.

Some students will remain in this program for only semester, some will remain a year, and some will continue into other programs at the College.

HUMAN SERVICES APC — 0949

The Human Services certificate program is designed for those who want to learn the skills and attitudes that are needed for work within a human service agency, but who do not want to undertake the supporting academic course work required for the two year degree. The program is flexible so that students may choose courses and field work experience in accordance with their area of interest and particular career goals.

Summer Session

EN 125 Freshman English I	3
HS 110 Intro. to Human Service	3
	6

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First Semester

EN 126 Freshman English II or	
EN 127 Technical English	3
HS 111 Human Service Interventions	3
HS 298 Human Service Intern.	4
SS 291 General Psychology	3
	<hr/>
	13

Second Semester

Human Services Elective*	3
HS 299 Human Service Intern.	4
SS 297 Developmental Psych	3
Human Service Elective*	3
Elective	3
	<hr/>
	13

*Human Services Electives: HS 211, HS 231, HS 251, HS 265

INDIVIDUAL STUDIES

See previous description of Individual Studies Programs (A.O.S.).

AUTOMOTIVE MECHANICS

APC — 0926

This one-year Automotive Mechanics Certificate Program is designed to provide students with concentrated skill training for immediate employment. However, all credits can be applied toward an Associate's degree.

Emphasis is on practical hands-on experience in all aspects of automotive mechanics including engines, support systems, electrical systems, chassis, and power train. Customer relations is also stressed. Modern electronic equipment is used in highly individualized laboratory projects. Advanced placement and credit for prior learning in school and on the job are possible. Students in this program are expected to provide their own safety footwear, limited hand tools, and other personal items appropriate for automotive laboratory classes.

Graduates may be employed as mechanics helpers, mechanics, and related careers. Jobs are available in small shops, dealerships, and automotive repair chain stores.

First Semester

AT 121 Intro. to Automotive Function*	3
AT 122 Theory of Internal Combustion Engines*	3
AT 124 Automotive Electrical Systems	3
AT 225 Automotive Chassis Systems*	3
Elective	3
	<hr/>
	15

Second Semester

AT 123 Internal Combustion Engine Support Systems*	3
AT 226 Power Trains-Design Features and Analysis*	3
AT 227 Electronic Engine and Chassis Analysis*	3
AT 228 Consumer Relations and Services	3
Elective**	3
Microcomputers	2
	<hr/>
	18

*Course meets at the Vo-Tec Center. Students make own transportation arrangements.

**Business course recommended.

A minimum of 32 semester hours are required to complete this program.

OFFICE TECHNOLOGY: CLERICAL

APC — 0935

This program leads to a certificate after one year of study. It is designed to provide students with concentrated skill training for immediate employment. However, all credits can be applied toward an Associates degree.

Emphasis is on applying basic clerical skills such as typewriting, administrative support procedures, and business communications in a computerized office environment. An individualized audio-visual tutorial instructional system is used by the instructor in some courses. Graduates will be prepared for employment as clerk typists, receptionists, and general office workers in modern automated offices in business, industry, and government.

FIRST YEAR

First Semester

OT 134 Intermediate Keyboarding*	3
OT 235 Administrative Support Procedures I	3
OT 239 Intro. to Office Systems & Technology	3
Business Elective	3
Microcomputer	2
	<hr/>
	14

Second Semester

OT 230 Machine Transcription	3
OT 236 Administrative Support Procedures II	3
OT 240 Word Processing Applications I	3
BU 137 Business Communications	3
	<hr/>
	12

*A student must have completed OT 133 or Equivalent.

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A minimum of 26 hours (29 hours if a student is required to complete OT 133 in preparation for OT 134) is required to complete this program.

CRIMINAL JUSTICE
APC — 0947

This program leads to a certificate in Criminal Justice and is designed to prepare students to become members of the municipal, county, and state police forces, as well as Federal Protection Officer, United States Marshal, campus security guard, correctional officer, institutional guard, youth-aid worker, social worker and other positions in the criminal justice system. The program is open, as well, to those who are currently employed in law enforcement. Below is a suggested sequence of the courses required for this certificate.

First Semester

EN 125 Freshman English I	3
CJ 103 Criminal Law I	3
CJ 106 Intro. to Law Enforcement & Criminal Justice	3
CJ 112 Intro. to Police Organization & Management	3
SS 291 General Psychology	3
Microcomputers	2
	<u>17</u>

Second Semester

EN 126 Freshman English II	3
CJ 104 Criminal Law II	3
CJ 105 Principles of Criminal Investigation	3
CJ 107 Police-Community Relations or CJ 108 Intro. to Juvenile Delinquency	3
SS 281 Intro. to Sociology	3
Mathematics (Strongly Suggested MA 160 Statistics)	3-4
	<u>18-19</u>

A minimum of 35 semester hours are required to complete this program.

DESKTOP PUBLISHING
[Pending Approval]

The one-year Desktop Publishing/Digital Typesetting program is designed to provide contemporary skills and knowledge in desktop publishing computers and typesetting systems. Students will learn by building keyboarding and computer skills through various computer modules, software packages and keyboarding courses. This program will provide essential background, knowledge, and skills needed for employment in the publishing, advertising, commercial printing, in-plant printing, and newspaper industries.

First Semester

GA 101 Intro. Graphic Communications	3
Microcomputers	2
BU 100 Computer Keyboarding	1
CS 101 Micro/Word Processing	1
EN 125 Freshman English	3
ER 101 Principles of Photography	3
BU 170 Principles of Advertising	3
	<u>16</u>

Second Semester

CS Elective*	3
GA 103 Advanced Graphic Communications	3
GA 104 Composition & Desktop Publishing Systems	3
CS 171 Intro. Mass Communications	3
Mathematics (142 or Higher)	3-4
	<u>15-16</u>

*CS 203 Recommended

MEDICAL INFORMATION PROCESSING
APC — 0045

The one-year Medical Information Processing certificate program is designed to provide students with concentrated skill training for immediate employment. However, all credits can be applied toward an Associate degree.

Emphasis is on practical hands-on experience in medical terminology, medical transcription, and medical administrative support procedures, as well as basic office skills. An individualized audio-visual instructional program is used by the instructor.

Graduates may be employed as medical records aides, medical transcribers, medical word processing specialists, medical office support personnel, and related careers. Jobs are available in hospitals, medical clinics, physician's offices, government agencies, and other health and related agencies. Evening and Summer registration required.

Program Prerequisite: OT 133 or equivalent.

First Semester

OT 134 Intermediate Keyboarding	3
OT 235 Administrative Support Procedures I	3
OT 283 Medical Terminology	3
Elective	3
Microcomputers	2
	<u>14</u>

Second Semester

Elective	3
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OT 285 Medical Administrative Support Procedures	3
BU 137 Business Communications	3
OT 287 Medical Transcription I	3
Elective	<u>3</u>
	15

Summer Term

OT 288 Medical Transcription II	<u>3</u>
	3

Suggested Electives: Computer Info. Systems, Word Processing, Humanities, Health, Social Science, Anatomy & Physiology, Human Development.

A minimum of 32 semester hours are required to complete this program.

QUANTITY FOOD PRODUCTION

APC — 0044

This program leads to a certificate in Quantity Food Production at the end of one year. It is designed to provide students with concentrated skill training for immediate employment. However, all credits can be applied toward an Associates degree.

Emphasis is on practical hands-on experience in food selection and preparation, purchasing, cost control, hospitality management, and nutrition. An internship in the food industry is required.

Students will be prepared for positions in all areas of quantity foods: preparation, receiving, operations, purchasing and service. Graduates may be employed by owner operated restaurants, chain restaurants, contractual food service companies, and other agencies associated with the production of food.

CERTIFICATE CORE

First Semester

FS 101 Intro. to Food Service	1
FS 111 Intro. to Safety & Sanitation	2
FS 122 Food Preparation I	3
FS 244 Hospitality — Intro.	1
FS 254 Hospitality — Service Techniques	1
FS 245 Cost Control Basics	1
Concentration Course	<u>3-6</u>
	12-15

Second Semester

FS 123 Food Purchasing	3
FS 124 Food Preparation II	3
FS 298 Internship*	3-6
Microcomputers	2
Concentration Courses	<u>3-6</u>
	14-17

Concentrations (7-9 credits)

Quantity Food

FS 264 Hospitality — Management	1
FS 255 Cost Control — Pro & F	1
FS 265 Cost Control — Manage.	1
HE 121 Nutrition	3
FS Elective	
FS 299 or	
FS 299 Internship	<u>1-3</u>
	7-9

Food Service Assistant

FS 299 Elective	3
FS 299 FS or	
HE Elective	3
FS 299 FS Elective	
FS 299 or	
FS 299 Internship	<u>1-3</u>
	7-9

Baking

FS 216 Fund. of Donut Making	2
FS 206 Fund. of Muffin Making	1
FS 226 Fund. of Baking	3
FS 226 Elective or	
FS 299 Internship	<u>1-3</u>
	7-9

*An elective may be substituted for 3 credits of internship with permission of instructor.

A minimum of 29 semester hours are required to complete this program.

Students taking 3 semester hours of FS 130 must take a 3 semester hour FS elective.

SECRETARIAL STUDIES

APC — 0927

This program is open to all students who have had two years of satisfactory high school training in shorthand, or its equivalent. This program leads to a certificate in secretarial studies at the end of one year. Students completing the program are qualified to accept positions as secretaries, stenographers, and receptionists in business, government and industry. All courses included in this program may be transferred to the Office Technology Administrative degree program.

First Semester

OT 134 Intermediate Keyboarding*	3
OT 233 Advanced Shorthand	4
OT 235 Administrative Support Procedures	3
Business Electives	<u>6</u>
	16

~ continued ~

Second Semester

OT 230 Machine Transcription	3
OT 236 Administrative Support Procedures	3
OT 239 Intro. to Office Systems & Technology	3
BU 137 Business Communications	3
Microcomputers	<u>2</u>
	14

*Must have completed OT 133 or equivalent.

A minimum of 30 semester hours are required to Complete this program.

**OFFICE TECHNOLOGY:
WORD/INFORMATION PROCESSING
APC — 0996**

This program leads to a certificate as a word/information processing operator at the end of one year. It prepares students for positions as word/information operators in automated offices in business, industry, and government. Most courses in the program can be used to meet the requirements for an Associate in Applied Science degree.

Program prerequisite: OT 133, or equivalent.

FIRST YEAR

First Semester

OT 134 Intermediate Keyboarding*	3
OT 235 Administrative Support Procedures I	3
OT 239 Intro. to Office Systems & Technology	3
Microcomputers	3
Business Elective	<u>2</u>
	14

Second Semester

OT 230 Machine Transcription	3
BU 137 Business Communications	3
Business Elective	<u>3</u>
	15

Summer Semester or Third Semester

OT 241 Word Processing Applications II	3
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*A student must have completed OT 133 or equivalent.

A minimum of 32 semester hours (35 hours if a student is required to complete OT 133 in preparation for OT 134) are required to complete this program.



ACADEMIC PROGRAMS

Fulton-Montgomery Community College's programs include: Liberal Arts, Career, One Year plus One Year, and Certificate. These programs are listed here along with the Higher Education General Information Survey (HEGIS) classification and the State University of New York Application Processing Center's (APC) codes.*

	HEGIS	APC
FULTON-MONTGOMERY COMMUNITY COLLEGE	0765	77

LIBERAL ARTS AND SCIENCES

	DEGREE	HEGIS	APC
General Studies	A.A.	5649	0250
Humanities	A.A.	5649	0201
Social Sciences	A.A.	5649	0212
Crafts Management	A.A.S.	5012	0417
Fine Arts	A.A.	5610	0664
Human Services	A.A.S.	5501	0604
Early Childhood	A.A.S.	5503	0605
Business	A.S.	5004	0671
Computer Science	A.S.	5101	0532
Mathematics/Science	A.S.	5649	0645
Math	A.S.	5617	0221
Science	A.S.	5649	0220
Engineering Science	A.S.	5609	0530
Individual Studies	A.O.S.	5699	0688

*Enrollment in other than registered or otherwise approved programs may jeopardize a student's eligibility for certain student aid awards.

CAREER

	DEGREE	HEGIS	APC
Accounting	A.A.S.	5002	0630
Automotive Technology	A.A.S.	5306	0525
Business Administration	A.A.S.	5004	0632
Computer Information Systems	A.A.S.	5103	0581
Computer Technology	A.A.S.	5104	0559
Construction Technology	A.A.S.	5317	0540
Criminal Justice	A.A.S.	5505	0640
Electrical Technology (Electronics Technology)	A.A.S.	5310	0555
Food Service Administration	A.A.S.	5404	0570
Leather Technology	A.A.S.	5313	0454
Natural Resources Conservation	A.A.S.	5499	0617
Nursing	A.A.S.	5208	0622
Office Technology, Administrative	A.A.S.	5208	5005
Office Technology, Word/ Information Processing	A.A.S.	5005	0694
Textile Technology	A.A.S.	5399	0434
Visual Communications Technology	A.A.S.	5012	0677
Individual Studies	A.O.S.	5699	0688
Individual Studies (COCAL)	A.O.S.	5699	0688
Individual Studies (Air Science)	A.O.S.	5699	0688

ONE YEAR PLUS ONE YEAR

DEGREE HEGIS APC

FULTON-MONTGOMERY COMMUNITY COLLEGE & CANTON COLLEGE OF TECHNOLOGY

Industrial Technology	A.A.S.	5312	0583
Mortuary Science	A.A.S.	5599	0599
Science Laboratory Technology (Biology)	A.A.S.	5407	0584
Science Laboratory Technology (Chemistry)	A.A.S.	5407	0584
Science Laboratory Technology (Milk and Food Quality Control)	A.A.S.	5407	0584

FULTON-MONTGOMERY COMMUNITY COLLEGE & COBLESKILL COLLEGE OF TECHNOLOGY

Biological Technology	A.A.S.	5407	0614
Chemical Technology	A.A.S.	5305	0535
Floriculture	A.A.S.	5402	0643
Public Health Technology (Environmental Health)	A.A.S.	5408	0624
Medical Laboratory Technology (Histotechnology)	A.A.S.	5205	0600

FULTON-MONTGOMERY COMMUNITY COLLEGE & THE COLLEGE OF ENVIRONMENTAL SCIENCE AND FORESTRY

Forest Technology	A.A.S.	5403	0620
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CERTIFICATE PROGRAMS (One Year)

DEGREE HEGIS APC

Automotive Mechanics	Certificate	6306	0926
Criminal Justice	Certificate	5505	0947
Early Childhood	Certificate	5503	0968
General Education	Certificate	5699	0985
Human Services	Certificate	5501	0949
Individual Studies including COCAL, and Technical & Career Preparation	Certificate	5699	0987
Medical Information Processing	Certificate	5214	0045
Office Technology, Clerical	Certificate	5005	0935
Office Technology, Word/ Information Processing	Certificate	5005	0996
Quantity Food Production	Certificate	5404	0044
Secretarial Studies	Certificate	5005	0927

COURSE DESCRIPTIONS

GENERAL NOTE: All courses described in this catalog will be regularly offered unless noted as follows: F — Fall semester only; WI — Intersession/Winter term only; S — Spring semester only; SU — Summer session only. The College reserves the right to cancel any course when the enrollment is insufficient to support the course. The right is also reserved not to offer a course if resources become unavailable or if the course has been dropped from the curriculum since the last printing of the catalog: s.h. means semester hours.

Extended Individualized Learning Modules

EM 300 Series

Individualized courses in various areas of study designed to meet particular student needs.

Internship

IN 291-294 Internship 1-4 s.h.

This course will serve as a structure for the awarding of credit for prearranged academically applicable work experiences. Students who have satisfactorily completed relevant courses may be placed with an approved agency on a part-time basis. Participation requires the approval of a College instructor and the appropriate Dean. Evaluation of the student's performance will be the responsibility of the instructor. A maximum of eight (8) semester hours of credit may be earned by any one student. *Prerequisite: Previous relevant course work. Hours of class per week: to be arranged.*

Independent Study

IS 291-294 Independent Study 1-4 s.h.

Course affords students the opportunity to investigate in-depth areas not available in existing courses. Provided they obtain the sponsorship of a faculty member and the permission of the Dean, students may submit proposals contracting to undertake from one to four semester hours of independent study in approved areas. Students accepted for independent study will be expected to confer regularly with their mentors and to demonstrate satisfactory proficiency in their particular area of study they have proposed to investigate. *Hours: to be arranged.*

Directed Study

DS 291-294 Directed Study 1-4 s.h.

Directed Study affords students the opportunity to study a course already listed in the College catalog, but not scheduled during the particular semester. Participation requires the sponsorship of the appropriate instructor and approval of the appropriate Dean. A student taking the Directed Study is expected to confer regularly with the instructor and meet all the requirements of the course. *Hours of class per week: to be arranged.*

Non-Credit Intensive English Language Program

Beginning Level

EF 051 Beginning Grammar Non-Credit

An introduction to the basic grammatical structures of English. Recognition and production in written and oral contexts. Related writing and speaking activities. This course may lead to further English language studies at higher levels, or be repeated depending on the progress of the student. *Hours of class per week: 5.*

EF 052 Beginning Writing Non-Credit

Written reinforcement of grammatical concepts: basic writing tasks. Sentence-level activities, practice in grouping sentences, and handwriting improvement. This course may lead to further English language studies at higher levels, or be repeated depending on the progress of the student. *Hours of class per week: 5.*

EF 054 Beginning Reading Non-Credit

Practice in comprehension of basic written communication, simple descriptive and narrative texts. Reading skills as stimulation of writing and speaking activities. Vocabulary expansion. This course may lead to further English language studies at higher levels, or be repeated depending on the progress of the student. *Hours of class per week: 5.*

EF 056 Beginning Speaking/Listening Non-Credit

Practice in simple conversational skills, aural comprehension, sound discrimination, vocabulary building, and comprehension of main ideas and inferences. Related reading and writing activities. Individual lab time required. This course may lead to further English language studies at higher levels, or be repeated depending on the progress of the student. *Hours of class per week: 5.*

Intermediate Level

These courses are designed to act as a transition between ESL and academic or vocational program college-level courses or employment and social opportunities. By advice and recommendation of the ESL faculty, students may also be allowed to take credit-bearing courses related to their academic goals.

EF 101 Intermediate Grammar **Non-Credit**
A study of the grammatical forms necessary for effective composition and oral presentation at the college level. This course may lead to further English language studies at higher levels, or be repeated depending on the progress of the student. *Hours of class per week: 5.*

EF 102 Intermediate Writing **Non-Credit**
Development of written communication skills in preparation for college expository and argumentative composition. Reinforcement of complex grammatical concepts and composition at the paragraph and short essay levels. Integration of writing, reading and speaking skills. This course may lead to further English studies at higher levels, or be repeated depending on the progress of the student. *Hours of class per week: 5.*

EF 104 Intermediate Reading **Non-Credit**
Practice in comprehension of academic materials, study skills, narrative texts and expository writing, dictionary usage, vocabulary expansion, and related writing and speaking activities. This course may lead to further English studies at higher levels, or be repeated depending on the progress of the student. *Hours of class per week: 5.*

EF 106 Intermediate Speaking/Listening **Non-Credit**
Development of speaking skills in conversational and academic contexts; practice in exposition, guided discussion and debate; related reading and writing activities as well as note-taking and academic study skills. Individual lab time required. This course may lead to further English studies at higher levels, or be repeated depending on the progress of the student. *Hours of class per week: 5.*

EF 109 Orientation to American Culture **Non-Credit**
Assistance through lecture/workshop/field trip and guest speaker series in adjustment to life and studies at FMCC and the surrounding community, and in understanding specific and broader aspects of American culture. Mandatory for all incoming international students in their first semester. *Hours of class per week: 3.*

Non-Credit Laboratory Courses

The purpose of these labs is to provide supplementary instruction for students who desire it on a non-credit basis. Fees are covered as part of credit tuition and/or lab fees.

C001 Computer Laboratory **Non-Credit**
This course has been designed to provide supervised hands-on computer experience for those students enrolled in data processing and mathematics courses requiring understanding of computer operation and use of computer terminals. *Hours will vary according to student needs.*

C002 MTL Center **Non-Credit**
This course is designed to provide instructional support for those students enrolled in secretarial science and word processing courses and to provide alternate instructional experiences for those who wish to learn independently. *Hours will vary according to student needs.*

C003 Nursing Laboratory **Non-Credit**
This course has been designed to provide instructional support for those students enrolled in nursing courses and to provide alternate instructional experiences for those who wish to learn independently. *Hours will vary according to student needs.*

C004 Mathematics Laboratory **Non-Credit**
This course has been designed to provide remedial assistance in mathematics for students planning to enroll or currently enrolled in any of the traditional mathematics courses offered at the College. *Hours will vary according to student needs.*

C005 Accounting Laboratory **Non-Credit**
This course has been designed to provide remedial support experiences for those students enrolled in traditional accounting courses, and to provide alternative experiences for those who wish to learn independently to update their vocational skills in accounting. *Hours will vary according to student needs.*

C006 Study Skills Laboratory **Non-Credit**
Students will work independently under the supervision of the instructor, who will set up an individualized remedial program to enhance the student's study skills and college level performance. *Hours will vary according to student needs.*

C007 Electricity Laboratory **Non-Credit**
This course has been designed to provide hands-on electric circuitry experience for those students enrolled in electrical programs who require additional work in electricity. *Hours will vary according to student needs.*

C008 Academic Software Skills **Non-Credit**
This course has been designed to provide academic computing skills experience for those student's enrolled in Career/Liberal Arts & Science programs, which require additional work with various software packages. *Hours will vary according to student needs.*

Peer Tutoring

PT 291-293 Peer Tutoring 1-3 s.h.

This course will serve as a structure for the awarding of credit for pre-arranged peer tutoring. Provided they obtain the sponsorship of a faculty member to serve as mentor and the approval of the appropriate Dean, students may contract to provide peer tutoring for one to three semester hours of elective credit in one semester. Students accepted as peer tutors are expected to confer regularly with their mentors and to provide tutoring services regularly to the students assigned to them. Evaluation of the student tutor's performance will be the responsibility of the mentor.

Number of credits received during one semester will be based on the number of students assigned to the tutor, number of different courses for which tutoring is provided, and the extent of the tutoring services needed to the students assigned. A student cannot receive credit twice for tutoring the same course(s). A maximum of six (6) semester hours of credit may be used by a student as electives toward a degree. *Prerequisite: Relevant course work as determined by the mentor. Hours of class per week: to be arranged.*

BUSINESS

Accounting

BU 121 Accounting I 4 s.h.

First half of a one-year course introducing accounting theory. Theory of debit and credit; accounts and special journals; the accounting cycle; accounting for notes and interest, accrued items, receivable, inventories, and plant assets; preparation of financial statements. Emphasis is on sole proprietorship. Computer assignments will be used. *Hours of class per week: 4.*

BU 122 Accounting II 4 s.h.

A continuation of BU 121. Accounting for partnerships and corporations, control systems for departments; manufacturing; analysis of statements and data. Computer assignments will be used. *Prerequisite: BU 121. Hours of class per week: 4.*

BU 125 Office Accounting S 3 s.h.

The course covers a full accounting cycle for a sole proprietorship service business. A section will be included where the student will apply these accounting principles to a professional enterprise. The second section of the course will concentrate on bank accounts, cash funds, and payroll accounting. A practice set for an attorney will be required that involves all of these concepts. *Hours of class per week: 3*

BU 221 Intermediate Accounting I F 4 s.h.

Corporate accounting emphasized. Major classification of items found in financial statements, including cash, investments, receivables, and inventories are analyzed. Computer assignments will be used. *Prerequisite: BU 122. Hours of class per week: 4.*

BU 222 Intermediate Accounting II S 4 s.h.

A continuation of the studies in BU 221, including analysis of liabilities, stockholders equity, land, buildings, and equipment. Computer assignments will be used. *Prerequisite: BU 221. Hours of class per week: 4.*

BU 224 Cost Accounting F 3 s.h.

Accounting for direct labor, materials, and factory overhead under both on job order costing and process costing. Standard cost principles and procedures, budgeting and direct decision making are among other topics covered. *Prerequisite: BU 122. Hours of class per week: 3.*

BU 225 Federal Income Taxes S 3 s.h.

Federal and State income tax laws and regulations are studied. Taxable income, inclusions and exclusions, capital gains and losses, deductions and other topics are covered. Practice is provided in preparation of income tax returns. Emphasis is on individual returns. *Prerequisite: BU 121 or permission of instructor. Hours of class per week 3.*

BU 229 Seminar in Accounting WI 3 s.h.

Reading and research on approved topics of special interest to the student. Written reports and oral presentations required. This course serves as an elective in the Accounting curriculum. *Prerequisite: Nine semester hours in Accounting. Hours of class per week: 3.*

BU 261 Managerial Accounting F 3 s.h.

Course is devoted to the use, rather than the construction, of accounting records and statements. Topics covered are: analysis and interpretation of financial data, flow of funds, cost concepts and applications, budget, and decision-making. *Prerequisite: BU 122 or permission of instructor. Hours of class per week: 3.*

Business Administration

BU 100 Computer Keyboarding 1 s.h.

This course is designed to teach basic keyboarding skills necessary to equip students to enter a variety of fields such as Computer Science, Data Processing, Accounting, or any business occupation that uses a keyboard to input information. The purpose of this course is to develop touch keyboarding skills accurately and quickly and to develop an understanding of the concepts used in keyboarding operations for

inputting and retrieving information on a computer.
Hours of class per semester: 15

BU 101 Principles of Business 3 s.h.
An introductory course to the diverse world of business, its structure, its operations and its impact upon each of us as employees, as consumers, as individuals, and as members of society. Course designed to acquaint the student with major disciplines of business such as: management, marketing, finance, human resource management and production management which the student may choose a career core for future study and training. Case studies and computerized and manual business games are used.
Hours of class per week: 3.

BU 103 Mathematics of Business Finance 3 s.h.
Review of the basic fundamentals and use of shortcut operations in arithmetic computations. Use of the hand-held calculator is stressed. Instruction in financial topics dealing with bank loans, interest, credit cards, bank reconciliation, property taxes, payroll, inventory, depreciation, trade and cash discounts, partial payments, markup and markdown, and present value. If time permits, an introduction to financial statement analysis. *Hours of class per week: 3.*

BU 113 The Typewriter Keyboard 1 s.h.
This course is taught in the Multi Tutorial Learning Center (MTLC) by a self-paced, individualized method of instruction. The keyboard is introduced requiring the touch method of operation. Basic electronic typewriter operation, styles of type, horizontal and vertical centering, and limited document formatting are taught. Grade is based on timed writings and theory tests. *Hours of class per week: 1. Additional hours in the MTLC.*

BU 123 Personal Keyboarding 2 s.h.
This course is taught in the Multi Tutorial Learning Center (MTLC) by a self-paced individualized method of instruction. In addition to the work required in , there is increased document formatting with automatic and manual correction methods stressed. There is continued emphasis on the use of the touch system in building speed and accuracy. The art of proofreading and proper word division is also stressed. Grade is based on correct production of office documents, timed writings, and knowledge of keyboarding theory. *Hours of class per week: 2 to 4. Additional hours in the MTLC.*

BU 137 Business Communications 3 s.h.
Emphasis on composing various types of business communications in a clear and concise manner while maintaining a readers' goodwill. Course also includes a review of grammar and mechanics of writing, spelling, and some public speaking. *Prerequisite:*

OT 133 or equivalent recommended. Hours of class per week: 3.

BU 140 Salesmanship 3 s.h.
A comprehensive treatment of professional salesmanship including an analysis of consumer types and buying motives, the approach and development of sales strategy. Students required to make sales presentation in role-playing situations. Equal emphasis placed on selling consumer and industrial products.
Hours of class per week: 3.

BU 141 Marketing 3 s.h.
An analysis of the principles, methods, trends and problems existing in marketing. A study of the distribution function of middlemen, their movement of goods and marketing policies, with some discussion of marketing research. *Prerequisite: BU 101. Hours of class per week: 3.*

BU 151 Human Resources Management 3 s.h.
An introduction to fundamentals of constructive personnel practices and techniques. Emphasis is placed on a knowledge of the theories of human behavior necessary to implement Human Resource policies dealing with recruitment selection, maintenance and development of human resources.
Hours of class per week: 3.

BU 152 Operations Production Management 3 s.h.
Objective of course is to promote a broad view of production/operations management using both descriptive and analytical material. Descriptions of production areas and the problems involved are blended with analytical approaches. *Prerequisite: BU 101. Hours of class per week: 3.*

BU 153 Supervision 3 s.h.
Study of the supervisor, "key person" in a company's chain of command. Supervisory role as perceived by superiors, subordinates, and peers. Study of the skills, attitudes and aptitudes necessary for effective supervision. Emphasis placed on practical solutions to employer-employee problems within supervisor's authority and responsibility. Lecture, case discussion, and role-playing instructional techniques used.
Prerequisite: BU 101. Hours of class per week: 3.

BU 160 Introduction to Finance 3 s.h.
Course introduces the student to the role of finance in modern business operations, providing a survey of both internal and external financial requirements and transactions handled primarily by mid-management personnel. *Prerequisite: BU 121 strongly recommended. Hours of class per week: 3.*

BU 164 Credit Administration 3 s.h.
Course designed to train the student for a possible career in credit management, introducing the student to the actual problems of granting credit as faced by institutions such as banks, finance companies, and other lending institutions. *Hours of class per week: 3.*

BU 165 Small Business Management 3 s.h.
Course provides essential concepts of starting and operating a small business. Topics covered include: initial procedures in starting a small business, record keeping, financing, labor/tax laws, promotion techniques, profit planning/cost control, inventory control, credit policies, sources of information, and franchise operations. *Prerequisite: Not open to first semester students except with permission of instructor. Hours of class per week: 3.*

BU 170 Advertising 3 s.h.
Survey of the advertising field, policies, procedures, and practices in planning and preparing various types of advertisements and selecting media. *Hours of class per week: 3.*

BU 171 Business Law I 3 s.h.
Course designed to familiarize the student with the law as it affects business personnel and social activities. A study of basic legal principles and procedures in addition to such topics as the origin and kinds of law, the law of contracts, sales, commercial paper, and of agency and employment should provide the student with an understanding of the rights and duties of individuals and businesses. Approach used includes case and text analyses and discussion. *Hours of class per week: 3.*

BU 172 Business Law II 3 s.h.
This Business Law course presents an in-depth treatment of areas such as: agency and employment, partnerships, corporations, commercial paper, etc. Career oriented content related to entrepreneurship, civil service, and professional exams will be stressed. *Hours of class per week: 3.*

BU 179 Principles of Management 3 s.h.
This course deals with the basic principles of management with applications to both entry-level as well as middle managers. Principles such as the nature and role of the manager, the decision making process, and the traditional management functions of planning, organizing, leading and controlling will be covered. *Hours of class per week: 3.*

BU 201 Principles of International Trade S 3 s.h.
A study of the basic concepts and theory pertaining to international business. Included in this study are cultural aspects, developed and developing countries, international trade strategies and economic integration.

International marketing, management, financing, production and transportation are touched upon to acquaint the student with various areas of international business. *Prerequisites BU 101, EC 180 or permission of instructor. Hours of class per week: 3.*

BU 243 Retail Management S 3 s.h.
Study of the principles and problems in the management of retail operations covering organization, store planning, selecting locations, customer services, merchandising policies, stock levels, and purchasing procedures. *Prerequisite: BU 101. Hours of class per week: 3.*

BU 262 Introduction to Investments 3 s.h.
Course related to security market structure. Investment objectives of risk, growth, and income portfolios analyzed. Topics will include stock market research, buying and selling, language, capital gains and losses, and tax considerations supported by Federal and State regulations. *Hours of class per week: 3.*

BU 299 Business Internship 1-4 s.h.
The Business Internship course will serve as a structure for the awarding of credit for prearranged academically applicable work experiences. Students who have satisfactorily completed relevant business courses may be placed with an approved agency on a part-time basis. Participation requires the approval of a Business Instructor and the appropriate Academic Dean. Evaluation of the student's performance will be the responsibility of the instructor. A maximum of eight (8) semester hours of credit may be earned by any one student. *Prerequisites: Previous business relevant coursework and approval of instructor and dean. Hours of class per week: 1-4.*

Computer Information Systems

CS 101 Microcomputer Application: Word Processing 1 s.h.
Students will learn to use microcomputers to process words via hands-on experience. WordPerfect 5.1 is the software used. Topics include: system components, default settings, editing, formatting selected office documents, and special features of the software. Proper use of the printer is also stressed. The concept of merge and sort is covered. *Prerequisites: Keyboarding pre-test to demonstrate skill in the touch system and CS 104 or equivalent, or permission of instructor. Hours of class per semester: 15.*

CS 104 Microcomputer Personal Productivity I 2 s.h.
This course provides an introduction to microcomputers and end-user system/application software. The microcomputer will be demonstrated as a tool to support other academic or professional

disciplines. Topics in the course include operating system commands, word processing software, spreadsheet software, database software. The course emphasizes familiarization of computer components and the operation of the overall microcomputer system. *Prerequisite: keyboarding knowledge required and pre-algebra math suggested. Hours of class per week: 2.*

CS 106 Microcomputer Personal Productivity II **S 2 s.h.**

This course offers additional experience with end-user application software. The microcomputer will be used as a tool to support other academic or professional disciplines. Topics will go beyond introductory commands and concepts to include spreadsheet and database manipulation and presentation. *Prerequisite CS 104. Hours of class per week: 2.*

CS 110 Introduction to Computers **3 s.h.**

Orientation course designed to introduce the terminology and concepts of computer and data processing. Topics include computer components, peripheral devices, number systems, machine language coding concepts, data processing coding techniques, and an introduction to computer programming using the BASIC language. Students will be required to make use of computer facilities to complete programming projects. *Hours of class per week: 3.*

CS 113 Programming Assembler Language **3 s.h.**

Introduce concepts of Assembler Language including hardware, software, flowcharting, documentation, and programming. Through text samples and business type programming assignments, the following operations or techniques will be covered: Basic Input and Output Operations, Comparing, Addition, Multiplication, Division, Use of Work Areas, Control Macros, Heading and Print Overflow. This basic foundation should provide the student with the ability to more effectively use assembly language in appropriate applications and also to use and understand the technical manuals supplied by computer manufacturers. *Prerequisite: CS 110 or equivalent work experience. Hours of class per week: 3.*

CS 115 Introduction to Computer Logic **F 3 s.h.**

The course will present logic tools used by computer programmers in the program development process. Symbolic representation of algorithms will be emphasized. Sequence structures, selection structures and repetition structures will be utilized to develop all problem-solving algorithms. The course will be taught language-independent in order to emphasize problem solving rather than computer language syntax. Commonly used data structures (variables, constants, arrays, files,) operators (assignment, math boolean, relational) and logic techniques (sorting, file updating) will also be covered. *Prerequisite: CS 104 taken*

concurrently and completion of an algebra course. Hours of class per week: 3.

CS 120 Computer Programming (FORTRAN) **3 s.h.**

Use of the computer for mathematical problem solving and report generation. The course is problem oriented and utilized FORTRAN programming language. Laboratory exercises on the College computer. *Prerequisite: CS 110 or permission of instructor. Hours of class per week: 3.*

CS 121 Computer Programming (COBOL) **3 s.h.**

Use of the computer for standard business applications. Programming techniques and report generation procedures through the utilization of the high-level programming language COBOL are emphasized. Laboratory exercises on the College computer. *Prerequisite: CS 110 or permission of instructor. Hours of class per week: 3.*

CS 122 Computer Programming (R.P.G.) **3 s.h.**

Use of the computer to produce standard business reports. Course is problem oriented and utilizes Report Program Generator as its programming language. Laboratory exercises on the College computer. Emphasis on report generation and programming procedures. *Prerequisite: Completion of or concurrent registration in CS 110 or permission of instructor. Hours of class per week: 3.*

CS 124 Computer Programming (PSACAL) **3 s.h.**

Use of a microcomputer for instructing programming techniques with this high level language. Emphasis will be placed on problem-solving techniques, anti-bugging, debugging as used in the program development cycle. In general, concepts common to all computer languages will be covered. Interactive programming will also be demonstrated. *Prerequisite: Prior programming course and/or experience in FORTRAN or COBOL or RPG or BASIC. Hours of class per week: 3.*

CS 125 Computer Programming C **3 s.h.**

C is a programming language that combines low-level and high-level operations capability. Low-level operations allow efficient implementation whereas the high-level characteristics facilitate structured design. This course will introduce both of the above mentioned aspects. Topics will include C syntax, constructs, file I/O, preprocessors, pointers, subprograms, operators, run-time libraries, arrays, and bit operations. Numerous computer programming projects will be assigned. Projects will be completed outside of scheduled class time. This course is not recommended as a first course in programming. *Prerequisite: One three credit programming course. Hours of class per week: 3.*

CS 130 CIS Internship 3-4 s.h.

Limited to students majoring in Computer Science or Computer Information Systems; involves an arranged schedule of work at a business site which employs computer-related personnel; designed to offer students direct on-the-job involvement in computer-related jobs such as programming, operations, systems analysis, sales, service, or training. *Prerequisites:* two programming courses and permission of instructor, and acceptance by employer. *Hours of bi-weekly:* 1; *on-the-job hours per week:* 6-8.

CS 133 Advanced Programming Techniques 3 s.h.

Advanced programming techniques such as editing, sequential and random file processing, multiple I/O files, external subroutines, sort and on line transaction/screen processing using COBOL language. Total program design, structure, documentation, scheduling and presentations stressed. Laboratory exercises on the College computer. *Prerequisite:* CS 121. *Hours of class per week:* 3.

CS 135 Systems Analysis and Design 3 s.h.

Present methods and techniques which a systems analyst uses to analyze and design computerized business data processing systems. Emphasis is on the organization, personnel, procedures, files, documents, and equipment that make up a business system. Theory is reinforced through case studies which illustrate common applications. Written and oral project presentations provide hands-on systems analyst experience. *Prerequisites:* CS 110, 113, and CS 133 or equivalent work experience, CS 120 recommended. *Hours of class per week:* 3.

CS 151 Color & Two Dimensional Graphics Programming Concepts 1 s.h.

The course shall cover the following topics: (1) An overview of CRT components and graphics commands, Raster and color screens. (2) Introduction to the output primitives of graphics programming; i.e., screen, color, palette, Pset, preset, line, draw, circle, and paint in medium resolution. (3) Application of output primitives to generate two dimensional graphs display such as straight lines, squares, rectangles, circles, arcs, pie shaped figures, ellipses and block filling of plane figures. *Prerequisite:* A working knowledge of BASIC programming or other microcomputer language. *Hours of class per semester:* 15.

CS 202 Advanced Spreadsheets 3 s.h.

This course will expand on introductory concepts and explore more powerful applications of electronic spreadsheets. Through hands-on experience students will master concepts in date management, such as data retrieval, data conditionals and data presentation. Students will be required to use the microcomputer lab

to complete various projects assigned. *Prerequisite:* CS 104. *Hours of class per week:* 3.

CS 203 Advanced Database 3 s.h.

This course will expand on introductory concepts and explore more powerful applications of database design and management. Through hands-on experience, students will master concepts in report generation and presentation, creation of screen formats, database views and queries. Students will also become familiar with database programming and the program Text Editor. Students will be required to use the microcomputer lab to complete various projects assigned. *Prerequisite:* CS 104. *Hours of class per week:* 3.

Economics

EC 180 Introduction to Economics 3 s.h.

One-term course designed around topics and problems which emphasize the individual's participation in the economy, both as consumer and supplier of productive resources, and the private and public institutions through which economizing is accomplished. Basic economic concepts will be introduced where necessary to explain economic activity. Special attention in discussion sessions to topics such as: employment and unemployment, poverty and affluence, education and opportunities, incomes and costs of living. *Hours of class per week:* 3

EC 190 Economics for the Consumer 3 s.h.

One-term course designed to develop the basic understanding every college graduate should possess regarding insurance, credit, home ownership, management of money, budgeting, investment, and retirement planning. *Hours of class per week:* 3

EC 282 Macroeconomics 3 s.h.

An analysis of aggregate economic behavior with application to the dynamic present-day economy. A study in detail of macroeconomic fluctuations of the business cycle with special emphasis given to the income-expenditure theory of cycles and trends, forecasting, high level of employment and international trade. Monetary resources, and economic growth policies are reviewed. *Prerequisite:* Sophomore status or permission of the instructor. *Hours of class per week:* 3.

EC 283 Microeconomics 3 s.h.

This course is an analysis of economic theory coupled with practical applications related to the consumer and the individual firm. It considers concepts of a more technical nature relative to price, distribution, production, costs and indifference curves under various market conditions. *Prerequisite:* EC 282 and

*Sophomore status, or permission of the instructor.
Hours of class per week: 3.*

Office Technology

Several office technology courses utilize a Multi-Media Learning Tutorial Center (MTLC). The MTLC combines audio-visual and printed materials with instructional staff assistance tailored to meet each student's individual learning needs. This structured, yet flexible system of self-paced individualized instruction permits the student to begin a course of study at a level based on previous knowledge, training and experience.

OT 131 Beginning Shorthand 5 s.h.
Presentation of the basic principles of Gregg shorthand theory. Intensive drill on brief forms. Development of skills in correct reading and writing techniques. Drills for spelling and punctuation in preparation for transcription.

OT 133 Introductory Keyboarding 3 s.h.
This course is taught in the Multi Tutorial Learning Center (MTLC) by a self-paced, individualized method of instruction. In addition to the work required in BU 123, increased document formatting is stressed. There is continued emphasis on the use of the mandatory touch system in building speed and accuracy. Business letters, reports, and electronically prepared tabulations are some of the documents introduced. Grade is based on correct production of office documents, timed writings, and knowledge of keyboarding theory. *Hours of class per week : 3-4. Pretest optional for advanced placement in course.*

OT 134 Intermediate Keyboarding 3 s.h.
This course is taught in the Multi Tutorial Learning Center (MTLC) by a self-paced, individualized method of instruction. In addition to the work required in OT 133, specialized document formatting is introduced. Lined tabulations, merge from memory, and special electronic features are presented. Resumes and financial forms are also covered. Grade is based on correct production of office documents, timed writings, and knowledge of keyboarding theory. *Hours of class: 45-47. Theory pretest optional for advanced placement in course. Five minute timed writing pretest is required.*

OT 183 Intermediate Shorthand S 4 s.h.
Review and reinforcement of shorthand principles including brief forms and phrases. Emphasis will be on reading and writing, speed building commensurate with previous background. Development of transcription skills including spelling and punctuation and transcription at the keyboard will be included. Individualized practice in the MTLC is required.

Prerequisite: OT 131 or equivalent. Hours of class per week: 4. Additional hours in the MTLC.

OT 230 Machine Transcription 3 s.h.
This course is taught in the Multi-Media Tutorial Learning Center (MTLC). This is a comprehensive course designed to provide the student with the necessary skills to prepare documents from a recorded voice. Material to be transcribed will consist of various forms of business correspondence used in fifteen different employment areas such as governmental, legal, medical, manufacturing, banking, retailing, etc. In addition, strong emphasis is placed on building language and vocabulary skills such as spelling, grammar, word division, abbreviations, punctuation, pronunciation, and word definition to prepare the student to edit when necessary. Cassette transcribers are used. *Prerequisites: EN 125, or BU 137, OT 134, or permission of instructor. Hours of class per week: 3. Additional hours in the MTLC.*

OT 233 Advanced Shorthand F 4 s.h.
Emphasis on increasing speed and accuracy in taking dictation of new material and transcribing mailable copy using a typewriter. Review of spelling, grammar, and proofreading is included. Production of mailable materials is stressed. *Prerequisite: OT 183 or equivalent. Hours of class per week: 4. Additional hours in the MTLC.*

OT 235 Administrative Support Procedures I 3 s.h.
An overview of office services and responsibilities of office employees will be provided. Topics covered include career planning, employment opportunities, work organization, computer information systems, telecommunications, communication processes, office teamwork, and ethics. *Prerequisite: OT 133 or equivalent, or concurrent enrollment, or BU 137. Hours of class per week: 3.*

OT 236 Administrative Support Procedures II 3 s.h.
An overview of office procedures and responsibilities of office employees will be provided. Topics covered include receptionist and telephone techniques, mail procedures, document creation, records management, mailing and shipping services, meeting and conference planning, travel arrangements, and financial assistance. *Prerequisite: Enrollment in OT 133 or equivalent, OT 235 is not a prerequisite for OT 236. Hours of class per week: 3.*

OT 239 Introduction to Office Systems & Technology 3 s.h.
This is an orientation course designed to introduce the terminology and concepts of the office automation/information system in the modern office. Topics include: an industry overview, input and output,

and reprographics and distribution. Emphasis will be on the people, procedures, and technology utilized in office systems. Machine concepts will be presented. Laboratory exercises on electronic typewriters and word processors will be assigned. *Prerequisite: OT 133 or equivalent. Hours of class per week: 3. Additional hours in the MTLC.*

OT 240 Word Processing Applications I 3 s.h.
Office output applications on word processors will be taught. Students will be required to apply these applications using word processors to prepare typical office communication projects. The use of a word processing procedures manual will be stressed along with the skill of proofreading. An introduction to reprographics and telecommunications will also be provided. *Prerequisites: OT 134, 239, or equivalent. Hours of class per week: 3. Additional hours in the MTLC.*

OT 241 Word Processing Applications II 3 s.h.
This course will be a continuation of the applications learned in WP I. Documents will be produced under simulated working conditions. In addition, emphasis will be given to Desk Top Publishing as it relates to the word processing field. Records management, file maintenance, purging, etc., will be covered. Through the simulated working environment, time management and decision-making abilities will be developed. The MTLC will be utilized. *Prerequisite: OT 240 (co-requisite for WP certificate majors). Hours of class per week: 3. Additional hours in the MTLC.*

OT 249 Information/Word Processing Practicum S 3 s.h.
This course will give the word processing student actual on-the-job work experience in a word processing center. The duties performed will primarily be those of correspondence secretary rather than administrative in nature. Although the primary workstation for this course will be the College's Word Processing Center, other arrangements, if available, can be made. Self-logging will be major responsibility of the student requiring a minimum of ten hours per week in a word processing center. At least three projects involving text assembly, list processing background merge, search and replace, electronic message communications, and justifying will be required. *Prerequisites: OT 230 and OT 239. Hours of class per week: 10-15.*

OT 259 Office Systems Supervisor S 3 s.h.
This course explores the key concepts related to people, organizations, and technologies as they relate to the supervision of automated office systems. Strategies for providing supervisory support in office system planning, implementation, and operation will be studied. Some assignments will utilize software for computer-assisted decision-making. *Prerequisite: OT*

239 or permission of instructor. Hours of class per week: 3.

OT 273 Legal Terminology F 1 s.h.
This course will provide knowledge and understanding of approximately 800 terms commonly used in the legal profession, with emphasis on correct spelling and pronunciation. In addition, the terms will be dictated in legal context for the students to transcribe correctly. *Hours of class per week: 3.*

OT 274 Legal Dictation F 1 s.h.
Material will be transcribed from letters and documents that are commonly prepared in the lawyer's office. Students will use shorthand symbols or machine transcription tapes as a source of input. Specialized legal vocabulary will be emphasized. *Prerequisite: OT 183 or equivalent. Hours of class per week: 3.*

OT 275 Legal Document Production F 1 s.h.
Legal Document Production is a simulation which represents three working days in a law firm. Students create and revise realistic legal documents commonly prepared in a law office. The jobs can be done on a word processor or a typewriter. *Prerequisite: OT 134 or equivalent. Hours of class per week: 3.*

OT 276 Legal Administrative Support Procedures S 3 s.h.
This course will familiarize students with the court structures, the jurisdiction of the courts, rules for preparing legal documents and the local fees for filing court papers. Specific areas of law will be covered, with the required procedures and necessary forms for each area, i.e. family law, wills and probate, real estate, bankruptcy, and criminal law. *Hours of class per week: 3.*

OT 283 Medical Terminology F 3 s.h.
Emphasis is on understanding medical terms. The logic behind the formation of medical terms, analysis of words, and interpretive and deductive skills will be used. Terms associated with all anatomical systems will be covered. MTLC slides and tapes may be used. *Hours of class per week: 3.*

OT 285 Medical Administrative Support Procedures F 3 s.h.
Emphasis is on topics covered by the American Association of Medical Assistants' Study Outline for Certification Review Administrative Division: patient relations, legal and ethical issues, communications, financial records, billing and collection, and insurance. *Prerequisite: OT 133 or equivalent. Hours of class per week: 3.*

OT 287 Medical Transcription I S 3 s.h.
This course begins with an introduction to medical transcription and use of medical references. Medical

document transcription is emphasized. Terminology, language skills, and transcription skills are systematically reinforced. Assignments are drawn from actual records. The MTLC instructional system may be used. *Prerequisite: OT 134 or permission of instructor. Hours of class per week: 3.*

OT 288 Medical Transcription II S 3 s.h.

This course continues to build on the material learned in Medical Transcription I. Detailed autopsies are emphasized. Specialty areas such as: cardiology, psychiatry, neurology, ob/gyn, respiratory system are included. Terminology, language skills, and transcription skills will continue to be systematically reinforced. Electronic keyboards will be utilized. The MTLC instructional system may be used. *Prerequisite: OT 287. Hours of class per week: 3. Additional hours in the MTLC.*

EDUCATIONAL RESOURCES

ER 110 Science of Library & Information Research

S 1 s.h.

The following areas of Library research and use will be considered: classification systems and subject searching (in the card catalog, indexes and reference tools). All formats of information (print and nonprint) as well as traditional paper indexing and computer assisted searching are included. Students will prepare a formal bibliography in a standard format. *Hours of class per week: 3 for five weeks.*

ER 111 Research Practicum

S 1 s.h.

The bibliographic and research techniques examined in ER 110 will be expanded by the student. Guidance will be provided in the step by step process of researching and writing a term paper. *Prerequisite: ER 110. Hours of class per week: 3 for five weeks.*

HEALTH, PHYSICAL EDUCATION AND RECREATION

100 Series-Service Program 1 s.h. each

Courses are designed to provide the student with a variety of lifetime sports and fitness activities. Emphasis is on making fitness through physical activity a part of everyday living.

PE 110 Slimnastics and Physical Fitness

PE 111 Jogging

PE 112 Introduction to Archery, Tennis, Racquetball

PE 113 Archery Skills

PE 114 Canoeing**

PE 115 Advanced Canoeing**

PE 116 Golf & Racquet Activities*

PE 117 Volleyball & Racquetball

PE 119 Racquet Activities

PE 120 Tennis & Aquatics F

PE 121 Intermediate Racquetball & Weight Training*

PE 122 Tennis & Bowling* F

PE 123 Bowling*

PE 125 Skiing (Beginning)* S

PE 127 Cross-Country Ski Touring* S

PE 128 Dance

PE 141 Beginning Swimming

PE 142 Intermediate Swimming S

PE 143 Lifesaving** F

PE 144 Skin & Snorkel Diving S

PE 149 Water Safety Instructors** S

**Course meets at sites other than campus. Students make transportation arrangements.*

***Prerequisites: See instructor. Hours of class per week: 2.*

160 Series-Majors Program 1 s.h. each

These activity courses are designed for the H.P.E.R. major. Special emphasis is placed on student performance and teaching techniques.

PE 165 Soccer & Weight Training F

PE 166 Racquet Activities & Fitness S

PE 241 General Aquatics for P.E. Majors S

Hours of class per week: 2.

HE 121 Nutrition F

3 s.h.

A study of the basic nutritional need required for the maintenance of active health. Special emphasis will be placed on relating nutritional needs to specific menu planning. *Hours of class per week: 3.*

HE 125 Advanced Nutrition

S 3 s.h.

An understanding of the nature and relationship between nutritional requirements and the nutritive value found in foods. Emphasis will be placed on food storage and preparation as it pertains to the maintenance of a high nutrient value. Vitamin and mineral deficiency diseases will be stressed. *Prerequisite: HE 121. Hours of class per week: 3.*

HE 135 Personal Health

3 s.h.

A one-semester course dealing with the application of scientific principles of effective, healthful living. Topics include critical areas of health, the causes and effects of health problems, and the practical application of this knowledge toward positive action. Drugs as well as environmental health, family hygiene, mental health, and social diseases will be covered. *Hours of class per week: 3.*

HE 136 First Aid & Safety Education 3 s.h.
A one-semester course to include accident causation and prevention in industry, recreation, home, and community. The Red Cross Advanced First Aid & Emergency Care certification will be granted following satisfactory completion of an emergency unit as outlined by the American National Red Cross. *Hours of class per week: 3*

HE 237 Human Sexuality 3 s.h.
An examination of the many concepts of sexual development, with a view toward development of patterns that are self-actualizing. Some of the areas of study are: Human Sexuality as an expression of total personality, structure functions, as well as dysfunctions of the anatomy involved in reproduction and sexuality, birth control, family planning and abortion; mechanisms of genetics, pregnancy and childbirth, sexual diseases and disorders, courtship, marriage, parenthood, and sexual adjustment in marriage. *Hours of class per week: 3.*

HE 235 Community Health F 3 s.h.
A detailed investigation of communicable diseases including definition, transmission, and control in respect to prevention of disease and promotion of health. Organized public health activities as conducted by local, state, national and international agencies.

An introduction to air and water pollution control, including effects and sources of pollution. Field trips are arranged. *Hours of class per week: 3.*

HE 337 Advanced Seminar in Human Sexuality 3 s.h.
A seminar providing presentation, detailed investigation and concentrated discussion of selected contemporary issues and topics in human sexuality. Emphasis is placed on student involvement in topic selection, research and experimental investigation. Topic selection is based on student interest and selected current controversial areas of sexuality. *Prerequisite: HE 237. Hours of class per week: 3.*

PE 021 American Leisure Time Activities 1 s.h.
An introduction to lifetime sport activities popular in America. Physical, social and mental benefits of activities are stressed through participation. The course may not be used to satisfy Physical Education activity course requirements. *Hours of class per week: 2.*

PE 031 Intramural Activities 1 s.h.
Students are required to participate satisfactorily in supervised sport activities to complete course requirements. The schedule of activities is available from the Physical Education faculty. This course may not be used to satisfy Physical Education activity

course requirements, but may be repeated for additional elective credit. *Hours of class per week: 1.*

PE 141 Beginning Swimming 1 s.h.
This course is designed for students who are either non-swimmers or marginal swimmers as determined by preliminary screening. The course objective is to have the student acquire enough basic knowledge and skill to effectively protect themselves and assist others, when in the proximity of water, under conditions of danger and stress (student option). *Prerequisite: Satisfactory medical examination. Hours of class per week: 2.*

PE 142 Intermediate Swimming S 1 s.h.
This course is designed for the student who has completed basic swimming or is capable of swimming with confidence. Intermediate swimming will include the learning of the four competitive swimming strokes. The basis rudiments of diving will also be taught. *Prerequisite: Basic swimming. Hours of class per week: 2.*

PE 143 Lifeguarding S 1 s.h.
A course structured for the skilled swimmer interested in becoming a Lifeguard. Lifeguarding and pool management skills are stressed. All students should be able to pass the basic and advanced swimming levels before enrollment and have reasonable stamina and endurance. This course fulfills partial requirements for Red Cross and New York State certification for Lifeguarding. *Hours of class per week: 2.*

PE 144 Skin and Snorkel Diving S 1 s.h.
A preliminary lead-up course of Scuba. Students will learn all the fundamental skills and basic concepts associated with self contained underwater breathing apparatus. (Scuba) Principles of Scuba Diving, safety, emergency techniques, physical endurance, (associated with diving) and some of the basic physics and medical aspects of diving will be taught. PE 144 will carry no certification. *Hours of class per week: 2.*

PE 149 Water Safety Instructor S 1 s.h.
Students enrolling for WSI will be introduced to teaching techniques for all levels of swimming instruction. They will be assigned to a teaching experience and VTR self-evaluation. Students should be able to do all the basic and advanced swimmer strokes. Upon completion of the course the student may qualify for certification as a Red Cross Water Safety Instructor. *Prerequisite: Satisfactorily pass the aquatic screening test. Hours of class per week: 2.*

PE 171 Ice Fishing W 3 s.h.
Course takes advantage of College location near Adirondack lakes. Some time spent in classroom discussing development and theory of ice fishing and use of equipment. Talks by local conservation

officials. Visit to local hatchery. Much time spent ice fishing on Sacandaga and other lakes of the region. *Hours of class per week: 3. Course meets at sites other than main campus. Students make their own transportation arrangements.*

PE 201 Introduction to Health, Physical Education and Recreation F 3 s.h.
Provides a historical background and understanding of health, physical education and recreation. Experiences in classroom observations, athletics, supervised teaching and administration are interspersed with lectures. Individual objectives and qualifications are reviewed, as are opportunities in the profession. *Hours of class per week: 3. Course meets at sites other than main campus. Students make their own transportation arrangements.*

PE 231 Camping S 3 s.h.
Selected, guided experiences in camping including nature and conservation, camp craft, nature craft, waterways, and conduct and management of resident and day camps. *Hours of class per week: 3. Course meets at sites other than main campus. Students make their own transportation arrangements.*

PE 235 Outdoor Education S 3 s.h.
This course is designed for students interested in management of wildlife and natural resources in New York State. Topics to be included are fisheries, wildlife management, and land control. Field trips will be coordinated with the New York State Department of Fish and Game and the Conservation Department. Special emphasis will be in Federal and State controls. *Hours of class per week: 3. Course meets at sites other than main campus. Students make their own transportation arrangements.*

PE 241 General Aquatics For Physical Education Majors S 1 s.h.
This required course is a broad introduction to aquatic activities including: basic strokes, simple forms of rescue, survival swimming, springboard diving, small craft, mask-snorkel-fins, and the American National Red Cross Swimming Program. *Hours of class per week: 2.*

PE 251 Lifetime Sports S 2 s.h.
Philosophy and instructional techniques in two of the lifetime sports. Activities include golf and badminton. *Hours of class per week: 2. Course meets at sites other than main campus. Students make their own transportation arrangements.*

PE 252 Lifetime Sports S 2 s.h.
Philosophy and instructional techniques in two of the lifetime sports. Activities include bowling and tennis. *Hours of class per week: 2. Course meets at sites other than main campus. Students make their own transportation arrangements.*

PE 253 Lifetime Sports F 2 s.h.
Philosophy and instructional techniques in two of the lifetime sports. Activities include volleyball and archery. *Hours of class per week: 2. Course meets at sites other than main campus. Students make their own transportation arrangements.*

Human Development

HD 100 Studies Of The Person 3 s.h.
This interdisciplinary course offers the student an opportunity to increase his/her self-understanding and move toward full development of his/her personal potential as he/she explores the question of what it means to be a fully functioning human being. Course content is drawn from a variety of academic disciplines and is organized around issues of emotional development, such as:

1. Identity (Finding answers to the question, "Who Am I?")
2. Connectedness (Relationship with other people and the environment)
3. Power (Exercising control over one's life)

Topics include: Self Actualization and the Fully Functioning Person. Values and Lifestyles, Assertiveness Training, Life Passages, Man in Nature, Management of Stress, and Interpersonal Relationships. *Hours of class per week: 3.*

HD 130 Supervised Community Service S 3 s.h.
Students are assigned to work with clients in human service agencies in the community (Sheltered Workshops for Retarded Adults, Special Education classes in the schools, Correctional Institutions, Youth Centers). In addition to their client contact, they attend regularly scheduled class sessions and individual conferences with the instructor for the purpose of reflecting upon their experiences and integrating the insights they have gained in their work. Students also complete selected readings and short papers related to their human service experience. **Prerequisite:** *Permission of the instructor. Hours of class per week: 1. Course meets at sites other than main campus. Students make transportation arrangements.*

HD 140 Improving Learning Strategies 1 s.h.
In this course students will assess their academic strengths and weaknesses. Various learning strategies

will be taught and emphasis will be placed on the transfer of the learning strategies to the classroom. The learning skills emphasized will be effective textbook reading strategies, listening, notetaking, preparing for the taking of examinations, and time management. *Hours of class per week: 1.*

HD 150 Reading and Learning Skills 3 s.h.

This course includes techniques designed to improve comprehension, vocabulary, and critical reading. Various learning strategies are discussed to help students "learn how to learn." Lab work centers around computer assisted instruction designed to improve students' reading ability in content areas. *Hours of class per week: 3.*

HD 221 Human Relations and Group Dynamics 3 s.h.

This course is designed to assist students in acquiring knowledge and skills which will enable them to communicate more effectively with other people, individually and in small groups. Learning activities include group process observation, role-playing and human relations skill training as well as film and lecture presentations on theories of interpersonal communication. Topics include: obstacles to communication, attending behavior, listening skills, conflict management, systems theory, male-female relationships, family dynamics, leadership, group roles, group norms and pressures. This course also contains a unit of Transactional Analysis. *Hours of class per week: 3.*

HD 250 Stress and Its Management: A Psychosocial Perspective 3 s.h.

The course will focus on theoretical and applied aspects of stress and its management. Included will be physical and psychological ramifications of the stress response, and an examination of the literature regarding personal, cultural, societal, medical, vocational, and environmental implications of stress. The development of the needs/values systems and its relationship to the stress response will be discussed. Selected stress reduction techniques will be introduced. *Hours of class per week: 3.*

HUMANITIES

English

EN 124 Basic English 3 s.h.

This course teaches the fundamentals of writing and may be a prerequisite for further study of composition for some students. The goal of the course is to help students improve their ability to communicate through writing. The course includes a study of grammar and composition with emphasis on the fundamental

principles of writing. This course is not credited toward the Associate Degree English and Humanities requirements, but may be used for elective credit. *Hours of class per week: 3.*

EN 125 Freshman English I 3 s.h.

The first two of a two semester sequence in communication skills; this course emphasizes basic techniques for writing and speaking improvement. Students learn to write a short essay which is grammatically and mechanically correct, logical and coherent. They also learn to deliver a clear, concise oral presentation. Research techniques and procedures for documenting sources are also covered. *Hours of class per week: 3.*

EN 126 Freshman English II 3 s.h.

Students expand on the skills learned and the procedures introduced in EN 125. Some of the oral and written reports will require critical evaluation of imaginative literature and essays. *Prerequisite: EN 125. Hours of class per week: 3.*

EN 127 Technical English S 3 s.h.

A study of the problems of organizing, writing, and presenting technical subject matter and materials with emphasis on description, process, abstract, technical reports and manuals. Instruction and practice will be provided in technical writing and reporting. *Prerequisite: EN 125 (Students in the technologies may take EN 127 Technical English in lieu of EN 126 Freshman English; other students may take EN 127 as an HU elective course.) Hours of class per week: 3.*

EN 128 Honors Freshman English II S 3 s.h.

This course develops the writing and speaking skills of those students whose backgrounds enable them to function in an intense and independently organized study of the arts and sciences. Among other assignments, students will prepare an oral and a written presentation on some aspect of the creative process. In any program, this course may be used to meet the requirement of EN 126. Either EN 126 or 128, but not both, may be credited toward a degree or certificate. *Prerequisite: EN 125 and permission of instructor. Hours of class per week: 3.*

EN 132 Speech 3 s.h.

This course introduces the student to the forms of public speaking and affords the opportunity to practice both the formal and informal deliveries of speech. Individual expression and creativity are still the main tenets of this course. The course aims to enrich the student's ability to communicate. Emphasis is placed on the spoken word. Various forms of discourse are studied and put into practice. Outside readings are required and the student prepares critical evaluations. The student is also given the opportunity to work with

panel and discussion groups. *Hours of class per week:* 3.

EN 200 Short Story S 3 s.h.

A survey of the development of the short story from its origins in the oral tradition to its present form. Emphasis is placed on the artistic development of this literary genre by the students' readings and discussions of a wide variety of 19th and 20th century short stories representing various authors and traditions. Course work includes critical papers and group presentations. *Prerequisite:* EN 125. (126 desirable). *Hours of class per week:* 3.

EN 231 Masterpieces of World Literature I F 3 s.h.

The course surveys world literature from the Greek and Roman classics up to the Renaissance. The readings include selections from Homer, Sophocles, Plato, Virgil, Dante, Chaucer, and other representative authors. *Prerequisite:* EN 125 (EN 126-desirable). *Hours of class per week:* 3.

EN 232 Masterpieces of World Literature II S 3 s.h.

The course surveys world literature beginning with the Age of Reason. Readings include Voltaire, Flaubert, Melville, Eliot, Mann and others. *Prerequisite:* EN 125 (EN 126 desirable). *Hours of class per week:* 3.

EN 233 American Literature I F 3 s.h.

A survey of American Literature from the Puritan period to the middle of the Nineteenth Century. *Prerequisite:* EN 125 (EN 126 desirable). *Hours of class per week:* 3.

EN 234 American Literature II S 3 s.h.

A survey of American Literature from the middle of the Nineteenth Century to the present. *Prerequisite:* EN 125 (EN 126 desirable). *Hours of class per week:* 3.

EN 235 Modern Drama S 3 s.h.

This course is an introduction to modern drama as literature and includes a representative sample of a number of plays. Aspects of modern drama such as naturalism, expressionism, and theater of the absurd are considered as seen in the works of Ibsen, Strindberg, Chekhov, Pirandello, Lorea, Ionesco, and Albee. American playwrights include O'Neill, Miller and Williams. Emphasis is placed on the meaning and appreciation of the plays through class discussion. Students will see a current dramatic production. A critical paper is required. *Prerequisite:* EN 125 (EN 126 desirable). *Hours of class per week:* 3.

EN 239 The Modern Novel S 3 s.h.

This course is a study, interpretation, discussion, and analysis of some of the great American and European

novels in the period from 1900 to the present day. The genre of the novel as well as the major works by leading Twentieth Century novelists will be considered. *Prerequisite:* EN 125 (126 desirable). *Hours of class per week:* 3.

EN 243 Oral Interpretation of Literature S 4 s.h.

Study and practice in the performance techniques and literary material appropriate to dramatic oral presentation, either individually or in concert. Particular attention will be paid to vocal expressiveness, in three genres — prose, poetry, and drama. Opportunities to perform publicly as a Readers' Theater group will be provided. *Prerequisite:* EN 126. *Hours of class per week:* 4.

EN 245 World Drama S 3 s.h.

An examination of major dramas from the Greeks to the late nineteenth century, with consideration of their literacy, theatrical, and socio-cultural values. Readings will include representative plays from the following periods, epochs, or "movements": Classical Greece and Rome; the Middle Ages; the Renaissance; Neo-Classical; Restoration; Romantic; Realistic. Genres: tragedy, comedy, melodrama, farce, and various hybrids. *Prerequisite:* EN 125 (EN 126 desirable). *Hours of class per week:* 3.

EN 257 Creative Writing S 3 s.h.

Instruction and practice in the various avenues of creative written expression. Poetry, drama, novel, short story, and other literary forms are investigated, but primary emphasis is placed on the student's development of his writing abilities along the lines of his particular interests and needs. Creative work is encouraged through regular individual conferences. *Prerequisite:* EN 126. *Hours of class per week:* 3.

Theater

TH 101 Theater History F 3 s.h.

The interaction of cultural, political, economic, and scientific forces upon dramatic art during the major epochs in Western civilization and their implications for the modern movements in dramatic theory and practice. Students will trace the development of the theater from its beginnings until the present. Major emphasis will be on Europe and America. Oriental theater will be treated only briefly and with an eye to its influence on recent trends in the West. *Hours of class per week:* 3.

TH 102 Stagecraft F 4 s.h.

Stagecraft will provide students with theory and practice of visual, aural, and construction facets of theater through study of scenery, sound, and lighting equipment. Workshop is required. *Hours of class per week:* 4.

TH 105 Fundamentals of Acting S 3 s.h.
Studies in movement and speech as aspects of dramatic art; exercises to enrich and discipline the imagination and to develop and control the responses of the body and speech to the imagination. The course will also entail some preliminary application of the elements of acting to the study of scenes. This will include analysis of the script for structure, objectives, and style. *Hours of class per week: 3.*

TH 136 Introduction to Theater 3 s.h.
This course is intended as a survey to introduce the student to theater as a technique apart from, although closely related to, literature. The student will study acting techniques, stage devices, set design, costuming, make up. Significant drama will be read to identify application of drama as art, audience reactions and needs, methods of expression, and interpretation. Textbooks will be used and laboratory experience will be provided. *Hours of class per week: 3.*

TH 201 Introduction to Theater Production F 3 s.h.
This course includes the fundamentals of directing, principles of design and organization and management of theatrical production. *Prerequisite: TH 102 desirable; completion or con-current registration of EN 126; or permission of instructor. Hours of class per week: 3.*

TH 202 Theater Seminar S 4 s.h.
Application of theater study to the challenges of theater practice. This course provides an intensive study of the components of theater in relation to actual productions; plays will be produced and directed by seminar students. *Prerequisite: TH 201 or permission of instructor. Hours of class per week: 3.*

Modern Foreign Language

FL 141-142 Elementary French I, II F,S 3 s.h. each semester
A beginner's course covering the fundamentals of oral comprehension, oral expression, and grammar. Readings in French familiarize the student with the civilization of France. A communicative approach will be used. *Hours of class per week: 3.*

FL 241-242 Intermediate French I, II F,S 3 s.h. each semester
In this intermediate course the comprehension and use of the spoken language are studied, as well as its grammar and composition, and the cultural aspects of the language. Reading texts are chosen to enable the student to converse in idiomatic French and to awaken interest in French Literature and culture. *Prerequisite: FL 142. Hours of class per week: 3.*

FL 143-144 Elementary Spanish I, II F,S 3 s.h. each semester
A beginner's course, covering the fundamentals of oral comprehension, oral expression, and grammar. Readings in Spanish introduce the student to the Hispanic World and serve as a basis for conversations. A communicative approach will be used. *Hours of class per week: 3.*

FL 243-244 Intermediate Spanish I, II F,S 3 s.h. each semester
The comprehension and use of the spoken language is further developed in this second-year language course. Grammar, composition, and the cultural aspects of the language are studied. Readings in Spanish introduce the student to Hispanic life and literature. *Prerequisite: FL 144. Hours of class per week: 3.*

FL 343 Spanish Conversation and Composition 3 s.h.
This course is designed to help students express themselves in idiomatic Spanish. Emphasis will be placed on vocabulary used in every day situations. Grammar will be reviewed as needed to facilitate oral and written communication. Assigned readings will assist the student in learning the expressions necessary for communication. *Prerequisite: FL 244 or equivalent. Hours of class per week: 3.*

FL 344 Readings in Spanish 3 s.h.
This is not a sequential course. A variety of readings in Spanish from works of representative authors. Class discussion will focus on the analysis of assigned readings to give the student a general basis for more specific work in literature and to help him/her understand articles in Spanish publications. Oral expression will be stressed. *Prerequisite: FL 244 or equivalent. Hours of class per week: 3.*

FL 145-146 Elementary Italian I, II F,S 3 s.h. each semester
A beginner's course covering the fundamentals of oral comprehension, oral expression, reading, and grammar of the Italian language. Italian will be presented in culturally relevant situations that will help students become acquainted with the civilization, life-style, and customs of the Italian people. *Hours of class per week: 3.*

FL 147-148 Elementary German I, II F,S 3 s.h. each semester
A beginner's course stressing the conversational approach to the language. Essential grammar and culture are studied and composition is introduced. *Hours of class per week: 3. Hours of lab per week: 1.*

FL 149-150 Elementary**Polish I, II****F,S 3 s.h. each semester**

A beginner's course covering the fundamentals of oral comprehension, oral expression, reading, and grammar of the Polish language. *Hours of class per week: 3.*

Music**MU 101 The American Broadway****Musical****F 3 s.h.**

This course teaches the fundamentals of reading music and vocal interpretation for the musical stage. The course will examine the scores of a number of Broadway musicals with special attention to Kern's Show Boat, Rodger & Hammerstein's Oklahoma and Sondheim's Company. *Hours of class per week: 3.*

MU 102 American Broadway**Musical Production****S 3 s.h.**

This course will consist of an in-depth study of the musical score, lyrics, and book of a particular Broadway show and will result in its production. These activities involve 60 hours of class and rehearsal time and will culminate with the performance of the show. This course may be repeated once for credit. *Hours of class per week: 3.*

MU 111 College Chorus**1 s.h.**

Study and performance of a wide variety of choral literature. Musical selections range from traditional to contemporary and includes such diverse styles as madrigals, songs, chorales, folk music, jazz and rock. Emphasis is placed on the study of characteristic music literature and the development of performance skills and techniques of choral singing. Attendance in all rehearsals and performances is mandatory. May be taken for credit for four semesters. *Prerequisites: Prior choral experience or permission of instructor. Hours of class per week: 2.*

MU 123 Concert Band**1 s.h.**

Study and performance of a wide variety of concert band literature. Musical selections range from traditional to contemporary. Emphasis is placed on the study of characteristic music literature and the development of musicianship. Attendance in all rehearsals and performances is mandatory. May be taken for credit for four semesters. *Prerequisites: Prior experience in playing a band instrument, suitable proficiency and permission of instructor. Hours of class per week: 2.*

MU 201 History of the American Musical**Theater****F 3 s.h.**

This course will trace the development of the American Musical from its European origins to its full realization as the major art form it is today. Emphasis will be placed on developing both a true understanding of the creative process involved, and a deeper appreciation of

the music and lyrics that have contributed so much to our society. A variety of musicals will be stressed.

*Hours of class per week: 3.***Art****AR 100 Studio Art****S 3 s.h.**

This basic course in drawing, painting, and sculpture will introduce the novice artist to the varied forms of self-expression and will aid in controlling the tools which are available. There will be studio experience with a variety of art media. Emphasis will be placed on line, color, texture, form and space. An analysis and critique of the student's studio work will be made. *Hours of class per week: 4.*

AR 101 Art History**F 3 s.h.**

Introduction to the history of art. A survey of world painting, sculpture, and architecture from prehistoric times to the Renaissance. Emphasis will be placed on stylistic developments and appreciation of man's aesthetic achievements. Presentation will combine lecture, text, and visual materials. *Hours of class per week: 3.*

AR 102 Art History**S 3 s.h.**

A continuing introductory course to the History of Art. This course surveys world painting, sculpture, and architecture, from the Renaissance to the present twentieth century. *Prerequisite: None (AR 101 desirable). Hours of class per week: 3.*

AR 125 Computer Graphics**3 s.h.**

This course provides students with the experience of designing and implementing projects in computer graphics, animation, and fine art. The emphasis is on combining fine art techniques with computer image processing. *Hours of class per week: 4.*

AR 150 Two Dimensional Design**3 s.h.**

Introduction to the elements and principles of two-dimensional design. Organization and composition on a flat surface with a variety of media. *Hours of class per week: 4.*

AR 160 Three Dimensional Design**3 s.h.**

An introductory studio course on the fundamentals of sculpture. Wood, paper, metal, wire, plaster, and clay will be used to identify solutions to problems in volume, scale, weight, texture, balance, movement and tension. Ideas being transformed into sculptural statements through visual logic and creativity, utilizing a variety of construction techniques will be stressed. *Hours of class per week: 4.*

AR 200 Printmaking I**F 3 s.h.**

Introduction to basic printmaking process: intaglio (etching, aquatint drypoint, lift ground, mezzotint). The collagraph print, the relief print, (woodcut, color

relief print, wood engraving). A consideration of the basic technique in printmaking. Emphasis on self-expression via experimentation. *Prerequisite: AR 100, equivalent or permission of instructor. Hours of class per week: 4.*

AR 210 Drawing I **F 3 s.h.**

A preliminary course which emphasizes technical and creative skills necessary to make drawings as visual language. Line, contour, gesture, volume and perspective will be covered, drawing from observation and non-observed subjects. *Hours of class per week: 4.*

AR 211 Drawing II **S 3 s.h.**

An exploration in a variety of drawing media, with emphasis on personal expression. Topics include studies in perceptual as well as conceptual drawing as a preparatory sketch, as diary, and as a finished product. Emphasis will be placed on the subjective, creative process. *Prerequisite: AR 210, or permission of Instructor. Hours of class per week: 4.*

AR 220 Painting I **F 3 s.h.**

An exploration to expand awareness of painting as a means of visual thinking and communication. Basic concepts will be stressed such as, composition, color theory, texture, value, form and content. Emphasis will also be on the variety of techniques available and personal creative solutions to specific painting problems. *Hours of class per week: 4.*

AR 221 Painting II **S 3 s.h.**

A continuation in the exploration of design concepts, composition, techniques, and expressive methods utilized in painting. Emphasis will be placed on individuals defining the direction of their work. *Hours of class per week: 4.*

AR 275 Pottery **F 3 s.h.**

A general course in pottery utilizing a variety of forming techniques with emphasis on coil, slab, and wheel thrown pieces, as well as ceramic sculpture. Concepts concerning clay, glazes, slips, texture, form, and firing techniques will be developed. Students will be required to furnish their own supplies. *Hours of class per week: 4.*

AR 300 Fine Arts Seminar **S 3 s.h.**

This course will allow the student opportunity to develop professional presentation and career skills for employment, college transfer and exhibition opportunities. A focus will be placed on development of aesthetic judgement and familiarization with past and current art trends. Topics will include portfolios, resumes, presentations and business matters concerning artists. *Hours of class per week: 4.*

Philosophy

HU 250 Introduction to Philosophy **F 3 s.h.**

An introduction to fundamental philosophical problems in some of the basic divisions of philosophy — metaphysics, epistemology, ethics, political philosophy, and philosophy of religion. The arguments of several major philosophers will be included. Developing critical thinking — i.e., "doing philosophy" — will be emphasized in addition to studying philosophical issues. *Hours of class per week: 3.*

HU 258 Ethics **S 3 s.h.**

An introduction to the basic ethical theories and their applications to human behavior and choices. Non-normative theories such as subjectivism and relativism, and normative theories such as utilitarianism, deontology, virtue theories, natural law, natural rights, and Platoism will be studied and compared. *Hours of class per week: 3.*

HU 266 Ancient Philosophers **F 3 s.h.**

A historical survey of the foundations of Western philosophical thought as developed in selected philosophers of the ancient period, including the pre-Socratics, Plato, and Aristotle, and concluding with the medieval philosopher Aquinas. An issue emphasized is the rise of the scientific tradition in ancient philosophy vs. the mythological treatment of cosmological issues prior to the pre-Socratics. *Prerequisite: HU 250 desirable. Hours of class per week: 3.*

HU 267 Modern Philosophers **F 3 s.h.**

An introduction to philosophers and philosophic problems from Descartes to the contemporary period. Emphasis is placed on historical development of ideas and such movements as rationalism, empiricism, pragmatism, and analytic philosophy. Problems range from the mind-body dualism of Descartes to how we justify knowledge. This course will show how consideration of philosophical problems relates to our everyday lives, and influences scientific investigation and social/ethical concerns. *Prerequisite: HU 250 or 266. Hours of class per week: 3.*

HU 271 Comparative Religions **S 3 s.h.**

A survey of world religions, major and minor, of the past and present. Religions of both Eastern and Western cultures investigated. Historical development of religion presented through mythology of Egypt, Greece, etc. as well as the historical progression of the semitic religions: Judaism — Christianity — Islam. Emphasis placed on determining similarities and differences among the various religions, but course also deals with the influence of religion on science, art, politics, etc., and their influence on religion. *Hours of class per week: 3.*

Communications

CO 171 Introduction to Mass Communications 3 s.h.

An introduction to mass communication theory and practice, including a survey of the historical, social, legal, political and economic aspects of mass communication; a critical study of the rights, responsibilities and current practices of the mass media including print journalism, broadcast journalism, advertising and public relations and their impact on local, national, and international affairs. *Prerequisite: EN 125 or permission of instructor. Hours of class per week: 3.*

CO 220 Introduction to Public Relations 3 s.h.

The student will be introduced to the principles, history and practice of public relations; and will develop an understanding of the processes that influence public opinion. This course will also cover the ethics and responsibilities of the practitioner to the media and the public, and discuss the public relations tools and resources that are available. *Prerequisite: EN 125. Hours of class per week: 3.*

CO 231 Journalism 3 s.h.

A study of the principles and practices of journalism, with special emphasis on print journalism. The question of what constitutes the news, the techniques of news gathering, news and feature writing, news editing, and ethical questions faced by journalists will be critically examined. Students will write articles to be submitted to the College publications, hometown newspaper, or other publications. *Prerequisites: EN 125 (EN 126 desirable) and CO 171. Hours of class per week: 3.*

CO 254 Video Production 3 s.h.

Theoretical and practical exploration of design and production techniques for the video as a medium of communication. Students will gain experience in video production by working in the studio, in the field, and at the control console at the College's telecommunications center. *Hours of class per week: 3.*

CO 264 Television News Production 3 s.h.

Expanding on the basic video skills learned in CO 254, students will produce and direct television news segments. Special emphasis will be placed on news judgement; script writing; production values such as lighting and sound; and the use of maps, graphics and footage to enhance reportage. Students will gain practical experience in front of, and behind the camera in the studio and in the field. In addition to class participation, students will be required to write, produce and edit several news segments including copy stories, photo illustrated stories and video packages as well as produce and direct a half hour news broadcast.

Students will gain experience in front of the camera as anchors or reporters. *Prerequisites: CO 254 required; CO 171 & 231 recommended. Hours of class per week: 3.*

EDUCATION

ED 110 Introduction to Education for Teacher Assistants 3 s.h.

An introductory course designed to meet the needs of those who want to work in elementary and secondary schools as teacher assistants. The course will acquaint the students with the organization of American public education, major issues in elementary and secondary education today, and important regulations as they affect classroom teaching. The course will also attempt to generate an awareness of the basic legal issues in American public education. Not credited toward any degree or certificate ED course requirement. *Hours of class per week: 3.*

ED 111 Education Theory and Practice for Teaching Assistants 3 s.h.

A second level course designed to aid the teaching assistant in theory and practice. A theory into practice approach will be used to explore the following areas: assertive discipline; effective teaching; interpersonal relations; effective communications; collaborative learning; stress management; informal structures; effective schools. Not credited toward any degree or certificate ED course requirement. *Prerequisite: ED 110. Hours of class per week: 3.*

ED 171 Introduction to Early Childhood Education F 3 s.h.

This course presents information and theory regarding materials and methods for educators and caregivers of children from birth to eight years old. Students will explore the nature and nurture of young children based on specific areas of skill development and competencies. Emphasis is placed on developing the student's understanding of proper learning environment; the advance of physical and intellectual competence; support of social and emotional development; establishment of relationships with families; maintaining a commitment to professionalism. Attention is given to skills needed in a variety of program settings, including head start, day care, pre-kindergarten, nursery schools and lower elementary school grades *Hours of class per week: 3.*

ED 185 Early Childhood Curriculum S 3 s.h.

This course is designed to develop and foster a creative and interdisciplinary approach to activities conducive to young children's total development. Learning activities and lesson development will be included. Through sensory and perceptual discrimination,

language arts, music, and rhythm, outdoor activities, creative arts, mathematics and natural science, social studies and other related activity areas, the student explores the potential of varied teaching/learning media. Students will also be given a historical overview of early childhood curriculum. *Prerequisite: ED 171. Hours of class per week: 3.*

ED 225 Arts and Crafts for Early Childhood

Education **F 3 s.h.**

This course presents child development theory, materials and techniques for promoting creative artistic development in young children. A variety of art activities will be explored. Students will have hands-on experience in the media and use of art materials from the environment. Activities will relate to the principles of child development, creativity, and the ability to provide appropriate creative experiences for children. *Hours of class per week: 3. Prerequisite: ED 171, 185, or permission of instructor.*

ED 250 Music for Early Childhood

Education **S 3 s.h.**

A study of musical needs of young children and appropriate instructional techniques. Emphasis placed on understanding rhythms and creating and using suitable materials. Activities will be related to the principles of child development and students will explore the curriculum area of music as a means of encouraging the child's development and individual expression. *Prerequisites: ED 171, 185, or permission of instructor. Hours of class per week: 3.*

ED 275 Children's Literature **S 3 s.h.**

A survey of all forms of children's literature and a study of a variety of materials relating to the development of literacy in children. Students will carry out critical study and evaluation of many children's books in areas of fiction, non-fiction and poetry. Criteria will be examined for selection of children's books for pleasure, enrichment of curriculum areas and child development. Appropriate presentation techniques will be examined. *Prerequisites: ED 171, 185, and EN 125. Hours of class per week: 3.*

ED 298-99 Early Childhood

Internship **F,S 4 s.h. each**

Early Childhood internship is designed to provide work and learning experience in the field of early childhood education. Individual field experience will be developed with community agencies and institutions. In addition, interns will spend one hour per week in a seminar type session where they will reflect on their field experiences and integrate the insights they have achieved in their field work. *Prerequisites: ED 171 and ED 185 or permission of the instructor and the Dean. Hours of class per week: 1 + additional hours to be arranged.*

SCIENCES

Biology

SC 135 Introductory Biology: Molecules & Cells **3 s.h.**

This course is designed for people with no or minimal background in biology. It prepares students to take upper level biology courses such as BI 171, 172, 173, 176, and 282. This course stresses the human relevance and social implications of biology. Modern scientific developments are discussed. Cellular anatomy, physiology and energetics are discussed in genetic and ecological perspective. Laboratory investigations apply concepts presented in lecture. Observation, interpretation, and library research are integrated by means of written laboratory reports and investigation into scientific literature. *Hours of class per week: 2 Hours of lab per week: 3.*

SC 137 Human Biology **3 s.h.**

This course in Human Biology will focus on how the systems of the human body operate and how various illnesses interfere with that operation. Lecture work will cover organ systems from a functional aspect, then diseases from a malfunctional perspective, with special attention given to the connection between malfunctions and symptoms. How treatment for disease is related (or not) to system malfunction will also be covered. Laboratories will cover simple internal anatomy, disease-causing organisms, simple diagnostics, and such topics as medical ethics and epidemiology. Laboratory approaches will vary from hands-on dissection to group discussion. *Hours of class per week: 2. Hours of lab per week: 3.*

SC 139 Introduction to Biology: Animals and Plants **S 3 s.h.**

A phylogenetic approach to plant and animal groups, both living and extinct, utilizing representative fossils and live specimens when available. An understanding of the inter-relationships between and among plant and animal species is complemented by topics from comparative anatomy and physiology. Observation, interpretation and library research are integrated by means of written laboratory reports and investigation into scientific literature. Included are dissection and micro-anatomy of representative invertebrates, vertebrates, and plants, field collection, identification, and study of plants and animals of biologic interest. *Hours of class per week: 2. Hours of lab per week: 3.*

BI 171 Modern Biology **F 4 s.h.**

A course in general biological principles relating cell structure to function. Topics discussed will include the origin and evolution of life; biochemistry, energetics; the molecular basis of cell metabolism; principles of

heredity and the genetic control of cell activity; cell division; the homeostatic regulation of the cell environment. Physiological processes at the organismic level will be analyzed and correlated with the simpler manifestations at the cell level. Emphasis will be placed on modern research, the nature and philosophy of science, and the art of experimentation as carried on concurrently in the laboratory portion of the course. *Hours of class per week: 3. Hours of lab per week: 3.*

BI 172 Plant Biology S 4 s.h.

An introduction to the structure, functions, and development of seed plants, followed by a survey of the diversity and economic significance of the plant kingdom. The organs of plants will be studied in relation to their morphogenesis, functional interaction, and special physiological roles. These plant organs will also be studied in relationship to their interaction with environmental factors such as air and soil. The major plant groups will be studied from the algae through the Angiosperms. The interactions of the plants in each of these groups will be considered with respect to such concepts as energy flow, competition, parasitism, plant succession, and biome composition. Major emphasis will be placed on basic concepts of population genetics and evolution. *Prerequisite: BI 171 or permission of instructor. Hours of class per week: 3. Hours of lab per week: 3.*

BI 173 Animal Biology S 4 s.h.

An evolutionary survey of the animals, from Protozoa through Chordata, and their ecology. Both gross and microscopic structures of vertebrates and invertebrates will be studied in relation to their development, functional interactions, and special physiological roles. These concepts shall be related to paleontology, biogeography, and population genetics, so that the student will be aware of the evolutionary significance of the structures studied. Emphasis will be placed on vertebrate history and behavior, especially as it concerns the origin of man. *Prerequisite: BI 171 or permission of instructor. Hours of class per week: 3. Hours of lab per week: 3.*

BI 176 Ecology S 3 s.h.

A study of the interrelationship between living systems and their physical environment. Emphasis will be placed on the understanding of different ecosystems, their balance and dynamics. Man's role as a member of the biosphere will be stressed. *Prerequisite: SC 141, or BI 171, or permission of instructor. Hours of class per week: 3. Field trips will be taken.*

BI 181-182 Anatomy and Physiology F,S 4 s.h.

Two-semester course exploring the human body as an integrated complex of systems. Fundamental concepts of biology, chemistry, and physics are explored as aids to understanding physiology of systems. Study of

structure and function of each organ system, with emphasis on interrelationships. Special emphasis on cellular physiology, cellular reproduction, fluid and electrolyte balance, acid-base balance and stress as it affects endocrine and neurophysiology. *Hours of class per week: 3. Hours of lab per week: 3.*

BI 282 Microbiology 4 s.h.

This course explores the morphology, physiology, and ecology of the major groups of microorganisms. Emphasis will be placed upon recent developments in the field of disease, immunology, and industrial applications. The laboratory will illustrate latest techniques in identification, culturing, and isolation of microbes as well as modern applications of microbiology. *Prerequisite: BI 171 or SC 141, BI 181 recommended or permission of instructor. Hours of class per week: 3. Hours of lab per week: 3.*

Chemistry

SC 170 Introductory Chemistry I 3 s.h.

A course emphasizing the role of chemistry in daily living suitable for the non-science major or for enhancing the background of a student who is preparing for the upper level course. Topics include measurement, dimensional analysis, basic atomic theory, chemical nomenclature, periodic behavior, stoichiometry, the course is an original research paper on a chemical aspect of a topic selected by the student and approved by the instructor. *Hours of class per week: 2. Hours of lab per week: 3.*

SC 171 Introductory Chemistry II 3 s.h.

A course designed to provide a liberal arts background for students interested in gaining an understanding of the chemical principles involved in current issues such as environmental pollution, waste generation and disposal, recycling and novel new materials. Concepts include the theory of chemical bonding, introductory kinetics and equilibrium, polymer and nuclear chemistry. Course lectures are augmented by weekly lab experimentation and technical report writing. A research paper will be an integral part of this course. *Hours of class per week: 2. Hours of lab per week: 3.*

CH 173-174 Fundamentals of Chemistry I — II

CH 174-S only 4 s.h. each semester

This course provides a comprehensive introduction to fundamental chemical principles. Topics include scientific notation, dimensional analysis, thermochemistry, atomic theory, periodicity, bonding, states of matter, solutions, electrochemistry, thermodynamics, kinetics, nuclear chemistry and a brief introduction to organic chemistry. *Hours of class per week: 3. Hours of Lab per week: 3.*

Engineering Science

ES 235 Mechanics: Statics F 3 s.h.

Course designed for sophomore engineering, mathematics, and physics majors. Presents the principles of static of particles and rigid bodies and indicates the general methods of applying them to the solution of varied engineering problems and develops the analytical ability of the student. Topics covered are: vector algebra; forces and equilibrium; structures, plane and space trusses, frames and machines; centroids of lines, areas, and volumes; flexible cables, beams with distributed loads; friction; area moments of inertia and mass moments of inertia. *Prerequisites: PH 171 and MA 157; completion of or concurrent registration in MA 158. Hours of class per week: 3.*

ES 236 Mechanics: Dynamics S 3 s.h.

Course designed for sophomore engineering, mathematics, and physics majors. Presents the principles of dynamics of particles and rigid bodies and indicates the general methods of applying them to the solution of varied engineering problems and develops the analytical ability of the student. Topics covered are: equations of motion, rectilinear and curvilinear motion, motion relative to translating and rotating axes; work and energy; impulse and momentum; Euler equations, the gyroscope; central force motion; simple harmonic motion, damped oscillations and forced oscillations. *Prerequisites: PH 171 and MA 157-158. Hours of class per week: 3.*

ES 251 Materials Science F 3 s.h.

This is a first course in materials science and engineering for Engineering Science majors. The emphasis of the course is on the relationships between structure of solids and their physical properties. Topics covered include: atomic and molecular structure, phase equilibria, microstructures, deformation and fracture, materials treatments and processes, metals, ceramics, polymers and composites, electrical and magnetic properties, and materials performance. *Prerequisites: PH 171 and CH 173. Hours of class per week: 3.*

ES 281 Electric and Electronic Circuits S 4 s.h.

A course on the analysis of linear and nonlinear circuits, designed for engineering and physics majors. Topics covered are: Ohm's law, Kirchoff's laws, superposition principle, mesh analysis, modal analysis, Thevenin's theorem, Norton's theorem, maximum power transfer; inductance and capacitance; response of first and second order systems — natural response, steady state response and complete response; average and rms values, phaser, impedance, complex power, series and parallel resonant circuits; complex frequency, transfer functions, poles and zeroes; characteristics of diodes and transistors and operational

amplifiers. *Prerequisites: PH 172 and concurrent registration in MA 258. Hours of class per week: 3. Hours of lab per week 3.*

Geology

SC 143 Earth Systems F 3 s.h.

A perspective on the Earth that emphasizes the structure dynamics, and resources of the planet, and examines man's use and misuse of finite resources. Major topics include rocks, minerals, and mining soils from a geologic perspective; surface and underground waters — their movement, origins, use and abuse; the atmosphere and its pollution; natural geological hazards such as landslides, earthquakes and faults; geothermal, tidal and other sources of energy; landforms and land use; wastes and their treatment; environmental action and the future. Labs will include practical identification of minerals and rocks; topographic maps. *Hours of class per week: 2. Hours of lab per week: 2.*

SC 144 The Ancient Earth 3 s.h.

A look at the Earth's history, ancient environments, and the fossil record. The dimension of time is a unifying theme that links the history and present state of the oceans; the fossil fuels — earth's savings bank; landscapes and their "evolution", fossilization and the "endangered species" of the past; the evolution and fossil record of invertebrates and fishes; the dinosaurs — when giants walked the earth; mammals, man and glaciers; the geological history of New York State and the Northeast. Labs will include study of the fossil record, nearby sedimentary rock sequences, detailed study. *Hours of class per week: 2. Hours of lab per week: 2.*

Physics

SC 161-162 Introduction to Physics

I, II 3 s.h. each semester

A two-part first course in physics intended for technologies students and other non-science majors. Course uses lectures supported by laboratory investigation to achieve a hands-on, practical approach to understanding important physical laws of nature. Topics covered include quantitative methods for describing motion; the relationships between forces and motion; work, power, and energy; momentum methods for analysis of collisions and explosions; torque and rotational motion; vibrations and waves; sound; basic electricity and magnetism; electromagnetic waves; atoms and spectra; atomic nuclei and nuclear energy; geometric and wave optics; heat and thermodynamics; and fluid mechanics. *Prerequisites: High school algebra, MA 147 or equivalent (or permission of instructor). SC 161 recommended, but not required to be taken before SC 162. Hours of class per week: 2. Hours of lab per week 3.*

PH 171-172 Physics I,**II****F,S 4 s.h. each semester**

A comprehensive course stressing the basic concepts, principles, and laws of physics, designed for engineering, mathematics and science majors. Areas covered are: fundamentals of mechanics, heat and thermodynamics, electricity and magnetism, oscillations and waves. Atomic and nuclear physics is also briefly studied. Fundamental forces and conservation of energy, linear momentum, and angular momentum are used as unifying themes of different branches of physics. Major emphasis is placed on developing the analytical ability and problem solving skills of the student. *Prerequisite: Concurrent registration in MA 157 or permission of instructor. Hours of class per week: 3. Hours of lab per week: 3.*

PH 271 Physics III**F 4 s.h.**

Course designed for engineering and physics majors. Topics covered are: Maxwell's equations and electromagnetic waves; special theory of relativity; photoelectric effect, Compton effect, pair production and annihilation, X-Rays, electron diffraction, deBroglie waves; particle in a box; uncertainty principles, Bohr model of the atom; Schrodinger equation; Pauli exclusion principle and the periodic table; nuclear structure; radioactivity; nuclear fission and fusion reactions; Maxwell-Boltzman distribution, quantum statistics, laser, band theory of solids and semiconductors. *Prerequisites: PH 171-172 and MA 157 or permission of instructor. Hours of class per week: 3. Hours of lab per week: 3.*

Introductory Sciences**SC 121 Basic Skills for Science and Technology****S 3 s.h.**

A course designed for providing the preparation needed for success in the study of all science and technology courses. Topics include recognizing the relevant scientific concepts while reading problems, effective use of diagrams for the solution of problems, selecting relevant relationships of physical variables for solving problems, deducing needed relationships of variables, manipulating algebraic relations and in arriving at a solution in terms of symbols representing variables, use of physical units and their conversions, dimensional analysis, effective use of graphs for solution of problems, applying right-triangle trigonometry to the solution of technical problems, use of measuring devices, and data analysis using computers. Not credited toward the Associate Degree science requirements, but may be used for elective credit. *Hours of class per week: 3.*

SC 130 Science, Technology, and Society**S 3 s.h.**

A course on the nature of science and technology and on the interaction between science, technology, and society. The nature of science and its influence on society are explored through a study of rational cosmological models and theories on the structure of matter. The nature of technology, the extent of science-technology coupling, and the impact of technology on man and the environment are investigated through a study of man's utilization of different sources of power and methods of communication. Systems approach to problem assessment, feedback elements of the decision-making process, modeling, and optimization are studied. The need for the assessment of technology and matching technology to society and the environment are stressed. *Hours of class per week: 2. Hours of lab per week: 2.*

SC 131 Environmental Physics**3 s.h.**

Course centered around the contemporary problems — energy, pollution, and depletion of natural resources — of our physical environment. Different forms of energy, energy conservation principle, our energy resources, methods of energy conversions and their by-products, first and second laws of thermodynamics, and efficiency of the present energy usage — thermal pollution, air pollution, solid waste, noise pollution, nuclear radiation pollution, and their effects on man and the environment — are analyzed. The potential for more efficient use of our natural resources is explored. Energy sources of the future — breeder reactor, fusion reactor, solar energy, geothermal energy, magnetohydrodynamics, fuel cells and energy from wastes are studied. Earthquake prediction, weather forecasting, and weather modification are also covered. *Hours of class per week: 2. Hours of lab per week: 2.*

SC 151 Introduction to Physical**Anthropology****3 s.h.**

This course first introduces the discipline of anthropology and then uses the fossil evidence for hominid evolution in conjunction with the study of past and present primates as well as basic genetics to investigate current theory concerning the ascent of Homo sapiens. Archeology and prehistory combine to present an introduction to the behavior of various hominid groups over time. Emphasis is continually on the interaction of all groups with the total environment. *Hours of class per week: 2. Hours of lab and recitation per week: 2.*

Mathematics**MA 141 Basic Technical Mathematics****F 4 s.h.**

This course is restricted to students with a minimal competence in arithmetic skills. It will not satisfy

mathematics requirements. Topics include whole numbers and the place value system; verbal problems, exponents; square roots; primes; factoring; L.C.M.; fractions; decimals; discount, profit and interest; mensuration, perimeter and circumference; area and volume. *Hours of class per week: 4.*

MA 142 Technical Mathematics 4 s.h.
A first course for most students in Automotive, Construction, Natural Resources, and Visual Communications Technologies. Topics include review of signed numbers and operations, exponents, algebraic fractions, calculator usage, the metric system, perimeter/area/volume, triangle trigonometry, law of sines and cosines, surveying applications, and dimensional analysis. Not credited toward the A.S. or A.A. degree mathematics requirements. *Hours of class per week: 4.*

MA 147 Algebra 4 s.h.
A modern approach to introductory algebra. This course is designed for students who have a limited mathematics background. Topics include sets and number systems; operations; exponents; polynomials and rational expressions; first degree equations; functions and graphs; verbal problems. Not credited toward the Associate Degree mathematics requirements. *Hours of class per week: 4.*

MA 150 Survey of Mathematics I 3 s.h.
An overview of mathematics for the non-science student. Topics include elementary symbolic logic, introductory set theory, numeration systems, number bases, modular arithmetics, and properties of abstract mathematical systems. Not open to students who have credit for Intermediate Algebra, MA 151, Math 11 or Course III. Not credited toward the A.S. degree in Math/Science or Engineering Science but may be used for elective credit. *Hours of class per week: 3.*

MA 151 Intermediate Algebra for College Students 4 s.h.
This course is designed for students who have had only a minimum of high school mathematics and who wish to enroll later in any of the following courses: MA 154, MA 160. Topics include properties of real numbers; polynomials and rational expressions; equations, exponents and radicals; functions and graphs, simultaneous systems, logarithms; right-triangle trigonometry. *Prerequisite: MA 147 or one year of high school algebra. Not open to students who have credit for Math 11 or Course III. Hours of class per week: 4.*

MA 154 Pre-calculus Mathematics 4 s.h.
Background material for the study of the calculus. Topics include logic, sets and proof; relations, functions, and graphs; inequalities and absolute value; exponential and logarithmic functions; circular

functions and topics from trigonometry; complex numbers; synthetic division and solution of polynomial equations. *Prerequisite: Intermediate Algebra, MA 151, Math 11, Course 3 or permission of instructor. Hours of class per week: 4.*

MA 157 Analytic Geometry and Calculus I 4 s.h.
First course in a sequence of four courses covering topics from the calculus, analytic geometry, differential equations and advanced areas. Primarily for mathematics or science majors, although qualified students from other fields are encouraged to elect the course. Topics include: functions; limits; continuity; asymptotes; differentiation of rational, polynomial and trigonometric functions; curve sketching; antidifferentiation; Riemann sums and the definite integral; applications. *Prerequisite: MA 154 or 3 years of high school mathematics or 3 years of high school mathematics and permission. Hours of class per week: 4.*

MA 158 Analytic Geometry and Calculus II 4 s.h.
A continuation of MA 157. Topics include the Fundamental Theorem; differentiation and integration of logarithmic, exponential, inverse trigonometric, and hyperbolic functions; areas; volumes; integration techniques; approximations; improper integrals; conic section; parametric equations; polar equations; arc length; applications. *Prerequisite: MA 157. Hours of class per week: 4.*

MA 160 Statistics 3 s.h.
A course designed to give a foundation in statistics for students in Business, Social Science, Education, Humanities, or Computer Information Systems who are planning to transfer to a four year program. Topics include descriptive statistics; counting principles and probability; binomial, hypergeometric, and normal distributions; hypothesis testing using the normal curve; linear regression; correlation; analysis of variance; chi-square tests. *Prerequisite: Intermediate Algebra, MA 151, Math 11, Course 3 or permission of the instructor. Hours of class per week: 3.*

MA 161 Mathematics for Electrical Technology I F 4 s.h.
This course develops fundamental mathematical skills needed for students of the Electrical Technology curriculum. Topics studied include basic arithmetic skills and calculator usage; algebraic manipulation; ratio; proportions; quadratics; logarithmic and exponential functions, right triangle trigonometry. Application of these topics to the field of electricity is stressed throughout this course (Fall Semester only). *Prerequisites: High School Algebra (1 year) or MA 147 and concurrent registration in EL 125, or*

permission of instructor. Hours of class per week: 4.

MA 162 Mathematics for Electrical Technology II S 4 s.h.

A continuation of MA 161. Topics include applied trigonometry, sine waves; vectors; phasers; computer number systems; Boolean algebra; mathematics of polyphase systems; an introduction to differential and integral calculus. *Prerequisites: MA 161 or permission of instructor, and concurrent registration in EL 126. Hours of class per week: 4.*

MA 250 Survey of Mathematics II S 3 s.h.

A sequel to Survey of Mathematics I this course includes topics selected from the following: geometries; relations, functions and graphs; axiomatics and proof; introductory probability; measurement and mensuration; history of mathematics; number theory and finite systems. *Prerequisites: Elementary Algebra or MA 147, and MA 150, or permission of instructor. Hours of class per week: 3.*

MA 254 Abstract Algebra F 3 s.h.

Recommended for Mathematics and Science majors. Topics include sets, mappings, morphisms, groups, rings, integral domains, and fields. *Prerequisite: MA 157. Hours of class per week: 3.*

MA 257 Analytic Geometry and Calculus III 4 s.h.

A continuation of MA 158. Topics include infinite series; Taylor polynomials; tests for convergence/divergence; vector geometry; cylindrical and spherical coordinate systems; vector differentiation and integration; tangent and normal vectors; multivariate differentiation and integration in several coordinate systems; line integrals; applications including lines, planes, areas, volumes, mass, and moments. *Prerequisite: MA 158. Hours of class per week: 4.*

MA 258 Differential Equations S 4 s.h.

Topics include definitions and properties of differential equations; differential equations of first degree and order; applications, Bernoulli's equation, linear independence; general solutions to homogeneous and nonhomogeneous equations; differential operators; auxiliary equations; the LaPlace transfer and its inverse; series solutions about ordinary and singular points. *Prerequisite: MA 257. Hours of class per week: 4.*

MA 259 Linear Algebra S 3 s.h.

This course is designed for second-year mathematics or science students. Topics covered: systems of linear equations, vector spaces, linear dependence, bases, dimension, linear transformations, matrices, determinants, eigenvectors. *Prerequisite: MA 158. Hours of class per week: 3.*

SOCIAL SCIENCES

History

SS 183 Modern Western Civilization I F s.h.

An introductory course in Western Civilization beginning around the tenth century. The course examines the major social, political, and economic ideas, and their contributions to the western heritage. *Hours of class per week: 3.*

SS 184 Modern Western Civilization II S 3 s.h.

Follows the same basic plan as SS 183 and is a continuation of that course to the present. The course enables the student to identify contributions made to the western heritage, changing patterns of power in the western world, and their implications for the future. *Hours of class per week: 3.*

SS 186 Black American History F 3 s.h.

A study of the historical background of Africans in America and their contributions and impact upon America. Emphasis shall be upon the last 100 years and the recent civil rights and Black Power movement. *Hours of class per week: 3.*

SS 187 Origins of the American Revolution 3 s.h.

An in-depth study into the political, economic, and social-cultural background of British America that caused the War for Independence. *Hours of class per week: 3.*

SS 283 Survey of American History I F 3 s.h.

A survey of the political, social, and intellectual development of the United States from the Colonial period to Reconstruction. *Hours of class per week: 3.*

SS 284 Survey of American History II S 3 s.h.

A continuation of SS 283 from Reconstruction to the present. Emphasis is placed on the changing character of the American society and its role in international affairs. *Hours of class per week: 3.*

SS 287 America Since 1945 3 s.h.

An interdisciplinary study of the U.S. since 1945 using a sociology, historical, and political science data to examine major changes and trends. The course will focus on four major aspects of this period: 1) cultural — changes in norms, values, and personal behavior; 2) social — changes in the nature and functions of social institutions; 3) political — trends and changes as reflected in the presidential elections; 4) international — patterns in American social relations. *Hours of class per week: 3.*

SS 293 Diplomatic History of the United States Before 1900 S 3 s.h.
This course will examine the relations of the United States with foreign nations from the American Revolution until the Spanish American War. *Hours of class per week: 3.*

SS 295 Diplomatic History of the United States Since 1900 3 s.h.
A continuation of SS 293. American foreign relations from the turn of the century to the present will be studied. *Hours of class per week: 3.*

SS 296 Israel: Biblical Period to 1948 F 3 s.h.
Major historical, political, social, and military developments from the time of Abraham to the emergence of the Modern State of Israel in 1948. Areas of concentration will include: Biblical Period, resistance against Greece and Rome; Life in the Diaspora; Rise of Jewish Nationalism; Growth of the Yishuv; Balfour Declaration and the British Mandate; Arab-Jewish Confrontation; Holocaust; Palestine in WW II; War of Independence; Mass Immigration. *Hours of class per week: 3.*

Political Science

SS 191 Comparative Democratic Systems F 3 s.h.
A comparative analysis of political ideologies, institutions, processes and policy problems of governments and politics in selected democratic political systems. The analysis will focus on the political systems of Great Britain, France, Italy, and West Germany. *Hours of class per week: 3.*

SS 278 International Politics S 3 s.h.
The dynamics of national power — the state system, nationalism, and imperialism; the quest for a cooperative international society — diplomacy, international law and organizations; foreign policies of the great powers today, with particular reference to East-West relations. *Hours of class per week: 3.*

SS 282 American Political System F 3 s.h.
The objective of this course is to describe, analyze, and explain the American Political System as it actually works. The approach will be primarily behavioral and not institutional. The fundamental question of this course will be "Who Gets What, When, How, in American politics?" *Hours of class per week: 3.*

SS 383 Policies and Politics — of States and Communities 3 s.h.
An analysis of the processes, structures and public policies of state and local governments. The course will examine the constitutional framework under which sub-national governments operate; the extent to which governments should participate in resolving social

problems, and the ideological debates concerning the level of government most appropriate for making and implementing domestic policies. After analyzing the constitutional, political, and ideological factors contributing to the making of policy, the course will examine several specific policies: Welfare, drugs, civil rights, education, and economic. *Hours of class per week: 3.*

SS 385 Community Power Structure S 4 s.h.
An examination of conflicting theories concerning the power structure and decision-making apparatus in community politics, along with the study of related empirical data. Also, an analysis of democratic theories in view of recent empirical findings. The student will become directly involved in an empirical investigation. *Prerequisite: 3 credit hours of Political Science or Sociology. Hours of class per week: 4.*

Psychology

SS 291 General Psychology 3 s.h.
The basic orientation in the psychology of human behavior includes a wide range of topics within the following major areas of study: biological, psychodynamic, cognitive, behavioral, and humanistic. The major theories and concepts related to the four major areas of developmental, abnormal, personality and social psychology are investigated. *Hours of class per week: 3.*

SS 292 Abnormal Psychology 3 s.h.
A biological, psychosocial and sociocultural approach structured around the Diagnostic and Statistical Manual of Mental Disorders (Third Edition Revised), (DSM-III-R). The nature, causes, and treatment of these maladaptive behaviors are stressed. Historical information, clinical assessment, and biologically-based and psychologically-based therapies are investigated. *Prerequisite: SS 291. Hours of class per week: 3.*

SS 297 Developmental Psychology 3 s.h.
A systematic examination of the patterns of development and behavior changes which occur during each of the principal stages of life, i.e., childhood, adolescence, adulthood, and old age. Attention is given to cultural and social, as well as genetic forces affecting human development. *Prerequisite: SS 291 or permission of the instructor. Hours of class per week: 3.*

SS 298 Child Development 3 s.h.
A study of the person from conception through adolescence, including cognitive, physical, emotional, moral, and social phases of development. *Prerequisite: SS 291 or permission of instructor. Hours of class per week: 3. Hours of class per week: 3.*

SS 384 Personality Theories S 3 s.h.
A study of personality as a theoretical construct which includes an organized system of structures and processes. Major models and how they are derived are used to pursue basic concepts of personality. *Prerequisites: SS 291 and SS 297 or permission of the instructor. Hours of class per week: 3.*

Sociology

SS 180 Contemporary Issues and Problems F 3 s.h.
This course will examine the major issues of concern to the American nation, and/or the world generally, at the time the course is offered. The issues and problems will include some that have troubled societies over a long period of time, such as poverty, mass education, racial tensions, power and privilege, family dislocation, as well as issues that may be just emerging. The course, in addition to offering a survey of the problems, will provide theoretical and/or conceptual frameworks to help the student understand the issues and problems at a greater depth. *Hours of class per week: 3.*

SS 181 The Sociology of the Post Affluent Society 3 s.h.
This course shall examine the literature regarding contemporary crises in agriculture, limits to growth, rising unemployment, rising prices, scarcity of non-renewable resources, pollution and other issues. This examination will include the question of whether we really are beginning a new, post industrial, post affluent society. This course will then examine the theoretical literature which explores various alternatives for future social life. *Hours of class per week: 3.*

SS 264 Minority Groups in America S 3 s.h.
This course will examine the sociological concepts and principles that help determine the nature of intergroup relations, especially the outcomes of dominant-subordinate relationships. These concepts and principles will then be applied to the American experiences of ethnic, religious and racial minority groups. *Prerequisite: SS 281 desirable. Hours of class per week: 3.*

SS 281 Introduction to Sociology 3 s.h.
An introductory course designed to acquaint the student with the study of sociology as one of the sciences that deals with man in his relationships with the members of his society and the world in which he lives. The methods and objectives of sociological research, the varying patterns of social organization, and the study of society in relation to individual and group behavior are major areas of study. *Hours of class per week: 3.*

SS 294 The Sociology of the Family F 3 s.h.
The course approaches the study of the family as the study of various systems that include courtship systems; marital systems; and family institution systems. The nature of systems is examined. Different systems that exist within our culture, and different systems that exist cross culturally are examined for commonalities and differences. Among other issues, the question of whether all family systems have common components is examined carefully in the light of both the sociological and the historical literature. *Prerequisite: SS 281 or permission of Instructor. Hours of class per week: 3.*

SS 382 Political Sociology F 3 s.h.
This course will develop the application of sociological theory to the study of political systems, the process of adult and child political socialization, theories of assimilation and acculturation. Systems analysis as a method of explanation will be utilized. *Hours of class per week: 3.*

SS 386 Deviant Behavior F 3 s.h.
Course attempts to identify the conditions under which certain acts, characteristics, persons, situations or events are labeled as socially deviant. It is assumed that certain patterns of perceptions, definition, and minimal consensus have to occur in a social group before deviance becomes a social reality. The intent, therefore, is to identify and define these patterns. It is the further intent of the course to illustrate that the production of deviance also reveals the nature of the social construction of reality. The course is offered generally from the theoretical perspective of social interactionism. *Prerequisite: SS 281 or permission of the instructor. Hours of class per week: 3.*

SS 387 Social Psychology S 3 s.h.
Human social behavior. A scientific attempt to understand and explain how the thought, feeling, and behavior of individuals are influenced by the actual, imagined, or implied presence of others. The study of people — loving, hating, working, helping, trusting, fighting, communicating. *Prerequisite: 3 credit hours of Sociology or Psychology. Hours of class per week: 3.*

Human Services

Human Services courses are not credited toward Social Science requirements, but may be used for elective liberal arts credit.

HS 110 Introduction to Human Services 3 s.h.
This course will introduce students to the field of human services. Students will be challenged to find a balance between the idealism of humanistic values and

the realism of present day society's ability and commitment to provide effective human services. The historical development of helping and current trends will provide the framework for discussing the field of human services. The roles, functions, and ethical standards of a generalist human service worker will be examined. Students will have the opportunity to enhance personal self awareness and contemplate their suitability to the field. *Hours of class per week: 3*

HS 111 Human Service Interventions 3 s.h.

This course will emphasize the role of the person in the environment and will cover the following topics: the helping relationship, observation skills, reporting and recording procedures, effective interviewing techniques, the transition from interview to counseling, problem solving techniques, the importance of values and ethical standards, as well as issues of diversity, and culture. *Hours of class per week: 3.*

HS 211 Problems of Substance Use Disorders S 3 s.h.

The purpose of this course is to introduce students to the subjects of drug and alcohol — their use, misuse, and abuse. The course will take a multidimensional approach reviewing the historical, social, legal, biological, pharmacological, and psychological aspects of the topic. Emphasis will be placed on the problems that arise from their legal and illegal use. Students will be encouraged to think critically and examine personal beliefs and values regarding drug and alcohol use or abuse. In addition, attention will be given to methods of prevention and treatment. *Prerequisite: SS 291. Hours of class per week: 3.*

HS 231 Introduction to Gerontology F 3 s.h.

This course provides a broad base introduction to the study of human aging. The elderly will be considered from several perspectives including: the biological, psychological, sociological, political, and economical. Students will explore historical events and current trends in the graying of America. Individual activities and community services that enhance and improve the quality of life for the older person will be highlighted. *Prerequisite: SS 297. Hours of class per week: 3.*

HS 251 Introduction to Developmental Disabilities S 3 s.h.

The course provides an introduction to the nature and assessment of developmental disabilities and the skills necessary for working with them. A study of the psychological needs and adjustments required by those with physical, mental, and emotional handicaps is included. Resources and services available for the developmentally disabled in our area will be identified and analyzed. *Prerequisites: HS 110 and concurrent registration in SS 297. Hours of class per week: 3.*

HS 265 Mental Health Services 3 s.h.

This course is designed to equip students with the concepts, terms, and structures of the mental health field. A psychosocial approach will focus on individual mental health needs, community mental health providers, and the role of the paraprofessional. Topics will include: identification of mental disorders, current therapy approaches, the use of psychotropic medication, legal issues, ethical and cultural consideration, and appropriate attending skills for mental health workers. *Prerequisites: HS 110; SS 291, and 292 desirable. Hours of class per week: 3.*

HS 298-9 Human Services

Internship F,S 3 s.h. each

Human Services Internship is designed to provide work and learning experiences in the field of human services. Individualized field experiences will be developed with community human service agencies. In addition, interns will spend one hour per week in a seminar type session where they may reflect on their field experiences and integrate the insights they have achieved in their field work. These sessions help develop helping skills including sensitivity, empathy, attending, questioning, confrontation and problem solving. Goal setting, case management, case planning and client assessment will be addressed. *Prerequisites: HS 110 and approval of HS program coordinator or the Dean. Hours of class per week: 1 + additional hours to be arranged.*

HONORS COURSE, SECTION, AND OPTION

ID 291 Honors Seminar S 3 s.h.

An interdisciplinary seminar involving extensive review of the literature and in-depth examination of global, national, and local relevance of the issues under consideration. Emphasis is on the general background reading, preparation, and discussions of the topic in philosophical, historical, social, technological, or scientific terms. By this approach, students will gain insight into the multidisciplinary nature of the topic under study. This format allows close communication and interaction between a small group of students and an experienced group of faculty. *Prerequisite: Sophomore status in the Honors Program OR Completion of at least 30 s.h. of Liberal Arts and Science with a grade point average of 3.2 AND approval from the Dean of Liberal Arts and Sciences. Hours of class per week: 3.*

Honors Section

An Honors Section of a course provides an enhanced educational experience that goes beyond the usual course treatment. The Honors Section enriches rather than accelerates the learning process. This is made possible by having the selected group of students, all highly motivated and academically prepared to undertake the intellectual challenges offered by the Honors Section of the course. Honors Section of a course will be indicated on the student's transcript by adding "Honors" after the title of the course. *Prerequisite: Admittance to the Honors Program or approval from the instructor and the Dean of Liberal Arts and Sciences.*

Honors Option

An Honors Option is an extra element added to a course to challenge the student to go beyond course requirements and explore some aspect of the course in greater depth or breadth. It might be a research project, a critical essay, or an investigation of allied material not dealt within the course. The approach and content of the Honors Option matters less than the salience of the intellectual demands placed upon the student. Successful completion of a course with Honors Option will be noted in the student's transcript by adding "Honors" after the title of the course. *Prerequisite: Admittance to the Honors Program and approval from the instructor and the Dean for Liberal Arts and Sciences.*

NURSING

Courses may meet at sites other than main campus. Students make transportation arrangements. Weekend field trips may be required.

Students require special clothing or safety equipment, in addition to texts. Instructor will furnish details.

NU 105 Nursing Science I **F 7 s.h.**
Course introduces concepts, skills, and procedures common to nursing care of all patients, regardless of age, disability, or location. Emphasis is placed upon acquiring a body of knowledge that will permit individualization of nursing care, based upon a sound, scientific rationale. The nursing process, the role of the nurse, communication theory, provision for meeting basic physical needs, nutrition, pharmacology, and the special needs of the aged are included. Practice in basic skills is provided in the College laboratory, and through selected patient care assignments at Montgomery and Fulton County Infirmaries. *Prerequisite: Completion of or concurrent*

registration in BI 181. Hours of class per week: 5. Hours of lab per week: 6.

NR 106 Nursing Science II **S 7 s.h.**
Course focuses on the commonalities of care of persons confined to acute care hospitals. It includes the care of the patient undergoing diagnosis, the care of the surgical patient, care of patients with fluid, electrolyte, and acid base disturbances, the care of patients with mobility problems, the care of the patient with cancer, and infection control. Clinical experiences include the care of both adults and children. Observational experiences are provided in the operating room, recovery room, and specialty areas of the hospital where patients are cared for by other than nursing personnel. *Prerequisite: NU 105, completion of or concurrent registration in BI 182 and SS 297. Hours of class per week: 4. Hours of lab per week: 9.*

NU 205 Nursing Science II **F 9 s.h.**
Course divided into three major units. Each instructor assumes complete responsibility for classroom and clinical instruction in a specialty area. Each unit is complete in itself. Units may be completed in any sequence. Based on faculty assessment of their learning needs, students may be asked to follow a particular sequence. Units are: Psychiatric — Mental Health, with clinical assignment to a psychiatric care facility; Reproductive Cycle, with assignments to maternity and newborn units of community hospitals; and Medical-Surgical, with assignments to specialty units of community hospitals. *Prerequisites: NU 106, completion of, or concurrent registration in, BI 282. Hours of class per week: 5. Hours of lab per week: 12.*

NU 206 Nursing Science IV **S 9 s.h.**
Course stresses complex health needs of children and adults. Principles, concepts, and skills considered in previous courses are further developed and expanded. A weekly, one-hour seminar is included, devoted to the study of issues in nursing, nursing education, and health care delivery. *Prerequisite: NU 205. Hours of class per week: Lecture 5, Seminar 1, Total 6. Hours of lab per week 9. In addition, a 4-week preceptorship is required.*

TECHNOLOGIES

Air Science

Air Science majors may be developed as a concentration in the A.O.S. degree Individual Studies.

The cost of flight experience (off-campus) is not included in the estimated costs listed in this catalog. Flight costs are established by the flight school and are paid directly to the flight school.

AV 101 Air Science I (Private Pilot) F 3 s.h.

This course is designed to provide the student with authoritative aeronautical knowledge to pass successfully the required written examination given by the Federal Aviation Agency. Subjects covered in this course include: theory of flight, aerodynamics, airplane operation and performance, navigation, flight computer, communications, publications, regulations, instrument flying and emergency procedures. *Prerequisites:* Concurrent flight experience or permission of instructor. *Hours of class per week:* 3.

AV 102 Air Science II (Instrument) S 3 s.h.

This course instructs the student in all phases required in preparation for the Federal Aviation written examination for the Instrument Rating. Instrument flying techniques and procedures, in conjunction with modern ILS, VOR, ADF, and radar facilities are stressed. *Prerequisites:* AV 101, and related flight experience, and Private Pilot Rating or permission of instructor. *Hours of class per week:* 3.

AV 201 Air Science III (Commercial Pilot) F 3 s.h.

This course provides the student with the aeronautical knowledge and experience necessary to pass the Commercial Pilot written examination given by the Federal Aviation Agency. Professional attitude and performance excellence are magnified during this course. Subjects covered in this course in detail are: basic aerodynamics, navigation, aircraft operation and performance, flight physiology, flight safety and emergency procedures, regulations, and communications. *Prerequisites:* AV 102, and related flight experience, and Private Pilot Rating. *Hours of class per week:* 3.

AV 202 Air Science IV (Flight Instructor) S 3 s.h.

This course provides the student with the knowledge required to pass the tests for the Flight Instructor's Written Examination. This course is devoted to fundamentals of teaching and effective techniques, the analysis of flight maneuvers, and an in-depth study of the principles of instrument flight instruction. *Prerequisites:* AV 201, and related flight experience, and Private Pilot Rating. *Hours of class per week:* 3.

Automotive Technology

Automotive Technology courses may meet at sites other than the main campus. Students make their own transportation arrangements.

Students require special clothing or equipment, in addition to texts. Instructor will furnish details.

AT 121 Introduction to Automotive Function F 3 s.h.

A basic course dealing with the construction, principles of operation, and identification of chassis units and support components. Consideration will be given to tool identification, shop safety, methods of operation, special tools, automotive terminology, publications, and basic welding (arc and oxyacetylene). *Hours of class per week:* 2. *Hours of lab per week:* 2.

AT 122 Theory of Internal Combustion Engines F 3 s.h.

Investigates the basic principles of internal combustion engines, cycles, engine types, construction, and services. Compression condition, noise identification, and internal engine condition analysis will be studied through lab experience with elementary diagnostics instruments. *Hours of class per week:* 2. *Hours of lab per week:* 3.

AT 123 Internal Combustion Engine Support Systems S 3 s.h.

Study of the lubrication, cooling, carburation, and emission systems of the internal combustion engine. Experience will be gained in the laboratory with test equipment and the infra-red unit. *Prerequisite:* AT 121, AT 122, SC 161 or permission of instructor. *Hours of class per week:* 2. *Hours of lab per week:* 3.

AT 124 Automotive Electrical Systems F 3 s.h.

Application of the principles of electricity to the design, operation, service and repair of automotive electrical starting, lighting, generating and ignition systems. *Prerequisite:* AT 121, AT 122, completion or concurrent registration in SC 162, or permission of instructor. *Hours of class per week:* 3. *Hours of lab per week:* 3.

AT 225 Automotive Chassis Systems F 3 s.h.

A more advanced study of steering and suspension designs, including rear suspension, front-end geometry, tire design features and service, and standard and power disc and drum brake systems. *Prerequisite:* AT 121, SC 162, or permission of instructor. *Hours of class per week:* 2. *Hours of lab per week:* 3.

AT 226 Power-Trains — Design Features and Analysis S 3 s.h.
Investigation of the automotive power train. Topics considered include clutches, standard transmission design, automatic transmission designs, drive lines, conventional and limited slip differentials, and axle and wheel bearing requirements. Laboratory experience with special transmission tools, measuring devices, and special pressing equipment is included. *Prerequisite:* AT 121, SC 162, completion of or concurrent registration in AT 225, or permission of instructor. *Hours of class per week:* 2. *Hours of lab per week:* 3.

AT 227 Electronic Engine and Chassis Analysis S 3 s.h.
Trouble-shooting through the use of the Sun 947 Engine Tester. The topics of scope pattern interpretation and dynamometer application and function will be studied. *Prerequisite:* AT 123, AT 124, 225, AT 226, SC 162, or permission of instructor. *Hours of class per week:* 2. *Hours of lab per week:* 3.

AT 228 Consumer Relations and Services S 3 s.h.
A course dealing with the concepts of wholesale and retail operation as they relate to service manager-customer relations, factory representation-dealer relations, and inspection and service for customer comforts. The experience will include inspection of accessories units, air conditioning system analysis, and field observation of service operation and factory representation function. *Hours of class per week:* 3.

Collaborative Career Learning (COCAL)

CL 191-192 Collaborative Career Learning I & II 8 s.h./each
These courses provide a structured approach to specialized individual career orientation, training, and development. Competency objectives are identified as a basis for learning. Local business and industry sites are utilized as classroom/laboratories. A college COCAL coordinator monitors and evaluates students with industry personnel. Areas of career study will be limited to those areas not offered by the College in traditional curricula. *Prerequisite:* Enrollment in Collaborative Career Learning. *Co-requisite:* Six to nine credits of on-campus study related to career area. *Hours of class per week:* 12 at business & industry site.

CL 199 Professional Career Preparation I 1 s.h.
Students are provided with material to assist them in the career decision-making process. Through self-assessment inventories, students will identify their interests, skills, work related values, and experiences. Careers are explored by researching occupations career paths and organizations. Emphasis will be on employment fields appropriate to background and preparation for their COCAL training experience. *Prerequisite:* Concurrent registration in CL 191 or permission of instructor. *Hours of class per week:* 3 (5 wks).

CL 200 Professional Career Preparation II 1 s.h.
Students will be presented with material to provide a better understanding of successful career preparation. Emphasis will be on employment for students who are training in fields where entry level job skills have been identified locally. Content will include practical aspects of job search: Human Relations as it relates to career development will be discussed. *Prerequisite:* CL 199 or permission of instructor. *Hours of class per week:* 3 (5 wks).

Computer Technology

TC 229 Electronics for Computer Technology 4 s.h.
This course is a combination of the topics covered in EL 229 and EL 230. All topics necessary for a fundamental background in electronics are covered. Topics include: solid state theory, device characteristics of a diode, clippers, clampers, rectifiers-half wave and full wave, power supply configurations, filtering, regulation, device characteristics of the transistor, base bias, voltage divider bias, other biasing circuits, small signal AC amplifiers, power amplifiers, the transistor as a switch, FETs, FET circuits, Op amps, and feedback. *Prerequisites:* EL 125, 126. *Hours of class per week:* 3. *Hours of lab per week:* 3.

TC 237 Advanced Microcomputers 4 s.h.
Advanced Microcomputers is a continuation of EL 236 emphasizing advanced digital, programming, and microprocessor concepts. Topics include: microprocessor assembly language programming, EPROM use in program development, 16-bit microprocessor programming and the hardware/software structure of the IBM PC. *Prerequisites:* EL 125, 126. *Hours of class per week:* 3. *Hours of lab per week:* 3.

TC 238 Computer Peripherals Data Communications 3 s.h.
This course deals with the communication and interfacing standards and devices used to assemble modern computer systems. Two hours of lecture and a 3 hour lab. Topics include: interfacing standards,

bus standards, UARTs, communications protocols and networking concepts, modems, network topology, terminals, printers, floppy disk hard disk storage, other mass storage technologies, and error correction. *Prerequisites: EL 232, EL 236. Hours of class per week: 3. Hours of lab per week: 3.*

Construction Technology

Construction Technology courses may meet at sites other than the main campus. Students make their own transportation arrangements.

Students require special clothing or equipment, in addition to texts. Instructor will furnish details.

CT 121 Introduction to Building Trades and Construction Materials F 3 s.h.
A basic course in construction materials and methods. Study of timber, steel, masonry, concrete, and other materials used in construction. Construction methods are studied to acquaint the student with field practices. *Hours of class per week: 3.*

CT 122 Light Frame Construction I F 3 s.h.
A study of construction materials, practices, equipment and terminology relating specifically to light frame construction. Includes forming and building codes for general structural components from foundations through rough framing. *Prerequisite: Concurrent registration in CT 121. Hours of class per week: 2. Hours of lab per week: 3.*

CT 123 Light Frame Construction II S 3 s.h.
Emphasis in this course is roof covering, exterior trim, insulation, exterior siding, interior trim, flooring, and layout of porches and garages. Lab experiences must be successfully completed. *Prerequisites: CT 121, CT 122. Hours of class per week: 2. Hours of class per week: 3.*

CT 124 Blueprint Reading S 3 s.h.
Course places emphasis on working drawings, blueprints, and the symbols, notations, and scaling that accompany blueprint information. The student will also learn the variation, the purpose of structure, the architectural progress set forth in blueprints; finally learn to obtain trade information by accurately reading and thoroughly understanding a set of blueprints. *Hours of class per week: 3.*

CT 225 Masonry, Concrete and Steel Construction F 3 s.h.
A study of construction, materials, practices, equipment and terminology relating specifically to non-wood structural components in light frame and light commercial construction. General structural components include foundations, unit masonry construction, reinforcing steel, and applicable building

costs. *Prerequisite: CT 121. Hours of class per week: 2. Hours of lab per week: 3.*

CT 226 Plumbing and Climate Control F 3 s.h.
A basic course in plumbing and climate control, including use of tools, basic lead working, steam and hot water heating, water distribution, venting drainage, and general installation, maintenance, and repair. *Prerequisite: CT 121, 122, 124. Hours of class per week: 2. Hours of lab per week 3.*

CT 228 Construction Estimating S 3 s.h.
A study of the elements of cost of construction. Includes analysis of procedures in recording quantity take off, labor factors and overhead; use of check lists, cost records, summaries and working drawings; bidding practices of the construction industry; sub contracts; critical path method. *Prerequisite: CT 121, CT 122, CT 124. Hours of class per week: 3.*

CT 229 Electrical Wiring S 3 s.h.
A course dealing with installation of wiring, including armored cable, wiremold, and romex; installation of wiring boxes, light fixtures, rigid metal conduit and electrical metallic tubing and connectors, and wiring such systems. *Suggested elective: EL 125 or permission of instructor. Hours of class per week: 2. Hours of lab per week: 3.*

CT 230 Principles of Soils S 1 s.h.
Study of the principles of erosion control, surface drainage and subsurface drainage; considers soil genesis, composition, classification, physical and chemical characteristics in relation to soil moisture, fertility and management. Encompasses all problems related to construction. *Hours of class per semester: 10. Hours of lab per semester: 10.*

CT 243 Advanced Carpentry Custom Building F 3 s.h.
This course is designed to meet the needs of individuals interested in developing advanced carpentry skills. This course builds upon the cognitive and practical skills developed in CT 122. Topics include — Types of wood: characteristics and applications; Joinery: mitering, dadoing, dovetail, rabbit; Equipment: table saw, power miter, router table, and planer; Custom built-in units; Custom Molding; Stains and Finishes; and Trends. *Prerequisite: CT 122. Hours of class per week: 2. Hours of lab per week 3.*

CT 245 Masonry/Bricklaying F 3 s.h.
This course is designed to meet the needs of students enrolled in the CT program and in the Masonry one-year certificate program. Students interested in developing both cognitive and practical skills beyond the basics offered in CT 225, Masonry, Concrete, Steel. Topics covered: Bricklaying as an occupation,

Building with Brick, Layout, Structural and Pattern Bonds, Leads, Piers, Arches and other openings, and Fireplace Construction. *Prerequisite: CT 225. Hours of class per week: 2. Hours of lab per week 3.*

CT 246 Plumbing & Climate Control II S 3 s.h.
An in-depth study of the design, layout and construction of plumbing, heating and cooling systems. Units of instruction include: plumbing systems for single-family housing, multi-family and commercial plumbing systems, individual and community waste treatment, hot air heating systems, duct work and sheet metal layout, hot water heating systems, heat loss and unit sizing, air conditioning systems, ventilation systems, environmental concerns and equipment for a safer environment. *Prerequisite: CT 226. Hours of class per week: 2. Hours of lab per week 3.*

CT 249 Electrical Wiring II S 3 s.h.
A follow-up to Electrical Wiring I with more emphasis on applying the National Electrical Code and how to use the code book and other sources to help solve problems such as those found on national tests for electricians and electrical inspectors. Special emphasis is given to solving electrical problems and issues encountered by certified electricians and electrical inspectors. *Prerequisite: CT 229. Hours of class per week: 2.*

CT 250 Construction Management S 3 s.h.
This course is designed to meet the needs of individuals who aspire to management positions. Topics include: Job descriptions and responsibilities, job site safety, job organization and sequencing, contracts, subcontracts, scheduling, critical path method, dealing with labor and subcontractors, record keeping, and relationships with regulating agencies. *Prerequisite: CT 121, 122, 124, 225 or equivalent. Hours of class per week: 3.*

Surveying

SU 101 Surveying I* 3 s.h.
Surveying I is an elementary course in surveying. It includes fundamentals of plane surveying and emphasizes the use and care of leveling instruments. Linear measurements and theory and practice of leveling are studied in coordinated lecture and field work. *Prerequisite: MA 142 or permission of instructor. Hours of class per week: 2. Hours of lab per week 2.*

*Course often meets at sites other than main campus. Students make transportation arrangements.

Criminal Justice

CJ 103 Criminal Law I F 3 s.h.
A survey of the history and philosophy of criminal law; the scope, purpose, definition and classification of modern criminal law; offenses against the person, property offenses; and a discussion of the relationship between the Constitutional rights of the individual and the protection of society. *Hours of class per week: 3.*

CJ 104 Criminal Law II S 3 s.h.
Comprehensive analysis of the rules of evidence and criminal procedural law; judicial notice, presumption, real and circumstantial evidence, burden of proof, provide of court and jury, documentary evidence, hearsay, confessions and admissions; laws of arrest; search and seizure. *Prerequisite: CJ 103. Hours of class per week: 3. Hours of lab per week: 3.*

CJ 105 Principles of Criminal Investigation S 3 s.h.
An analysis of the nature and purpose of criminal investigation. Discussion will include various methods of investigation, the interview, and the interrogation of witnesses and suspects, collection and preservation of evidence, use of informants, techniques of surveillance and special investigation techniques; methods used in police science laboratory, ballistics, documents, serology, photography, and related forensic services. *Hours of class per week: 3.*

CJ 106 Introduction to Law Enforcement and Criminal Justice F 3 s.h.
A survey of the historical and philosophical development of law enforcement; and analysis of the court system; the criminal justice process; Constitutional limitations placed upon the criminal justice system, emphasis given to the interrelationship between these agencies and future trends in law enforcement. *Hours of class per week: 3.*

CJ 107 Police-Community Relations S 3 s.h.
Survey of the numerous and complex factors involved in the area of human rights. Topics covered: Controlling racial prejudice in the community; the role of police as professionals; and examination of prejudice and discrimination and their effects and implications for police in a changing and interacting society. The history and development of civil rights and liberties is surveyed. *Hours of class per week: 3.*

CJ 108 Introduction to Juvenile Delinquency S 3 s.h.
Consideration of the methods and philosophy of the juvenile court system, police programs for the prevention and control of juvenile delinquency and the role of various social work agencies in the care and treatment of juveniles. Special attention will be given to police techniques utilized in handling juveniles with

special emphasis on the utilization of existing community resources. The course will examine prevailing professional philosophy, existing law, public policy, and knowledge of current delinquent behavior theories. *Hours of class per week: 3.*

CJ 109 Criminology F 3 s.h.

A survey of the nature and scope of prevalent forms of criminology. This course will consider the major theories of criminal conduct drawn from psychological, social and cultural modes of explanation. A discussion of various classifications and topologies and the role of crime statistics will be included, as well as the relevancy of these factors for understanding, prevention, control and prediction. *Hours of class per week: 3.*

CJ 111 Introduction to Public Administration S 3 s.h.

A study of the theory, basic principles of public administration in the United States including discussions related to the development, organization, functions, and problems of national, state, and local administration. *Hours of class per week: 3.*

CJ 112 Introduction to Police Organization and Management F 3 s.h.

The principles of administration and management in their application to law enforcement agencies. A study of police organizational structure, responsibilities, and inter-relationships; an analysis of staff-line relationships and functions within the context of a police environment. Analysis of the functions of specialized units within police organizations, including police planning and research, patrol operations, internal affairs, and public relations. Principles of personnel management and supervision; police labor relations; consideration of alternative and comparative models of law enforcement organizations; the elements of organized crime and impact on police operations and management. *Hours of class per week: 3.*

CJ 113 Private Sector Issues 3 s.h.

This course is designed to familiarize the student with the legal and historical aspects of private sector police. Special attention will be given to the differences between public and private sector police. Principles and practices related to internal loss prevention will be covered. The legal and ethical responsibilities of private sector police in relation to issues of safety and health are also covered. *Hours of class per week: 3.*

CJ 118 Hazard Mitigation and Emergency Management 3 s.h.

This course approaches the problems of Hazard Mitigation and Emergency Management from both a historical and a technical perspective. Students are given a broad conceptual knowledge of hazard types and causes as well as practical, technical information

which is used by public service personnel involved in the management of hazardous situation. The course will cover hazards mitigation and emergency management of situations such as: storms, floods, earthquakes, fires, droughts, famine, epidemics, nuclear-chemical accidents, transportation and fixed facility hazardous materials incidents, strikes, civil unrest, toxic waste problems, serial crimes, and other hazards and emergency situations. *Hours of class per week: 3.*

CJ 121 Introduction to Corrections S 3 s.h.

This course is designed to expose the student to the history of, and theories behind, various types of correctional programs. The corrections field is comprised of many areas. The continuum of correctional services will be explored from probation to community corrections to institutional facilities, both the function of the facility and the inmate subculture, through parole. Further, the course will address basic philosophical issues in corrections and focus on the relationship between system goals and the needs of society. *Hours of class per week: 3.*

CJ 260 Criminal Prosecution Seminar F 3 s.h.

A practical, realistic, simulated prosecution of a hypothetical criminal case, from investigation through arrest, arraignment, pre-trial hearings, trial and appeal. Students will be required to engage in the same discretionary decision-making as practiced by Police, Prosecutors and the Courts. The class will prepare documents used in the prosecutorial process, including search warrants and their supporting affidavits, arrest and charging documents, pre-trial motion and answering papers, and basic appellate arguments, and will also engage in court-room testimony and presentation of evidence through role-playing in simulated hearings. *Prerequisite: CJ 103/104/105 & Permission of Instructor. Hours of class per week: 3.*

CJ 299 Criminal Justice Internship 1-4 s.h.

The Criminal Justice Internship course will serve as a structure for the awarding of credit for prearranged academically applicable work experiences. Students who have satisfactorily completed relevant criminal justice courses may be placed with an approved agency on a part-time basis. Participation requires the approval of a Criminal Justice Instructor and the appropriate Academic Dean. Evaluation of the student's performance will be the responsibility of the instructor. A maximum of eight (8) semester hours of credit may be earned by any one student. *Prerequisite: Previous criminal justice relevant coursework and approval of instructor and Dean. Hours of class per week: TBA.*

Electricity and Electronics

EL 125 Electricity I F 4 s.h.

Pilot course in the Electrical Technology curriculum. Investigates the fundamental concepts of voltage, current, and power as applied to both DC and AC (single phase) circuits. The nature of resistance, inductance, and capacitance are studied. Fundamental circuit analysis is developed by the application of the basic laws and theorems to functional electrical circuits. Applicable electrical instruments are used in the laboratory. Practical application is stressed. The use of computers to solve circuit problems is also introduced. *Prerequisites: Math Course I, enrollment in MA 161 or 157. Hours of class per week: 3. Hours of lab per week 2. Hours of recitation per week 1.*

EL 126 Electricity II S 4 s.h.

A continuation of EL 125 where the transient response and the AC response to linear circuits are developed. The operational principles and electrical characteristics of devices are also studied. Time constants, reactance, impedance, and resonance are studied with an emphasis on the practical application of these concepts to electronic circuits. The ideal transformer is introduced. The parameters of active electronic devices are studied. Computer solutions are taught and used throughout the course. *Prerequisites: EL 125 and either MA 161 or MA 157; Corequisites: MA 162 or MA 158. Hours of class per week: 3. Hours of lab per week: 2. Hours of recitation per week: 1.*

EL 127 Instrumentation S 2 s.h.

Students in this course will be introduced to a more detailed study of the test instruments used in all fields of electronics. Specific emphasis is placed on the utility of the oscilloscope, electronic meters, signal generators, and component testing instruments. A generalized study of the internal circuitry of these devices is also conducted. Measurement error, both human and mechanical, is studied. The student is also introduced to standards, transducers, frequency counters, chart recorders and computer aided measurements. *Prerequisite: EL 125, enrollment in EL 126. Hours of class per week: 1. Hours of lab per week: 2.*

EL 229 Electronics I F 5 s.h.

This course introduces the student to theory, design and application of circuits used in the electronics field. Specific areas of study will include: diodes, rectifiers, filters, regulators, transistor characteristics, h-parameters, transistor bias, small and large-signal amplifiers. *Prerequisites: EL 126, EL 127. Hours of class per week: 4. Hours of lab per week: 3.*

EL 230 Electronics II S 5 s.h.

This course will delve deeper into the material developed in EL 229 as well as investigate additional

circuit concepts. The high and low frequency response of amplifiers, is studied using Bode diagrams. Other topics include: feedback, oscillators, switching circuits, op amps, and the field effect transistor. In addition, waveform analysis using the frequency domain is introduced. *Prerequisite: EL 229. Hours of class per week: 4. Hours of lab per week: 3.*

EL 231 Electric Machines F 3 s.h.

EL 231 is concerned with construction and operational characteristics and testing procedures of rotating machinery including both AC and DC motors and generators, as well as the transformer. Also of primary concern is the basic principles of operation of associated circuitry, including speed controllers and starting devices, for these machines as well as power ratings on this type of equipment. Both single phase and polyphase machinery is studied as related to their efficiencies and utility. *Prerequisites: EL 125, EL 126. Hours of class per week: 2. Hours of lab per week: 3.*

EL 232 Digital Electronics F 3 s.h.

This course introduces Boolean logic and the devices necessary to produce digital computing circuitry. Fundamentals are covered such as AND, OR, NOT, NAND, and NOR logic through more complex devices such as flip-flops, one-shots, RAM and ROM. Digital circuits studied include: counters and shift registers. Analytical techniques are used to design efficient combinational and sequential circuits. Strong emphasis is placed on design skills. *Prerequisite: EL 125 or permission of instructor. Hours of class per week: 2. Hours of lab per week: 3.*

EL 234 Telecommunications 3 s.h.

This course introduces the theory governing electronic communication elements and discusses the various systems used to accomplish communication tasks. Theories covered include: radio wave propagation, antennas, transmission lines, fiber optics, and modulation techniques. Systems studied include: AM & FM transmitters and receivers, telephone and data communications. *Prerequisites: EL 229. Hours of class per week: 3.*

EL 235 Industrial Electronics and Robotics S 3 s.h.

Students in this course will study the theory and operation of semi-conductor devices and systems used in industrial controls including fundamentals and applications of robotics. The student will become familiar with and be able to troubleshoot and repair controls containing semiconductor devices such as: SCRs, photoelectric devices, timing circuits, UJTs, speed controls for DC motors, and controls for AC motors and lighting systems. The course will include sensing mechanisms, programming, interfacing and other industrial applications of robotic units. These

items will be assembled and tested for performance in lab. *Prerequisite:* EL 229. *Hours of class per week:* 2. *Hours of lab per week:* 3.

EL 236 Introduction to Microcomputers S 4 s.h.
This course provides an understanding of microprocessor computer architecture. The students will learn the hardware and programming details of an 8-bit microprocessor system. Topics include microprocessor system organization, registers, memory, addressing, machine language programming, interrupts and interfacing. Additional topics include memory technologies, memory system interfacing and programmable logic devices (PLD's). *Prerequisite:* EL 232 or equivalent. *Hours of class per week:* 3. *Hours of lab per week:* 3.

Food Service Administration

Courses may meet at sites other than main campus. Students make own transportation arrangements.

Students require special clothing and equipment, in addition to text books.

FS 101 Introduction to Food Service 1 s.h.
A basic course introducing the students to the world of Food Service. The course includes a definition of all styles of food service establishments including schools, hospitals, fine dining, quick serve, cafes, military feeding and more. It includes a history of food service and modern day trends. The course will investigate job titles and job opportunities. Students will be introduced to the definition and responsibilities of each food service department such as purchasing, production, service management, menu planning, etc. Included will be a tour of Food Service operations and students will be required to write a 5 page paper. Participation in food service events may be required. *Hours of class per week:* 3 (5 wks).

FS 111 Introduction to Food Service — Safety and Sanitation 2 s.h.
A comprehensive course teaching the principles of safety and sanitation to be used in Food Service establishments. Included will be information on personal hygiene, cleaning, safe food preparation, bacteria growth, foodborne illnesses, safe dining service, safe food storage procedures, the control of pests, coping with inspections, etc. Students successfully completing the course will receive a certificate from the National Restaurant Association. *Hours of class per week:* 3 (10 wks).

FS 122 Food Preparation I F 3 s.h.
An introduction into the fundamental skills required for proper food selection, preparation, and storage. The relationship between proper preparation and storage and nutritional value will be emphasized. This course

will utilize lecture, demonstration, and laboratory work. *Hours of class per week:* 2. *Hours of lab per week:* 3.

FS 123 Food Purchasing S 3 s.h.
Techniques for quality food purchasing for profit and nonprofit services. Specifications and standards of quality, grades, methods of purchase are emphasized for each category of food. A study is made of modern food processing and the purchasing of convenience foods. *Prerequisites:* HE 121, FS 121. *Hours of class per week:* 3.

FS 124 Food Preparation II S 3 s.h.
The course is designed to emphasize the unique requirements related to producing quantity food in a palatable fashion. Emphasis will be placed on such problems as bulk food production, menu making, cost evaluation, sanitation, and safety as they apply to quantity food production. *Prerequisite:* FS 122. *Hours of class per week:* 2. *Hours of lab per week:* 3.

FS 126 Dietary Therapy S 3 s.h.
The course develops a relationship between health needs and specialized diets. Emphasis is placed on relating specific nutritional requirements for a variety of special dietetic needs. *Prerequisites:* HE 125, SC 170, or permission of instructor. *Hours of class/lab per week:* 3.

FS 206 Muffin Production F 1 s.h.
This is a basic course to introduce students to the production methods of variety muffins. Included in this course will be mixing, portion control, and proper baking methods. This course will investigate job opportunities in this area of the baking industry. Included will be a tour of a bakery producing these products. Participation in food service events may be required. *Hours of class per week:* 2. *Hours of lab per week:* 3.

FS 216 Donut Production F 2 s.h.
This is a basic course to introduce students to the production methods of cake donuts and yeast raised donuts. This will include mixing, cutting, frying and finishing of donuts, such as sugaring, icing, and filling. This course will investigate job opportunities in this area of the baking industry. Included will be a field trip to a bakery which produces these products. Participation in food service events may be required. *Hours of class per week:* 1. *Hours of lab per week:* 4.

FS 226 Fundamentals of Baking and Pastry 3 s.h.
Baking fundamentals, approach to making breads, cakes, puff and French pastry, and fancy desserts. *Prerequisites:* FS 122, or permission of instructor.

Hours of class per week: 2. Hours of lab per week: 3.

FS 227 Food Service Organization and Management S 3 s.h.

Course designed to give food service majors the basic understanding necessary to organize a food service operation. Emphasis will be placed on budgetary management, cost equivalence, and employee management. *Prerequisite: FS 123. Hours of class per week: 3.*

FS 240 Seminar — Bar & Beverage Service S 1 s.h.

This is an introductory course in beverage service in the Food Service Industry. Topics will include: identification of alcoholic and non-alcoholic beverages, control of beverages, bartending techniques and customer relations and service. Emphasis will be placed on providing service within the guidelines of legal and moral demands. Students will participate off campus. Students are not restricted by age. *Hours of class per week: 2 (5 wks). Hours of lab per week: 3 (5 wks).*

FS 244 Hospitality — Introduction to Service F 1 s.h.

This is an introductory course in the history and components of service in the food service industry. Offered will be an overview of the different methods of service " American, French, Russian, Cafeteria, quick serve, etc. The responsibilities and duties of service personnel will be investigated. Students will learn course structure, the order of service and elementary menu writing. The basic principles of table service will be introduced. Students will be required to participate in food service events. *Hours of class per week: 2 (5 wks).*

FS 245 Food & Beverage Cost Control: Basics F 1 s.h.

This course will provide each student with the computational and measuring ability needed to insure accuracy in food service procedures. Methods of weighing and measuring will be practiced. Basic food service computations will be reviewed along with the use of a calculator. Students will practice and develop the ability to solve problems in portion control, recipe conversions, yields, ordering points, tipping, change and sales checks. *Hours of class per week: 2 (5 wks).*

FS 248 Seminar — Food Catering S 1 s.h.

An introduction course to the catering of food service functions and bar service. Techniques for successful catering will be covered, such as contracts, equipment, menus, presentation, personnel, costs and extras. Basic bar service will be taught. Previous service experience recommended. Off-campus participation

required. *Prerequisite: FS 122 or permission from instructor. Hours of class per week: 2 (5 wk).*

FS 254 Hospitality Service Technique F 1 s.h.

This is a practical course in table service and table setting. Students will learn and practice all aspects of fine dining service such as: order of service, timing, side station responsibilities, principles of placement order taking, points of service, beverage service, buffet service, completeness and efficiency of service. Emphasis will be placed on customer satisfaction. The intent of the course is to develop the skills, pride and professionalism of dining room staff. Additional lab hours may be scheduled. *Hours of class per week: 2 (5 wk).*

FS 255 Food & Beverage Cost Control Procedure and Forms F 1 s.h.

This course will familiarize the student with the common forms and procedures used to regulate (control) the various departments of a food service operation. Topics will include production reports, standardized recipes, inventory and requisition sheets, purchase orders, cashiers worksheets and cash control charts. Emphasis will be placed on the operational procedures associated with each topic. Bar and cash control methods will be included. Instruction may involve computer use. *Prerequisite: FS 245. Hours of class per week: 3 (5 wks).*

FS 258 Seminar — Restaurants and Nutrition S 1 s.h.

This course will investigate the customers need for healthier foods and the restaurants' responsibility to serve it. Student will apply basic nutritional principles to the preparation of food and the planning of menus in a restaurant. By preparing a personal nutrition plan, students will understand the importance of eating right. Course will include methods to modify existing recipes to cut down fat, salt, yet maintain nutrients. This practical course will introduce new menu ideas and methods to increase sales through healthier choices. Techniques to educate the customer will be taught. The course will include computer use. *Hours of class per week: 2 (5 wk). Hours of lab per week: 3 (5 wks).*

FS 264 Hospitality — Management 1 s.h.

This course is designed for students who expect to be in a supervisory or management position in Food Service. The principles of management as they relate to the service aspects of restaurants and institutions will be the main emphasis. Additional topics of special interest to the Food Service Professional will be taught. Subjects will include: reservations; room arrangement, purchasing serviceware, pre-meal meetings, table-top merchandising, cash control, credit cards, dining room supervision, training and trouble shooting. Students will plan and manage a food

service event. Additional lab hours may be needed.
Prerequisite: FS 244, FS 254. *Hours of class per week:* 2 (5 wks).

FS 265 Food & Beverage Cost Control — Management F 1 s.h.

This course is intended for students who expect to be in a supervisory or management position in the food service industry. Emphasis will be placed on analyzing the food service operation as a whole through balance sheets, profit and loss statements and break even points. Students will be taught menu pricing, food cost percent and the methods for casting a recipe. Basic principles of supervising the control of costs in a food service operation will be studied. Instruction may involve computer use. *Prerequisite:* CS 104, FS 245. *Hours of class per week:* 3.

FS 268 Seminar — Menu and Merchandising S 1 s.h.

The course investigates the methods of increasing food sales through menus, menu planning, and food merchandising. Students will study various menus and prepare samples. Food will be prepared as part of menu planning and to develop merchandising skills. Each student will present a food demonstration to the class. Additional lab time may be needed. Previous food preparation skill recommended. *Prerequisite:* FS 122 or permission from instructor. *Hours of class per week:* 2 (5 wks). *Hours of lab per week:* 3 (5 wks).

FS 280 Seminar — Current Issues F 1 s.h.

This course will investigate current issues in the Food Service Industry and current trends. Subject matter will vary as issues demand. Present issues might include: employee turnover, surviving in a recession, the computer and its use, methods of cash control, etc. Students will be required to research a topic and present information. *Hours of class per week:* 2. *Hours of lab per week:* 3.

Photography

Courses may meet at sites other than the main campus. Students make their own transportation arrangements.

ER 101 Principles of Photography F 3 s.h.

The study of the history of photography, balance of color, lighting and composition in the photograph, basics of taking pictures (camera operation, exposure, films, filters, flash, lenses, composition). *Hours of class per week:* 2. *Hours of lab per week:* 3. *Students are required to provide their own film and supplies. Student owned cameras are helpful but not required.*

ER 102 Advanced Photography S 3 s.h.

Advanced photo techniques with emphasis on posing, lighting and composition; darkroom techniques,

negative retouching, print enhancement and mounting. Studio and field shooting sessions with related darkroom work. *Prerequisite:* ER 101. *Hours of class per week:* 3. *Hours of lab per week:* 3. *Students are required to provide their own film and supplies. Student owned cameras are helpful but not required.*

Graphic Arts

GA 101 Introduction to Graphic Communications Technology F 3 s.h.

Introduction and orientation to the graphic communications industry to include the history of printing, publishing, advertising and allied industries. The course emphasis is directed toward the lithographic printing process with an overview of screen printing, flexography and gravure reproduction. Production methods, substrates and product knowledge is emphasized. Students learn basic principles and applications of the offset printing process to include hands-on training in: copy preparation, typesetting and reproduction photography using a vertical camera. Other areas include film assembly opaquing, proofing, platemaking, binding and color proofing films. *Hours of class per week:* 2. *Hours of lab per week:* 3.

GA 103 Advanced Graphic Communications Technology S 3 s.h.

Advanced Graphic Communications builds on the principles and practices learned in GA 101. The course focuses on the areas of halftone reproduction using densitometry, manual and automated vertical cameras. students learn various contacting and darkroom techniques to include posterization, duotones, film assembly and proofing. Offset press principles, imposition and finishing are reviewed. students create various impositions for small duplicator production. Students also create images using Macintosh® computers and digital typesetting equipment. *Prerequisite:* GA 101. *Hours of class per week:* 2. *Hours of lab per week:* 3.

GA 104 Composition & Desktop Publishing Systems S 3 s.h.

An introduction to electronic publishing and digital typesetting. this course investigates the variety of graphic computers and photocomposition equipment available in the various segments of the printing and publishing industry. This course emphasizes the function of typefaces, type identification, point sizes, copyfitting, proofreading, computer graphic applications and editing skills. an overview of output devices is discussed. Students learn image generating techniques used in advertising, newspaper and the commercial printing sectors of the industry. Students gain practical skills in typesetting, Macintosh® computer use, and latest software programs.

Prerequisite: GA 101 or Enrollment in Word

Processing Certificate program. Hours of class per week: 2. Hours of lab per week: 2.

GA 105 Graphic Arts Layout and Design

F 3 s.h.

This course approaches the planning and design aspects of creating quality paste-ups and mechanicals. Emphasis is directed toward designing single and multi-color mechanicals produced in advertising agencies, newspaper firms, in-plant printing facilities and commercial printing plants. Topics of study include practical principles and applications of the use of reproduction methods, equipment and materials. students learn by cropping and scaling photos, use of various photo mechanical transfer materials, screen tints, impositions and proofing techniques. Artwork and type are created manually, by computer graphics, typesetting and camera techniques. Offset reproduction, specifications and limitations related to various paper stocks and inks are discussed. *Hours of class per week: 2. Hours of lab per week: 2.*

GA 106 Graphic Arts Production

F 3 s.h.

An in depth study of graphic reproduction in relation to problem solving techniques with emphasis toward lithography; reproduction photography, film assembly, paper characteristics, color proofing, lithographic inks and imposition techniques. Students are involved in hands-on practice involving the use of production equipment in a quality control conscientious manner. Students use a variety of daylight and orthochromatic films to produce multiple color images in a controlled environment. This course is also supplemented with actual plant tours to enhance learning of production methods in the printing and publishing industry to include the gravure printing press. *Prerequisite: GA 101-103. Hours of class per week: 2. Hours of lab per week: 2.*

GA 107 Production Management

S 3 s.h.

Production Management is designed to develop knowledge and skills in the area of organizational communication and management. The emphasis is directed toward the printing and publishing environments to include the topics of: plant layout, wage policies, inventory control, production management, equipment costing and customer service. Technical and practical hands-on skills include: film assembly, typesetting, computer graphics, four color proofing, reproduction photography, offset duplicator and impositions. The course is designed to stimulate students to develop useful skills for entrepreneurship in the printing and publishing industry. *Prerequisite: GA 101. Hours of class per week: 2. Hours of lab per week: 2.*

GA 121 Basic Offset Press Principles and Practices

S 3 s.h.

Introduction to safe practical set-up operation of offset duplicators and supplies. The course features theory, practice, and hands-on duplicator training emphasizing: Offset lithography, product knowledge, introduction to inks, paper, additive plates, subtractive plates, electrostatic masters, offset moisture systems, fountain solutions, PH balance, and printing blankets. Students learn standards needed to produce quality black and white line and halftone copy. Safety, problem solving and basic maintenance is emphasized. *Hours of class per week: 2. Hours of lab per week: 2.*

GA 122 Advanced Offset Press

Techniques

F 3 s.h.

This course is designed to increase understanding and knowledge of the offset color reproduction process. Introduction to the theory, principles and practices of two and four color reproduction is emphasized. The course is structured to provide students the opportunity to safely operate duplication equipment in a multi color sequence. The course will focus on: Form roll and related pressures, ink tack, rubber base inks, oil based inks, coated uncoated papers, trouble shooting techniques, wet trap, and identification of standards needed to produce quality color reproductions. Safety and basic press maintenance is emphasized. *Prerequisite: GA 121. Hours of class per week: 2. Hours of lab per week: 2.*

MD 171 Engineering Graphics

F 3 s.h.

The course covers drafting work in lettering, use of drawing instruments including the drafting machine and parallel straight edge, geometrics, orthographic projection, cross sections, axonometric projection, intersections and sketching. *Hours of class per week: 2. Hours of lab per week: 2.*

MD 174 Computer Aided Drafting

3 s.h.

This course will teach the basics of computer aided drafting as applied to engineering type drawings. Topics will include geometric shapes, scaling, polar and delta positioning, editing, arcs and fillets, grids and snap, dimensioning, translating, rotation and mirroring, three dimensional drawing, and wireframe drawings. *Hours of class per week: 3. Hours of lab per week: 3.*

MD 176 Electrical Graphics

F 3 s.h.

This electrical graphics course introduces the student to basic drafting and construction techniques used in the electronics industry. This is strictly a computer aided drafting course. The course will introduce the basics of orthographic and isometric projections, cross sections, dimensioning, and sketching using the CADKEY software package. The student is then introduced to the electronic schematic diagram and to printed circuit development using the EE Designer III

software package. Finally the student is presented with a series of drawings ranging from block and logic diagrams, chassis drawings, graphs and charts, residential and industrial wiring diagrams, and 3D diagrams. *Hours of class each week: 1. Hours of lab per week: 3.*

MD 180 Architectural Drawing S 3 s.h.

Architectural drawing as related to functional planning of residence buildings, working drawings, including plans, elevations, section, details, notes and specifications. *Prerequisite: MD 171. Hours of class per week: 2. Hours of lab per week: 2.*

Leather Technology

LT 101-102 Introduction to Leather Technology I, II F-S 3 s.h.

each semester An introductory course designed to acquaint the student with the history of the Leather Industry and some of the general principles involved in the manufacture of leather from raw stock to finished goods. The important leather manufacturing processes are covered. Emphasis is on the important factors that govern which course a leather will take through a mill to produce a predetermined desirable or aesthetically acceptable product and the physical and chemical changes that occur, depending on the product's end use or customer's specification. The course will include several field trips to local manufacturing plants. *Hours of class per week: 3.*

LT 130 Leather Internship 3/6 s.h.

This course consists of practical application of skills learned in leather technology classes. An arranged schedule of work experience in area industry is required. *Prerequisites: LT 221 and LT 222. Hours of class per week 10-12/15-20 hours on the job per week per 3 credits.*

LT 221 Principles of Leather Technology (Pre-tanning) 3 s.h.

A basic course dealing with leather manufacturing, topics include a study of leather, evaluation of hides and skins and chemical processes related to pretanning. Practical applications will be stressed. *Hours of class per week: 3.*

LT 222 Leather Tanning and Coloring 3 s.h.

A study of leather and coloring processes. Topics include vegetable tanning, chrome and other materials tanning, resins syntans, and aldehyde tonnages, dyes and their properties, theory of dye fixation; color designation matching and measurement, and dyeing methods. *Prerequisites: LT 101, 102. Hours of class per week: 3.*

LT 223 Leather Finishing 3 s.h.

A study of leather processes. Topics include requirements of leather finish coating technology, leather finishing methods, additives and monomers, and methods of application. Practical techniques will be stressed. *Prerequisites: LT 101, LT 102 or equivalent or permission of instructor. Hours of class per week: 2. Hours of lab per week: 2.*

LT 224 Leather Analysis & Testing 3 s.h.

A study of leather analysis and testing processes. Topics include physical properties of leather, measurements used for control of processes, solution concentration, tannery floats and feeds, shrinkage meters, and Ph measures. Practical applications will be stressed. *Prerequisites: LT 101, 102, or equivalent or permission of instructor. Hours of class per week: 2. Hours of lab per week: 2.*

LT 230 Tannery Management 3 s.h.

A study of unique requirements of managing tannery operations. Development of efficient methods from acquisition of raw materials to production of the finished product will be stressed. Economic factors will be covered. *Prerequisites: LT 221. Hours of class per week: 3.*

Legal Assisting

LE 101 Introduction to Legal Assisting 3 s.h.

An introduction to the role of the legal assistant, including ethical and professional practice standards applicable to all law office personnel. Units include an overview of law and legal systems, the relationship between Federal and State courts systems, and an overview of paralegal skills. *Hours of class per week: 3.*

LE 102 Legal Research & Writing 3 s.h.

The basic principles of legal research and writing style and techniques are presented. Units include sources of law, citations, researching cases and statutes, and writing legal briefs. Students will be introduced to the use of computer-assisted legal research (CALR), including WESTLAW. *Prerequisite: LE 101, EN 125, CS 104 or permission of instructor. Hours of class per week: 3.*

LE 201 Real Estate S 3 s.h.

This course includes a study of the substantial law of real estate and the related procedural and practical aspects such as landlord-tenant proceedings, title searching, real estate closing, etc. Drafting problems involving various legal instruments; special research projects related to the subject matter; and a study of the system of recording and search of public documents will be included. *Prerequisite: LE 101 or equivalent. Hours of class per week: 3.*

LE 227 Estates & Trusts F 3 s.h.
This course covers estates, powers and trust, intestacy and probate, and the preparation of wills. A study of laws applicable to each as well as the organization and jurisdiction of the appropriate probate court will be included. A detailed analysis of the administration of estates and a review of estate and inheritance taxes will also be covered. *Prerequisite: LE 101 or Equivalent.*
Hours of class per week: 3.

Machine Processes

Courses may meet at sites other than main campus. Students make transportation arrangements. Weekend field trips may be required.

MP 101 Machine Processes I 3 s.h.
The construction, purpose and operation of lathes, drill presses, sawing and milling machines will be studied. Included are the theory of cutting angles, tool and cutter selection, cutting speeds, feeds, and coolants, industrial safety, use of bench and layout tools, measuring instruments, gauges and the accepted machine shop practices used in industry and service repair shops. *Hours of class per week: 2. Hours of lab per week: 2.*

Natural Resources Conservation

Courses may meet at sites other than main campus. Students make transportation arrangements. Weekend field trips may be required.

Students require special clothing or safety equipment, in addition to texts. Instructor will furnish details.

NR 121 Fisheries and Wildlife Management I F 3 s.h.
Introduction to the principles of fisheries and wildlife management. An understanding of the practice of wildlife management in a contemporary context, but with sufficient review of past efforts to clarify present directions. A knowledge of the plants and animals indigenous to Eastern United States with respect to their management and identification will be stressed. *Hours of class per week: 2. Hours of lab per week: 3.*

NR 122 Fisheries and Wildlife Management II S 3 s.h.
Utilization and an understanding of both the theoretical and operational aspects of the varied techniques used in the management of both fisheries and wildlife. Topical areas will include population estimation, analysis and manipulation of cover water and food for both fisheries and wildlife, wildlife collection techniques, species management techniques, telemetry. *Prerequisites: NR 121. Hours of class per week: 2. Hours of lab per week: 3.*

NR 126 Principles of Soils and Water S 3 s.h.
A study of the principles of erosion control, surface drainage and subsurface drainage; considers soil genesis, composition, classification, physical and chemical characteristics in relation to soil moisture, fertility and management. *Hours of class per week: 2. Hours of lab per week: 2.*

NR 223 Forest Management I F 3 s.h.
The practices and principles involved in managing woodlands for timber, recreation, wildlife, and soil conservation values. Includes species identification and characteristics, tree development and growth, cutting practices, harvesting and marketing, reforestation, planting management and protection. *Prerequisite: NR 122. Hours of class per week: 2. Hours of lab per week: 3.*

NR 224 Forest Management II S 3 s.h.
Major topics will include tree physiology, major forest products, nursery techniques, planting, maintenance of individual trees (ornamental and Christmas trees,) forest protection (fire, insects and disease), forest influences upon the environment, and harvesting techniques from the standing tree to the mill. Proper use and maintenance of related tools will be emphasized. *Prerequisite: NR 223. Hours of class per week: 2. Hours of lab per week: 3.*

NR 231 Practical Skills in Conservation and Outdoor Recreation 4 s.h.
This is a basic level practical skills course in which students will work on individual or group projects assigned by the instructor. Projects will involve actual field experience and will be selected to give students a high degree of introductory skills in work normally conducted in Natural Resources. Where possible the student shall work with Conservation agencies and active field specialists. *Hours of class per week: 2. Hours of lab per week: TBA.*

NR 232 Basic Research in Conservation and Outdoor Recreation 4 s.h.
In this research seminar students will work with the instructor in selecting a topic of research. The topic will be selected to give the student a strong introduction to methods and techniques of research. The student will pursue a line of field work along with studying subject related textbooks and literature. The student will document activities and will prepare a class presentation. *Prerequisites: NR 231 or equivalent and permission of instructor. Hours of class per week: TBA. Hours of lab per week: TBA.*

NR 233 Advanced Research in Conservation and Recreation 4 s.h.
The student electing to take this course will submit for approval detailed plan on researching a topic in Natural Resources planning or management. Upon being

granted permission to pursue this topic, students will be involved in both advanced field work and literature search. The student will submit both a comprehensive research paper and field study results for review by the instructor. *Prerequisites: NR 232 and permission of instructor. Hours of class per week: TBA. Hours of lab per week: TBA.*

NR 241 Water Resources Management I — F 3 s.h.

This course will provide students with an introduction to the physical and biological properties of water. Specific areas of study will include the following: the hydrologic cycle; hydraulics and electricity; water chemistry, (acids, bases and salts, chemical calculations, solutions); microbiology; water quality tests and standards; sedimentation. *Prerequisite: High school biology and general science. Hours of class per week: 2. Hours of lab per week: 3.*

NR 242 Water Resources Management II S 3 s.h.

This course will further the student's understanding of water resources management. Specific areas of study will include the following: filtration processes; chlorination; softening; aeration; taste and odor control; corrosion and corrosion control; fluoridation; protection of water and watershed; plant maintenance and accident prevention. *Prerequisite: Water Resources Management I. Hours of class per week: 2. Hours of lab per week: 3.*

NR 250 Waste Resource Management S 3 s.h.

This course will provide the student with a general background in the science and technology of solid and hazardous waste management. Specific areas of study will include the following: conventional disposal operations; material recovery operations; energy recovery systems; composting-methodology, products, and legal restrictions; sanitary landfilling; innovations in solid and hazardous waste disposal; hazardous waste reduction, recycling, and waste exchange; transportation of wastes; siting of waste treatment facilities; health effects and risk assessment; household hazardous wastes. *Prerequisite: SC 141, 170 or permission of instructor. Hours of class per week: 3.*

Textile Technology

TT 101-102 Introduction to Textile Technology I, II

F-S 3 s.h. ea.

An introductory course designed to acquaint the student with the history of the Textile Industry and some of the general principles involved in the manufacture of textiles from raw stock to finished goods. Emphasis is on the important factors that govern which course a fiber will take through a mill to produce a predetermined desirable or aesthetically acceptable product and the physical and chemical changes that occur, depending on the product's end use or

customer's specification. Part II will cover characteristics and manufacture of natural and manmade fibers, yarns and fabrics, spinning, knitting and weaving; fiber, yarn, and fabric production — including processes, equipment, and technologies involved. Part II will cover dyeing (coloring) or various fibers, yarns, and fabrics discussed in Part I. Natural and synthetic dyes, basic dyeing mechanisms, dye selection, classification and chemistry of dyes and various methods of dyeing, processes, and equipment will be introduced. The courses will include several field trips to local manufacturing plants. *Hours of class per week: 3.*

TT 130 Textile Internship 3/6 s.h.

This course consists of practical application of skills learned in textile technology classes. An arranged schedule of work experience in area industry is required. *Prerequisites: TT 202, 204. Hours of class per week: 10-12/15-20 hours on the job per week per 3 credits.*

TT 201 Advanced Textile Technology I 3 s.h.

This course covers the various ASTM and AATCC test methods used in quality control; use of computers in textile dyeing automation and color matching; environmental considerations and regulations; energy and economics; mill management and supervision. *Hours of class per week: 3.*

TT 202 Textile Dyeing 3 s.h.

This course is designed for further study of the principles of dyeing fiber stock, yarns, and piece goods; the theory of color; introduction to color-matching; laboratory or "pot" dyeing methods; and dyestuffs and their classification. *Prerequisites: TT 101, 102. Hours of class per week: 3.*

TT 203 Advanced Textile Dyeing 3 s.h.

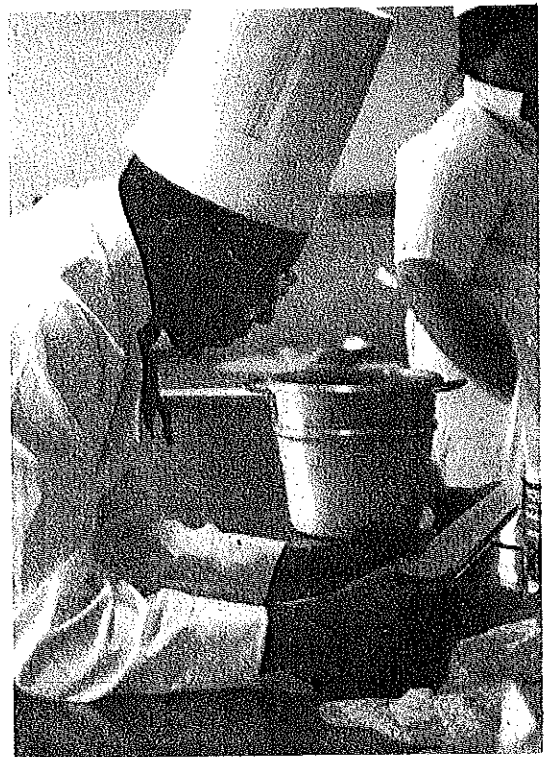
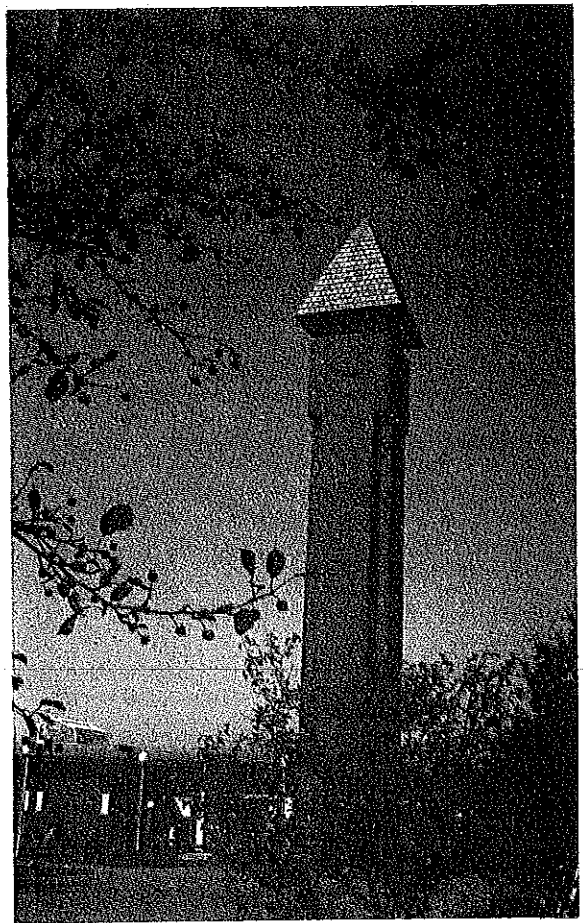
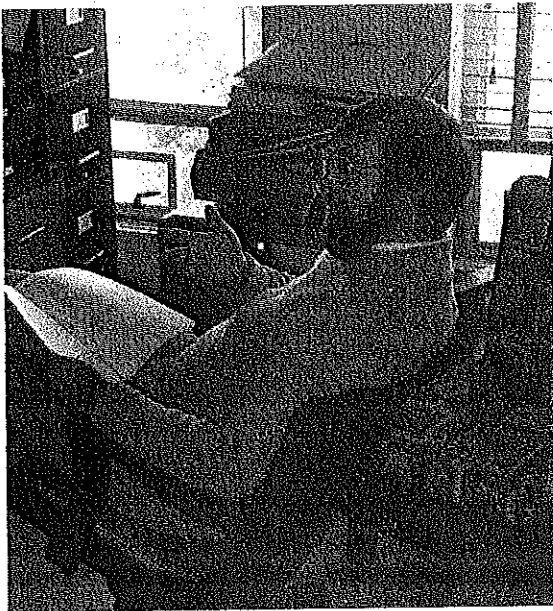
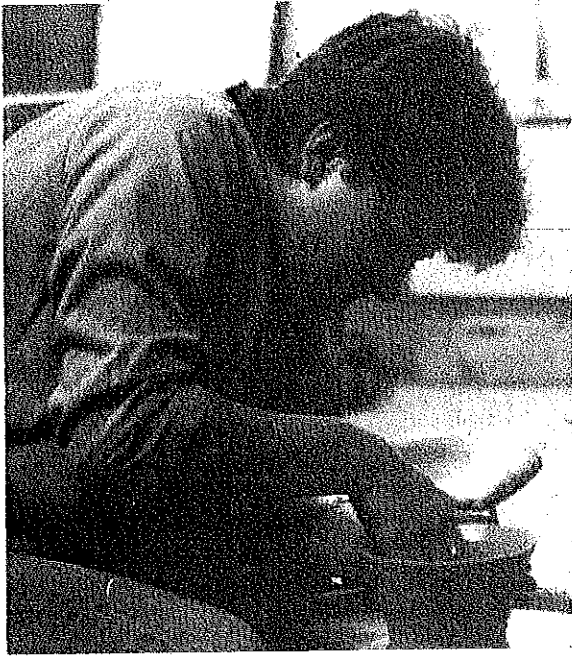
A practical course in advanced dyeing theory and techniques. The course includes the principles and methods of fiber preparation, scouring, bleaching and dyeing and the important fibers and current technologies. Dyeing of cotton, polyester, nylon, acrylics, wool, silk will be studied. Selection of the proper dyestuffs, their properties and economical application and various dyeing methods and equipment including non-aqueous systems will also be studied, including stripping, continuous dyeing, dye equipment and quality control. Class time will be allotted to promote a hands-on dyeing experience. *Prerequisite: TT 202. Hours of class per week: 3.*

TT 204 Textile Finishing 3 s.h.

This course provides an introduction to physical and chemical finishing techniques that impart the special and desirable end-use characteristics to fabric. *Hours of class per week: 3.*

TT 205 Advanced Textile Finishing 3 s.h.

This course covers the important mechanical and chemical finishing techniques currently used in textile finishing. It will include most of the physical finishing, such as slitting, combing, carding, napping, embossing, and drying techniques as well as the chemical and wet finishing techniques, such as sizing, resin treatments, water repellents, fire retardants, softeners, soil release, polymeric finishes. The principles and properties imparted on fabric to change or improve its characteristics for desirable or marketable effects will be studied. *Prerequisites: TL 204. Hours of class per week: 3.*



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