The State University of New York, established by the State Legislature in 1948, comprises 68 colleges and centers. At present, 60 conduct classes: four University Centers, two Medical Centers, ten Colleges of Arts and Science, seven Specialized Colleges, six two-year Agricultural and Technical Colleges, and 31 locally-sponsored, two-year Community Colleges.

Three additional Colleges of Arts and Science are in varying stages of development. Two four-year campuses, in Westchester County at Purchase and in Nassau County at Old Westbury, are under development. Old Westbury will admit its first students in limited numbers in September 1968. The third campus will be upper-divisional (junior-senior years) in concept and located in the Utica-Rome-Herkimer area. Master's level programs will be offered at all three campuses.

The University's Trustees also have approved the establishment of additional Community Colleges. In varying stages of development, they are sponsored by Clinton, Columbia-Greene, Tompkins-Cortland, Essex-Franklin and Schenectady Counties.

The University further comprises the Ranger School, a division of the College of Forestry which offers a 43-week technical forestry program at Wanakena; the Center for International Studies and World Affairs at Oyster Bay, L.I. which serves as a University-wide conference and seminar facility and as the site for programs in international education; and four Urban Centers administered by Community Colleges.

University-wide research programs include the Atmospheric Sciences Research Center with campus headquarters at Albany, the Institute for Theoretical Physics and the Marine Sciences Research Center at Stony Brook, the Great Lakes Research Laboratory at the College at Buffalo, and the Water Resources Center at the College of Forestry.

Graduate study at the doctoral level is offered by State University at 12 of its campuses, and graduate work at the master's level at 22. The University is continuing to broaden and expand over-all opportunities for advanced degree of study.

Graduate study areas embrace a wide spectrum including agriculture, business administration, criminal justice, dentistry, education, engineering, forestry, law, liberal arts and science, library science, medicine, nursing, pharmacy, social work and veterinary medicine.

Four-year programs strongly emphasize the liberal arts and science and also include specializations in teacher education, business, forestry, maritime service, ceramics, etc.

Two-year programs include nursing and liberal arts transfer programs and a wide variety of technical curriculums such as agriculture, business, and the industrial and medical technologies.

The University's Urban Centers provide training for skilled and semi-skilled occupations and college foundation courses for youths in city poverty areas.

Governed by a Board of Trustees appointed by the Governor, State University of New York comprises all State-supported institutions of higher education, with the exception of the senior colleges of City University of New York. Each college and center of State University is locally administered. Although separated geographically, all are united in the purpose of improving and extending numerous opportunities to the youth of New York State.

The State University motto is: "Let Each Become All He Is Capable of Being."
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Agriculture
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Automotive Technology
Biological Technology
Medical Laboratory Technology
Business Administration
Secretarial Science—Advertising,
Industrial, Legal, Medical
Chemical Technology
Civil Technology-Highway
Community Service Assistant

Construction Technology—Building
Data Processing
Dental Hygiene
Electrical Technology—Electronics
Engineering Science
Food Processing Technology
Mechanical Technology
Nursery Education
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Calendar

Fall Semester 1968

Registration and Orientation
Classes begin
Holiday
Holiday
Holiday
Holiday
Semester ends

September 9-13/Monday-Friday
September 16/Monday
September 23/Monday
October 2/Wednesday
November 27-December 1/Wednesday-Sunday
December 21-January 5/Saturday-Sunday
January 23/Thursday

Spring Semester 1969

Registration
Classes begin
Holiday
Open House
Holiday
Semester ends
Commencement

February 3-7/Monday-Friday
February 10/Monday
April 3-15/Thursday-Sunday
April 24-26/Thursday-Saturday
May 30/Friday
June 5/Thursday
June 18/Friday

Fall Semester 1969

1969-1970

Registration and Orientation
Classes begin
Holiday (Yom Kippur)
Holiday
Holiday
Semester ends

September 8-11/Monday-Thursday
September 12/Friday
September 22/Monday
November 26-28/Wednesday-Friday
December 22-January 2/Monday-Friday
January 20/Tuesday

Spring Semester 1970

Registration
Classes begin
Holiday
Holiday (Passover)
Open House
Holiday
Semester ends
Commencement

January 29-30 & February 2-3/
Thursday, Friday, Monday, Tuesday
February 4/Wednesday
March 26-April 3/Thursday-Friday
April 21/Tuesday
April 30-May 2/Thursday-Saturday
May 29/Friday
June 4/Thursday
June 12/Friday
AGRICULTURAL AND TECHNICAL COLLEGE
AT FARMINGDALE

College Council

MORTIMER J. GLEESON, Chairman ................................................. Manhasset
CHARLES B. BUCKLEY ................................................................. Baldwin
WILLIS B. CARMAN ................................................................. Farmingdale
SIMON COHEN ................................................................. Lawrence
CYRIL E. FYLES ................................................................. Douglaston
ANTHONY MASTROIANNI ........................................................ Huntington Station
EDWARD REJAUNIER ................................................................. Mill Neck
Administration

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EUGENE O'NEILL, A.B., C.C.N.Y.; M.A., Ed.D., Columbia  Dean of Instruction
JAMES F. NIHAN, A.B., M.A., Los Angeles State; Ed.D., N.Y.U.  Dean, Evening College
BERTHOLD D. WILLENBROCK, B.A., Colgate; M.A., Columbia  Dean of Students
THEODORE A. DEDOWITZ, B.S., Cornell; M.A., Hofstra  Director of Business Affairs
ARTHUR H. MAYBIN, JR., B.A.E., Clemson  College Facilities Planning Coordinator

Office of the President

FRANK ELKINS  Assistant to the President for Public Information
NOEL PALMER, B.A., William Penn; B.S., M.A., Teachers College, Columbia  Assistant to the President for Special Programs
GEORGE F. HAUCK, B.B.A., Adelphi U.  Assistant Facilities Planning Coordinator
JUNIATTA HECHLER  Secretary to the President

Office of the Vice President

CARL SCHILLING, B.A., M.A., Hofstra  Assistant Dean
WILLIAM BYRNE, B.B.A., St. Francis  Data Processing Manager
FREDERICK J. WALSH, A.B., M.S. in Ed., St. John's U.  Registrar
JACK PHILLIPS, A.B., Brooklyn; M.A., N.Y.U.  Director, Audio-Visual Services
RICHARD H. EDEL, B.A., Drew U.; M.A., Columbia  Director, Institutional Research

Office of the Dean of Students

Admissions

CARL H. MITLEHNER, B.A., Harpur; M.S. in Ed., Hofstra  Director of Admissions
EDWARD F. JONES, A.B., Dickinson; M.A., American U.  Associate Director of Admissions
PAULA SHAER, A.A, B.S., Boston U.  Admissions Counselor

Student Affairs

WILLIAM J. REILLY,  A.B., St. Francis; M.A., N.Y.U.; LL.B., St. John's U.  Associate Dean of Students
CARL R. BELLO, B.S., Fordham  Director of Financial Aid
GERARD V. DANZI, B.S., C. W. Post; M.S., New Paltz  Counselor
MICHAEL T. FLEMING,  B.S., Brockport; M.S., U. of Bridgeport; M.S., S.U.N.Y. Albany  Director of Student Union
JOSEPH H. BENEDICT, JR.,
B.S., S.U.N.Y. Brockport; M.S., S.U.N.Y. Albany
Student Activities Counselor

JOHN JORDAN, B.S., M.S., U. of Scranton
Counselor

ROGER S. MORAN, B.S., Texas A&M; M.S., Hofstra
Counselor

BARBARA RING, A.B., Regis College; M.A., St. John's University
Counselor

DENNIS L. PAYETTE, A.B., C.W. Post; M.A., L.I.U.
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WILMA H. SIECINSKI, R.N., Metropolitan School of Nursing, N.Y.C.
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Office of the Dean, Evening College

RONALD A. GERARD, B.B.A., U. of Miami; M.S., C.W. Post
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Business Office and Campus Services

MICHAEL J. MURRAY
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WILLARD VIEMEISTER
Buildings and Grounds

Division Chairmen

ALBERT E. HAAS, B.Ed., Rider M.S., U. of Penn; Prof. Dipl., Columbia
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Chairman, Division of Health and Social Services

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Faculty

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Assistant Professors

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I. EDWARD ALCAMO
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B.S., Iona; M.S., St. John's U.

BENGT ANDERSON
Business Administration
B.B.A., Pace; M.B.A., Columbia

JOYCE BERG
Nursery Education
B.S., M.S., Brooklyn
<table>
<thead>
<tr>
<th>Name</th>
<th>Department</th>
<th>Degree Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Robert C. Blank</td>
<td>Social Science</td>
<td>B.B.A., Pace; M.S., Hofstra; M.A., St. John's U.</td>
</tr>
<tr>
<td>Margaret Breen</td>
<td>English</td>
<td>A.B., St. Joseph's; M.A., Fordham</td>
</tr>
<tr>
<td>Edward Brower</td>
<td>Business Administration</td>
<td>B.S., M.B.A., N.Y.U.</td>
</tr>
<tr>
<td>Alan Brown</td>
<td>Automotive Technology</td>
<td>B.S., M.S., Iowa State</td>
</tr>
<tr>
<td>Stephen Brozak</td>
<td>Social Science</td>
<td>A.B., N.Y.U.; M.A., Fordham</td>
</tr>
<tr>
<td>Sylvia Burns</td>
<td>Nursery Education</td>
<td>A.B., M.A., Queens</td>
</tr>
<tr>
<td>Janaardhan G. Butte</td>
<td>Biological Technology</td>
<td>B.S., M.S., Osmania U., India; Ph.D., Catholic U.</td>
</tr>
<tr>
<td>George Byrd</td>
<td>Automotive Technology</td>
<td>B.S.A., University of Florida</td>
</tr>
<tr>
<td>David H. Conford</td>
<td>English</td>
<td>A.B., Hofstra; M.A., U. of New Mexico</td>
</tr>
<tr>
<td>James Curran</td>
<td>Police Science</td>
<td>B.A., Brooklyn College; M.S.W., Fordham</td>
</tr>
<tr>
<td>Laurie De Courcy</td>
<td>Social Science</td>
<td>B.A., Adelphi; M.A. and M.S., Hofstra</td>
</tr>
<tr>
<td>Peter H. Deland</td>
<td>English</td>
<td>B.S., M.A., Columbia</td>
</tr>
<tr>
<td>Wheeler Dennis</td>
<td>English</td>
<td>A.B., Harvard; M.A., Adelphi U.</td>
</tr>
<tr>
<td>Sophia Ellsworth</td>
<td>Health and Physical Education</td>
<td>B.S., N.Y.U.</td>
</tr>
<tr>
<td>Charles H. Erlanger</td>
<td>Biological Technology</td>
<td>B.S., The Citadel; M.S., St. John's U.</td>
</tr>
<tr>
<td>George O. Estes</td>
<td>Agriculture</td>
<td>B.S., M.S., U. of Maine</td>
</tr>
<tr>
<td>Louis Fanning</td>
<td>Social Science</td>
<td>A.B., U. of Illinois; M.A., C.W. Post</td>
</tr>
<tr>
<td>Roberta Fay</td>
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<td>R.N., Diploma, Carney Hospital School of Nursing; B.S., Columbia; M.S., St. John's U.</td>
</tr>
<tr>
<td>Stanley Feist</td>
<td>Physics</td>
<td>B.S., Brooklyn</td>
</tr>
<tr>
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Nursery Education

Mrs. Bertha Campbell, The University of the State of New York, Bureau of Child Development and Parent Education, The State Education Department, Albany, N.Y.
Mrs. Berta Rafael, 22 Flower Lane, Roslyn Nursery School, Box 134, Roslyn Heights, N.Y.
Mr. Alonzo H. Shockley, Jr., Education Coordinator, Economic Opportunity Commission of Nassau County, 320 Old Country Road, Garden City, N.Y.

Nursing

Eileen Jacobi, Dean, School of Nursing, Adelphi University, Garden City, N.Y.
Eugenie C. Jones, Nursing Services Consultant, Suffolk County Dept. of Health, Riverhead, N.Y.
Sister Mary Jean, C.I.J., Administrator, Mercy Hospital, Rockville Centre, N.Y.
Sister Mary Louise, Director of Nursing, Mercy Hospital, Rockville Centre, N.Y.
Mildred A. Moger, Director of Nursing, Southside Hospital, Bay Shore, N.Y.
Dr. Mildred L. Montag, Professor, Department of Nursing Education, Teachers College, Columbia University, New York, N.Y.
Mary O'Keefe, Educational Director of Nursing, Southside Hospital, Bay Shore, N.Y.
Helena Ure, Chief, Nursing Service for Education, Northport Veterans Hospital, Northport, N.Y.

Ornamental Horticulture

Joseph E. Clark, Lewis and Valentine Nurseries, Inc., Northern Boulevard, Greenvale, N.Y.
Edwin H. Costich, President, Hicks Nurseries Inc., Jericho Tpke., Eastbury, N.Y.
Robert Ench, Director of Garden Center Operations, S. Klein Inc., 20 Montrose Place, Melville, N.Y.
James Manka, Supt., Inwood Country Club, Inwood, N.Y.
Henry S. Mattson, 717 Glen Ride Lane, East Northport, N.Y.
Anthony Micelli, Irene Hayes, Wadley & Smythe, 420 Park Ave. at 55th St., New York, N.Y.
Freeman L. Parr, Parr & Hanson, Inc., 16 Charles St., Hicksville, N.Y.
Donald F. Polli, 1379 Cedar Swamp Road, Brookville, Glen Head, N.Y.
Henry D. Renkie, Jr., 33 Stillwater Ave., Massapequa, N.Y.
Robert A. Russell, J & L Adikes Inc., 182-12 93rd Ave., Jamaica, N.Y.
Andre Viette, Martin Viette Nurseries, North Boulevard, 25A, East Norwich, N.Y.
Wilbur E. Wright, Director of State Parks, Conservation Departments, State Campus, Albany, N.Y.

Photographic Technology

Frank Adrian, Manager, Field Service Stations, Bell & Howell Co., 7100 McCormick Road, Chicago, Ill.
Dr. Eldon E. Bauer, Vice President in charge of Operations, Graflex, Inc., Rochester, N.Y.
Kenneth E. Becker, President, Calumet Manufacturing Co., 6550 N. Clark Street, Chicago, Ill.
James C. Forbes, Manager of Marketing, Photo Lamp Division, General Electric Co., Nela Park, Cleveland, Ohio.
Phillip Hixon, President, Rolor Corporation, 155 Michael Drive, Syosset, L.I., N.Y.
John L. Morgan, Manager, Marketing Division, Photo Products Department E.I. duPont de Nemours & Co., Inc., 1007 Market St., Wilmington, Del.
Herbert Morreall, Director of Technical Services, Photographic & Reproduction Division, General Aniline & Film Corp., 140 West 51st St., New York City, N.Y.
Joseph T. Morris, Executive Vice President, National Association of Photographic Manufacturers, 10 Rockefeller Plaza, New York City, N.Y.
Gordon H. Tubbs, Director, Education Markets Development, Eastman Kodak Company, 343 State St., Rochester, N.Y.
L.O. Wasomen, Training Manager, Pako Corporation, 6300 Olson Memorial Highway, Minneapolis, Minn.
Frank H. Wakeley, Director, Customer Equipment Service Division, Eastman Kodak Company, 343 State Street, Rochester, N.Y.

Police Science

Commissioner John L. Barry, Suffolk County Police Department, Hauppauge, N.Y.
Inspector Theodore F. Donnelly, Suffolk County Police Department, Hauppauge, N.Y.
Jack Finnerty, Deputy Commissioner, Suffolk County Police Department, Hauppauge, N.Y.
Dr. Robert R. J. Gallati, Director, New York State Identification and Intelligence System, Alfred E. Smith Office Building, Albany, N.Y.
Inspector William H. Gardiner, Commanding Officer, Training Command, Suffolk County Police Department, Hauppauge, N.Y.
Dr. Irving Goldaber, 6 Stratford Court, North Bellmore, N.Y.
James R. Ketcham, Deputy Commissioner, Nassau County Police Department, Mineola, N.Y.
Francis B. Looney, Commissioner, Nassau County Police Department, Mineola, N.Y.
Inspector Walter A. Looney, Deputy Chief Inspector, Nassau County Police Department, Mineola, N.Y.
Patrick V. Murphy, Associate Director, Law Enforcement Assistance Act, H.O.L.C. Building, 1st St. and Indiana Ave., Washington, D.C.
John B. Sheehan, Director of Security and Safety, Fairchild Camera and Instrument Corporation, 300 Robbins Lane, Syosset, N.Y.
Walter F. Waring, Chief of Police, Lynbrook, N.Y.
Judge Jack B. Weinstein, 69 Station Rd., Great Neck, N.Y.
Orrell A. York, Executive Director, Municipal Police Training Council, 155 Washington Ave., Albany 10, N.Y.

Recreation Supervision

Maxwell M. Alexander, Executive Director, National Association of Private Camps, 55 West 42nd Street, New York 36, N.Y.
Donald F. Bohnet, District Representative, National Recreation and Park Association, Middle Atlantic District, 319 Pearl Street, Moorestown, N.J.
Dr. Milton A. Gabrielsen, Professor of Education, New York University, School of Education, Department of Physical Education, Health and Recreation, Washington Square, New York, N.Y.
Dr. Jack M. Gootzeit, Director, Bronx Habilitation Center for the Retarded, Association for the Help of Retarded Children, 2280 Wallace Avenue, Bronx, N.Y.

Joseph W. Halper, Superintendent of Recreation, Department of Public Works Recreation, Administration Office, Salisbury Club, East Meadow, N.Y.

Lee E. Koppelman, Executive Director, Nassau-Suffolk Regional Planning Board, Veterans Memorial Highway, Hauppauge, N.Y.

John McGinn, Director of Recreation, Department of Recreation, Union Free School District No. 14, 37 East Rockaway Road, Hewlett, N.Y.

Arthur H. Mittelstaedt, Jr., Planning Associates, Education and Recreation Consultants, 291 Hempstead Avenue, West Hempstead, N.Y.

Ernest M. Swanton, General Manager, DBA—Dobiecki and Beattie, Architects, 664 Suffolk Avenue, Brentwood, N.Y.
General Information

History and Development

The State University of New York Agricultural and Technical College at Farmingdale was Long Island’s first public college, having been founded by the State Legislature in March, 1912.

Throughout its early years the College, then known as the State Institute of Applied Agriculture, offered programs that mirrored the agrarian orientation of the Long Island region.

As technological advances were made, and as industries began migrating to the Island, the complexion of educational offerings at the College shifted in order to meet local employment demands. By 1946, Farmingdale’s programs included agriculture and a broad range of engineering technologies. In 1948, the College became a unit of the then newly-formed State University of New York.

Since then the College has experienced considerable growth, both academically and physically, and today stands as the largest two-year college in the State specializing in technical education.

Its numerous curriculums reflect the variety of technical specialities represented by the Island’s business, industrial, and social communities and are in keeping with its philosophy of providing meaningful education for responsible careers.
This catalog is up-to-date as of the time of printing. The College reserves the right to make changes in policy and regulations, as circumstances dictate, subsequent to publication. The College expects each student to have knowledge of the information presented in this catalog and in other College publications.

**College Objectives**

The College is authorized to offer two-year programs of study beyond the high school level which will qualify students for direct placement in various technical and related fields. Subject to this authorization, the College subscribes to the following objectives:

1. **To aid the student in developing abilities and competence in his technical field.** To accomplish this end each curriculum offers sound theoretical instruction along with actual experience in practical phases of the work. In addition, the College endeavors to induce its students to develop attitudes and ethics which make for optimum on-the-job relationships in each occupation.

2. Since there is more to living a life than earning a living, the College endeavors to **assist each student in developing his potentialities so as to live a happy, healthy, responsible, and productive life.** Thus the College provides opportunities for students to learn to think clearly; to communicate effectively; to understand and appreciate their cultural and intellectual heritages; to be responsible members of families, of local communities, of national and world societies, and of any other groups of which they are part.

3. **To serve business, industries, professions and units of government** by providing competent personnel in technical and related fields. The College faculty keeps abreast of the changing needs in our technological society by continuing educational experiences among which are professional improvement through graduate study, meetings with other professional groups, visits to business enterprises, consultations with advisory groups, and periodic surveys of our graduates.

4. **To serve society** by stimulating students to develop their respective capacities for participating in and contributing to the democratic way of life; by making them mindful of the fact that all future generations are dependent upon the world's natural resources that are now entrusted to our common stewardship; by encouraging them to exercise restraint, consideration, and justice in individual and group relations with their fellow men throughout the world; and by helping them to understand that only by making a contribution to the future can a person or a generation pay its debt to the past.
The Curriculum

The College offers two-year day programs for high school graduates who wish to prepare for careers in engineering technologies, business, health services, recreation supervision, community services, police science, agriculture, and ornamental horticulture. Typical employment opportunities are suggested in the curriculum descriptions in a later section of this catalog. The curriculum in Engineering Science prepares for future study at a college of engineering with full transfer credit.

All curriculums are two academic years in length. Each academic year consists of two semesters. Courses in English, social science and either mathematics or the natural sciences or both are required for all students. During the second year advanced courses provide for concentration on underlying theory and applied science appropriate to the field of specialization, reinforced by suitable laboratory experiences.

The College reserves the right to cancel any course or curriculum option where enrollment does not warrant the offering of the course or option.

Library

The Mary K. Peters Memorial Library, a two-floor wing of Whitman Hall includes such features as a reference room, a listening room, microfilm viewing facilities, conference room, and offices and workrooms.

Presently the Library has approximately 83,000 volumes on a wide range of subjects. Over 950 periodical titles are received annually, along with bulletins, circulars, and government publications in many academic, agricultural, and technical fields.

Registration and Accreditation

All curriculums have been registered by the State Education Department of the University of New York and are approved for the purpose of awarding the degree of Associate in Applied Science (A.A.S.). The Associate in Science degree (A.S.) is awarded to graduates of the Engineering Science curriculum.

The Middle States Association of Colleges and Secondary Schools has granted accreditation to the State University of New York as an entity, and this accredited status applies also to the State University Agricultural and Technical College at Farmingdale.

The College is approved by the Veterans Administration for the training of veterans under the Veterans' Readjustment Benefits Act of 1966, in addition to veterans and eligible dependents of deceased veterans attending under the Korean Bill and War Orphans Education Assistance Act.

The Dental Hygiene curriculum is accredited by the American Dental Association.
The Nursing curriculum is accredited by the National League for Nursing.
The Aircraft Operations Technology curriculum is approved by the Federal Aviation Agency to provide Basic and Advanced Ground School for Private and Commercial Pilots.
The Engineers' Council for Professional Development has accredited curriculums in Air Conditioning Technology, Chemical Technology, Civil Technology—Highway, Construction Technology—Building, Electrical Technology—Electronics, and Mechanical Technology.

Veterans
The College is approved by the Veterans Administration for the training of veterans under the Serviceman's Readjustment Benefits Act of 1966, in addition to veterans, and eligible dependents of deceased veterans, attending under the Korean Bill and War Orphans Education Assistance Act. Under these laws eligible students are required to pay their own tuition and fees. They, in turn, receive financial benefits directly from the Veterans Administration. Upon receipt of the Certificate of Eligibility from the Veterans Administration, the student should present said certificate to the Student Personnel Office for completion.

Evening College
The Evening College provides degree and certificate programs as well as individual courses designed to meet the part-time educational needs of the Long Island Community.
Programs are planned to develop technical competence for those already employed as well as those who wish to prepare for or to change employment. The Evening College cooperates with business, industrial, union, community, and professional groups in organizing and conducting short courses, seminars, and special educational programs to meet their needs.

Summer Sessions
The Evening College is responsible for the Summer Sessions which include two five-week sessions and one ten-week session with courses offered both morning and evening.
Summer Sessions offer an opportunity for students to improve their readiness for college through college preparatory courses in science, mathematics and English. In addition, many college level courses are offered, which permit students to take advanced work or to rectify previous college deficiencies.

The Campus
The College campus of some 380 acres is situated one and one-half miles north of the village of Farmingdale, on Melville Road. It is just off Route 110, about midway between the Southern State Parkway and the Long Island Expressway and Northern State Parkway.
Field Trips

The location of the College affords many opportunities for field trips to supplement classroom and laboratory instruction. Field trips enlarge and crystallize on-campus educational values; they are an integral part of the training.

Faculty-Student Association

The Faculty-Student Association is a non-profit corporation formed to promote and cultivate educational and social relations among the students and faculty of the State University at Farmingdale. Any reserve funds which are received from its operations must be used to promote all-college educational purposes. The Association takes a responsibility for supervision of the College Bookstore and all assessments voluntarily levied by the students on themselves.

Entrance Requirements and Related Information

Admissions to this College and to all other colleges of the State University of New York are based on the academic qualifications of the respective applicants, and are made without regard to the race, color, creed, or national origin of individuals.

1. Applicants must be graduates of approved four year high schools, or hold a high school equivalency diploma.

2. Applicants must be of good character.

3. Applicants must submit evidence of satisfactory health in advance of registration.

4. Applicants must have completed satisfactorily at least 16 units of high school credit, which should include the following specific curriculum requirements:
Advertising Art and Design
Art 2 units

Agriculture, Food Technology, and Ornamental Horticulture
Mathematics 2 units (Algebra and Geometry)
Science 2 units (Biology and Chemistry recommended)

Biological Technology
Mathematics 2 1/2 units (Including Intermediate Algebra)
Science 2 units (Biology required—Chemistry recommended)

Business Administration
Mathematics 2 units (Algebra and Geometry)

Chemical Technology
Mathematics 2 1/2 units (Including Intermediate Algebra)
Physics 1 unit
Chemistry 1 unit

Community Service Assistant
Mathematics 1 unit (Elementary Algebra)
Science 2 units (Biology recommended)

Correctional Administration
Mathematics 2 units (Elementary Algebra)
Science 2 units

Data Processing
Mathematics 2 units (Algebra and Geometry)

Dental Hygiene
Science 2 units (Biology and Chemistry)

Engineering Science
Mathematics 3 1/2 units (Including Advanced Algebra)
Physics 1 unit

Engineering Technologies* and Aircraft Operations Technology
Mathematics 2 1/2 units (Including Intermediate Algebra)
Physics 1 unit

* Includes: Air Conditioning, Automotive, Civil, Construction, Electrical, Mechanical and Photographic.
Graphic Arts and Advertising Technology

Art 2 units
Mathematics 1 unit (Elementary Algebra)

Medical Laboratory Technology

Mathematics 2 units (Algebra and Geometry)
Science 2 units (Biology required—Chemistry recommended)

Nursery Education

Mathematics 1 unit (Elementary Algebra)
Science 2 units (Biology recommended)

Nursing

Mathematics 1 unit (Elementary Algebra)
Science 2 units (Biology and Chemistry)

Police Science

Mathematics 2 units (Elementary Algebra)
Science 2 units

Recreation Supervision

Mathematics 2 units (Including Elementary Algebra)
Science 2 units (Biology recommended)

Secretarial Science—Advertising, Legal

Mathematics 1 unit (Elementary Algebra)

Secretarial Science—Industrial

Mathematics 2 units (Algebra and Geometry)

Secretarial Science—Medical

Mathematics 1 unit (Elementary Algebra)
Science 2 units (Biology and Chemistry recommended)

5. Special requirements for:
Advertising Art and Design. Tests in art aptitude and ability will be given to all candidates. Student portfolios will be reviewed.

6. Applicants are required to take the New York State Regents Scholarship Examination or the State University Admissions Examination. The Regents Scholarship Examination is given in all New York State high schools each year,
usually in October. Applicants should apply for this examination through their high school. Students who do not take the Regents Scholarship Examination must take the State University Admissions Examination which will be offered on the campuses of State University units at various times throughout the year. Information concerning the State University Admissions Examination is included with the application forms.

Out of state applicants and members of the Armed Forces may submit the College Board Scholastic Aptitude Tests in lieu of the Regents Scholarship or State University Admissions examinations. For further information and application materials for the Scholastic Aptitude Tests write to either: (1) College Entrance Examination Board, Box 592, Princeton, New Jersey 08540; or (2) College Entrance Examination Board, Box 1025 Berkeley, California 94701.

Although test results are considered in selecting students, they are used mainly for guidance purposes. Additional tests may be required. Academic weaknesses are scrutinized, and remedial programs are recommended or required where necessary.

7. Applicants with a subject deficiency will be required to correct the deficiency prior to registration.

8. Applicants may be requested for a personal interview.

9. Scholastic record, extra-curricular activities, out-of-school experiences, health, physical ability, test results, and personal interview may all be considered in evaluating an applicant's preparation for college. From this information the candidate's acceptability is ultimately determined.

Application for Admission

Persons desiring to file an application should write to the Director of Admissions, State University Agricultural and Technical College, Farmingdale, New York 11735 for an application form. Each application is sent to Albany accompanied by a check or money order for $5.00. This application fee will not be refunded if the student withdraws his application or if his application is not acted upon favorably.

Admission and Registration

First semester students in all curriculums are admitted only in the fall semester.

Registration is required before a student may attend classes. This involves the payment of all charges as outlined in the section on Expenses. Students registering late or reporting late for the work of any semester are accountable for absences incurred thereby and are required to pay a minimum penalty fee of $5.00. Permission to register late may be granted for sufficient reason if the writ-
ten request is received and approved by the Director of Admissions in advance of the actual registration date.

**Procedure for Applicants from Countries Other than the United States**

1. Submit request for application material.
   a. State clearly the number of years completed in elementary and secondary school, and college or university study.
   b. Determine the specific field of study.
   c. Review educational qualifications. Applicants must have completed successfully the equivalent of twelve years of United States elementary and secondary school study.

2. After receiving a State University Application for Admission:
   a. Submit completed application at least six months before the beginning of the semester in which you wish to enter the College.
   b. Accompany application with photostatic copy and translated copy of school records which clearly indicates highest level of study completed. Copy must be attested as true.
   c. Submit substantiation of knowledge of the English language. It is strongly recommended that each applicant sit for TOEFL (Test of English as a Foreign Language), administered by the Educational Testing Service, and have test results forwarded to the College.
   d. Submit a certified statement describing the manner in which expenses for travel and study will be paid.

**Admission to Advanced Standing**

All applicants who have attended other colleges must meet curriculum entrance requirements and must submit transcripts of their previous college records and indication of honorable dismissal. Students who wish to transfer college credits must submit an official transcript from the college attended to the Director of Admissions at Farmingdale and follow the regular admissions procedure.

Transfer credit will usually be granted for course work at accredited colleges that was completed with a grade C or better, provided the subject matter was substantially equivalent to that offered at Farmingdale. Achievement points will not be credited. To be eligible for the Associate Degree, transfer students must earn at least the equivalent of one year's credits in residence at the College.

Credits may be granted for appropriate courses completed at non-accredited institutions upon successful completion of an examination constructed and
administered by the College. The limit of such credit by examination will be
nine credits. A fee of $10.00 shall be assessed for each examination.

Exemptions from certain courses may be granted for subjects taken at non-
accredited institutions that are comparable in content to required courses. In
these cases, credit will not be granted and the student will be required to com-
plete a number of credits equal to those given in the course which was granted in
exemption.

Credit will not be granted for courses completed at any institution more than
ten years prior to application to the degree program.

Students seeking a second associate degree shall be governed by the above
requirements for transfer credits.

This College is participating in the College Proficiency Examination Program
offered by the New York State Education Department. A student may obtain col-
lege credit by examination under this program. Information about the subjects
covered and their applicability to the programs at this College can be obtained
by writing to the Dean of Instruction, or to the State Education Department,
College Proficiency Examination Program, Albany, New York 12201.

Before visiting the College it is strongly urged that the prospective applicant
and his parents review the catalog and supplementary information which are
available through the Guidance Office at the high school or from the Office of
Admissions at the College.

“Open House,” held annually in the Spring, provides an additional opportu-
nity to inspect the campus. The public is cordially invited.

**Visiting the College**

The college encourages interested people to visit the campus. Stud-
ents who are considering enrollment at Farmingdale will find this an excellent
opportunity to learn more about the courses of study. The Office of Admission on
the first floor in the Administration Building is open throughout the year. Coun-
selors are available for interviews Monday through Friday from 9:00 A.M. to 4:30
P.M. It is advisable to schedule an appointment in advance of the visit.
Finances

Tuition

The State University Board of Trustees has established a policy of uniform tuition charges. Residents of New York State are assessed a tuition of $400.00 a year. Non-residents of New York State are assessed $600.00 a year. Part-time students are assessed a charge of $13.50 for each credit hour.

A student considering admission to college should begin assessing the source of his funds before registration. A student should be prepared to pay the tuition, fees, and other charges, including books and equipment, for the first semester. Special arrangements cannot be made to postpone payment of tuition and fees.

Tuition Awards: The New York State “Scholar Incentive Award Program” provides scholarships which apply towards tuition costs. Every resident of New York State is eligible to submit an application. For further details read the paragraph on Scholar Incentive Awards under the heading of “Financial Aid” in this catalog.

Tuition Payment: Payments for tuition, fees, room, board and similar charges are made at the beginning of each semester. In other words, the $400.00 tuition charge is paid in $200.00 installments each semester. Fees, room, and board are paid on the same basis.

Fees

All fees, tuition, and other charges are subject to change without prior notice.

<table>
<thead>
<tr>
<th>Fee</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>College Fee*</td>
<td>$12.50 per semester</td>
</tr>
<tr>
<td>Student Activity Fee**</td>
<td>$22.50 per semester</td>
</tr>
<tr>
<td>Insurance: (a) Men (b) Women</td>
<td>$15.00 per calendar year</td>
</tr>
<tr>
<td>Graduation Fee</td>
<td>$15.00 per calendar year</td>
</tr>
<tr>
<td>Residence Halls Services    (Residents only)</td>
<td>$12.50 paid 4th semester</td>
</tr>
<tr>
<td>Room Charges (Depending on residence assigned)</td>
<td>$13.00 per semester</td>
</tr>
<tr>
<td>Board</td>
<td>$135.00-172.50 per semester</td>
</tr>
<tr>
<td>Five-Day Plan (15 meals/week)</td>
<td>$220.00 per semester</td>
</tr>
<tr>
<td>Seven-Day Plan (21 meals/week)</td>
<td>$290.00 per semester</td>
</tr>
<tr>
<td>Student Nursing Fee</td>
<td>$20.00 per academic year</td>
</tr>
</tbody>
</table>

* Part-time students pay $0.85 per credit per semester.
** Part-time students pay $5.00 for 1 to 3 credits taken; $10.00 for 4 to 7 credits; $15.00 for 8 to 11 credits—per semester.
Fees and Charges Explained

The College Fee is required of all students by State University. It includes the cost of general laboratory materials and supplies.

The Student Activity Fee supports student activities; includes admission to all home athletic contests, a subscription to the Rambler, the student newspaper, and a copy of the Islander, the student yearbook. Lifetime membership in the Alumni Association for graduates of the College is covered by part of this fee.

Insurance. An accident insurance policy covering most medical payments resulting from accidents is maintained for the welfare of the students.

The Graduation Fee is required of all seniors, payable before the beginning of the Fourth Semester, to defray in part the cost of renting caps and gowns, the diploma, and the commencement expenses.

The Residence Halls Services Fee covers the cost of renting linen lockers, laundering, and distributing bed linens, and all other residence halls services. This fee also provides the funds for the Student Inter-Dormitory Council budget.

Room Charges cover the cost of a room on a seven-day a week basis, two students to a room. All pertinent information on the subject is provided in the “Manual for Resident Students.”

Board Charges cover meals five days or seven days a week depending on option selected. Refunds are prorated on the semester, but require two weeks notice in writing.

All students engaged in the Physical Education Program must purchase regulation shirts, shorts, and gym shoes during the first week of attendance.

Dental Hygiene, Nursing, and Nursery Education students will be required to obtain clinical experience arranged by the College in local schools, hospitals, and industrial plants. Arrangement for and expense of transportation to clinical facilities off campus will be the responsibility of each student.

Advance Deposits

A non-refundable advance tuition deposit of $50.00 is required according to instructions conveyed in the student’s Certification of Admission. This advance deposit is applicable toward fees and charges due at registration. This tuition deposit is not refundable after the 30th of April preceding the admission date for which the student was accepted, unless, in the opinion of the President of the College, conditions beyond the control of the student warrant the refund.

A room application fee of $25.00 is required of any student who wishes to apply for a room on campus. Refunds are granted if written notice is received at least sixty days before registration when accommodations are available. The application fee is due at the time the student submits his housing application.
Students dismissed from the Residence Halls as a result of disciplinary action are not entitled to any refund of room and board charges.

**Effect of Withdrawals on Refunds**

A student who has been given permission to withdraw after instruction has begun, may, at his option, be granted either a transfer fee credit within the State University system, or a refund of a portion of his tuition and fees. The Student Activity Fee will not be refunded. No refunds will be made until a student has completed the formal withdrawal procedures.

**Total Estimated Cost**

Estimated cost for students who commute will range from $1,050.00 to $1,200.00 for one Academic Year (two semesters) for resident students, from $1,600.00 to $1,735.00.

Estimated expenses per academic year are computed as follows:

<table>
<thead>
<tr>
<th></th>
<th>Residents</th>
<th>Commuters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuition</td>
<td>$400.00</td>
<td>$400.00</td>
</tr>
<tr>
<td>Fees</td>
<td>130.00</td>
<td>100.00</td>
</tr>
<tr>
<td>Room</td>
<td>$270.00 or 345.00</td>
<td></td>
</tr>
<tr>
<td>Board</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Five-Day Plan</td>
<td>440.00</td>
<td></td>
</tr>
<tr>
<td>Seven-Day Plan</td>
<td>580.00</td>
<td></td>
</tr>
<tr>
<td>Books</td>
<td>$150.00 to 200.00</td>
<td>$150.00 to 200.00</td>
</tr>
<tr>
<td>Travel</td>
<td>90.00</td>
<td>200.00</td>
</tr>
<tr>
<td>Personal Expenses</td>
<td>$200.00 to 250.00</td>
<td>$200.00 to 250.00</td>
</tr>
</tbody>
</table>

**Financial Aid**

The College participates in the College Scholarship Service (CSS) of the College Entrance Examination Board. Entering students seeking financial assistance are required to submit a copy of the Parents' Confidential Statement (PCS) form to the College Scholarship Service, designating State University Agricultural and Technical College at Farmingdale as recipient. The Parents' Confidential Statement (PCS) form may be obtained from a secondary school or the College Scholarship Service, P.O. Box 176, Princeton, New Jersey 08540.

**Call to Military Service**

If either the date of a student's actual induction into active military service, or the reporting date of a reservist's recall to active military service occurs
during an academic semester, the student will be entitled to a full refund of all fees and charges for that semester. This is subject to the following exception:
If the student, as of the date of entry into active military service, will have had opportunity to attend 75% of the class sessions, the instructor may make provision for special work or testing which will make possible achievement of credit for a semester’s work in the course. No refunds, of course, will be available to a student who has earned credit for the semester’s work.

Scholarships, Loans, and Part-time Employment

State Scholarships

The scholarships provided by the State of New York are:

Scholar Incentive Award. Most New York State residents qualify for this award.

Regents College Scholarship. This scholarship is based on the results of the Regents Scholarship Examination.

State Scholarships for Children of Deceased or Disabled Veterans. This scholarship is obtained in the same manner as the Regents College Scholarship, except that the amount of the award may differ.

The State University Scholarship Award. This program provides that an enrolled student whose New York State net taxable family income is $1,800.00 or less shall be awarded an amount equal to the tuition charge for the year. This award applies even if the student has not met the requirements for the Scholar Incentive Award Program.

Vocational Rehabilitation. The State of New York provides assistance for handicapped students through the Division of Vocational Rehabilitation. While all handicapped students do not qualify, many are eligible. The local units of the Division of Vocational Rehabilitation should be consulted for further information.

Note: Applications and specific information regarding State Scholarships may be obtained by writing to: The University of the State of New York, State Education Department, Regents Examination and Scholarship Center, Albany, New York 12224.

Federal Scholarships

The Federal Government offers Economic Opportunity Grants ranging from $200.00 to $800.00 a year to students who meet specific requirements. These scholarships are offered under the provisions of Title IV of the Higher Education Act of November 8, 1965. The scholarships will be awarded on the basis of academic promise and exceptional financial need.
Information concerning Opportunity Grants will be provided upon request by the Director of Financial Aid of the College.

Veterans may attend the State University under the benefits of Public Law 894 (disability), P.L. 550 (Korean War), or any additional benefits approved by the Congress of the United States. Under these laws eligible students are required to pay their own tuition and fees. They, in turn, receive financial benefits directly from the Veterans Administration. Upon receipt of the Certificate of Eligibility from the Veterans Administration, the student should present said certificate to the Student Personnel Office for completion.

**College Scholarships**

Scholarships have been made available to the College through the generosity of interested individuals, associations, and groups. The scholarships are awarded to students who have been in attendance at the College. Awards are based on academic achievement and other special criteria. These scholarships will be awarded through the academic departments of Nursing, Dental Hygiene, Mechanical Technology, Secretarial Science, Food Processing Technology, Ornamental Horticulture, and Biological Technology.

<table>
<thead>
<tr>
<th>Scholarship Fund/Memorandum</th>
<th>Amount</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Murcott Scholarship Fund</td>
<td>Varies</td>
<td>Preference given to Suffolk County residents in Nursing or Mechanical Technology.</td>
</tr>
<tr>
<td>Women's Auxiliary to the Nassau County Medical Society</td>
<td>Varies</td>
<td>Scholarship for 1 year to student in either Nursing or Dental Hygiene, based on academic achievement and financial need.</td>
</tr>
<tr>
<td>The Long Island Chapter 88 of the American Society of Tool and Manufacturing Engineers</td>
<td>$250.00</td>
<td>Two scholarships of $125.00 each to Mechanical Technology Students</td>
</tr>
<tr>
<td>Junior American Dental Hygienists Association Scholarship</td>
<td>150.00</td>
<td></td>
</tr>
<tr>
<td>Nassau County Dental Auxiliary Society</td>
<td>150.00</td>
<td>Scholarship for 2-year student</td>
</tr>
<tr>
<td>Suffolk County Dental Auxiliary Society</td>
<td>150.00</td>
<td>Scholarship for 2-year student</td>
</tr>
<tr>
<td>Long Island Chapter, National Secretaries Association (International)</td>
<td>800.00</td>
<td>Awarded to a Nassau County Resident, based on entrance credentials</td>
</tr>
</tbody>
</table>

**Food Processing Technology Scholarships:**

<table>
<thead>
<tr>
<th>Scholarship</th>
<th>Amount</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eastern Frosted Foods Association, N.Y., N.Y.</td>
<td>$1,000.00</td>
<td>(Five scholarships of $200.00 each)</td>
</tr>
<tr>
<td>Armstrong Dairy, Locust Valley, N.Y.</td>
<td>200.00</td>
<td></td>
</tr>
<tr>
<td>National Prepared Frozen Foods Association, N.Y., N.Y.</td>
<td>200.00</td>
<td>(Two scholarships of $100.00 each to students interested in precooked foods)</td>
</tr>
<tr>
<td>Carvel, Inc., Yonkers, N.Y.</td>
<td>400.00</td>
<td>(Four scholarships of $100.00 each)</td>
</tr>
<tr>
<td>Oak Tree Farms Dairy, Inc., East Northport, N.Y.</td>
<td>100.00</td>
<td></td>
</tr>
<tr>
<td>Charles H. Dahl, Jr., Sweet Clover Dairy, N.Y.</td>
<td>200.00</td>
<td></td>
</tr>
<tr>
<td>Howard Boener and Co., Great Neck, N.Y.</td>
<td>200.00</td>
<td></td>
</tr>
<tr>
<td>Dairy Barn Stores, East Northport, N.Y.</td>
<td>100.00</td>
<td></td>
</tr>
<tr>
<td>Allan Cohen, Protein Derivatives, Inc., East Farmingdale, N.Y.</td>
<td>200.00</td>
<td>(Two $100.00 scholarships)</td>
</tr>
</tbody>
</table>

**Ornamental Horticulture Scholarships**

<table>
<thead>
<tr>
<th>Scholarship</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Julia T. Emerson Scholarship</td>
<td>200.00</td>
</tr>
</tbody>
</table>
Beatrice Morgan Goodrich Scholarship ........................................ 200.00
(Each awarded to a woman in Ornamental Horticulture by the New York State
Division of Women's National Farm and Garden Association)
Hillside Park Oaks Garden Club Scholarship ............................ 200.00
North Shore Horticultural Society Scholarship ......................... 300.00
The North Country Garden Club of Long Island ...................... 450.00
Long Island Horticultural Foundation ................................. 300.00
Matinecock Garden Club Award ........................................... 500.00
Laura P. Vogler Scholarship ............................................... 100.00
Douglas Garden Club Scholarship .................................... 50.00
Woman's Club of Great Neck Award ................................... 60.00
Metropolitan Cemetery Association Scholarship ...................... 450.00
Brookville Garden Club ............................................. 100.00
New York State Arborists Association ................................. 200.00
South Bay Garden Club .............................................. 100.00
Federated Garden Clubs of New York State, 2nd District ........... 175.00

Biological Science Scholarships:
J. and L. Adikes Gro-Well Scholarship ................................... 200.00
Halco Chemical Company Scholarship .................................. 100.00
North Shore African Violet Society Award ............................ 50.00

The awards of the following scholarships vary from year to year:
Assn. of Cemetery Officials
Comm. of Dist. of Scholastic Magazines
Parents Assn. of Amityville
L.I. Chrysanthemum Society
Henry Hicks Garden Club of the Westburys
Republic Assistance Fund, Inc.
Josephine Chang Nursing Faculty Service Award

The Alumni Association Scholarship Fund
The Alumni Association offers scholarships through two foundations:

The Sy Wolf Scholarship was founded in recognition of the efforts of Mr. Sy
Wolf, a friend of the College, whose assistance towards students and alumni has
earned him the appreciation of the Alumni Association.

This Scholarship Fund provides a limited number of awards to students who
are in good academic standing and have a financial need. Awards range from
$100.00 to $500.00 depending upon the student's level of achievement or degree
of need. Since the New York State Scholarships may be used for tuition, the Sy
Wolf Scholarship is designed to meet other college expenses.

The Alumni Association General Scholarship also provides a limited number
of scholarships to students who are in good academic standing and demonstrate
financial need. This Scholarship is intended for students who demonstrate partic-
ular leadership, or athletic ability. Awards will vary, but may not exceed $750.00
for a year. Alumni Association Scholarship awards are usually applied towards
the payment of room, board, and fees in the case of resident students. Commut-
ing students generally receive cash awards.

Murcott Scholarship Fund
The Murcott Scholarship Fund has been established through the
endowment of Mrs. Charles Murcott and Mr. Charles Murcott, President of
Lumex, Inc., of Bay Shore, New York. The amounts will be determined by the financial need and the number of applicants. Preference is given to residents of Suffolk County matriculating for the Associate in Applied Science degree in Nursing or Mechanical Technology.

Part-Time Employment

There are two separate part-time employment programs operated by the College. They are referred to as the College Work-Study Program and the Campus Work-Study Program.

The Campus Work-Study Program is intended for students who wish to earn supplementary funds for college or related expenses. There is no "need" requirement to be eligible for on-campus or off-campus part-time work opportunities in this program. Employment on campus includes working in the College cafeteria, distributing student mail, serving as bookstore clerks, and assisting in the library, laboratories, and shops. Part-time employment is also available in communities adjacent to the College. In rare cases are students so employed able to earn as much as half of their maintenance. It is the philosophy of the College that the student's time during attendance at the College is too valuable to give more attention than is absolutely necessary to outside employment.

Students interested in the Campus Work-Study Program may obtain further information from the Office of the Director of Placement.

The College Work-Study Program is a program intended for students who need part-time work to meet some expenses. Eligibility is based on family income and financial need. Applicants must be full-time, matriculated students in good academic standing. Most positions are on-campus. Under this program, a student may work a maximum of fifteen (15) hours in any week that classes are in session, and a maximum of forty (40) hours during a scheduled vacation period. A student accepted for fall admission may work during the preceding summer. Students may continue their employment in this program as long as they meet the eligibility requirements.

In addition to the College Work-Study Program, many other on-and off-campus employment opportunities exist for full-time students. Students interested in employment possibilities should contact the Director of Placement.

Student Loans

The college participates in three major loan programs: The New York State Higher Education Assistance Corporation (NYHEAC), the National Defense Student Loan (NDSL), and the Nurses Training Loan (NTL). These programs allow students to borrow money to meet college expenses. No payment
is due on these loans nor does interest accrue while the student is in college. Payment on a low interest rate basis begins after graduation.

For further information write to the Director of Financial Aid, State University Agricultural and Technical College at Farmingdale, Melville Road, Farmingdale, New York 11735.

**Faculty Student Loans**

Short-term emergency loans are available to students. These loans are available for a period of thirty (30) days. Students may borrow up to $100.00 for a valid reason and repayment must be made within thirty (30) days.

**Academic Information**

**Grades and Achievement Points**

The following is the official College grading system:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Interpretation</th>
<th>Achievement Points per Credit Hour</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Excellent</td>
<td>4</td>
</tr>
<tr>
<td>B</td>
<td>Good</td>
<td>3</td>
</tr>
<tr>
<td>C</td>
<td>Satisfactory</td>
<td>2</td>
</tr>
<tr>
<td>D</td>
<td>Minimum Passing</td>
<td>1</td>
</tr>
<tr>
<td>F</td>
<td>Failure</td>
<td>0</td>
</tr>
<tr>
<td>I</td>
<td>Incomplete</td>
<td></td>
</tr>
<tr>
<td>W</td>
<td>Withdrawn</td>
<td></td>
</tr>
<tr>
<td>X</td>
<td>Withdrawn Passing</td>
<td></td>
</tr>
<tr>
<td>Y</td>
<td>Withdrawn Failing</td>
<td></td>
</tr>
</tbody>
</table>

In computing averages for all students, only grades earned at the College are considered. A student must maintain a 2.0% average in order to remain in good standing scholastically and to qualify for graduation. If at the end of any semester a student is deficient in achievement points, he may be placed or considered for dismissal, depending on the extent of the deficiency. A student on recommendation of the Department Chairman may be required to carry a reduced schedule.

The following table serves as a guide for determining academic status:

<table>
<thead>
<tr>
<th>Semester</th>
<th>Academic Probation</th>
<th>Academic Dismissal</th>
</tr>
</thead>
<tbody>
<tr>
<td>First</td>
<td>Below 1.5</td>
<td>Below 1.1</td>
</tr>
<tr>
<td>Second</td>
<td>Below 1.7</td>
<td>Below 1.4</td>
</tr>
<tr>
<td>Third</td>
<td>Below 1.9</td>
<td>Below 1.7</td>
</tr>
</tbody>
</table>
Any student with an achievement point average of less than 2.0 is considered to be academically deficient. The College reserves the right to dismiss at any time any student whose academic standing, conduct, or attendance upon classes is unsatisfactory.

Nursing and Dental Hygiene: a grade of C or above must be maintained in all clinic and clinically related courses. A failure in a clinically related area constitutes a withdrawal from the curriculum. All prerequisites for these courses, as listed in the catalog, require a grade of C or above.

**Computation of Achievement Points and Averages**

To determine the achievement point average, multiply the achievement point value of each grade by the credits designated for each subject, then divide the total achievement points by the number of credits carried.

**The Dean's List**

The Dean's List is composed of all students who have an average of 3.00 or better, with the exception of those who have failures, incompletes, “D” grades or "Y" grades, or have carried less than twelve semester credits. The Dean's List is determined at the end of each semester and is entered on the student's permanent record.

**A Grade of Incomplete**

The grade “Incomplete” or “I” is reported when, for some reason beyond his control, the student misses the final examination or a portion of the required work of the course. No grade points are awarded for an incomplete, but credit hours in the course are counted as “hours carried” in determining the achievement point average. All incomplete grades must be removed within 30 days after the end of the semester. After that, they automatically become failures, unless the Dean of Students permits an extension of this period for good cause. Request for extension must be in writing.

**Failing Grades and Repeating of Courses**

To qualify for graduation, a student must successfully complete all course requirements for his curriculum. Therefore, a failure must be repeated, although in special cases an equivalent course may be permitted.

A student is advised to consult with the Student Personnel Office and with his Department Chairman when repeat of a failed course is contemplated.

Formal approval from the Dean of Instruction must be obtained if a student
wants to take a course at another college. In that case, credits, but not achievement points, will be applicable toward the degree.

If a student repeats a course in either the Day or Evening branches of this College, achievement points and credits will be applicable toward the degree.

A student must have approval of his Department Chairman if he wishes to repeat a course in order to raise a grade. The most recent grade in the course becomes his official grade for the course, including withdrawal grade.

**W, X, and Y Grades**

W-Withdrawal from a course with permission of the Dean of Students before evaluation of progress is possible. A grade of “W” must be approved by the Dean of Students at the time of the student's withdrawal.

X-Withdrawal from a course with permission of the Department Chairman and the Dean of Students while doing passing work.

Y-Withdrawal from a course with permission of the Department Chairman and the Dean of Students while doing failing work. (The final grade of “Y” will be treated as an “F” in determining the cumulative average.)

Students withdrawing from a course without permission will be carried on class rolls. (See Withdrawal from a Course.)

**Permission to Carry Extra Courses**

Any student who wishes to carry more than the prescribed number of credits scheduled for his curriculum during any one semester, must receive written approval from his Department Chairman and the Dean of Students. To obtain approval to carry extra courses, a student must have demonstrated his ability to achieve better than minimal (2.0) average work with no failing grade in the previous semester.

A student desiring to take courses at another college must consult with the Dean of Instruction before registering for these courses.

**Course Auditing**

Full-time students currently enrolled at State University Agricultural and Technical College at Farmingdale who wish to audit a course must secure permission to do so from the office of the Dean of Instruction.

**Requirements for Graduation**

1. Recommendation of the Faculty.
2. Satisfactory completion of the minimum number of credits required by the specific curriculum.
3. The earning of a 2.00 achievement point average.
4. Evidence of good character and moral worth.
5. Payment of all financial obligations.
6. Attendance at Official Convocations.

The College reserves the right to cancel any course or curriculum option where enrollment does not warrant the offering of the course or option.

**Procedures for Degree Candidates**

1. Application for the Associate degree must be completed and filed with the Dean of Students no later than one month after beginning of semester in which degree requirements will be met. Applications for the degree are available from Department Chairmen.
2. The Graduation Fee is payable at registration for the fourth semester.
3. Candidates for degrees must comply, before end of third semester, with requests from the placement office for faculty recommendations.
4. Attendance at the June Commencement ceremony is expected of all students who have met the requirements of the degree. Those unable to participate must inform the Dean of Students in writing.

**Transfer to Other Colleges**

The College course of study is specifically designed to achieve College objectives. Except for Engineering Science, the curriculum program is not presented as the first two years of a conventional four-year program. The pattern and content which is most effective in technical education does not necessarily conform to traditional first and second year college work. Nevertheless, many four-year institutions grant advanced standing credit to graduates of the College. Credit is usually granted only for courses which are similar in content and scope to the program of the admitting institution and is granted solely at the option of that institution. Applicants for transfer are, of course, expected to have maintained high standards of academic achievement.

The curriculum in Engineering Science is designed specifically to prepare the successful student for further study at a college of engineering with full transfer credit. Information on this program is detailed in another section of this catalog.

**Transcripts**

A student leaving the College is entitled to have one transcript furnished at his request. No charge is imposed for this service. Additional transcripts will each cost $1.00.
Attendance

To maintain highest quality of academic work, regular attendance at class is necessary. Absence from class is considered a serious matter and never excuses a student from class work. Students must complete all assignments, examinations, and other requirements of the course.

In some curriculums, clinical and laboratory experiences are gained in off-campus facilities. Students are required to provide their own transportation to these facilities.

Absences may be excused by the instructor after reviewing the student's justification. An excused absence gives the student the opportunity to make up work missed; it will not excuse him from that work.

If absence is anticipated, the student has the obligation to inform the instructor as far in advance as possible.

Students on the Dean's List will be extended discretion in attendance at lecture classes unless an announced examination is scheduled. Attendance at laboratory classes follows the standard attendance requirements.

School Closing

In the event that inclement weather, or other unforeseen circumstances make it necessary to cancel College classes, students are advised to listen to local radio stations announcing the College's decision. A listing of such stations will be posted on campus bulletin boards and in such student publications as the Rambler and What's New. In order to make up for work lost, classes that have been cancelled may be rescheduled at the discretion of the College.

Withdrawal from a Course

A first semester student will not be permitted to withdraw from a course unless reasons of health necessitate it. Substantiation may be requested of the attending physician.

Advanced students will not be permitted to withdraw from a course unless the Department Chairman and the Dean of Students concur that it is in the best interest of the student and the College. The same criteria will be used in granting permission to carry a reduced semester schedule. Students who withdraw without permission will be carried on class rolls and will receive a failing grade for all assignments and tests not completed.

Withdrawal from the College

If a student wishes to withdraw from the College, he must submit, in writing, to the Dean of Students, a notification stating his reasons at least three
days before he intends to begin withdrawal proceedings. Students under twenty-one years of age must also submit written assent from a parent or guardian.

Students who do not follow this procedure will be carried on the College rolls and will receive a failing grade for all assignments and tests not completed in each course.

No full or partial refunds of fees can be made until a student has officially completed the withdrawal procedure.

Information about a student’s record will not be released until financial clearance has been obtained by the student.

**Placement**

The Placement Office assists in securing both full- and part-time employment for its students and alumni. The Office functions to establish a liaison with industry, to solicit full- and part-time positions for students and graduates, and to advise students on career planning.

To aid in the employment of students, the Placement Office sponsors an on-campus recruitment program. During the spring semester, corporate representatives visit the campus and interview June graduates for possible employment with their home firm. Students must complete the necessary registration material to be eligible for participation in this free service.
The Campus Community

Residence Halls

For students who are unable to commute to the College on a daily basis, living accommodations are provided in the residence halls for approximately four hundred men and two hundred fifty women. When accommodations are available, students under twenty-one years of age, not commuting from home or living with relatives in nearby communities are required to live on campus. When the number of applicants for residence halls space exceeds the number of accommodations available, applicants will be selected on the basis of the location of their homes and the dates of their requests.

The residence halls program is coordinated by the Director of College Housing and Resident Counselors in a manner which promotes the academic and social development of the resident student.

All residence halls are closed during holiday periods, and it is necessary for all resident students make other arrangements during these periods. Students withdrawing from the residence halls during a semester will receive pro-rated refunds of room and board charges depending upon the circumstances of withdrawal.

No accommodations are provided for families of married students. The College will, whenever possible, assist married students in securing off-campus housing. Inquiries concerning residence halls and off-campus housing should be addressed to the Director of College Housing.

Additional facilities scheduled for completion will provide 600 more beds and a new dining hall in 1970 and another 300 beds shortly thereafter.
Food Services

The College provides dining hall facilities five days and seven days a week at rates indicated in this catalog. Resident students must participate in the meal plan. Excellent meals are prepared and served under the highest standards of nutrition and good health. The Student Dining Hall Committee assists the Dining Hall staff in menu planning and arrangements for special events.

No refunds are made for absences unless they are for prolonged, continuous periods. Two weeks notice, in writing, must be given by any student withdrawing from dining hall privileges.

Because meals and services are provided as near to cost as possible, rates are subject to change.

Snack bars providing limited food service accommodations are also available on campus.

Student Automobiles

All students are permitted to bring their cars on campus except freshman resident students providing the automobiles are properly registered with the College. Regulations pertaining to the safe operation of automobiles are enforced by the Campus Security Officers. Repeated or serious violation of traffic regulations will result in the withdrawal of the campus parking privilege. Automobiles must be kept in their assigned parking lots. Driving to and from classes is prohibited.

Personal Property

The College cannot assume liability for loss or theft of personal property or for damage to personal property on college grounds or in college buildings. Personal property is brought to the campus at the owner’s risk. The use and care of personal property is the responsibility of the owner.

Conduct of Students

The College, in order to insure the optimum conditions for pursuing the objectives to which it is committed, expects and requires each student to conform to the law and accept the moral and social practices of the local community, the state and the nation. In general, it is required that each student conduct himself or herself in such a manner as to uphold the good name of the College and that of his fellow students. Each student, in his relationships with other students, faculty and/or administrators, shall respect the rights and privileges of the other party and conduct himself or herself accordingly.

Specific rules and regulations governing student conduct are published in the Student Handbook.
Counseling Services

The Student Personnel Office, administered by the Dean of Students, provides counseling services for any enrolled student. These services include academic advisement, placement or career advisement, personal counseling, and financial aid. Students are encouraged to seek counsel from members of the Dean's staff at any time, for any reason. The use of this resource is left largely to the initiative of the student.

Student Health Services

The College endeavors to safeguard the health of all students while they are on the campus. A physical examination, required of all entering students prior to registration, furnishes valuable background information for the College Health Department.

The College's full-time nurses provide emergency medical service at the Health Service Center from 7:00 A.M. to 1:00 A.M. on days when school is in session. Limited medical attention is also provided by the College's part-time physician. All students are urged to consult the nurse at the first indication of physical disorder or in case of accident, however slight the accident or disorder may seem.

In unusual circumstances, the College reserves the right to call a consulting physician or a specialist in case of illness, the expense to be borne by the student.

The College maintains first-aid cabinets in the campus buildings. Special medical supplies prescribed by a physician are paid for by the student. If a student requires continuous medical attention, he may be advised to return to his home or to place himself under hospital care.

The right is reserved by the College to exclude from continued class attendance any person who, in the judgment of the authorities, is not physically qualified to follow the regular curriculum program.

Dental Examination

A certificate of good oral health must be submitted by all freshman before the completion of their second semester at the College. This involves an oral examination which may be performed by the College Dental Hygiene Clinic or by the student's personal dentist. If need for oral prophylaxis or remedial work is indicated, proper action must be taken. To aid in achieving this requirement, the Dental Hygiene Department will schedule appointments for all freshman throughout the year. There will be no charge for the oral examination or the oral prophylaxis if obtained through the College Dental Clinic. General policy will be to refer remedial work to the student's personal dentist.
Student Activities

The College has, throughout its history, sought development of the whole student through encouragement of extra-curricular activities to supplement the academic atmosphere of classroom and laboratory. Farmingdale is proud of an activities program that provides outlets for a wide variety of student interests: professional, religious, cultural, social, recreational, journalistic, and governmental.

The President’s Luncheon

At the conclusion of the spring semester, outstanding participants in student activities are honored at the President’s Luncheon. On this occasion, the President of the College presents the “Aggie Spirit Awards” to graduating seniors who, in the opinion of their organization faculty advisors, have rendered exceptional service to their organizations and to the entire College.

The College Union

Newest development in the Farmingdale activities program is affiliation with Region III of the Association of College Unions—International. Within this Region, the College is recognized as a leader among two-year institutions. The new union facilities offered by Theodore Roosevelt Hall have led to the creation of a Farmindale College Union Board. This 15-man committee, with student, faculty, and administration membership, plans social, recreational, and cultural programs of interest to the entire college community. Among the programs are the Distinguished Speakers and Artists Series and a Distinguished Film Series, which each semester features significant examples of cinematic art. In addition, the Board sponsors weekly coffee hours, at which members of the fac-
ulty and student body enjoy informal association. The College Union Recreation Program, featuring facilities for informal participation in billiards, table tennis, bowling, chess, and similar pastimes, is also under the advisement of the Union Board.

**Student Organizations**

At the heart of the entire activities program are some forty student organizations, each of which benefits from the advice of at least one faculty sponsor. Rare indeed is the Farmingdale student who does not affiliate with at least one of these groups during his two years on campus.

Roughly half the student organizations are curriculum clubs designed to serve the pre-professional interests of students and related directly to various academic departments. Religious organizations include the Newman Club, Hillel, Canterbury Club, and Student Christian Association. Cultural activities center on the Drama Club, Collegiate Chorale, and International Club.

Student Government organizations, always among the most important and active on campus, are the Student Senate and Inter-Dormitory Council.

Student journalistic aptitudes are satisfied through affiliation with the Rambler (a bi-weekly newspaper), the Islander (the College Yearbook), and the Radio Club (which administers a campus AM station, WATI, and a ham radio station, W2YNM).

Groups specializing in recreational activities are the Gun Club, Judo Club, Chess Club, and Gymnastics Club.

The men's social service organization is Tau Kappa Beta; its female counterpart is Psi Theta Epsilon.

One of the greatest honors a Farmingdale student may receive is election to the local chapter (Mu Omega) of Phi Theta Kappa, the National Junior College Honorary Scholastic Society.

**Social Events**

Traditional college social affairs include the Senior Prom, the annual Student Senate Semi-Formal, the March "Sweetheart Swing" dance, and various events associated with Freshman Orientation.

In general, college social events are held throughout the year either on campus in such facilities as the Log Cabin or Allard Field House or off campus at approved establishments in the area. Most of these events are under the direct sponsorship of various student organizations.
**College Convocations**

At various times throughout the year, the student body and faculty gather for official convocations of interest to the entire community. Attendance is expected.

**Athletics**

The Department of Health and Physical Education offers intercollegiate varsity competition in baseball, basketball, cross-country, golf, soccer, tennis, track, and wrestling. Intramural participation is invited in badminton, basketball, tennis, golf, softball, bowling, touch football, track and volleyball. Association of College Unions tournament competition is offered in chess, billiards, bowling, and table tennis. Related directly to the College Athletic Program are two student organizations: the *Cheerleaders* and the *Block A (Varsity Club)*.

Each student receives a *Student Handbook*, published by the Student Senate, providing detailed information on the entire activities program.
General Education

Courses in English and the Humanities are designed to aid students: to achieve greater efficiency in communication; to increase understanding of the human experience as it is examined and expressed in philosophy and the creative arts.

All students are required to take EN 100 English Composition and EN 101 Introduction to Literature, except those students who are required to take EN 114 Speech in the second semester in order to fulfill accreditation requirements. EN 100 and EN 101 are prerequisites for all other courses offered in English and the Humanities. EN 114 may be substituted for EN 101 as a prerequisite by students for whom EN 114 is required in the second semester.

Electives in English and the Humanities will generally be offered at times listed below.

**Fall Semester**
- EN 102 American Literature
- EN 104 English Literature
- EN 108 Introduction to the Theatre
- EN 114 Speech
- HU 100 Introduction to Philosophy
- HU 110 Music Appreciation

**Spring Semester**
- EN 103 American Literature
- EN 105 English Literature
- EN 109 The Short Story
- EN 114 Speech
- HU 101 History of Philosophy
- HU 111 Survey of Contemporary Music
- HU 115 Art Appreciation

People ought to be more than successful economic entities for the production of goods and services. General Education is largely concerned with the quality of living; balancing the technical arts with the humanistic arts through basic courses in English and Humanities, Social and Behavioral Science, Health and Physical Education.

In these courses we expose the students to basic ideas, facts, theories and skills in human relations and communications which students will need not only for involved responsible citizenship but also for greater success in their jobs and professions. Our courses are similar to those given in most accredited colleges; thus they are readily transferable when students desire to continue their education.
General Education can and must help to humanize an increasingly technical, impersonal society—that is, if we hope to retain our human capacity to feel and to care about people.

**Social Science**

The Social Science Department offers courses in the disciplines of Anthropology, Economics, Geography, History, Political Science, Psychology, and Sociology. These multi-level courses furnish students with reliable information about how Man labors, develops various economic systems, arranges his family and government, worships, transmits his ways and values to the next generation, and makes use of his time free from necessary toil. Students study how “We” have performed these universal human functions at different times, in different places—always to meet our needs as individuals and as members of various personal and social groups. Social Sciences are concerned with the disruptive disparity between the rates of technological and social changes, and between preoccupation with acquisition of material rather than social benefits.

Honest skepticism, systematic inquiry and hard thinking are integrated to reveal to students the comic-tragic realities of the human condition; to give an idea of the joy of creative individuality, however limited; the dullness of authoritarian conformity, however assuring; the impartiality of nature, however inexorable; and the wonder of intellectual curiosity, however naive.

All students are required to take a minimum of six credits in Social Sciences. Courses in Economics, Political Science, Psychology, and Sociology are required courses for certain curriculums, especially those preparing students for positions in Community Services, e.g., nurse, nursery education assistant, police, recreation supervisor.

During the second year, students in most curriculums will choose social science electives from the following list:

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<tr>
<th>Course Code</th>
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<td>SO 237</td>
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**Mathematics and Science**

Agricultural and industrial technologies have their foundations in the biological and physical sciences. Mathematics is the abstract language by which much technical knowledge is communicated. To become technicians, students must master such of these courses as are basic to their respective fields of work.
Elective opportunities are provided in both mathematics and science for those students who wish to pursue courses beyond their curriculum requirement.

For students not required to take other science work, a course in Biology is given. Its purpose is to interpret the forces which make up our complex world, and to place at the students' disposal enough scientific knowledge to free their minds of prejudice and superstition.

**Health and Physical Education**

Physical Education courses are designed to lead to more effective and satisfying living. Instruction in physical education offers an opportunity to learn the skills of the lifetime sports of badminton, tennis, golf and bowling. These sports can be played and enjoyed throughout life.

The athletic program includes participation in intramural and inter-collegiate sports and games. The intramural program—determined by the interests of the students and open to all—offers badminton, basketball, bowling, golf, pocket billiards, horseshoes, softball, table tennis, tennis, touch football, track and volleyball. In inter-collegiate athletics the College fields teams in baseball, basketball, cross country, golf, soccer, tennis, track, wrestling, bowling and lacrosse. All coaches are full time members of the physical education staff.

Facilities for the Athletic and Physical Education programs include a field house 100' x 135', a new modern gymnasium with eight AMF bowling alleys, playing fields, 18 Grasstex tennis courts, and an outdoor skating rink 60' x 100' with its own refrigeration plant for making artificial ice, and three golf greens for instructional purposes.

Recreation rooms, furnished with many types of games, provide a place for leisure time activities. Several of Long Island's famous State parks, including nearby Bethpage, Jones Beach, and Belmont Lake are popular with the students at the College. These parks offer facilities for golf, canoeing, swimming, skiing, and ice skating.

**Physical Education Requirements**

Medical reasons supported by a physician's statement provide the only permanent excuse from physical education. Physical education is required of all students. Students physically disabled may be required to take an Adaptive Physical Education program.

A student who, because of a temporary health reason, is excused from physical education during any semester will be required to make up such deficiency in physical education before he is permitted to graduate.

All students taking physical education are required to purchase the regulation uniform from the college bookstore.
A student who transfers from another college and who shows evidence from an official transcript of having taken physical education with or without credit and with satisfactory grade or grades will not be required to take the course or the courses in physical education at this college.

**Elective Courses**

Students may select elective courses from a wide range of "Common Electives" (open to all students) and "Technical Electives" (limited to certain curriculums). The following lists are representative; each term the specifics of courses available, credit hours, prerequisites, etc., are published for consultation by students and advisors, when the time comes for arranging schedules.

### Common Electives

- BU 110* Business Mathematics
- BU 116 Public Relations
- BU 119 Industrial Purchasing
- BU 133 Transportation Principles
- BU 138 Principles of Finance
- BU 204 Advertising Psychology
- BU 207 Principles of Taxes
- BU 210 Industrial Management
- BU 214 Personnel Management
- BU 222 Investments and Securities
- BU 228 Salesmanship
- BU 233 Principles of Marketing II
- CH 103 Chemistry
- CH 104 Chemistry
- CH 106 Introduction to Biochemistry
- EN 102 American Literature
- EN 103 American Literature
- EN 104 English Literature
- EN 105 English Literature
- EN 108 Introduction to the Theatre
- EN 109 The Short Story
- EN 114 Speech
- HU 100 Introduction to Philosophy
- HU 101 History of Philosophy
- HU 102 Music Appreciation
- HU 111 Survey of Contemporary Music
- HU 115 Art Appreciation
- SC 107 Biology
- SO 201 U. S. History
- SO 202 U. S. History
- SA 206 Economics
- SO 214 Western Civilization
- SO 215 Western Civilization
- SO 217 Political Science
- SO 218 Political Science
- SO 219 General Psychology
- SO 220 General Psychology
- SO 222 Sociology
- SO 223 Sociology
- SO 224 Sociology
- SO 232 Developmental Psychology
- SO 233 Developmental Psychology
- SO 234 Developmental Psychology
- SO 237 Anthropology

### Technical Electives

**Advertising Art and Design**

- AA 204 Advertising Illustration
- AA 208 Fashion Illustration
- AA 213 Technical Illustration
- AA 221 Package Design

**Agriculture**

- AG 201 Agricultural Economics
- AG 202 Comparative Animal Genetics
- AG 203 Beef Cattle Management
- AG 204 Dairy Barn Management
- AG 205 Dairy Cattle Management
- AG 206 Dairy Science
- AG 208 Field Crop Science
- AG 209 Forest Science
- AG 210 Agricultural Construction and Mechanization
- AG 211 Animal Nutrition
- AG 212 Meat and Meat Products
- AG 213 Poultry and Physiology and Health
- AG 214 Soil and Water Conservation
- AG 215 Soil Fertility
- AG 216 Vegetable Production
- AG 218 Animal Care
- AG 221 Metal Work

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- AG 214 Soil and Water Conservation
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- AG 216 Vegetable Production
- AG 218 Animal Care
- AG 221 Metal Work

* The code symbols which precede the names of courses relate to the order of arrangement of courses, under the several instructional areas, in the list of course descriptions.
Automotive Technology
AT 205 Electricity
AT 207 Power Transmission

Biological Technology
AG 102 Genetics
AG 215 Soil Fertility
CH 221 Environmental Control
CH 222 Environmental Control
OH 112 Ecology
OH 201 Arboriculture
OH 223 Plant Breeding
PT 220 Biological Photography
PT 221 Biological Photography
SC 204 Entomology II

Business
BU 103 Intermediate Accounting I
BU 110 Business Mathematics
BU 116 Public Relations
BU 118 Advertising Principles
BU 119 Industrial Purchasing
BU 132 Business Communications
BU 133 Transportation Principles
BU 138 Principles of Finance
BU 201 Cost Accounting
BU 204 Advertising Psychology
BU 205 Intermediate Accounting II
BU 206 Business Law I
BU 207 Principles of Taxes
BU 208 Production Management
BU 210 Industrial Management
BU 214 Personnel Management
BU 215 Office Management
BU 219 Case Problems in Business
BU 222 Investments and Securities
BU 228 Salesmanship
BU 233 Principles of Marketing II
BU 237 Business Law II
BU 258 Computer Applications in Accounting
BU 259 Managerial Applications of Accounting Data

Engineering Science*
ES 206 Engineering Circuit Analysis I
ES 207 Engineering Circuit Analysis II
ES 208 Engineering Circuit Analysis Laboratory
ES 211 Engineering Circuit Analysis (NON-EE)
ES 212 Engineering Circuit Analysis Laboratory
ES 213 Mechanics of Deformable Bodies
CH 215 Organic Chemistry
CH 216 Organic Chemistry
PH 154 Modern Physics

Ornamental Horticulture
OH 201 Arboriculture I
OH 204 Herbaceous Plants II
OH 205 House and Conservatory Plants
OH 206 Landscape Contracts and Specifications
OH 218 Indoor Planting
OH 219 Landscape Construction
OH 223 Plant Breeding
OH 225 Woody Plants
SC 207 Economic Botany
OH 231 Turfgrass Management III

* Prerequisites for E. S. Elective must be minimum Grade “C”.
Aircraft Flight Instruments Simulator, Department of Aircraft Operations
The Curriculums

ADVERTISING ART AND DESIGN

The advertising business is a growing field, presenting ever increasing opportunities for men and women who have creative and artistic ability. Trained people are needed for such kinds of work as preparing advertising layouts, television commercials, magazine and newspaper illustrations, technical drawings and manuals, book illustrations, fashion illustrations, displays, animations, and many others.

In this curriculum, emphasis is placed on layout and design, and the preparation of drawings for the various methods of reproduction in the graphic arts.

Close contact is maintained with the advertising business, and our graduates in the field.

Each advertising art student is required to prepare a satisfactory portfolio of his work before graduation.

Typical Employment Opportunities

Art Director
Advertising Artist
Technical Illustrator
Layout Man
Airbrush Artist
Advertising Illustrator
Assistant Art Director

Cartoonist
Production Assistant
Display Artist
Book Illustrator
Fashion Artist
Photographer
Photo Retoucher
# ADVERTISING ART AND DESIGN

## First Semester

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## Electives

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GRAPHIC ARTS AND ADVERTISING TECHNOLOGY

The continued expansion of industrial and commercial enterprises on Long Island has created a need for an increasing number of personnel in advertising, publishing, printing, marketing, graphic arts and related fields.

Graduates of this curriculum would have a wide variety of opportunities for employment in many kinds of businesses.

Areas of Employment in Graphic Art and Advertising:
Personnel
Selling
Estimating
Purchasing
Supervisory

Typical Job Opportunities
Advertising Manager
Account Executive
Copywriter
Advertising Artist
Production Assistant
Assistant Advertising Manager
Space Salesman
Merchandising Manager

TV Production Assistant
Media Buyer
Art Director
Printing Buyer
Typographer
Printing Estimator
Printing Salesman
Office Manager

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### Fourth Semester
#### Advertising

<table>
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<td>BA135 Salesmanship</td>
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<td>BA237 Advertising Media</td>
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<td>AA235 Seminar</td>
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#### Graphic Arts

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<td>BA246 Principles of Management</td>
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### Electives—Third Semester

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<tbody>
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<tr>
<td>AA219 Photography</td>
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<td>EN114 Speech</td>
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<td>AA203 Advertising Layout</td>
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<td>AA207 Figure Drawing</td>
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<td>AA211 Photo Retouching</td>
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<td>AA231 Copywriting II</td>
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<tr>
<td>AA209 Graphic Design</td>
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<td>BA236 Advertising Psychology</td>
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</table>

Students take the same courses in the first year, and select either Graphic Arts or Advertising courses for the second year.
AGRICULTURE

Agriculture in the United States is becoming more technical. Agriculture is more than farming; it includes supplying the raw materials and services to farmers before producing, and then taking the production and grading it, packaging, marketing, processing, distributing, transporting products to the consumer in the desired form.

Many businesses basically depend upon agriculture, and the demand for technicians with agricultural knowledge and experience provides many opportunities for employment.

AGRONOMY

Agronomy is the art and science of managing farm land. Scientific agricultural planning and production are based upon knowledge of soil, crop and livestock management. In addition, land and water, the greatest natural resources, must be managed wisely for the benefit of present and future generations.

Typical Employment Opportunities

<table>
<thead>
<tr>
<th>Farmer</th>
<th>Agricultural Chemical Salesman</th>
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</thead>
<tbody>
<tr>
<td>Farm Manager</td>
<td>Certified Seed Grower</td>
</tr>
<tr>
<td>Vegetable and Fruit Inspector</td>
<td>Custom Farm Serviceman</td>
</tr>
<tr>
<td>Manager for Farm Equipment</td>
<td>Seed Salesman</td>
</tr>
<tr>
<td>Sales and Service</td>
<td>Technical Assistant</td>
</tr>
<tr>
<td>Farm Supply Store Manager</td>
<td>Research Assistant</td>
</tr>
<tr>
<td>Feed and Fertilizer Salesman</td>
<td>Produce Broker</td>
</tr>
</tbody>
</table>

Nematode Research Laboratory

The Laboratory is primarily concerned with research on the golden nematode disease of potatoes. It also conducts studies on other nematodes that attack potatoes, vegetables, and ornamental plants. Cooperative research is conducted with the New York State Department of Agriculture and Markets, United States Department of Agriculture, and the College.
AGRICULTURE

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Typical Employment Opportunities

Farmer
Farm Manager
Vegetable and Fruit Inspector
Manager for Farm Equipment
Sales and Service
Farm Supply Store Manager
Feed and Fertilizer Salesman

Agricultural Chemical Salesman
Certified Seed Grower
Custom Farm Serviceman
Seed Salesman
Technical Assistant
Research Assistant
Produce Broker

Nematode Research Laboratory

The Laboratory is primarily concerned with research on the golden nematode disease of potatoes. It also conducts studies on other nematodes that attack potatoes, vegetables, and ornamental plants. Cooperative research is conducted with the New York State Department of Agriculture and Markets, United States Department of Agriculture, and the College.
# AGRICULTURE-AGRONOMY (Crop and Soil Science)

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<tr>
<td>AG 107</td>
<td>Soil Science</td>
<td>3</td>
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<tr>
<td>AG 110</td>
<td>Tractor Operation and Maintenance†</td>
<td>3</td>
</tr>
<tr>
<td>CH 103</td>
<td>Chemistry</td>
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<tr>
<td>SC 114</td>
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<td>EN 100</td>
<td>English Composition</td>
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<tr>
<td>AG 101</td>
<td>Animal Anatomy, Physiology, and Health</td>
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<tr>
<td>AG 102</td>
<td>Genetics</td>
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<td>EN 101</td>
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<td>AG 209</td>
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</table>

**Total Credits Required:** 70

* Please see Index for information about General Education courses.
† Approximate: depending on Elective.
‡ Optional for women students. (Suggest AG 218 Animal Care for First Semester.)
§ AG 218 Livestock and Poultry Practice required of all students during the year. See Course Description.
ANIMAL SCIENCE

A rapid transition is taking place in Animal Agriculture with an increasing application of science and technology to the production of animal products.

Livestock farming is the leading agricultural enterprise of the nation and New York State. Milk production, processing, and merchandising is New York State's most important agricultural enterprise.

Technicians are in demand to work closely with the ever increasing number of professional people engaged directly or indirectly in the agriculturally related phases of our economy. To supply the materials of production (feed, seed, chemicals, tractors, farm machinery) and to distribute and market the products of agriculture requires better educated people each year.

The College has a fine herd of purebred, registered dairy cattle, consisting of Holsteins, Ayrshires and Guernseys. A herd of purebred Angus cattle represents the beef breeds. A few swine and sheep complete the livestock program.

Animal Science deals with the science and principles of the production and processing of livestock and livestock products.

Typical Employment Opportunities

Dairy Farm Owner
Livestock Breeder
Dairy Herd Improvement Supervisor
Dairy Equipment Sales and Serviceman
Herd Manager
Livestock Buyer
Livestock Inspector
Manager of Dairy Farm
Foreman, Livestock Breeding Farm

Meat Inspection
Feed Salesman
Manager of Feed Store
Manager of Farm Supply Store
Artificial Inseminator (after additional specialized training)
Technical Assistant: (colleges, laboratories, veterinarians)
Research Assistant
Meat Packer Representative
AGRICULTURE—ANIMAL SCIENCE

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<td>Chemistry</td>
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Total Credits Required: 69

* Please see Index for information about General Education courses.
† Approximate; depending on Elective.
‡ Optional for women students. (Suggest AG 218 Animal Care for First Semester.)
§ AG 218 Livestock and Poultry Practice required of all students during the year. See Course Description.
POULTRY SCIENCE

The program is designed to provide the student with fundamental training and knowledge in the comparative nutrition, physiology, breeding, selection, and management of various classes of livestock and poultry science as a specialty. An understanding of the role of animal production in the National and world economy will be gained without the danger of overspecialization.

Throughout the first year, assignments to Livestock and Poultry Laboratory bring each student in direct contact with all the major farm animals and many of the crop procedures used with plants utilized for livestock feed. Fruit and vegetable production and marketing laboratories are also included. It is suggested that students work in agriculture, or in a closely related field, during the summer between the freshman and senior year.

Typical Employment Opportunities

- Poultry Breeder
- Hatchery Operator
- Manager of Egg and Poultry Cooperative
- Egg Farmer
- Broiler Grower
- Turkey Grower
- Poultry Products Grader and Inspector
- Manager of Processing Plant
- Poultry Products Serviceman
- Feed Company Manager
- Research Technician
- Feed Salesman
- Manager and Owner of Retail Poultry Store
- Poultry Specialist for Feed Company
- Supervisor in Processing Plant
# AGRICULTURE—POULTRY SCIENCE

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<thead>
<tr>
<th>First Semester</th>
<th>Hours per Week</th>
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<td>SC 114 Zoology</td>
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</table>

Total Credits Required: 69

* Please see Index for information about General Education courses.

† Approximate; depending on Elective.

‡ Optional for women students. (Suggest AG 218 Animal Care for First Semester.)

§ AG 108 Livestock and Poultry Practice required of all students during the year. See Course Description.
AIR CONDITIONING TECHNOLOGY
(An ECPD approved Engineering Technology Curriculum)

The control of comfort through the science of environment engineering has become one of our greatest industries. The demand for technicians in this field outstrips the supply many times. This program is among the most promising for those seeking to enter an industry which will increase with today's expanding population and building boom.

The field is particularly interesting for those desiring to own their own business, either in maintenance, design, or construction of air conditioning and heating facilities. Large consulting and construction engineering concerns, with world-wide operations, also have demands for these graduates. The modernization of older buildings and construction of new apartment buildings, stores, and factories in this area assures a continuing supply of employment opportunities.

The program of instruction is built around a strong core of general studies which includes English, Social Sciences, Mathematics, and Physical Science. This background is given the student to insure his ability to understand technological changes which come about as the advancement of scientific frontiers takes place.

The program of technical specialties is based upon knowledge gained from our graduates in the field, advice from industrial advisors, and criteria set by accrediting engineering societies. Well-equipped laboratories are used for exercise of the knowledge gained in the basic classroom studies. Complete air-conditioning and heating systems are designed using standard equipment and construction methods.

Typical Employment Opportunities

| Owner or Manager of Business:              |                          |
| Refrigeration, Heating and/or Air Conditioning | Sales Engineer |
| Sales Manager                              | Controls Technician     |
| Installation Foreman                       | Manufacturer's Representative |
| Service Manager                            | Estimator               |
| Systems Designer                           | Design Draftsman         |
|                                           | Test Technician          |
|                                           | Field Engineer           |
# AIR CONDITIONING TECHNOLOGY

### First Semester

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Class</th>
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<tr>
<td>MT 103</td>
<td>Manufacturing Processes</td>
<td>2</td>
<td>3</td>
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<tr>
<td>PH 131</td>
<td>Physics</td>
<td>3</td>
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</tr>
<tr>
<td>EN 100</td>
<td>English Composition</td>
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Total: 14 hours

### Second Semester

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Class</th>
<th>Lab.</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>AC 102</td>
<td>Air Conditioning Equipment I</td>
<td>2</td>
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<tr>
<td>AC 103</td>
<td>Themodynamics</td>
<td>3</td>
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<td>MA 125</td>
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<td>PH 132</td>
<td>Physics</td>
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<td>2</td>
<td>4</td>
</tr>
<tr>
<td>EN 101</td>
<td>Introduction to Literature</td>
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<tr>
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Total: 14 hours

### Third Semester

<table>
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<th>Lab.</th>
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<tbody>
<tr>
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<tr>
<td>AC 202</td>
<td>Air Conditioning Principles I</td>
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<td>AC 204</td>
<td>Heating Principles</td>
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<tr>
<td>AC 211</td>
<td>Heating Equipment</td>
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<td>3</td>
<td>2</td>
</tr>
<tr>
<td>MA 126</td>
<td>Mathematics</td>
<td>3</td>
<td>0</td>
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<td>PE 102</td>
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<td>1½</td>
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Total: 15 hours

### Fourth Semester

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<tr>
<td>AC 206</td>
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<td>AC 207</td>
<td>Control Instruments</td>
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<td>AC 208</td>
<td>Engineering Measurements</td>
<td>1</td>
<td>3</td>
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<tr>
<td>AC 210</td>
<td>Systems Design</td>
<td>2</td>
<td>6</td>
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<td>SO</td>
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Total: 14 hours

*Total Credits Required: 71

*Please see Index for information about General Education courses.
AIRCRAFT OPERATIONS TECHNOLOGY

Aviation constitutes an industry that requires large organizations staffed by highly skilled technicians. It is a complex force which is helping to remake our society, economy, and world organization. The development and direction of this force toward the attainment of a better life for mankind offers a great challenge to youth.

The aviation industry needs men who possess a wide range of knowledge and ability. For example, in positions of flight control, air carrier operations, airport management, and related governmental capacities, there are found combinations of requirements for which much general education, as well as special technical training, is necessary. The degree of one’s leadership in this area depends upon the extent of one’s related information and one’s degree of technical competence.

This curriculum covers the essential elements that are involved in this highly specialized industry. The program is being continually revised and broadened to include the latest technical and operational developments as effected by this industry.

The College is approved by the Federal Aviation Agency to provide training in Basic and Advanced Ground School for Private and Commercial Pilots.

**Typical Employment Opportunities**

- Airways Operations Specialist
- Airline Operations
- Maintenance
- Airport Manager
- Aircraft Operations
- Flight Dispatcher
### AIRCRAFT OPERATIONS TECHNOLOGY

#### First Semester

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours per Week</th>
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<tbody>
<tr>
<td>AO 100</td>
<td>General Aeronautics</td>
<td>1 Class, 2 Lab.</td>
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<td>AO 101</td>
<td>Aerodynamics</td>
<td>3</td>
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<tr>
<td>MA 124</td>
<td>Mathematics</td>
<td>3</td>
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<tr>
<td>PH 131</td>
<td>Physics</td>
<td>3</td>
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<tr>
<td>EN 100</td>
<td>English Composition</td>
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<td>PE 102</td>
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**Credit Hours:** 13.6

#### Second Semester

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<td>DP 150</td>
<td>Aircraft Operation Data Processing</td>
<td>2 Class, 0 Lab.</td>
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<td>AO 104</td>
<td>Aircraft Structures</td>
<td>3</td>
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<tr>
<td>MA 125</td>
<td>Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>PH 132</td>
<td>Physics</td>
<td>3</td>
</tr>
<tr>
<td>EN 101</td>
<td>Introduction to Literature</td>
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**Credit Hours:** 17.6

#### Third Semester

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<tbody>
<tr>
<td>AO 201</td>
<td>Aircraft Electronics</td>
<td>3</td>
</tr>
<tr>
<td>AO 202</td>
<td>Aircraft Power Plants</td>
<td>3</td>
</tr>
<tr>
<td>AO 203</td>
<td>Navigation</td>
<td>3</td>
</tr>
<tr>
<td>AO 204</td>
<td>Weight and Balance</td>
<td>2</td>
</tr>
<tr>
<td>MA 126</td>
<td>Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>SO</td>
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**Credit Hours:** 17

#### Fourth Semester

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<th>Course Title</th>
<th>Hours per Week</th>
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<tbody>
<tr>
<td>AO 205</td>
<td>Air Traffic Control</td>
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<tr>
<td>AO 206</td>
<td>Flight Technique</td>
<td>3</td>
</tr>
<tr>
<td>AO 207</td>
<td>Jet Propulsion</td>
<td>4</td>
</tr>
<tr>
<td>AO 208</td>
<td>Meteorology</td>
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<tr>
<td>SO</td>
<td>Social Science*</td>
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</tbody>
</table>

**Credit Hours:** 16.5

Total Credits Required: 70

* Please see Index for information about General Education courses.
AUTOMOTIVE TECHNOLOGY
(An ECPD approved Engineering Technology Curriculum)

The objective of this program is to prepare technicians who will have a thorough understanding of mechanics and machines.

The automotive industry provides employment for many graduates in the sales, service, and experimental development of gasoline, diesel, and gas turbine powered equipment.

The technical courses are automotive oriented. However, the components of the automobile are analyzed for their principles of operation as well as for their functions.

Thus having a comprehension of the fundamentals of mechanical devices, there is available to graduates a variety of opportunities in the many applications of mechanical, electrical, and fluid power.

The department is dedicated to assisting students in developing a thirst for knowledge, professional ethics, a sense of responsibility and a respect for the dignity of their fellowmen.

Typical Employment Opportunities

- Automotive Diagnostician
- Warranty Processor
- Sales and Service Engineer-Automotive and Diesel
- Research and Development Technician
- Dealership: Parts, Sales, and Service
- Service Instructor
- Farm Equipment Sales and Service
- Insurance Underwriter and Adjuster
### AUTOMOTIVE TECHNOLOGY

#### First Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours per Week</th>
</tr>
</thead>
<tbody>
<tr>
<td>AT 102</td>
<td>Mechanical Power Equipment</td>
<td>2 Class 4 Lab</td>
</tr>
<tr>
<td>AT 104</td>
<td>Combustion Engines</td>
<td>2 Class 0 Lab</td>
</tr>
<tr>
<td>MA 124</td>
<td>Mathematics</td>
<td>3 Class 0 Lab</td>
</tr>
<tr>
<td>MT 102</td>
<td>Graphics</td>
<td>1 Class 3 Lab</td>
</tr>
<tr>
<td>PH 131</td>
<td>Physics</td>
<td>3 Class 2 Lab</td>
</tr>
<tr>
<td>EN 100</td>
<td>English Composition</td>
<td>3 Class 0 Lab</td>
</tr>
<tr>
<td>PE 102</td>
<td>Physical Education</td>
<td>0 Class 2 Lab</td>
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</table>

**Total:** 14 Class 11 Lab 17 1/2 Hours

#### Second Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours per Week</th>
</tr>
</thead>
<tbody>
<tr>
<td>AT 103</td>
<td>Mechanical Power Equipment</td>
<td>1 Class 6 Lab</td>
</tr>
<tr>
<td>AT 105</td>
<td>Combustion Engines</td>
<td>1 Class 2 Lab</td>
</tr>
<tr>
<td>PH 132</td>
<td>Physics</td>
<td>3 Class 2 Lab</td>
</tr>
<tr>
<td>EN 101</td>
<td>Introduction to Literature</td>
<td>3 Class 0 Lab</td>
</tr>
<tr>
<td>MA 125</td>
<td>Mathematics</td>
<td>3 Class 0 Lab</td>
</tr>
<tr>
<td>SO</td>
<td>Social Science*</td>
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</table>

**Total:** 14 Class 10 Lab 18 Hours

#### Third Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours per Week</th>
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</thead>
<tbody>
<tr>
<td>AT 106</td>
<td>Engineering Materials</td>
<td>3 Class 3 Lab</td>
</tr>
<tr>
<td>AT 204</td>
<td>Electricity</td>
<td>2 Class 3 Lab</td>
</tr>
<tr>
<td>AT 214</td>
<td>Combustion Engines</td>
<td>1 Class 2 Lab</td>
</tr>
<tr>
<td>AT 216</td>
<td>Engineering Measurements</td>
<td>2 Class 3 Lab</td>
</tr>
<tr>
<td>MA 126</td>
<td>Mathematics</td>
<td>3 Class 0 Lab</td>
</tr>
<tr>
<td>SO</td>
<td>Social Science*</td>
<td>3 Class 0 Lab</td>
</tr>
</tbody>
</table>

**Total:** 14 Class 11 Lab 18 Hours

#### Fourth Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours per Week</th>
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</thead>
<tbody>
<tr>
<td>AT 213</td>
<td>Senior Seminar</td>
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</tr>
<tr>
<td>AT 215</td>
<td>Diesel Engines</td>
<td>3 Class 3 Lab</td>
</tr>
<tr>
<td>AT 217</td>
<td>Applied Mechanics</td>
<td>2 Class 2 Lab</td>
</tr>
<tr>
<td>PE 103</td>
<td>Physical Education</td>
<td>0 Class 2 Lab</td>
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<tr>
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<td>3 Class 0 Lab</td>
</tr>
<tr>
<td>Elective</td>
<td></td>
<td>5 Class 3 Lab</td>
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</tbody>
</table>

**Total:** 14 Class 10 Lab 17 1/2 Hours

---

* Please see Index for information about General Education courses.

† Approximate: depending on Elective. See Index for elective courses.
BIOLOGICAL TECHNOLOGY

Basic cultural and science courses comprise the first year. Specialization in specific biological fields are offered in the second year through the selection of any one of several options or elective sequences.

Expanding research is producing many new drugs, toiletries, food additives, pesticides, growth stimulants, sterilants, and other compounds potentially valuable in public health, grooming, biology, nutrition, agriculture, and horticulture. Evaluation of those compounds on humans, animals or plants in research laboratories is essential before they can be approved for marketing.

In other areas, our increasing population is requiring the expansion of public health and medical services, the preservation and greater utilization of land, marine and fresh water resources, and the prevention and control of environmental pollution.

These evolutions have created additional demands for technically educated men and women in research and development activities, diagnostic and advisory services, and in sales.

To prepare students for careers in these fields, the Biology Department provides the following senior year options: Biological Research Technology, Pest Control Technology, and Oceanic Biological Technology**, and Medical Laboratory Technology*.

Graduates with a good record who wish to continue with their education may obtain close to 2 years college credit from colleges or universities offering the same or similar major areas of study.

Typical Employment Opportunities

<table>
<thead>
<tr>
<th>Biological Aide</th>
<th>Environmental Control Technician</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laboratory Technician</td>
<td>Marine Laboratory Technician</td>
</tr>
<tr>
<td>Research Assistant</td>
<td>Horticultural Research Technician</td>
</tr>
<tr>
<td>Junior Biologist</td>
<td>State Horticultural Inspector</td>
</tr>
<tr>
<td>Pesticide Salesman</td>
<td>Pesticide Screening Technician</td>
</tr>
<tr>
<td>Custom Spray Operator</td>
<td>Medical Laboratory Technician</td>
</tr>
<tr>
<td>Pest Control Operator</td>
<td>College Laboratory Assistant</td>
</tr>
<tr>
<td>Public Health Inspector</td>
<td>Laboratory Animal Technician</td>
</tr>
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</table>

*A curriculum with the same common first year as offered in Biological Technology, See separate listing.

**Near the end of the second semester a choice of one of the senior-year options (and elective sequences) must be made for the Senior Year.
First Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours per Week</th>
</tr>
</thead>
<tbody>
<tr>
<td>SC 102</td>
<td>Botany</td>
<td>2 2 3</td>
</tr>
<tr>
<td>SC 114</td>
<td>Zoology</td>
<td>2 2 3</td>
</tr>
<tr>
<td>CH 107</td>
<td>General Chemistry</td>
<td>3 3 4</td>
</tr>
<tr>
<td>MA 105</td>
<td>College Algebra</td>
<td>3 0 3</td>
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<tr>
<td>EN 100</td>
<td>English Composition</td>
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<tr>
<td>PE 102</td>
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<td>0 2 1/2</td>
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| Total   | 13 9 16 1/2        |

Second Semester

<table>
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<tr>
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<td>Entomology or</td>
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<tr>
<td>SC 225</td>
<td>Parasitology**</td>
<td>2 2 3</td>
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<tr>
<td>SC 115</td>
<td>Plant Physiology or</td>
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<tr>
<td>SC 105</td>
<td>Anatomy and Physiology</td>
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<td>MA 110</td>
<td>Statistics***</td>
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<tr>
<td>CH 110</td>
<td>Introduction to Organic Chemistry</td>
<td>3 3 4</td>
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<tr>
<td>EN 101</td>
<td>Introduction to Literature</td>
<td>3 0 3</td>
</tr>
<tr>
<td>PE 103</td>
<td>Physical Education</td>
<td>0 2 1/2</td>
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| Total   | 13 or 14 9 16 1/2 or 17 1/2 |

BIOLOGICAL RESEARCH TECHNOLOGY—OPTION

This option offers a broad spectrum of biological specialties for students who are interested in research and desire positions in various types of biological screening or research laboratories.

Third Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>SC 104</td>
<td>General Microbiology</td>
<td>2 2 3</td>
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<tr>
<td>SC 201</td>
<td>Medical Entomology</td>
<td>2 2 3</td>
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<tr>
<td>SC 202</td>
<td>Microtechnique</td>
<td>1 4 3</td>
</tr>
<tr>
<td>SC 203</td>
<td>Research Procedures I</td>
<td>1 3 2</td>
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<tr>
<td>SO —</td>
<td>Social Science*</td>
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</table>

Technical Elective****

| Total   | 2+ 2+ 3 or 4          |

<table>
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<tbody>
<tr>
<td>Class</td>
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Fourth Semester

<table>
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<th>Title</th>
<th>Hours per Week</th>
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<tbody>
<tr>
<td>SC 205</td>
<td>Mycology and Nematology or Tech. Elective</td>
<td>2+ 3+ 3 or 4</td>
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<tr>
<td>SC 206</td>
<td>Research Procedures II</td>
<td>1 4 2</td>
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<tr>
<td>SC 217</td>
<td>Biology Seminar</td>
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<td>CH 204</td>
<td>Biochemistry</td>
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<td>Social Science*</td>
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</table>

| Total   | 12 12 16 or 17         |

Total Credits Required: 66 to 69

* Please see Index for information about General Education courses.
** Only for students selecting the Medical Laboratory Technology Curriculum.
*** Students expecting to specialize in Pest Control Technology may substitute BU 110 Business Math.
**** Please see Technical Elective sequences on following pages.
+ Approximate depending on technical elective.
PEST CONTROL—EMPHASIS

This major is offered for those students interested in plants and who prefer positions in horticultural or agricultural pest control research or service as indicated under Typical Employment Opportunities.

<table>
<thead>
<tr>
<th>Third Semester</th>
<th>Hours per Week</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td></td>
<td>Class</td>
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<tr>
<td>OH 112 Ecology</td>
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<tr>
<td>OH 201 Arboriculture</td>
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<tr>
<td>OH 231 Turfgrass Management</td>
<td>2</td>
<td>2</td>
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<tr>
<td>SC 201 Medical Entomology</td>
<td>2</td>
<td>2</td>
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<tr>
<td>SC 212 Weeds and Their Control</td>
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Fourth Semester

<table>
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<tbody>
<tr>
<td></td>
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<td>Lab.</td>
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<tr>
<td>AG 217 Fruit and Vegetable Culture</td>
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<tr>
<td>SC 205 Mycology and Nematology</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>SC 208 Field Research Procedures</td>
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<tr>
<td>SC 217 Biology Seminar</td>
<td>0</td>
<td>2</td>
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<tr>
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<td>0</td>
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<td></td>
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</tbody>
</table>

Total Credits Required: 66

OCEANOLOGY—EMPHASIS

This major is recommended for those students interested in employment in the expanding marine industrial, educational, and research enterprises.

<table>
<thead>
<tr>
<th>Third Semester</th>
<th>Hours per Week</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td></td>
<td>Class</td>
<td>Lab.</td>
</tr>
<tr>
<td>SC 104 General Microbiology</td>
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<td>2</td>
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<tr>
<td>SC 202 Microtechnique</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>SC 203 Research Procedures I</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>SC 221 Introduction to Oceanography</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>SC 234 Marine Botany</td>
<td>2</td>
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<tr>
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<td>3</td>
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</table>

Fourth Semester

<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td></td>
<td>Class</td>
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</tr>
<tr>
<td>SC 206 Research Procedures II</td>
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<tr>
<td>SC 217 Biology Seminar</td>
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<tr>
<td>SC 256 Marine Zoology</td>
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<tr>
<td>CH 204 Biochemistry</td>
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<tr>
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<tr>
<td></td>
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</tbody>
</table>

† Women students or non-climbers may substitute another technical elective.
* Please see Index for information about General Education courses.
TECHNICAL ELECTIVE SEQUENCES

BIOLOGICAL RESEARCH TECHNOLOGY OPTION

This elective sequence is recommended for those students interested in macro and micro photographic reproduction and recording in hospital, medical, or biological research laboratories. The courses have been specifically developed to meet the photographic educational requirements for certification under the plan of the Biological Photographic Association.

<table>
<thead>
<tr>
<th>Third Semester</th>
<th>PT 220 Biological Photography I</th>
<th>Hours per Week</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Class</td>
<td>Lab.</td>
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<table>
<thead>
<tr>
<th>Fourth Semester</th>
<th>PT 221 Biological Photography II</th>
<th>Hours per Week</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Class</td>
<td>Lab.</td>
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</tbody>
</table>

Total Credit Required: 68

MEDICAL LABORATORY TECHNOLOGY

This curriculum prepares students for employment in hospital laboratories, private and government clinical and industrial laboratories, blood banks, and medical research laboratories. Graduates of this program are qualified for immediate employment, may continue their training for registry, or may become Registered Associate Medical Technologists in the N.Y. State Registry of Medical Technologists.

* A technical elective sequence will be offered only when the number of students selecting it is sufficient.
## Typical Employment Opportunities

<table>
<thead>
<tr>
<th>Hospital Medical Laboratory Technician</th>
<th>Doctors’ Laboratory Technician</th>
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</thead>
<tbody>
<tr>
<td>Clinical Laboratory Technician</td>
<td>Health Department Technician</td>
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<tr>
<td></td>
<td>Research Technician</td>
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### First Semester

<table>
<thead>
<tr>
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<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>SC 102</td>
<td>Botany</td>
<td>2/2</td>
<td>3</td>
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<tr>
<td>SC 114</td>
<td>Zoology</td>
<td>2/2</td>
<td>3</td>
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<tr>
<td>CH 107</td>
<td>General Chemistry</td>
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</tr>
<tr>
<td>MA 105</td>
<td>College Algebra</td>
<td>3/0</td>
<td>3</td>
</tr>
<tr>
<td>EN 100</td>
<td>English Composition</td>
<td>3/0</td>
<td>3</td>
</tr>
<tr>
<td>PE 102</td>
<td>Physical Education</td>
<td>0/2</td>
<td>1/2</td>
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**Total Credits Required:** 13

### Second Semester

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<th>Credit Hours</th>
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<td>Parasitology</td>
<td>2/2</td>
<td>3</td>
</tr>
<tr>
<td>SC 105</td>
<td>Anatomy and Physiology</td>
<td>3/2</td>
<td>4</td>
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<tr>
<td>CH 110</td>
<td>Introduction to Organic Chemistry</td>
<td>3/3</td>
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<td>MA 110</td>
<td>Statistics</td>
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<td>EN 101</td>
<td>Introduction to Literature</td>
<td>3/0</td>
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<tr>
<td>PE 103</td>
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**Total Credits Required:** 14

### Third Semester

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<td>SC 202</td>
<td>Microtechnique (Histology and Cytology)</td>
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<td>SC 210</td>
<td>Hematology and Renal Physiology</td>
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<td>3</td>
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<tr>
<td>SC 215</td>
<td>Serology and Immunology</td>
<td>2/2</td>
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**Total Credits Required:** 11

### Fourth Semester

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<td>Clinical Chemistry</td>
<td>3/3</td>
<td>4</td>
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<tr>
<td>SC 217</td>
<td>Biology Seminar</td>
<td>0/2</td>
<td>1</td>
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<tr>
<td>SC 243</td>
<td>Practicum in Medical Technology</td>
<td>2/3</td>
<td>3</td>
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<tr>
<td>CH 204</td>
<td>Biochemistry</td>
<td>3/3</td>
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<td>Social Science*</td>
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</table>

**Total Credits Required:** 14

---

* Please see Index for information about General Education courses.
BUSINESS ADMINISTRATION

This program prepares men and women for employment as administrative assistants in industry and business. The first-year core curriculum provides the student with general business information essential to the development of the second-year concentration in one of three options—Accounting, Management, or Marketing.

In addition to the business courses of instruction, the students' collegiate program is broadened through a required sequence of study in English; mathematics and physics; and the social sciences.

Graduates find that the broad background of this curriculum provides excellent preparation for the small business enterprise. Graduates entering large corporations secure initial employment in such areas as production, personnel, engineering, accounting, selling, purchasing, and advertising. In recent years, some students have taken the opportunity of transferring to four-year colleges to complete the baccalaureate degree in business administration.

Typical Employment Opportunities

Salesman
Expediter
Merchandising
Cost Accounting
Payroll Clerk
Personnel Department

Junior Accountant
Purchasing
Administrative Assistant
Management Trainee
Insurance
### BUSINESS ADMINISTRATION

#### First Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Class</th>
<th>Lab.</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>BA 101</td>
<td>Accounting</td>
<td>2</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>BA 111</td>
<td>Business Organization and Management</td>
<td>3</td>
<td>0</td>
<td>3</td>
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<tr>
<td>EN 100</td>
<td>English Composition</td>
<td>3</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>PE 102</td>
<td>Physical Education</td>
<td>0</td>
<td>2</td>
<td>1/2</td>
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<tr>
<td>MA 105</td>
<td>College Algebra</td>
<td>3</td>
<td>0</td>
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<tr>
<td>SO 206</td>
<td>Economics</td>
<td>3</td>
<td>0</td>
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<td></td>
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#### Second Semester

<table>
<thead>
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<tbody>
<tr>
<td>BA 102</td>
<td>Accounting</td>
<td>2</td>
<td>2</td>
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<tr>
<td>BA 151</td>
<td>Principles of Marketing I</td>
<td>3</td>
<td>0</td>
<td>3</td>
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<tr>
<td>BA 160</td>
<td>Systems and Procedures</td>
<td>1</td>
<td>2</td>
<td>2</td>
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<tr>
<td>BA 162</td>
<td>Business Communications</td>
<td>1</td>
<td>2</td>
<td>2</td>
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<tr>
<td>EN 101</td>
<td>Introduction to Literature</td>
<td>3</td>
<td>0</td>
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<tr>
<td>PE 103</td>
<td>Physical Education</td>
<td>0</td>
<td>2</td>
<td>1/2</td>
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<tr>
<td>PH 121</td>
<td>Physics (or MA ———)</td>
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<tr>
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<td><strong>8</strong></td>
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#### Third Semester

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<thead>
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<th>Class</th>
<th>Lab.</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>BA 211</td>
<td>Principles of Management</td>
<td>3</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>BA ■</td>
<td>Business Elective (select 2)</td>
<td>4</td>
<td>4</td>
<td>5-6+</td>
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<tr>
<td>DP 200</td>
<td>Business Data Processing</td>
<td>3</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>PH 122</td>
<td>Physics (or PH 121, or MA ———)</td>
<td>3</td>
<td>0</td>
<td>3</td>
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<tr>
<td>SO 219</td>
<td>General Psychology</td>
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<td>0</td>
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<td><strong>Total</strong></td>
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#### Fourth Semester

<table>
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<th>Credit Hours</th>
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<tr>
<td>BA 260</td>
<td>Statistics</td>
<td>3</td>
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<td>BA ■</td>
<td>Business Elective (select 4)</td>
<td>8</td>
<td>8</td>
<td>11-12</td>
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<tr>
<td>SO ■</td>
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<td></td>
<td><strong>Total</strong></td>
<td><strong>14</strong></td>
<td><strong>8</strong></td>
<td><strong>17-18</strong></td>
</tr>
</tbody>
</table>

Total Credits Required: 67

---

* Please see Index for information about General Education courses.

† Student will elect three courses each semester from the suggested "option" list, business elective list, and in consultation with the Department Chairman or faculty advisor.
ACCOUNTING OPTION**

Suggested Electives for Business Administration
(Select Six Courses)

The accounting option features studies in cost accounting, payroll and taxes, office management, and business problems of the accounting profession.

BA 201 Intermediate Accounting I
BA 151 Business Mathematics
BA 152 Principles of Finance
BA 203 Cost Accounting
BA 202 Intermediate Accounting II

BA 161 Business Law I
BA 206 Principles of Taxes
BA 251 Investment and Securities
BA 261 Business Law II
DP 121 Basic Machine Operation

MANAGEMENT OPTION**

Managerial aspects of business and industry are treated in courses including industrial management, personnel management, and problems in management.

BA 238 Industrial Purchasing
BA 233 Transportation Principles
BA 158 Principles of Finance
BA 161 Business Law I
BA 206 Principles of Taxes

BA 212 Production Management
BA 213 Industrial Management
BA 216 Personnel Management
BA 262 Case Problems in Business
BA 261 Business Law II

MARKETING OPTION**

The marketing option deals with marketing, industrial purchasing, salesmanship, and advertising fundamentals.

BA 151 Business Mathematics
BA 230 Public Relations
BA 234 Advertising Principles
BA 238 Industrial Purchasing
BA 133 Transportation Principles

BA 236 Advertising Psychology
BA 161 Business Law I
BA 216 Personnel Management
BA 262 Case Problems in Business
BA 231 Principles of Marketing II

** Courses in Data Processing curriculum are also available for electives.
SECRETARIAL SCIENCE

The main objective of the Secretarial Science curriculum is to prepare students for careers as technical secretaries through a concentration of specialized study in one of the four options offered by the department.

All students are required to take a core curriculum during their first year. This core program develops the basic fundamental necessary for the second-year specialization in: Advertising, Industrial, Medical, or Legal.

Most of the graduates seek employment in the field of their specialized training, and many advance within a few years to positions of considerable responsibility. Students also transfer to four-year colleges for the purpose of completing the requirements for a baccalaureate degree in business.

Each option is further enriched through a required sequence of study in English; mathematics and sciences; and the social sciences.

Technical Secretary:
  - Legal
  - Medical
  - Advertising
  - Industrial or Engineering

Research Assistant
Specifications Writer

Executive Assistant
  - Statistician
  - Engineering Aide
  - Estimator

Executive Secretary
  - Production Assistant

SECRETARIAL SCIENCE

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Hours per Week</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Class</td>
<td>Lab.</td>
</tr>
<tr>
<td>SS 111 Stenography (1)</td>
<td>2</td>
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<tr>
<td>BA 111 Business Organization and Management</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>SS 102 Typewriting (2)</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>SS 133 Office Machines</td>
<td>1</td>
<td>3</td>
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<tr>
<td>EN 100 English Composition</td>
<td>3</td>
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<tr>
<td>PE 102 Physical Education</td>
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<tr>
<td>SO Social Science*</td>
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Second Semester

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<tbody>
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<tr>
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<td>SS 112 Transcription (1)</td>
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<td>SS 102 Typewriting (2)</td>
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<td>BA 161 Business Law I</td>
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<td>EN 101 Introduction to Literature</td>
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(1) Stenography Sequence—SS 111, SS 112, or SS 112 and BA Elective.
(2) Typewriting Sequence — SS 101, SS 102, SS 201; or SS 102, SS 201 and BA 162.
(3) MA 105 College Algebra for Industrial Option; SC 107 Zoology for Medical Option.
* Please see Index for information about General Education courses.
SECRETARIAL SCIENCE—ADVERTISING OPTION

<table>
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<th>Hours per Week</th>
<th>Credit Hours</th>
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<tr>
<td><strong>Third Semester</strong></td>
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<tr>
<td>AA 214 Advertising Art and Design</td>
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<tr>
<td>BU 118 Advertising Principles</td>
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<td>SS 201 Typewriting (2)</td>
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<td>SS 211 Intermediate Transcription</td>
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<td>MA-SC Math or Science</td>
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<tr>
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<tr>
<td>AA 201 Advertising Copywriting</td>
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<td>SS 250 Office Practice</td>
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<td>SS 212 Advanced Transcription</td>
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Total Credits Required: 68

SECRETARIAL SCIENCE—INDUSTRIAL OPTION

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</tr>
</thead>
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<td></td>
</tr>
<tr>
<td>SS 201 Typewriting (2)</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
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<td>6</td>
</tr>
<tr>
<td>MA 107 College Algebra and Trigonometry</td>
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<td>MT 102 Graphics</td>
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<tr>
<td>PH 121 Physics</td>
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<th>Hours per Week</th>
<th>Credit Hours</th>
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<td></td>
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<td>SS 250 Office Practice</td>
<td>2</td>
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<td>SS 212 Advanced Transcription</td>
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Total Credits Required (First Year): 34

* Please see Index for information about General Education courses.
### Secretarial Science—Legal Option

<table>
<thead>
<tr>
<th>Third Semester</th>
<th>Hours per Week</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>SS 201</td>
<td>Typewriting (2)</td>
<td>1 Class, 3 Lab, 2 Hours</td>
</tr>
<tr>
<td>SS 211</td>
<td>Intermediate Transcription</td>
<td>2 Class, 6 Lab, 4 Hours</td>
</tr>
<tr>
<td>BA 261</td>
<td>Business Law II</td>
<td>3 Class, 0 Lab, 3 Hours</td>
</tr>
<tr>
<td>SS 240</td>
<td>Legal Procedures I</td>
<td>1 Class, 2 Lab, 2 Hours</td>
</tr>
<tr>
<td>MA-SC</td>
<td>Math or Science</td>
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</tr>
<tr>
<td>SO</td>
<td>Social Science*</td>
<td>3 Class, 0 Lab, 3 Hours</td>
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<td><strong>Total</strong></td>
</tr>
<tr>
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<td><strong>13</strong></td>
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#### Fourth Semester

| SS 250         | Office Practice | 2 Class, 2 Lab, 3 Hours |
| SS 212         | Advanced Transcription | 2 Class, 3 Lab, 3 Hours |
| SS 241         | Legal Procedure II | 3 Class, 0 Lab, 3 Hours |
| SS 214         | Legal Transcription | 1 Class, 2 Lab, 2 Hours |
| SO             | Social Science* | 3 Class, 0 Lab, 3 Hours |
|                | Elective        | 3 Class, 0 Lab, 3 Hours |
|                |                | **Total**     |
|                |                | **14** | **8** | **17** |

**Total Credits Required: 68**

### Secretarial Science—Medical Option

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<tr>
<td>SS 211</td>
<td>Intermediate Transcription</td>
<td>2 Class, 6 Lab, 4 Hours</td>
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<tr>
<td>SS 213</td>
<td>Medical Terminology</td>
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<td>EN 114</td>
<td>Speech</td>
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<td>SC 118</td>
<td>Anatomy and Physiology</td>
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<td>Social Science*</td>
<td>3 Class, 0 Lab, 3 Hours</td>
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#### Fourth Semester

| SS 250         | Office Practice | 2 Class, 2 Lab, 3 Hours |
| SS 215         | Medical Transcription | 3 Class, 5 Lab, 5 Hours |
| SC 209         | Medical Routines | 2 Class, 3 Lab, 3 Hours |
| SO             | Social Science* | 3 Class, 0 Lab, 3 Hours |
|                | Elective        | 3 Class, 0 Lab, 3 Hours |
|                |                | **Total**     |
|                |                | **13** | **10** | **17** |

**Total Credits Required: 68**

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* Please see Index for information about General Education courses.
CHEMICAL TECHNOLOGY
(An ECPD approved Engineering Technology Curriculum)

The Chemical Technology curriculum is designed to prepare men and women for challenging positions in research, development, and production in the field of chemistry and many others industries requiring scientifically educated personnel.

During the first year, the science studies concentrate on chemistry, physics, and mathematics. In the second year, all students continue basic studies in analytical and organic chemistry. The Chemical Technology student is encouraged to choose, with the advice of the Department Faculty, electives in biochemistry, and materials science.

Typical Employment Opportunities

Laboratory Technician Analyst
Pilot Plant Operator and Foreman
Chemical Salesman
Technical Service Representative
Production Manager
Technical Project Director
Environmental Control Technician

Quality Control Chemist
Research Assistant
Metallurgical Technician
Biochemical Assistant
Scientific Aide
Chief Laboratory Technician
### CHEMICAL TECHNOLOGY

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<thead>
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<th>First Semester</th>
<th>Hours per Week Class</th>
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<td>MA 124 Mathematics</td>
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</tr>
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<td>PH 131 Physics</td>
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<td>2</td>
<td>4</td>
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<tr>
<td>EN 100 English Composition</td>
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<td>4</td>
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<td>EN 101 Introduction to Literature</td>
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<td>PE 103 Physical Education</td>
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Chemistry electives offered in the Third Semester:
- CH 201 Chemical Processes ........................................ 3 3 4
- CH 221 Environmental Control I .................................. 3 3 4
- CH 258 Biochemistry I ............................................. 3 3 4

Chemistry electives offered in the Fourth Semester:
- CH 222 Environmental Control II .................................. 3 3 4
- CH 259 Biochemistry II ............................................ 3 3 4
- CH 275 Elements of Materials Science ............................ 3 3 4

*Please see Index for information about General Education courses.
CIVIL TECHNOLOGY—HIGHWAY
(An ECPD approved Engineering Technology Curriculum)

The construction industry is the largest single industry in America today. The growth of our country is dependent upon the construction of roads and bridges, industrial plants, water systems, homes of our people, and all other structures which house the activities of our civilization. An army of engineers, architects, engineering technicians, and skilled mechanics is busy changing our cities, highways, and bridges. It is moving mountains, creating lakes, and bridging wide stretches of water. The courses in the Civil Technology curriculum are arranged to give a basic education in the fundamentals of soils and foundations, concrete and steel construction, structural design, surveying, mapping, and highway engineering. Graduates are engineering technicians prepared to assist Civil Engineers either in field or office work. State, county, and municipal departments of public works, as well as private engineers and contractors, offer employment to our graduates.

Typical Employment Opportunities

- Structural Designer
- Contractor
- Construction Superintendent
- Surveyor
- Engineering Aide
- Structural Draftsman
- Highway Draftsman
- Topographer
- Estimator
- Materials Tester
- Inspector
- Field Clerk
<table>
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<tr>
<th>First Semester</th>
<th>Hours per Week</th>
<th>Credit Hours</th>
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<tbody>
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<td>Construction Materials and Methods I</td>
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</table>

Total Credits Required: 71

* Please see Index for information about General Education courses.
CONSTRUCTION TECHNOLOGY—BUILDING
(An ECPD approved Engineering Technology Curriculum)

Civilization leaves its mark of progress in the architecture of its buildings. Our modern civilization is so vast and is changing so rapidly that construction is one of the great accomplishments of our times. The imagination of the architect working with the ever increasing structural knowledge and ingenuity of the engineer has produced a multitude of the world's most unique buildings. The vast industry of building materials supplies the designer with a nearly unlimited variety of materials and structural assemblies.

The courses in the building construction curriculum are designed to give a basic understanding of building technology. A solid foundation in mathematics, together with knowledge of materials and methods of construction, are correlated with technical studies in planning, designing, surveying, drafting, estimating, inspecting.

Graduates are engineering technicians prepared for many types of supervisory and technical employment in the building industry. The variety of employment opportunities enables our graduates to select positions that favor individual interest and ability.

Typical Employment Opportunities

Architectural Designer  Assistant Surveyor
Architectural Draftsman  Engineering Aide
Structural Detailer  Estimator
Construction Superintendent  Expediter
Contractor  Materials Salesman
Building Inspector  Materials Tester
## CONSTRUCTION TECHNOLOGY—BUILDING

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</table>

**Total Credits Required:** 71

* Please see Index for information about General Education courses.
COMMUNITY SERVICE ASSISTANT

Designed to provide the fundamental knowledge and skills essential for understanding human behavior, human problems, and human relationships, the Community Service Assistant curriculum prepares students for meaningful work with people in community, private, or public social welfare agencies.

The nature and needs of the individual are explored from various points of view of psychological forces and from those of the society in which he lives.

In their second year, students have the opportunity of gaining additional insights through field placement, which integrates academic understanding with agency experience.

Typical Employment Opportunities

Case Work Aide
Medical Social Work Assistant
Golden Age Club Administration Aide
Medicaid Assistant
Welfare Research Assistant

Neighborhood Worker
Community Action Aide
Statistical Assistant
Vocational Rehabilitation
Counseling Aide
### COMMUNITY SERVICE ASSISTANT

#### First Semester

<table>
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<th>Title</th>
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<td>Sociology</td>
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</table>

Total: 15 hours

#### Second Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours per Week</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 102</td>
<td>Community Service Agencies</td>
<td>1</td>
<td>2</td>
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<tr>
<td>CS 103</td>
<td>Introduction to Skills &amp; Techniques in Social Work</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>EN 101</td>
<td>Introduction to Literature</td>
<td>3</td>
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</tr>
<tr>
<td>PE 103</td>
<td>Physical Education</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>MA 100</td>
<td>Mathematics</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>SO 220</td>
<td>Psychology</td>
<td>3</td>
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<tr>
<td>SO 223</td>
<td>Sociology</td>
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Total: 16 hours

#### Third Semester

<table>
<thead>
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<th>Title</th>
<th>Hours per Week</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>CS 201</td>
<td>Field Experience</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>CS 205</td>
<td>Organization of Com. Welfare Services</td>
<td>3</td>
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</tr>
<tr>
<td>EN 110</td>
<td>Report Writing</td>
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<tr>
<td>EN 114</td>
<td>Speech</td>
<td>3</td>
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</tr>
<tr>
<td>SO 224</td>
<td>Sociology</td>
<td>3</td>
<td>3</td>
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<tr>
<td>SO 232</td>
<td>Developmental Psychology</td>
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Total: 16 hours

#### Fourth Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours per Week</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 202</td>
<td>Field Experience</td>
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<td>2</td>
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<tr>
<td>RS 212</td>
<td>Recreation for the Ill, Handicapped and Aged</td>
<td>3</td>
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<tr>
<td>CS 207</td>
<td>Community Mental Health Programs and Planning (E)</td>
<td>3</td>
<td>3*</td>
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<tr>
<td>CS 208</td>
<td>Community Programs and Planning for Mentally Retarded (E)</td>
<td>3</td>
<td>3*</td>
</tr>
<tr>
<td>DP 120</td>
<td>Introduction to Behavioral Stat.</td>
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<tr>
<td>NU 210</td>
<td>Child, Family and Community Health</td>
<td>3</td>
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<tr>
<td>BU 124</td>
<td>Typewriting+</td>
<td>1</td>
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</table>

Total: 14 to 16 hours

* Depending on elective
+ (Included unless passing proficiency examination)

Total 66 or 67*
DATA PROCESSING

High speed computers and ancillary data processing equipment are a necessary integral part of the business, scientific, industrial, educational and governmental facilities of the nation. Data processing is a growing professional field with rapidly expanding opportunities for employment.

This curriculum concentrates on the organization and interaction of the computer complex as an information processing system. The course is designed to provide the student with: an understanding of the principles and methods of data handling; competence in the application of computers and data processing equipment in different environments; experience in the use of both business and scientific programming languages, and an overview of business organization and management.

Work with a modern computer, auxiliary magnetic tape, disc and card processing equipment is included, as well as systems design, data processing techniques and programming languages.

Typical Employment Opportunities

Business Programming Trainee
Program Coder
Digital Computer Console Operator
Tape Librarian
Junior Documentation Writer
Junior Scientific Programmer

Systems Aide
Computer-Peripheral-Equipment Operator
Statistical and Tabulating Aide
Research Assistant
### DATA PROCESSING

<table>
<thead>
<tr>
<th><strong>First Semester</strong></th>
<th><strong>Hours per Week</strong></th>
<th><strong>Credit Hours</strong></th>
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</thead>
<tbody>
<tr>
<td>DP 101 Basic Computer Concept</td>
<td>3</td>
<td>3</td>
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<tr>
<td>DP 104 Introduction to Algorithmic Processes</td>
<td>2</td>
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<tr>
<td>DP 108 Principles of Automated Accounting</td>
<td>2</td>
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<tr>
<td>EN 100 English Composition</td>
<td>3</td>
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<tr>
<td>PE 102 Physical Education</td>
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<tr>
<td>MA 105 College Algebra*</td>
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<tr>
<td>SO 206 Economics</td>
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<th><strong>Hours per Week</strong></th>
<th><strong>Credit Hours</strong></th>
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<tbody>
<tr>
<td>DP 105 Systems Analysis and Design I</td>
<td>3</td>
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<tr>
<td>DP 109 Cost Analysis</td>
<td>2</td>
<td>2</td>
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<tr>
<td>DP 110 Fortran and Statistics</td>
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<tr>
<td>DP 115 Programming Systems</td>
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<td>EN 101 Introduction to Literature</td>
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<td>PE 103 Physical Education</td>
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<td>MA 107 College Algebra and Trigonometry*</td>
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<td>DP 205 Systems Analysis and Design II</td>
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<tr>
<td>DP 220 Cobol Programming**</td>
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<tr>
<td>PH 131 Physics Theory</td>
<td>3</td>
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<tr>
<td>PH 131 Physics Laboratory</td>
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<tr>
<td>SO — Social Science Elective</td>
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<table>
<thead>
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<th><strong>Hours per Week</strong></th>
<th><strong>Credit Hours</strong></th>
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<tbody>
<tr>
<td>DP 225 Business Data Processing Applications**</td>
<td>4</td>
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<td>or</td>
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<tr>
<td>DP 226 Industrial Data Processing Applications**</td>
<td>4</td>
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<tr>
<td>DP 230 Computer Approach to Decision Making</td>
<td>3</td>
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<tr>
<td>PH 132 Physics Theory</td>
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<tr>
<td>PH 132 Physics Laboratory</td>
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<tr>
<td>SO — Social Science Elective</td>
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<td>3</td>
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<tr>
<td>Elective***</td>
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<tr>
<td><strong>Total Credits Required:</strong></td>
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<td><strong>16</strong></td>
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* Students are required to take two semesters of mathematics. Students with high mathematical aptitude and advanced high school courses will be permitted to start with higher level courses in mathematics.

** In this course, students will be required to use the computer center for the preparation of homework assignments and projects during the semester.

*** Electives will be selected from the fields of mathematics, business or science after consultation with the chairman of the department.
DENTAL HYGIENE

The medical and dental professions have long appreciated the connection between oral hygiene and general health, and the general public is now beginning to recognize this relationship. This situation creates a need not only for more dentists but for a proportionately greater number of dental hygienists. A dental hygienist performs oral prophylaxis, including the taking and developing of dental roentgenograms, and instructs patients in the proper care of the mouth.

This curriculum is designed to provide education in theory and practice requisite for the licensed profession of dental hygiene. The first year's work is concerned largely with general subjects and basic sciences. Students also work with dental materials and practice oral prophylaxis on manikins. The second year's work is concerned with specialized subject matter and practical training. Students gain experience by assisting dentists, performing oral prophylaxis at the College and hospitals, as well as the taking and processing of dental x-rays.

All students receive courses in education which prepare for dental health education in schools and which lead to the granting of a provisional dental hygiene teacher's certificate in addition to the Associate Degree. Other required courses prepare students for private practice under the supervision of a registered dentist. Positions may occur in private dental offices, in public clinics, or in schools or other institutions.

Graduates of the College with a major in Dental Hygiene are eligible for participation in the various State Board Examinations in Dental Hygiene as well as the National Board Examination in Dental Hygiene.

Typical Employment Opportunities

<table>
<thead>
<tr>
<th>Private Dental Office</th>
<th>Clinic Supervisor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Health Clinic</td>
<td>Research Assistant</td>
</tr>
<tr>
<td>Hospital</td>
<td>Dental Assistant</td>
</tr>
<tr>
<td>Industrial or Private Clinic</td>
<td>Dental X-Ray Technician</td>
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</table>
# DENTAL HYGIENE

<table>
<thead>
<tr>
<th></th>
<th>Hours per Week</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td></td>
<td>Class</td>
<td>Lab.</td>
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## First Semester

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>DH 101</td>
<td>Dental and Oral Anatomy</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>DH 104</td>
<td>Dental Manikin</td>
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</tr>
<tr>
<td>CH 106</td>
<td>Introduction to Biochemistry</td>
<td>3</td>
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<tr>
<td>SC 105</td>
<td>Anatomy and Physiology</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>EN 100</td>
<td>English Composition</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>PE 102</td>
<td>Physical Education</td>
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<td>1/2</td>
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</table>

|                | 12 | 13 | 17 1/2 |

## Second Semester

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>DH 102</td>
<td>Preventive Dentistry</td>
<td>2</td>
<td>2</td>
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<tr>
<td>DH 103</td>
<td>Dental Assisting</td>
<td>2</td>
<td>2</td>
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<tr>
<td>DH 105</td>
<td>Dental Roentgenology</td>
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<td>2</td>
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<tr>
<td>DH 107</td>
<td>Clinical Dental Hygiene I</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>SC 109</td>
<td>Histology and Embryology</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>SC 110</td>
<td>Medical Microbiology</td>
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<tr>
<td>EN 114</td>
<td>Speech</td>
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<tr>
<td>PE 103</td>
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</table>

|                | 12 | 12 | 17 1/2 |

## Third Semester

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>DH 106</td>
<td>Dental Roentgenology</td>
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<tr>
<td>DH 201</td>
<td>Clinical Dental Hygiene II</td>
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<tr>
<td>DH 203</td>
<td>Methods and Materials in Dental Health Education</td>
<td>2</td>
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<tr>
<td>DH 204</td>
<td>Nutrition</td>
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<td>DH 205</td>
<td>Pathology</td>
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<td>DH 209</td>
<td>Pharmacology</td>
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<tr>
<td>SO 219</td>
<td>General Psychology</td>
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|                | 11 | 14 | 16   |

## Fourth Semester

<table>
<thead>
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<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
<th>Credits</th>
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<tbody>
<tr>
<td>DH 202</td>
<td>Health Services in Schools</td>
<td>2</td>
<td>2</td>
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<tr>
<td>DH 206</td>
<td>Clinical Dental Hygiene III</td>
<td>0</td>
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<td>DH 207</td>
<td>Dental Materials</td>
<td>1</td>
<td>2</td>
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<tr>
<td>DH 208</td>
<td>Public Health</td>
<td>2</td>
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<td>ED 230</td>
<td>School Organization</td>
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<td>2</td>
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<tr>
<td>SO 222</td>
<td>Sociology</td>
<td>3</td>
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<tr>
<td>SO 222</td>
<td>Social Science*</td>
<td>3</td>
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</tbody>
</table>

|                | 13 | 14 | 18   |

Total Credits Required: 69

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* Please see Index for information about General Education courses.
ELECTRICAL TECHNOLOGY—ELECTRONICS
(An ECPD approved Engineering Technology Curriculum)

Electronics offers one of the largest and most varied areas in our modern industrial, economic, and social organization, and as such demands men with a high degree of proficiency in the technical subjects of their field together with supplemental knowledge in allied fields.

The curriculum of Electronics prepares engineering technicians for industrial positions in fields of Communications Electronics, Electrical Equipment, and Industrial Electronics.

The increasing application of electrical and electronic equipment makes it difficult for industry to secure qualified technical specialists to develop, install, operate, and maintain that equipment. Students in Electronics receive instruction to meet industrial needs.

Typical Employment Opportunities

Avionic Technician
Communication Technician
Computer Technician
Customer Engineer
Electronic Draftsman
Electronic Technician
Electronics Tester
Engineering Aide

Environmental Test Technician
Missile Electronics Technician
Nucleonic Technician
Radar Technician
Research Laboratory Technician
Technical Writer
Television Technician
Transmitter-Receiver Test Technician
### ELECTRICAL TECHNOLOGY—ELECTRONICS

**First Semester**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours per Week</th>
</tr>
</thead>
<tbody>
<tr>
<td>ET 101</td>
<td>Electrical Circuits I</td>
</tr>
<tr>
<td>MA 124</td>
<td>Mathematics</td>
</tr>
<tr>
<td>PH 131</td>
<td>Physics</td>
</tr>
<tr>
<td>EN 100</td>
<td>English Composition</td>
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<tr>
<td>PE 102</td>
<td>Physical Education</td>
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<tr>
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**Second Semester**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours per Week</th>
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</thead>
<tbody>
<tr>
<td>ET 103</td>
<td>Electrical Circuits II</td>
</tr>
<tr>
<td>ET 106</td>
<td>Electronics I</td>
</tr>
<tr>
<td>MA 125</td>
<td>Mathematics</td>
</tr>
<tr>
<td>PH 132</td>
<td>Physics</td>
</tr>
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<td>EN 101</td>
<td>Introduction to Literature</td>
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<td>PE 102</td>
<td>Physical Education</td>
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<td><strong>Total</strong></td>
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**Third Semester**

<table>
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<tr>
<th>Course</th>
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<tbody>
<tr>
<td>ET 201</td>
<td>Circuit Construction and Analysis</td>
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<tr>
<td>ET 222</td>
<td>Electronics II</td>
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<tr>
<td>ET 223</td>
<td>Electronics III</td>
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<tr>
<td>MA 126</td>
<td>Mathematics</td>
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**Fourth Semester**

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<tr>
<td>ET 224</td>
<td>Electronics IV</td>
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<td>ET 225</td>
<td>Electronics V</td>
</tr>
<tr>
<td>ET 226</td>
<td>Electronics VI</td>
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<td>SO —</td>
<td>Social Science*</td>
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<tr>
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</tbody>
</table>

**Total Credits Required:** 71

* Please see Index for information about General Education courses.
ENGINEERING SCIENCE

Purpose

The purpose of the curriculum is to prepare students in the basic areas of science, mathematics, and humanities, qualifying them for further study as third-year students at a senior college where specialization in several fields of engineering, applied mathematics, or applied science may be undertaken.

Requirements for Admission

Only students with 3½ to 4 units of high school mathematics, including Algebra, Geometry, Trigonometry, Advanced Algebra, and one unit of high school Physics will be accepted. High school Chemistry is recommended.

Typical Employment Opportunities

Graduates of this program ordinarily pursue advanced studies. Where circumstances prevent a graduate from continuing his studies, he may be qualified for a position as an engineering aide, research assistant, laboratory technician, or science assistant.

Transfer

The College has made transfer credit arrangements with several local colleges so that students completing the program can transfer directly as third-year students. Students should discuss their individual plans for transfer with the Department Chairman.
### First Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Subject</th>
<th>Class</th>
<th>Lab.</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>CH 115</td>
<td>General Chemistry</td>
<td>3</td>
<td>3</td>
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</tr>
<tr>
<td>MA 150</td>
<td>Analytic Geometry and Calculus</td>
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<td>PH 151</td>
<td>Physics</td>
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<td>EN 100</td>
<td>English Composition</td>
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<td>1/2</td>
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### Second Semester

<table>
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<th>Subject</th>
<th>Class</th>
<th>Lab.</th>
<th>Credit Hours</th>
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<td>3</td>
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</tr>
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<td>MA 151</td>
<td>Analytic Geometry and Calculus</td>
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<td>PH 152</td>
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<td>PH 161</td>
<td>Physics Laboratory</td>
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### Third Semester

<table>
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<th>Subject</th>
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<th>Lab.</th>
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<tbody>
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<tr>
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<td>or</td>
<td>3</td>
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<td>MA 152</td>
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<td>Physics</td>
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<td>Social Science Elective*</td>
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### Fourth Semester

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<tbody>
<tr>
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Total Credits Required: 70

---

*Electives will be selected by the students in conference with the Chairman of the Department. Prerequisite for electives must be minimum Grade "C".*
FOOD PROCESSING TECHNOLOGY

The nearly two hundred million people in the United States today must be assured of an adequate, satisfying food supply, not to mention the average yearly increase of four million persons. More food as well as more food research and new food ideas constitute a never ending search.

More than fifty per cent of the food items presently on our grocery shelves were not there ten years ago. Freeze-dried, radiated, and synthetic foods are now replacing many forms we currently know and accept. The field of foods is one of the most vital, most interesting, and well paying career areas open to young men and women. Challenging opportunities exist in a variety of capacities: production, quality control, merchandising, research and development of foods and products.

Students of Food Processing Technology study and practice in clean, sanitary laboratories which come under Federal, State, and local health jurisdiction. All students must comply with the U. S. Public Health Service, the New York State Health Department, the Suffolk County Health Department, and the State University at Farmingdale requirements.

Please note, in another section of this catalog, the scholarships offered to students enrolled in Food Processing Technology. These scholarships reflect the great interest the industry has in our students taking this course. Students seeking these awards should be mindful that they are based on scholarship, leadership, effort, ambition, industry, personality, financial need, and plans for the future.

Typical Employment Opportunities

- Food Processing and Manufacturing
- Federal-State Inspection of Food Products
- Food Plant Quality Control
- Inspectors, Health Department
- Food Research and Development
- Food Testing and Analysis
- Food Brokerage
- Food Buyer
- Ice Cream Manufacturing
- Cheese Processing
- Food Packaging
- Fluid Milk Processing
- Frozen Food Sales and Sales Supervision, Retail and Institutional
- Dairy Plant Quality Control
- Advertising
- Merchandising and Distribution of Foods
- Prepared and Pre-Cooked Frozen Foods Production
- Food Plant Management
- Food Equipment Sales
- Food Condiment Sales
FOOD PROCESSING TECHNOLOGY

<table>
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<tr>
<th>First Semester</th>
<th>Hours per Week</th>
<th>Credit Hours</th>
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<tr>
<td>FT 101 Food Preservation or FT 102 Milk and Food Processing</td>
<td>2 2 3</td>
<td>3</td>
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<tr>
<td>FT 107 Nutrition</td>
<td>2 0 3</td>
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<td>CH 103 Chemistry</td>
<td>2 2 3</td>
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<th>Hours per Week</th>
<th>Credit Hours</th>
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<tbody>
<tr>
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<td>PH 121 Physics</td>
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<th>Hours per Week</th>
<th>Credit Hours</th>
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<td>FT 201 Dairy Products Manufacturing I</td>
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<tr>
<td>FT 202 Food Processing Machinery</td>
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<td>SC 111 Microbiology of Foods</td>
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<tr>
<td>FT 204 Commercial Processing of Pre-Cooked and Specialty Frozen Foods</td>
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<tr>
<td>FT 205 Dairy Products Manufacturing II</td>
<td>2 3 3</td>
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<td>FT 206 Quality Control of Foods</td>
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<td>FT 208 Salesmanship</td>
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<td>BA 101 Accounting</td>
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<td>SO Social Science*</td>
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</table>

Total Credits Required: 67

* Please see Index for information about General Education courses.
MECHANICAL TECHNOLOGY
(An ECPD approved Engineering Technology Curriculum)

The Mechanical Technology graduate is in increasing demand in today's world of sophisticated manufacturing methods and newly-developed metal alloys and plastics. These have come about through the advancement of our scientific frontiers.

The program of studies is designed around two strong cores: general studies, and technical specialties. General studies involve English, Social Sciences, Mathematics, and Physical Science. This gives the technician a strong background in the ability to solve problems in a literal and quantitative sense.

The technical specialty courses have been developed to utilize the general studies core in preparing the graduate to enter industry in the employment opportunities listed below. The knowledge and operations taught are based upon studies made of our graduates in industry, advice from our industrial consultants, and from criteria established by accrediting engineering societies.

Our well-equipped laboratories are used to provide an experimental and operative basis for understanding and verifying basic classroom instruction. Through this curriculum's technical societies, faculty counseling, and field trips, the student expands his knowledge and strengthens his understanding of the general and technical relationships in our changing society.

Typical Employment Opportunities

Laboratory Technician
Machine Designer
Metallurgical Technician
Methods Engineer
Manufacturing Engineer
Numerical Control Programmer

Product Designer
Purchasing Agent
Quality Control Specialist
Technical Writer
Tool Designer
## MECHANICAL TECHNOLOGY

<table>
<thead>
<tr>
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<th>Hours per Week</th>
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<tr>
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<tr>
<td></td>
<td></td>
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<td></td>
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</tbody>
</table>

* Please see Index for information about General Education courses.
NURSERY EDUCATION

The curriculum in Nursery Education is designed to provide post-high school training for students in preparation for careers in day nurseries and private nursery schools. The curriculum in Nursery Education would qualify the graduate for work with young children under private and public auspices.

Typical Employment Opportunities

- Assistant Teacher Pre-Kindergarten Programs
- Assistant Teacher Day Care Center
- Assistant Teacher in Nursery School
- Assistant Teacher for the Physically Handicapped
- Attendant in a School for the Mentally Retarded
- Counselor in Children's Home
- Summer Camp Counselor
# Nursery Education

**First Semester**

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<tr>
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<tr>
<td>SC 119</td>
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<tr>
<td>SO 219</td>
<td>General Psychology</td>
<td>3 0 3</td>
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<tr>
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<td>3 0 3</td>
</tr>
<tr>
<td>EN 100</td>
<td>English Composition</td>
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**Second Semester**

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<td>ED 115</td>
<td>Childhood Education</td>
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<td>ED 120</td>
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<td>EN 114</td>
<td>Speech</td>
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</tr>
<tr>
<td>HU 112</td>
<td>Fundamentals of Music</td>
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**Third Semester**

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<td>Creative Activities</td>
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<tr>
<td>ED 205</td>
<td>Field Experience</td>
<td>2 6 4</td>
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<td>ED 200</td>
<td>Childrens Literature</td>
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<td>FT 107</td>
<td>Nutrition</td>
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**Fourth Semester**

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<tr>
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<tr>
<td>NU 210</td>
<td>Child, Family, and Community Health</td>
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<td>Physical Science</td>
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**Total Credits Required:** 66

† Approximate; depending on Elective.
NURSING

The preparation of a technical nurse is the major objective of the Nursing program. This is achieved within two academic years. Upon graduation, students receive the Associate in Applied Science degree and are eligible to take the New York State licensing examination for registered nurses.

The curriculum offers a balance of general education courses and specialized courses in nursing. Combined, these courses meet the graduation requirements and ready the student for his role as a nurse and as a citizen in today's society.

The technical or specialized aspect of the program is planned to provide each student with active participation in giving nursing care to individuals from infancy to old age. These learning experiences are obtained in the hospital. To further enrich the student's experiences, observation periods are made available in community health and welfare agencies, physicians' offices, and field trips.

Each student is assisted in the development of his fullest potential through guidance given by teachers who possess broad nursing experience and academic preparation in their fields.

The department of Nursing is accredited by the National League of Nursing.

The college environment provides students with social and cultural events to enhance their education.

Men and women of any age, single or married, who meet the college entrance requirements are eligible for admission to the program.

Typical Employment Opportunities

First level bedside nursing in the general hospital.
### NURSING

#### First Semester

<table>
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<th>Course</th>
<th>Title</th>
<th>Hours per Week</th>
<th>Credit Hours</th>
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<td>Anatomy and Physiology</td>
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<td>4</td>
</tr>
<tr>
<td>SO 219</td>
<td>General Psychology</td>
<td>3</td>
<td>3</td>
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<tr>
<td>EN 100</td>
<td>English Composition</td>
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<tr>
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| Total    |                                           | 13             | 13           |

#### Second Semester

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<td>Nursing-Parental and Child Health</td>
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<td>Introduction to Biochemistry</td>
<td>3</td>
<td>4</td>
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<td>SO 232</td>
<td>Developmental Psychology</td>
<td>3</td>
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<tr>
<td>EN 101</td>
<td>Introduction to Literature</td>
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<tr>
<td>PE 103</td>
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| Total    |                                           | 12             | 14           |

#### Third Semester

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<tr>
<td>SC 110</td>
<td>Medical Microbiology</td>
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<td>3</td>
</tr>
<tr>
<td>SO 222</td>
<td>Sociology</td>
<td>3</td>
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<tr>
<td>EN 114</td>
<td>Speech</td>
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| Total    |                                           | 14             | 11           |

#### Fourth Semester

<table>
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<th>Title</th>
<th>Hours per Week</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
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<td>NU 202</td>
<td>Nursing-Mental and Physical Illness</td>
<td>5</td>
<td>8</td>
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<tr>
<td>NU 204</td>
<td>Nursing in Modern Society</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>SO —</td>
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</tr>
<tr>
<td>Elective</td>
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| Total    |                                           | 15             | 9            |

Total Credits Required: 68

† Approximate; depending on Elective.

* Selected in consultation with major advisors.
The Department of Ornamental Horticulture offers courses for those who would be engaged in business or obtain employment in the field of ornamental horticulture. The program is based upon analysis of the job requirements of technicians in floriculture, landscape, nursery, turf and related horticultural enterprises.

Opportunities in the fields of ornamental horticulture are more numerous than ever. Each year requests for technically prepared men and women have greatly exceeded the number of available graduates.

During the first semester the courses in ornamental horticulture are basic and preparatory for the specialization which follows and are the same for all students. Integrated with the subject matter courses are laboratory and field experiences which provide students the opportunity to apply principles to specific problems and promote independent thinking. Specialization continues in the second year where further opportunity is afforded for improving competence and judgment.

Many graduates are stimulated to continue their education by transferring to four-year colleges or universities with one to two years of transfer credit.

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Hours per Week</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Class</td>
<td>Lab.</td>
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<tr>
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At the beginning of the second semester each student selects one of the following major fields: Floriculture, Landscape Development, Nursery Management, or Turfgrass Management.
The business of growing and selling flowers has been stimulated by the increase in our standard of living and the slogan, "Say it with Flowers" which the public has adopted as its own. Every community has its florist shop where flowers and plants are displayed and sold. Frequently these shops are attached to the greenhouses where flowers may be both grown and displayed. In cities the florist maintains a shop which he stocks with plants and cut flowers to sell to customers for anniversaries, weddings, engagements, expressions of sympathy, and everyday living. In some cases garden items such as seeds, tools, and other accessories are carried for the convenience of customers.

**Typical Employment Opportunities**

- Floral Designer
- Flower Shop Manager
- Private Estate Flower Grower
- Indoor Plant Designer
- Retail Florist
- Wholesale Florist
- Salesman or Sales Manager for Plants

### FLORICULTURE MERCHANDISING—FLORICULTURE PRODUCTION

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</table>

* Please see Index for information about General Education courses.

† Approximate; depending on Elective.

Total Credits Required: 68
LANDSCAPE DEVELOPMENT

The construction of private and public buildings during the past few years has hit new highs. One result of this activity has been an increased need for the services of the landscape man. Despite the many good publications available on the subject of landscaping, home owners seek the advice of trained horticulturists when contemplating a complex or partial landscape job. A trained landscape man is prepared to build and maintain lawns; plant and cultivate trees, shrubs, flowers, and other plants; and design and construct landscape features, including walks, paths, small pools, and walls. Likewise pruning, spraying, feeding, and other kinds of tree work require the services of the competent landscape man.

Typical Employment Opportunities

Foreman 
Landscape Company
Landscape Designer
Landscape Consultant
Landscape Contractor
Landscape Construction Foreman
Landscape Planting Foreman
Garden Center Manager
Arborist
Landscape Inspector
Landscape Nurseryman
Landscape Maintenance Business
Park Superintendent

LANDSCAPE DEVELOPMENT

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<th>Second Semester</th>
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<th>Credit Hours</th>
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<tr>
<td>OH 105</td>
<td>Landscape Gardening</td>
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| Third Semester | |
|-----------------|-----------------|-----------------|-----------------|
| Class | Lab. | Credit Hours |
| OH 204 | Herbaceous Plants II | 1 | 3 | 2 |
| OH 206 | Landscape Contracts and Specifications | 3 | 0 | 3 |
| OH 207 | Landscape Plans I | 1 | 6 | 3 |
| OH 212 | Woody Plants II | 2 | 2 | 3 |
| OH 231 | Turfgrass Management III | 2 | 2 | 3 |
| SO | Social Science* | 3 | 0 | 3 |

| Fourth Semester | |
|-----------------|-----------------|-----------------|-----------------|
| Class | Lab. | Credit Hours |
| OH 219 | Landscape Construction | 2 | 3 | 3 |
| OH 220 | Landscape Plans II | 1 | 9 | 4 |
| OH 221 | Landscape Surveying | 2 | 3 | 3 |
| SO | Social Science* | 6 | 0 | 6 |

| Total Credits Required: 68 |

* Please see Index for information about General Education courses.
NURSERY MANAGEMENT

With increasing needs for landscape services due to an accelerated building program comes a corresponding stepped-up demand for plants. A person entering this field of ornamental horticulture, beside having a love for plants, must be able to propagate and grow to a commercial size, the many different species and varieties of woody plants which can be sold to the landscape man or home owner. The nursery, because of land values, is usually located in the lightly populated suburban or rural areas. Another type of nursery activity is the garden center or roadside market, a smaller enterprise where plants are held temporarily for sale to wholesale or retail customers.

Typical Employment Opportunities

Nursery Manager  
Plant Propagator  
Garden Center Manager  
Retail Nurseryman  
Wholesale Nurseryman  
Horticulturist

Design in Landscape Department  
Arboretum Superintendent  
Woody Plant Specialist  
State Horticultural Inspector  
Custom Spray Operator  
Parkway Supervisor

NURSERY MANAGEMENT

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<tr>
<th>Second Semester</th>
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<td>OH 106 Nursery Management I</td>
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### Third Semester

| OH 208 Nursery Management II | Class 3  Lab. 3 | 4 |
| OH 209 Planting Plans I | Class 1  Lab. 6 | 3 |
| OH 210 Plant Propagation | Class 2  Lab. 3 | 3 |
| OH 212 Woody Plants II | Class 2  Lab. 3 | 3 |
| SO Social Science* | Class 3  Lab. 0 | 3 |
| **Total** | **11 14 16** | |

### Fourth Semester

| OH 221 Landscape Surveying | Class 2  Lab. 3 | 3 |
| OH 222 Nursery Management III | Class 2  Lab. 3 | 3 |
| OH 224 Planting Plans II | Class 1  Lab. 3 | 2 |
| SO Social Science* | Class 6  Lab. 0 | 6 |
| Elective | Class 2  Lab. 2 | 3 |
| **Total** | **13 11 17** | |

Total Credits Required: 68

* Please see Index for information about General Education courses.
TURFGRASS MANAGEMENT

With the increased emphasis being placed upon turf by municipalities, state, and federal agencies as they construct new highways, parkways, parks, and recreation areas throughout the country, the scarcity of competent turf specialists is becoming acute. The Turfgrass Management option prepares students for such positions as golf course construction and maintenance foreman, golf course superintendent, cemetery, park, and grounds supervisors. Areas of instruction in addition to the basic horticultural courses include courses in turf maintenance as a business, turfgrass problems, horticultural and turf equipment, landscape plans, landscape construction and topographical mapping.

Typical Employment Opportunities

Superintendent Golf Course
Turf Maintenance Business
Turf Supply Salesman
General Turf Construction Contractor
Golf Course Construction Contractor
Turf Research Technician

Commercial Sod Grower
Cemetery Superintendent
Golf Course Construction Foreman
Park Manager
Turf Consultant
Salesman Turf Products

TURFGRASS MANAGEMENT

<table>
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<th>Hours per Week</th>
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| **Third Semester** | | | |
| OH 201 | Arboriculture I | 1 | 3 | 2 |
| OH 206 | Landscape Contracts and Specifications | 3 | 0 | 3 |
| OH 209 | Planting Plans I | 1 | 6 | 3 |
| OH 214 | Horticultural and Turfgrass Equipment | 2 | 2 | 3 |
| OH 221 | Landscape Surveying | 2 | 3 | 3 |
| SO --- | Social Science* | 3 | 0 | 3 |
| **Total** | 12 | 14 | 17 |

| **Fourth Semester** | | | |
| OH 219 | Landscape Construction | 2 | 3 | 3 |
| OH 230 | Turfgrass Management II | 2 | 3 | 3 |
| OH 235 | Turfgrass Problem Reporting | 1 | 6 | 3 |
| OH 236 | Drainage and Irrigation | 2 | 3 | 3 |
| SO --- | Social Science* | 6 | 0 | 6 |
| **Total** | 13 | 15 | 18 |

Total Credits Required: 68

* Please see Index for information about General Education courses.
FACILITIES

Extensive horticultural facilities, in addition to classrooms and conventional laboratories, reinforce the educational program of the College.

The horticultural complex enables a wide variety of practical experience with materials and methods especially appropriate for technicians.

Included are 20,000 square feet of glass in the conservatory and various greenhouses devoted to specialized crops; several acres of land devoted to a woody plant nursery with shade houses and portable greenhouses; an acre of turf demonstration plots; a two hole golf course with seven more holes now planned for early construction to make a nine hole course; three acres of formal and informal gardens together with 10 acres of arboretums containing collections of shrubs and trees, and 50 acres of college buildings situated on a cultivated campus featuring a selected variety of plants, thus completing a living laboratory.

A limited area at Farmingdale is applied to the breeding and testing of plants in cooperation with individuals and private organizations engaged in research. These include official test plots of the All-American Selections, flower seed trials, and a demonstration rose garden.

Ornamentals Research Laboratory

This facility conducts research on problems of Long Island nurserymen and flower growers. It is a cooperative project of the New York State College of Agriculture at Cornell University, the United States Department of Agriculture at Beltsville, Maryland, and the College.
PHOTOGRAPHIC TECHNOLOGY

The Photographic Technology curriculum opens a completely new and unique career opportunity for persons with a deep interest in the technical aspects of photography.

Technical advances in the field of photography have made it one of the nation's largest and fastest growing industries. Photography has proven itself as a necessary and invaluable tool in every field. It performs vital functions in industry, business, medicine, space, education, communications; it is essential to the military, the professions, and the sciences, as well as a hobby enjoyed by millions. To meet these widely diversified photographic applications, a considerable amount of specialized and complex equipment has been designed.

This curriculum has been established to help provide technically qualified personnel not only to install, maintain, modify, and service these increasingly important photographic devices, but to test and evaluate the materials and processes with which they are associated.

The course of study prepares the technician with both a theoretical and practical background in physics, mathematics, photomechanisms, photochemistry, electricity, electronics, color photography, and the photographic process. Students interested in more advanced degrees will find opportunities for transfer in Photographic Science, Photographic Illustration and Photographic Instrumentation.

Typical Employment Opportunities

Manager, Photo Process Plant
Repair Department Supervisor
Technical Assistant
Quality Control Technician
Photo Equipment Service Technician
Technical Representative
Motion-analysis Photographer
Photoelectronics Technician
Graphic Arts Cameraman
Photo Interpretation Technician

Camera Store Manager
Custom Equipment Designer
Color Process Supervisor
Industrial Photographer
Audio-Visual Equipment Specialist
Research Assistant
Photofinishing Production Manager
Production Sensitometrist
Photographic Technician
Photo-Technical Correspondent
PHOTOGRAPHIC TECHNOLOGY

<table>
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<th>Course</th>
<th>Hours per Week</th>
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Total Credits Required: 70

* Please see Index for information about General Education courses.
POLICE SCIENCE

The preservation of the peace, the protection of life and property, the safeguarding of civil rights, and the maintenance of social order are essential to the functioning of a democratic society.

To provide for this peace, security, safety, and freedom, public and private agencies at the local, state, and federal levels are engaged in activities designed to enforce laws; detect and apprehend criminals; prevent crime and delinquency; correct and rehabilitate offenders; provide safety and security in industrial; commercial, financial organizations; and promote highway safety.

The Department of Police Science provides preparation for career services in these areas. Supported by a broad general education, training is given to develop professional competence in the fields of law enforcement administration, police science, the prevention and control of delinquency and crime, correctional administration, industrial security administration, and highway traffic administration.

The program is offered in cooperation with the law enforcement, correctional administration, and industrial security organizations of the State of New York.

Typical Employment Opportunities

Law enforcement positions with:
Federal Government
State Government
Business and Industrial Security

Insurance Claim Investigation
U. S. Armed Forces Police
Local Government: County, City, Town
### First Semester

<table>
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<tr>
<td>PS 104</td>
<td>Patrol Administration</td>
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Total Credits: 15

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<td>Police Administration</td>
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Total Credits: 18

### Third Semester

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<td>PS 210</td>
<td>Police Records and Communications</td>
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<td>PS 218</td>
<td>Criminal Law</td>
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Total Credits: 18

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<td>PS 219</td>
<td>Evidence and Criminal Procedure</td>
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<td>PS 220</td>
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Total Credits: 15

Total Credits Required: 70

* Please see Index for information about General Education courses.
CORRECTIONAL ADMINISTRATION

The increased urbanization of the nation's suburban and rural areas has generated a need for competent correctional personnel. This curriculum is designed to provide the education and training essential for careers in this area.

CORRECTIONAL ADMINISTRATION

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Hours per Week</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Class</td>
<td>Lab.</td>
</tr>
<tr>
<td>PS 103</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>PS 104</td>
<td>3</td>
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</tr>
<tr>
<td>EN 100</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>PE 102</td>
<td>0</td>
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<tr>
<td>MA-SC</td>
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<tr>
<td>SO — Social Science*</td>
<td>0</td>
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Second Semester

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<thead>
<tr>
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<th>Hours per Week</th>
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<tbody>
<tr>
<td></td>
<td>Class</td>
<td>Lab.</td>
</tr>
<tr>
<td>PS 110 Police Administration I</td>
<td>3</td>
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</tr>
<tr>
<td>EN 101 Introduction to Literature</td>
<td>3</td>
<td>0</td>
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<tr>
<td>EN 110 Report Writing</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>PE 103 Physical Education</td>
<td>0</td>
<td>2</td>
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<tr>
<td>MA-SC Math or Science</td>
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</tr>
<tr>
<td>SO — Social Science*</td>
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Third Semester

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<tr>
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<th>Hours per Week</th>
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<tr>
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<td>Class</td>
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</tr>
<tr>
<td>PS 218 Criminal Law</td>
<td>3</td>
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</tr>
<tr>
<td>PS 226 Juvenile and the Police I</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>PS 250 Introduction to Probation and Parole</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>PS 251 Criminology</td>
<td>3</td>
<td>0</td>
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<tr>
<td>PE 204 Physical Education</td>
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Fourth Semester

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<thead>
<tr>
<th></th>
<th>Hours per Week</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td></td>
<td>Class</td>
<td>Lab.</td>
</tr>
<tr>
<td>PS 214 Civil Rights and Human Relations</td>
<td>3</td>
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</tr>
<tr>
<td>PS 220 Interviewing and Case Preparation</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>PS 252 Probation and Parole II</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>PS 253 Introduction to Penal Administration</td>
<td>3</td>
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<tr>
<td>PE 205 Physical Education</td>
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<tr>
<td></td>
<td>16</td>
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</tbody>
</table>

Total Credits Required: 70

* Please see Catalog Index for information about General Education courses.
RECREATION SUPERVISION

Recreation has taken its place in today's society as an important, basic human need. The demand for professional recreation personnel has increased rapidly since World War II, particularly with the increase in leisure time and the public's awareness of the values of recreation in serving its physical, emotional, and social needs.

This two-year curriculum serves to guide young men and women into careers as recreation technicians and to be leaders in a variety of agencies: community recreation, the armed forces, youth serving agencies, correctional institutions, industrial recreation, and with agencies serving the ill, handicapped, and aged.

Designed to provide education in theory and practice requisite for the position of recreation leader or technician, the first year's course work focuses primarily on general subjects, the introduction and organization of recreation, and a number of skills courses related to such activities as games, sports, music and arts and crafts. Second year course work is concerned with several specialized areas in outdoor recreation, camping, and recreation for the ill, handicapped, and aged.

In addition, each student will be scheduled for two terms of field work in which he will obtain practical experience and training.

The curriculum will provide the two year graduate with the skills needed to obtain a recreation position and for those who wish to continue their studies with a transfer program into a four year recreation curriculum.

Typical Employment Opportunities

Municipal Recreation
County Recreation
Rural Recreation
State Recreation
Federal Recreation
Industrial Recreation
Park Departments
School Recreation
Commercial Recreation
Hospital Recreation

Institutional Recreation
Boys Clubs and Girls Clubs
Y.M.H.A. and Y.M.C.A.;
Y.W.C.A. and Y.W.H.A.
Settlement Houses
Boy Scouts and Girl Scouts
Churches
Camps
Play Schools
## RECREATION SUPERVISION

### First Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours per Week</th>
</tr>
</thead>
<tbody>
<tr>
<td>EN 100</td>
<td>English Composition</td>
<td>3 Class, 0 Lab.</td>
</tr>
<tr>
<td>PE 102</td>
<td>Physical Education</td>
<td>0 Class, 2 Lab.</td>
</tr>
<tr>
<td>RS 100</td>
<td>Introduction to Recreation</td>
<td>3 Class, 0 Lab.</td>
</tr>
<tr>
<td>RS 110</td>
<td>Recreation Skills &amp; Techniques</td>
<td>2 Class, 2 Lab.</td>
</tr>
<tr>
<td>SC 107</td>
<td>Biology</td>
<td>3 Class, 0 Lab.</td>
</tr>
<tr>
<td>SO 222</td>
<td>Sociology</td>
<td>3 Class, 0 Lab.</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>14 Class, 4 Lab.</strong></td>
<td><strong>15 1/2 Credit</strong></td>
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### Second Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours per Week</th>
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</thead>
<tbody>
<tr>
<td>EN 101</td>
<td>Introduction to Literature</td>
<td>3 Class, 0 Lab.</td>
</tr>
<tr>
<td>PE 103</td>
<td>Physical Education</td>
<td>0 Class, 2 Lab.</td>
</tr>
<tr>
<td>PE 105</td>
<td>Safety and First Aid</td>
<td>0 Class, 2 Lab.</td>
</tr>
<tr>
<td>RS 105</td>
<td>Organization of a Recreation Program</td>
<td>3 Class, 0 Lab.</td>
</tr>
<tr>
<td>RS 107</td>
<td>Arts &amp; Crafts</td>
<td>2 Class, 2 Lab.</td>
</tr>
<tr>
<td>RS 111</td>
<td>Recreation Skills &amp; Techniques</td>
<td>2 Class, 2 Lab.</td>
</tr>
<tr>
<td>SO 219</td>
<td>Psychology</td>
<td>3 Class, 0 Lab.</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>13 Class, 8 Lab.</strong></td>
<td><strong>16 1/2 Credit</strong></td>
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### Third Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours per Week</th>
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</thead>
<tbody>
<tr>
<td>NU 210</td>
<td>Child, Family &amp; Community Health</td>
<td>1 Class, 4 Lab.</td>
</tr>
<tr>
<td>PE 211</td>
<td>Physical Education</td>
<td>0 Class, 2 Lab.</td>
</tr>
<tr>
<td>RS 205</td>
<td>Field Work in Recreation</td>
<td>3 Class, 0 Lab.</td>
</tr>
<tr>
<td>RS 212</td>
<td>Recreation for the Ill, Handicapped and Aged</td>
<td>3 Class, 0 Lab.</td>
</tr>
<tr>
<td>RS 215</td>
<td>Skills in the Cultural Arts</td>
<td>2 Class, 2 Lab.</td>
</tr>
<tr>
<td>SC 118</td>
<td>Anatomy and Physiology</td>
<td>3 Class, 0 Lab.</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>12 Class, 8 Lab.</strong></td>
<td><strong>15 1/2 Credit</strong></td>
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</table>

### Fourth Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours per Week</th>
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</thead>
<tbody>
<tr>
<td>EN 108</td>
<td>Introduction to the Theatre</td>
<td>3 Class, 0 Lab.</td>
</tr>
<tr>
<td>PE 212</td>
<td>Physical Education</td>
<td>0 Class, 2 Lab.</td>
</tr>
<tr>
<td>MA</td>
<td>Mathematics</td>
<td>3 Class, 0 Lab.</td>
</tr>
<tr>
<td>PS 214</td>
<td>Civil Rights &amp; Human Relations</td>
<td>3 Class, 0 Lab.</td>
</tr>
<tr>
<td>RS 206</td>
<td>Field Work in Recreation</td>
<td>3 Class, 0 Lab.</td>
</tr>
<tr>
<td>RS 210</td>
<td>Outdoor Recreation and Camping</td>
<td>3 Class, 0 Lab.</td>
</tr>
<tr>
<td>Elective</td>
<td></td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>14 Class, 9 Lab.</strong></td>
<td><strong>18 1/2 Credit</strong></td>
</tr>
</tbody>
</table>

Total Credits Required: 66

* Approximate depending on elective.
Course Descriptions

Course descriptions are arranged in alphabetical-numerical order according to the code symbols which precede the names of the courses. The symbols identify or relate to the departments or instructional areas in which the courses are taught. Numbers in parentheses indicate lecture and laboratory hours per week respectively.

Advertising Art and Design

AA 103 Advertising Layout I. (2,3) 3 Cr.
The execution of sketches and comprehensive layouts for newspaper and magazine ads. The development of skill in indicating type and three-dimensional form with chisel-point pencil.

AA 104 Advertising Production I. (2,3) 3 Cr.
A study of the reproduction processes used in the graphic arts. The making of mechanicals. Drawings for line and halftone engravings in black-and-white and color.

AA 105 Design Fundamentals. (1,3) 2 Cr.
The fundamentals of design and designing theory in black-and-white and color.

AA 106 Figure Anatomy. (2,3) 3 Cr.
A study of anatomy as related to the basic structure and ideal proportions of the human figure. Drawings of the head and figure in various action poses.

AA 107 Advertising Drawing. (2,3) 3 Cr.
The principles of structural drawing, free-hand perspective, light and shade, and pictorial composition, applied to landscape subjects and manufactured objects. The technique and use of black and white mediums in commercial art such as pencil and pen and-ink.

AA 108 Geometrics. (1,3) 2 Cr.
The use of drawing instruments applied to graphic art. The drawing of geometric figures, charts and graphs, and trade marks. Mechanical Illustration.

AA 109 Lettering. (2,3) 3 Cr.
The evolution of the Roman alphabet and the modern styles used in contemporary advertising. A study of typography including the recognition and selection of type. The rendering of type with chisel point pencils.

AA 201 Copywriting. (1,2) 2 Cr.
The copywriter's contribution to advertising. Psychological considerations in the selection of appeals and themes and the preparation of copy for various media. Emphasis in on creative writing and its application to advertising problems.

AA 202 Advertising Production. (2,2) 3 Cr.
Organization and procedures for handling production: including scheduling costs, and purchasing problems. The basic principles of photo-engraving, and letterpress, offset, and gravure printing. The preparation of artwork for various printing processes. The recognition, selection, and use of type in advertising.
AA 203 Advertising Layout II. (2,3) 3 Cr.
Advertising and editorial layout including type and figure indication. Professional working procedures in making comprehensives, integrated with discussions on production problems and agency procedures.

AA 204 Advertising Illustration. (2,3) 3 Cr.
Interpretation of the elegance, poise, and dignity of the smartly clothed figure. Drawings of the advertising and fashion figure and merchandise, for wash and color reproduction.

AA 207 Figure Drawing I. (2,3) 3 Cr.
A study of the draped garment in relation to the underlying figure, and the structure and texture of contemporary costume. The rapid portrayal of figures in pencil and chalk for advertising layouts.

AA 208 Graphic Arts I. (2,3) 3 Cr.

AA 209 Graphic Design. (2,3) 3 Cr.
The application of the principles of advertising design to a wider range of advertising situations and media, including book jackets, record album covers, direct mail pieces, and posters.

AA 210 Merchandise Illustration. (1,3) 2 Cr.
The preparation of drawings of merchandise for advertising purposes. The drawing and rendering of interiors and objects in perspective. The use of various rendering techniques.

AA 211 Photo Retouching I. (1,6) 3 Cr.
The use of the airbrush in rendering typical basic drawings. Introduction to the retouching of photographic prints of merchandise for advertising reproduction.

AA 212 Seminar. (1,3) 2 Cr.
A study of the business relationships in the advertising art field. Prospecting for employment, working conditions, and prospects for advancement. The preparation and presentation of the portfolio.

AA 213 Technical Illustration. (2,3) 3 Cr.
The drawing of mechanical and technical subjects for catalog or handbook illustration; orthographic projection, isometric drawings, and mechanical perspective.

AA 214 Advertising Art and Design. (1,4) 2 Cr.
Methods and procedures in handling advertising artwork. Practical experience in the application of the fundamental principles of drawing and design to advertising problems.

AA 217 Industrial Drawing. (2,3) 3 Cr.
The illustration of industrial products in isometric and perspective. The designing and drawing of graphs, charts, and visual aids. Industrial presentations.

AA 218 Fashion Illustration. (2,3) 3 Cr.
The evolution and direction of men's and women's fashions. Sketching the fashion figure and the development of sketches required in the fashion industry. Rendering of fashion accessories and men's furnishings in line and wash.

AA 219 Photography. (1,3) 2 Cr.
The principles of photography, including the use of equipment, lighting, exposure, composition, processing, and enlarging. The use of photography in advertising.

AA 220 Figure Drawing II. (3,3) 4 Cr.
Drawings of the advertising and fashion figure in wash and color.

AA 221 Package Design. (2,3) 3 Cr.
The application of the elements and principles of design to three-dimensional objects. Introduction to packaging and display problems. Label, box, and carton design. Students make sketches, models, and finished drawings.

AA 222 Advertising Production II. (1,3) 2 Cr.
The preparation of drawings for various methods of printing, including offset, rotogravure, and silk screen. Typesetting by hand and machine, photographic processes, paper selection, and estimating.

Numbers in parentheses indicate lecture and laboratory hours per week respectively.
AA 223 Typography and Lettering. (2,3) 3 Cr.
The function of type, identification and specification of type, copyfitting, proofreading and marking-up of proofs, reproduction processes such as linotype, monotype, and cold-type methods. Type indication for layout.

AA 224 Advertising Procedures. (3,3) 4 Cr.
Planning campaign strategy. Determining the advertising appeal. Visualization. Media planning. The complete campaign. The application of product and marketing research.

AA 225 Graphic Arts II. (3,3) 4 Cr.

AA 226 Estimating-Printing. (3,0) 3 Cr.
A study of production methods and materials and estimating procedures in letterpress and offset printing.

AA 228 Oil Painting. (1,3) 2 Cr.
Creative work in easel painting with attention given to development of individual approach and style.

AA 225 Graphic Arts and Advertising Seminar. (0,3) 1 Cr.
A study of the advertising and graphic arts business on Long Island. Opportunities for employment. Contact with industry through field trips and speakers.

Agriculture

AG 101 Animal Anatomy, Physiology, and Health. (2,2) 3 Cr.
Anatomy and physiology as a background for disease treatment and control. The normal function of the organs and systems of the body. Symptoms, causes, and preventive treatment of common ailments of animals.

AG 102 Genetics. (3,0) 3 Cr.
The principles of inheritance in plants and animals. The biological implications of genetics, in terms of the interplay of the effects of heredity units and environment, as a foundation for applied genetics.

AG 103, AG 104 Livestock and Poultry. (0,4) 1 Cr. each
Students must attain minimum standards of proficiency in this laboratory. Experience in operating farm machinery and equipment, preparing land for planting, caring for growing crops, harvesting grains, vegetables, and fruit, hauling, storing, and mixing feed. Practice using fertilizer lime, and weed controls. The grading, storing, and marketing of farm products.

AG 105 Introductory Animal Science. (1,2) 2 Cr.
The common breeds of farm animals and poultry; their care and management. The economic importance of livestock and poultry in the agriculture of the State and Nation.

AG 106 Poultry Production and Marketing. (1,3) 2 Cr.

AG 107 Soil Science. (2,3) 3 Cr.
The origin, formation, and chemical properties of soil. Soil texture, drainage, tillage, fertility, and the use of fertilizer, lime, and farm manure related to the growing of plants.

AG 108 Livestock and Poultry Practice. (6,4) 1 Cr.
Alternating schedules in the care of livestock and poultry to acquire experience and skills. Some weekend experience will be required. Students must attain minimum standards of proficiency.

AG 110 Tractor Operation and Maintenance. (2,2) 3 Cr.
Types of farm tractors, their selection, operation, maintenance, and "tune-up"; basic engine and power transmission theory.

AA 201 Agricultural Economics. (3,0) 3 Cr.
The fundamental basic principles and relationships in the production, distribution and consumption of agricultural goods and serv-
ices with particular application to Northeastern U.S. and New York State agriculture. Price levels, the price-income structure of agriculture, the role farm prices play and how they are determined, government and agriculture, agricultural cooperatives and the changing structure of farm markets. Students follow agricultural economics in the press and present a paper of some length showing their opinions and grasp of agricultural economics.

AG 202 Comparative Animal Genetics. (2,2) 3 Cr.
The basic principles of livestock breeding including poultry. Problems of practical and economic importance of livestock and poultry breeders are considered, including artificial insemination, conversion factors, sire indices, testing methods, costs and production records. The College herds and flocks serve as practical examples.

AG 203 Beef Cattle Management. (2,0) 2 Cr.
The place of beef cattle in New York State. Characteristics of the major breeds; selection of stock; feeding and management problems. Work with the College Angus herd.

AG 204 Dairy Barn Management. (2,0) 2 Cr.
Practical experience with the College dairy herd. Herd management, feeding, breeding, and ailments. Offered in the third and fourth semesters.

AG 205 Dairy Cattle Management. (2,2) 3 Cr.
Selection of the dairy farm, history and development of the dairy breeds, selection of stock, raising calves and young stock, selection and care of herd sires, feeding and management problems, disease control and housing.

AG 206 Dairy Science. (1,3) 2 Cr.
The scientific, technical, and sanitary aspects of fluid milk production, including milk and its relation to public health, dairy barn scoring, and milk price plans. The composition and physical properties of milk, quantitative tests for butterfat, acidity, and solids. Students satisfactorily completing this course are eligible to take the examination for the New York State Tester's License.

AG 207 Farm Management Accounting. (2,2) 3 Cr.
Complete business records as needed for the effective management of the agricultural business. The principles and practices of business accounting; basic fundamentals, books of original entry, special columnar journals, ledgers, worksheets, statements, and adjusting and closing of accounts. Farm inventories. Social security and income tax returns.

AG 208 Field Crop Science. (2,2) 3 Cr.
Field crops in the Northeast; cropping systems related to soils, types of farming, and environment; management procedures, balance of enterprises, conservation programs, pest control, and fertility.

AG 209 Fruit Science. (2,3) 3 Cr.
The principles of growing trees and small fruits in the Northeast. The selection of plants, cultural practices in growing the crop to maturity, the control of insects and diseases. The study of varieties important to the Northeast. Propagation, pollination, tree nutrition, harvesting, grading, packaging, storing, and marketing.

AG 210 Agricultural Construction and Mechanization. (2,3) 3 Cr.
Trends in livestock housing; economies of construction and efficiency. Farm location, farmstead planning, construction problems and techniques; materials, ventilation, and electrical facilities. The selection and maintenance of equipment and labor saving devices.

AG 211 Animal Nutrition. (2,2) 3 Cr.
The proper nutrition of livestock including poultry. The sources of nutrients. Economical feed formulation, feed efficiency, and feeding practice.

AG 212 Meat and Meat Products. (1,3) 2 Cr.
Meat as a food, and the processing of meat animals of several classes and species. Antemortem and post-mortem examination, Federal and New York State meat inspection, refrigeration, and preservation of meats and meat products. Composition of meat, its vitamin content, and how to recognize the better grades as well as species and age of animal involved. The gross anatomy and physiology of the animals processed.

Numbers in parentheses indicate lecture and laboratory hours per week respectively.
AG 213 Poultry, Physiology and Health. (2,2) 3 Cr.
Building an effective barrier against poultry diseases, and insuring good health; principles of disease and parasite prevention and control.

AG 214 Soil and Water Conservation. (2,3) 3 Cr.
The principles and methods of making accurate measurements and calculating land areas and elevation, as related to soil erosion controls and water conservation practices. Factors contributing to soil and water losses and vegetative and engineering practices involved in control measures.

AG 215 Soil Fertility. (2,3) 3 Cr.
Plant nutrient needs, including the role of minor elements, for various crops. Constituents, ratios, and methods of mixing fertilizers. Soil tests for plant nutrients, fertilizer requirements, and recommendations correlated with the tests. Building and maintaining soil productivity.

AG 216 Vegetable Production. (1,2) 2 Cr.
The fundamentals of gardening, preparing the soil, planting, cultivating, and harvesting. Dusting and spraying for insect and disease control.

AG 217 Fruit and Vegetable Culture. (2,2) 3 Cr.
The basic principles and practices in growing vegetables, trees and small fruits, soil preparation, selection of varieties, planting, cultivation, insect and disease control, harvesting, grading, and packaging.

AG 218 Animal Care. (2,2) 3 Cr.
The fundamentals of large, pet, and laboratory animal care. Management, nutrition, disease, handling and assisting in treatment and surgery are considered. Blood and milk sample collection and records for the field, animal hospital, and laboratory are kept and discussed.

AG 220 Laboratory Animal Pathology. (2,2) 3 Cr.
Diseases of laboratory animals, their nature, cause, prevention, and treatment.

AG 221 Metal Work. (1,2) 2 Cr.
Theory and practical application of electric arc and oxy-acetylene welding. Cutting, shaping, drilling, tapping, threading, riveting, soldering, plumbing, and sharpening of edge tools. Identification of metals and their uses.

AG 225 Farm Machinery. (2,3) 3 Cr.
Selection, field operation, maintenance, and repair of basic, commonly used farm implements such as plows, harrows, drills, seeders, planters, cultivators, and harvesting machinery, with emphasis on efficiency and economy in use. A comparison of different makes of machinery, choosing sizes suitable for the power available; combination of field operations to secure proper tractor load; characteristics of materials, ordering repairs, lubrication, bearing construction, and other subjects related to the selection and purchase of equipment. Field operation problems involving the numerous units of the College farms.

Air Conditioning Technology

AC 101 Electricity. (2,3) 3 Cr.

AC 102 Air Conditioning Equipment I. (2,6) 4 Cr.
Thermodynamics of refrigeration, refrigeration cycles, refrigerants and system components. Compressor construction and performance. Refrigerant flow controls, equipment installation, operation, and testing. Prerequisite: AC 101.

AC 103 Thermodynamics. (3,0) 3 Cr.

AC 201 Air Conditioning Equipment II. (1,3) 2 Cr.
Automatic flow control devices, controls and control circuitry. Analysis of operation of cooling systems. Water conservation equipment capacity control. Prerequisite: AC 102.
AC 202 Air Conditioning Principles I. (4,0) 4 Cr.
Prerequisite: MA 125, AC 103.

AC 204 Heating Principles. (3,0) 3 Cr.
Prerequisite: MA 125, AC 103.

AC 206 Air Conditioning Principles II. (3,0) 3 Cr.
Prerequisite: AC 202.

AC 207 Control Instruments. (2,3) 3 Cr. 2 Cr.
Fundamentals of measurement and control. Electric, electronic, and pneumatic control systems. Control of commercial and industrial air conditioning and heating systems. Zone control.
Prerequisite: AC 201, AC 211.

AC 208 Engineering Measurements. (1,3) 2 Cr.
Fundamental engineering measurements of pressure, temperature, time, speed, power, and fluid flow. Performance tests on centrifugal fans, pumps, refrigeration systems, and heating systems.
Prerequisites: MA 126, AC 103.

AC 210 Systems Design. (2,6) 4 Cr.
Complete design, layout, and specifications for two projects: A year-round air conditioning system for a residence, and a year-round air conditioning system for a commercial or industrial building.
Prerequisites: AC 202, AC 204.

AC 211 Heating Equipment. (1,3) 2 Cr.
A study and analysis of residential commercial, and industrial-steam, hot water, and warm air heating systems. Equipment installation, maintenance, and analysis of service problems. Control systems. High pressure and low pressure oil burners, gas burners, and combustion testing.
Prerequisite: AC 101.

Aircraft Operations Technology

AO 100 General Aeronautics. (1,2) 2 Cr.
An introductory course covering the aeronautical knowledge essential to private pilots. Course will include FAA requirements for Basic Ground School in Federal Air Regulations; air navigation including radio navigation; meteorology; general service-aircraft and engines; safety practices and procedures.

AO 101 Aerodynamics. (3,0) 3 Cr.
Nomenclature of aircraft; aircraft axes and motion about these axes. Problems involving lift and drag to illustrate the change in performance with change in velocity, or weight, or altitude, or wing area. Introduction to high speed flight.

AO 104 Aircraft Structure. (3,4) 4 Cr.
Prerequisite: AO 101.

AO 201 Aircraft Electronics. (3,0) 3 Cr.
Fundamentals of electricity, capacitors and inductors, measuring instruments, batteries, generators, a-c and d-c current, principles of electronics, receivers, transmitters.
Prerequisite: PH 192.

AO 202 Aircraft Power Plants. (3,4) 4 Cr.
Theory and principles of operation of aircraft reciprocating engines, engine disassembly, assembly, running, live engines, and testing.
Prerequisite: PH 191.

AO 203 Navigation. (3,0) 3 Cr.
Charts, chart projections and their use. Navigational instruments and their use. The use of the slide rule section and wind vector face of the navigational computer for solving various types of dead reckoning problems. Radio navigation bearings and fixes using
both low and very high frequency radio aids
to navigation.
Prerequisite: AO 100.

AO 204 Weight and Balance. (2,0) 2 Cr.
Appraisal of the results of improperly bal-
ancing or overloading an aircraft. Finding
the empty weight and empty center of gravity after a series of removals and installa-
tions. The load adjustor and its use. Loading
graphs.
Prerequisite: MA 124.

AO 205 Air Traffic Control. (4,0) 4 Cr.
Radio aids to navigation, radio frequency
and procedures. Use of publications; flight
information manual; airmans guide; radio
facility, approach, and terminal area charts;
FAA manual of air traffic control procedures.
Prerequisite: AO 203.

AO 206 Flight Technique. (3,0) 3 Cr.
Aircraft and engine performance. Use of air-
craft and engine cruise charts. Methods of
cruise control; problems involving flight
analysis, flight logs, and How-goz-it charts.
Prerequisite: AO 202. AO 101.

AO 207 Jet Propulsion. (4,0) 4 Cr.
Basic theory of the operation of jet engines.
Classifications, identification, jet theory,
thrust augmentation, centrifugal flow, axial
flow, turbo props, athodyds and after burn-
ers.
Prerequisite: AO 202.

AO 208 Meteorology. (2,3) 3 Cr.
Fundamental physical concepts of meteorol-
ogy. Meteorological instruments and observa-
tions. Teletype sequence and synoptic chart
interpretation. Air masses, fronts, fog forma-
tion and dissipation, aircraft icing, and thun-
derstorms.
Prerequisite: AO 100.

Automotive Technology

AT 102 Mechanical Power Equipment. (2,4)
3 Cr.
Operation and maintenance of motive power.
Theory of steering systems, differentials,
clutches, torque multiplication mechanisms,
couplings, and power transmitting equip-
ment. Rebuilding, repairs, and adjustment
projects.

AT 103 Mechanical Power Equipment. (1,6)
3 Cr.
Cylinder design, crankshaft and camshaft
construction. Valve specifications and timing.
Valve lifters. Valve and valve seat recondi-
tioning. Piston types. Bearing fitting. Lubri-
cation, cooling, and fuel systems.

AT 104 Combustion Engines. (2,0) 2 Cr.
Introduce heat engine types, construction
arrangements, and operating cycles. Engine-
vehicle performance parameters, group and
individual problem solving. Effects of gaso-
line design on performance and combustion
requirements.

AT 105 Combustion Engines. (1,2) 2 Cr.
Gasoline engine fuel requirements and car-
buretor systems. Thermodynamic laws and
applications to heat engine and refrigeration
cycles.
Prerequisite: AT 104.

AT 106 Engineering Materials. (3,3) 4 Cr.
Chemical and physical properties, methods of
production, and utilization of industrial
materials. Forging, casting, and welding.
Physical tests and heat treatment. Projects
in the use and care of hand tools for bench
layout operations.

AT 204 Electricity. (2,3) 3 Cr.
Electron theory, definitions, measurement.
D-C circuits. Electrical power. Magnetism
and induction. Instruments and measure-
ment. Production of electricity. Distribution
systems. Fuses, switches. A-C characteristics.
Single and 3-phase circuits. A-C equipment,
heaters, transformers. Electric motors and
their controls.

AT 205 Electricity. (2,3) 3 Cr.
Power networks, ignition, lighting, starting,
and generating systems. Analysis of typical
live repair and maintenance problems, using
latest diagnostic test equipment and proce-
dures. Electronics: diode, triode, tuning and
regenerative circuits.
Prerequisite: AT 204.
AT 207  Power Transmission.  (2,3)  3 Cr.
Fluid type drive and transmission. Automotive hydraulic devices and their servo controls. Application of the principles of the planetary gear systems and conversion of fluid energy to study of a wide variety of automatic transmissions.

AT 210  Welding.  (1,3)  2 Cr.
Theory and practical application of electric arc welding; cutting, welding, and brazing with oxy-acetylene.

AT 212  Machinery Marketing.  (3,0)  3 Cr.
Channels of distribution; the dealership, its location and building requirements, organizational structure, financing, insurance, and legal aspects; selecting, training, and compensating personnel; accounting and general management.

AT 213  Senior Seminar.  (1,0)  1 Cr.
Performance of an extensive, Faculty approved, research and/or construction, curriculum related project; submitting preliminary, progress, and final technical written reports and a formal oral report.

AT 214  Combustion Engines.  (1,2)  2 Cr.
Study and analyze the balancing and dampening of forces and motions of linear and torsional vibration. Comparative analysis of diesel, gasoline, steam gas turbine heat engines with regard to performance, size, weight, and reliability. Diesel combustion process injection and ignition. Combustion chamber design with regard to air distribution versus reaction kinetics theory.
Prerequisite: AT 105

AT 215  Diesel Engines.  (3,3)  4 Cr.
Design and performance characteristics of piston, vane roots, Lysholm, centrifugal, axial, and Complex diesel engine blowers and compressors. Engine governing systems, including isochronus types and paralleling of diesel generator sets. Diesel engine starters and starting procedures. Free piston and gas turbine engine design, performance, and control characteristics.

AT 216  Engineering Measurements.  (2,3)  3 Cr.
Industrial type testing and reporting of pressure, temperature, speed, time, fluid flow, fuels and lubricants tests, and heat engine performance characteristics.
Prerequisite: MP 105.

AT 217  Applied Mechanics.  (2,2)  3 Cr.
Motion, velocity, and acceleration analysis of kinematic linkages. Basic static fluid principles and devices as used in power equipment for steering, brakes, transmissions, governors, and other auxiliary servo units.

Biological Sciences

SC 102  Botany.  (2,2)  3 Cr.
The fundamentals of plant science; plant anatomy, morphology, physiology, taxonomy; reproduction, genetics and pathology.

SC 104  General Microbiology.  (2,2)  3 Cr.
A study of the living forms of the microbial world. Fundamental techniques related to the isolation and differentiation of microbes by morphological, cultural, and bio-chemical methods. Principles of microbiology in relation to man and his environment.
Prerequisites: SC 102, SC 114, CH 103.

SC 105  Anatomy and Physiology.  (3,2)  4 Cr.
The structural and functional relationships of the human body systems. Concepts of the regulatory processes that integrate body cells, tissues, and organs. Individual study with physiological equipment, preserved and fresh materials, and models of biological structures.
Prerequisite: SC 114.

SC 107  Biology.  (3,0)  3 Cr.
Lectures and demonstrations in the basic biological principles of plant and animal life from both a cultural and scientific aspect.

SC 108  Entomology.  (2,2)  3 Cr.
The nature, structure, growth, habits, and injurious effects of insects and related forms. The identification of common plant pests, diseases, and their injuries, in the field. Control measures and application equipment. A collection of insects, plant diseases, and injuries is required.
SC 109 Histology and Embryology. (2,2) 3 Cr.
The microscopic structure of tissues and their function. Embryology and microscopic anatomy of the teeth.
Prerequisite: SC 105.

SC 110 Medical Microbiology. (2,2) 3 Cr.
The role of microorganisms in the diseases of man and animals; the culture and differentiation of pathogenic bacterial species. Classification of infectious diseases; modes of transmission of infectious agents therapeutic and epidemiological aspects. Infection and resistance, sero-diagnostic methods.
Prerequisites: SC 114, SC 102, CH 103.

SC 111 Microbiology of Foods. (2,3) 3 Cr.
The relationship of microbes to fresh and preserved foods. Microbiological analysis of food and dairy products for determination of sanitary quality. The role of microbes as food spoilage agents: transmission by food and water supplies; sources of contamination in the food-processing plant and methods of control.
Prerequisite: SC 104.

SC 114 Zoology. (2,2) 3 Cr.
The world of animal life and the processes which activate and govern it; morphology, anatomy, physiology, reproduction, and genetics.

SC 115 Plant Physiology. (2,2) 3 Cr.
The functions of plant growth and maintenance in the seedling, vegetative, and reproductive stages of development. The physical and chemical factors involved in nutrition and growth are studied in the laboratory. Quantitative data are sought in all investigations followed by formal reporting and discussion of the work.
Prerequisite: SC 102.

SC 118 Anatomy and Physiology. (3,0) 3 Cr.
A lecture-demonstration course for secretaries taking the medical option, covering the structural and functional relationships of the human body systems.

SC 119 Biology. (2,2) 3 Cr.
The basic biological principles of plant and animal life from both a cultural and scientific aspect. Laboratory studies stress similarities in all life forms such as respiration, reproduction, genetic controls, homeostatic mechanisms, and growth. Differences among organisms and their effects upon each other are considered.

SC 201 Medical Entomology. (2,2) 3 Cr.
The study of insects and other anthropods that annoy man and animals, transmit diseases, and contaminate stored products; their identification, life histories, mode of disease transmission, and control.
Prerequisite: SC 108.

SC 202 Microtechnique. (2,3) 3 Cr.
The preparation of plant and animal tissue for microscopic examination, including the embedding, sectioning, and staining of organs and tissues. The identification of cells and tissues is included.
Prerequisite: SC 102.

SC 203 Research Procedures I. (1,3) 2 Cr.
The nature of research and research methods. Experimental design; data reporting, recording and interpretation; research writing and library research. Use of instruments and equipment in biological research.

SC 204 Entomology. (2,2) 3 Cr.
The identification and control of pests and diseases of plants grown under glass, using latest chemical materials and control equipment.
Prerequisite: SC 108

SC 205 Mycology and Nematology. (2,3) 3 Cr.
The study of fungi and nematodes; their culture, isolation, identification, life cycles, injuries, and control.
Prerequisite: SC 102

SC 206 Research Procedures II. (1,4) 2 Cr.
A continuation of Research Procedures I in which students conduct research. Outstanding students may select, conduct and report their own research problem.

SC 207 Economic Botany. (2,3) 3 Cr.
Plants used in commerce and industry, for medicines, pest control, spices, twine, and foods. Plant collecting and herbariums.
Prerequisite: SC 102.
SC 208 Field Research Procedure. (1,6) 3 Cr.
Practice in the proper use of chemicals and application equipment in insect, plant disease, and weed control in the field. Planning, conducting, and recording control projects. Field trips to various commercial enterprises.

SC 209 Medical Routines. (2,3) 3 Cr.
Basic medical office procedures and skills are learned. These include assistance in the treatment room, sterilization processes, blood counts, urinalysis, blood pressure and temperature determination, pulse and respiration rates, First Aid Principles and other related activities. Emphasis is placed on understanding the rationale and scientific background to each procedure.

SC 210 Hematology and Renal Physiology. (2,3) 3 Cr.
The study of hemopoiesis, and the blood count as a diagnostic tool. The significance of abnormal findings; study of the physiology of the kidney under normal and abnormal circumstances, through analysis of the urine. Materials, equipment and methods used in blood and urine analysis.
Prerequisites SC 114, CH 107, SC 105, or permission.

SC 211 Bioanalytical Procedures. (2,3) 3 Cr.

SC 212 Weeds and Their Control. (2,2) 3 Cr.
The classification and identification of weeds harmful to crop culture. Methods of controlling weeds and the herbicides used. Field study is stressed.

SC 214 Diagnostic Microbiology. (2,3) 3 Cr.
Emphasis on the isolation and identification of pathogenic bacteria encountered in the clinical bacteriology laboratory. The first part of the course deals with the general principles of bacteriology; the latter part with bacteriologic diagnosis involving the cultivation and differentiation of pathogenic bacteria from clinical materials, with antibiotic susceptibility tests, serological typing procedures, sterility testing of hospital materials and applied methods in virology.

SC 215 Serology and Immunology. (2,3) 3 Cr.
The study of resistance to infectious diseases by the body's immune mechanisms. This includes consideration of the properties and behavior of foreign antigenic substances and antibodies formed in response. Serological diagnostic procedures in the laboratory emphasize understanding and interpreting the tests for Syphilis, Mononucleosis, Rheumatic Fever, Rheumatoid Factor, Pregnancy and others. An introduction to Blood Banking is included and involves blood typing and RH determination, Crossmatching and Coombs test. Modern techniques and instrumentation such as the Auto Analyzer are employed.

SC 217 Biology Seminar. (0,2) 1 Cr.
Presentations by the biology faculty and guest lecturers on the latest developments and research progress in the various fields of biology followed by questions and discussions.

SC 221 Introduction to Oceanography. (2,2) 3 Cr.
The chemical, physical, topographical and geologic aspects of the sea. The importance of the sea. Field study is included.

SC 225 Parasitology. (2,2) 3 Cr.
An introduction to parasites of man and domestic animals with an emphasis on identification, morphology, classification, etiology, life histories and the principles of parasitism. Prerequisite: Zoology or Biology.

SC 228 and SC 229 Care and Management of Laboratory Animals. (2,4) 3 Cr.
This course provides the students with the essential information required to properly manage and care for laboratory animals. Emphasis is placed on record keeping, sanitation, quarters, breeding, nutrition and handling of the mouse, rat, guinea pig, rabbit and hamster. Laboratory clinics will be held at a local hospital utilizing their research animal facilities.

SC 234 Marine Botany. (2,2) 3 Cr.
The biology of plants in the sea, their life histories, distribution, classification, structure

Numbers in parentheses indicate lecture and laboratory hours per week respectively.
and economic importance. Emphasis on the flora of the Long Island littoral. Field collection and study is included.

SC 236 Marine Zoology. (2,2) 3 Cr.
The classification, identification, life histories and ecology of the marine invertebrates and vertebrates from the protozoa through the chordates. Field collection study is included.

SC 237 Pesticides. (2,0) 2 Cr.
The principles of formulating insecticides, herbicides, fungicides, rodenticides, nematocides and avicides. Safety, mathematical computations involved with formulations and uses of pesticides will be covered. This course will be followed in the spring semester by SC 208 which includes exercises in laboratory and the field involving the formulating and application of pesticides.

SC 238 Industrial and Household Pests. (2,3) 3 Cr.
Biology and control of fabric, wood and stored grain pests will be stressed. The use of field trips, guest lecturers, movies and live materials will be incorporated into the course. Fundamentals of the pest control business and the responsibility to the public will be covered.

SC 243 Practicum in Medical Technology. (2,3) 3 Cr.
Prerequisites: Open only to students who have completed SC 202, 210, 215 or with permission of Chairman. Students will spend five hours per week at local cooperating hospitals and laboratories under guidance of senior technician and/or laboratory director. Work to be appraised by person in charge of laboratory and department chairman. In lieu of this, students may do advanced work in specialized tests in the college laboratory.

SC 244 Clinical Seminar. (0,2) 1 Cr.
Presentations by the biology faculty and guest lecturers on the latest developments and research progress in the clinical field followed by questions and discussions.

SC 245 Principles of Genetics. (2,3) 3 Cr.
The mechanisms of heredity in plants and animals including man with emphasis on Mendelian principles, nature and structure of the gene, transmission and action of genes and population genetics. Laboratory studies cover the basic organisms and techniques used in genetic research.

Business

BA 101 Accounting. (2,2) 3 Cr.
The principles of accounting are covered through a discussion of the accounting cycle of trading and non-trading businesses. The theory of debits and credits, the recording process, financial statements, depreciation, and accruals.

BA 102 Accounting. (2,2) 3 Cr.
A continuation of BU 101 Accounting: the basic problems of partnerships, the principles of corporation accounting. The voucher system, payroll and tax procedures, and the fundamentals of accounting for the manufacturer.
Prerequisite: BA 101.

BA 111 Business Organization and Management. (3,0) 3 Cr.
A concise picture of the business universe. Topics are: ownership, risk and risk-bearing production, finance and the financial system, marketing and transportation, and the effect of government on business.

BA 131 Marketing I. (3,0) 3 Cr.
A study of those business activities which are necessary to effect transfers in ownership and physical distribution of goods and services with reference especially to consumer goods. The importance of the marketing task, place of the consumer in our economic system, and the functions of retailing and wholesaling.

BA 133 Traffic Management I. (3,0) 3 Cr.
The problems encountered in transporting goods from the end of the production line to the home of the ultimate consumer, by means of air, highway, rail, waterways and pipelines. Attention is given to the creation of a total product distribution system. Effective relationships are discussed between various types of carriage.

BA 135 Salesmanship. (3,0) 3 Cr.
Creative selling and the development of the sales personality. Classification and use of
buying motives, analysis of customer types, complete product knowledge, and organization of the sales effort. Individual sales presentations are required.

**BA 151 Business Mathematics. (3,0) 3 Cr.**
Application of mathematics to business. Ratio and proportion, percentage, interest, bank discount, graphs, measurements, annuities, review of aliquot parts, and the elementary statistics principle regarding the median-mode-arithmetic mean.

**BA 152 Finance. (3,0) 3 Cr.**
An introductory finance course covering the whole field of finance, both public and private. Topics include the monetary and credit system of the United States, the demand for funds, and monetary policies and credit policies. Emphasis is also placed on current problems in the field of finance.

**BA 160 Systems and Procedures. (1,2) 2 Cr.**
A survey of the basic tools and techniques of systems analysis and their application to a broad range of control activities and office sub-systems in varied types of businesses. Description of basic tools and techniques—flow charts, work counts, work distribution charts, forms control, layouts.

**BA 161 Business Law. (3,0) 3 Cr.**
An introduction to legal concepts in general, the law of contracts, agency, and employment, negotiable instruments, personal property, bailments, and sales.

**BA 162 Business Communications. (1,2) 2 Cr.**
The fundamentals of grammar, punctuation, and sentence structure. Practice in writing simple reports, interoffice memoranda, and business letters, including sales, credit, inquiry, complaint, adjustment, and application.

**BA 201 Intermediate Accounting I. (2,2) 3 Cr.**
A review of the fundamental processes of accounting: an analysis of working capital items and valuations; and an understanding of noncurrent items including investments, plant, and equipment. 
Prerequisite: BA 102.

**BA 202 Intermediate Accounting II. (2,2) 3 Cr.**
A continuation of BA 201. Emphasis in this course will be on the stockholders' equity—paid-in capital and retained earnings; and an analysis of financial statements and funds-flow. 
Prerequisite: BA 201.

**BA 203 Cost Accounting. (2,2) 3 Cr.**
Principles of cost accounting applied to manufacturing industries. The use of cost data and procedures under job order, process cost, and standard cost accounting systems as a tool of management. 
Prerequisite: BA 201.

**BA 206 Principles of Taxes. (3,0) 3 Cr.**
Fundamental principles of accounting procedures, laws and regulations involved in recording taxes, payroll deductions, employment records, and tax reports. The preparation of income tax returns for the individual proprietorship and the partnership type of organization. 
Prerequisite: BA 101.

**BA 211 Principles of Management. (3,0) 3 Cr.**
A basic course that recognizes the importance of “management” as a distinct function and the universality of management principles in the administration of any type of enterprise. The managerial functions of planning, organizing, and controlling are presented as a basis for subsequent courses that emphasize their application in specific areas.

**BA 212 Production Management. (3,0) 3 Cr.**
Selected production problems are considered in such areas as analytical methods in production management, design of production systems, operation and control of production systems.

**BA 213 Industrial Management. (3,0) 3 Cr.**
Basic management techniques applied to the control of manufacturing activities. Analysis of product selection and development techniques, physical facilities, production planning, and quality control. 
Prerequisite: BA 111.

Numbers in parentheses indicate lecture and laboratory hours per week respectively.
BA 215 Office Management. (3,0) 3 Cr.
A study of the perspectives of office management; general considerations of data processing; computing and duplication processes; communications, filing processes; retention processes and records management; the nature, organization, tools of system analysis; managerial functions; employee selection, development, motivation, and supervision. Theoretical problems in office management.

BA 216 Personnel Management. (3,0) 3 Cr.
Major personnel functions in business and industry; policies, practices, and operating procedures in employment, training, safety and medical, staffing, and employer benefits.

BA 230 Public Relations. (3,0) 3 Cr.
Principles and practices of building good public relations between industry and employees, stockholders, consumers, suppliers, and the press. The development of public relations as a top-management function.

BA 231 Principles of Marketing II. (3,0) 3 Cr.
Marketing, planning, research, channels of distribution, management of pricing, management of selling, and management of customer service. Emphasis is placed on industrial goods. Prerequisite: BA 131.

BA 233 Traffic Management II. (3,0) 3 Cr.
A continuation of Traffic Management I. Emphasis is placed on managerial responsibilities in rate analysis, loss and damage claims handling, industrial traffic department operations, regulation and regulatory procedures. Prerequisite: BA 133.

BA 234 Advertising Principles. (3,0) 3 Cr.
The fundamental principles, techniques, and procedures used in modern advertising. Copywriting, selection of media, layout, the role of the advertising agency, and the planning of an advertising campaign.

BA 236 Advertising Psychology. (3,0) 3 Cr.
A study of psychological principles, methods and appeals developed in advertising. Emphasis is placed on the development of a psychological point of view toward advertising. Prerequisite: BA 234.

BA 239 International Transportation. (3,0) 3 Cr.
A survey of the methods of transportation employed in international commerce—sea, air, rail, and motor. The technical and economic aspects of equipment use, terminal facilities, organization and operation of government policy in foreign and domestic ports are prime areas of concentration. Prerequisite: BA 133.

BA 251 Investments and Securities. (3,0) 3 Cr.
Examination of financial literature and facilities available as guides to the proper selection of securities. The approach is from the viewpoint of the individual, including a logical portfolio commensurate with the financial resources of the individual. Prerequisite: BA 161.

BA 260 Statistics. (3,0) 3 Cr.
Formulation of decision problems and the use of data which serve as a basis for deciding upon a rational course of action. Statistical populations, decision-parameters, sample selection, probability theory, sampling distribution, risk, error, bias, and control charts.

BA 261 Business Law II. (3,0) 3 Cr.
A continuation of BU 206 with emphasis on the application of legal principles to partnership corporations, real property and leases, insurance, suretyship and guaranty, bankruptcy, trust and estates, and government regulations. Prerequisite: BA 161.

BA 262 Case Problems in Business. (3,0) 3 Cr.
Learning to display originality, leadership, and responsibility when confronted with the necessity of making decisions in general business management, personnel management, and production management.

Secretarial Science

SS 101 Typewriting I. (1,3) 2 Cr.
Fundamentals of touch typewriting and basic...
techniques; accuracy, simple tabulation, and letter placement.

**SS 102 Typewriting II. (1,3) 2 Cr.**
Prerequisite: SS 101 or equivalent.

**SS 111 Stenography. (2,3) 3 Cr.**
The fundamental principles of Gregg shorthand and the application of these principles to an extensive shorthand vocabulary. Rapid reading of shorthand.

**SS 112 Transcription. (2,3) 3 Cr.**
Dictation and transcription from shorthand notes. Accuracy and speed in transcription techniques. Stenographic theory and improvement of shorthand vocabulary.
Prerequisite: SS 111.

**SS 133 Office Machines. (1,3) 2 Cr.**
The efficient operation and use of calculating machines (ten-key, full-key, rotary, key-driven), mimeograph and spirit duplicator, and dictating and transcribing equipment.

**SS 201 Typewriting III. (1,3) 2 Cr.**
Development of speed and accuracy in advanced production work. Building skill in typing office problem materials to meet business standards.
Prerequisite: SS 102.

**SS 211 Intermediate Transcription. (2,6) 4 Cr.**
Review of brief forms, phrasing, prefixes and suffixes, letter placement, and reading from shorthand plates. Dictation speeds will range from 60-120 wpm., with a high degree of accuracy to transcribed material.
Prerequisite: SS 112.

**SS 212 Advanced Transcription. (2,3) 3 Cr.**
Continuation of Intermediate Transcription. Dictation will range from 100-140 wpm.
Prerequisite: SS 212.

**SS 213 Medical Terminology. (1,2) 2 Cr.**
Medical terminology developed through the use of stenographic roots, prefixes, and suffixes. Vocabulary development related to musculo-skeletal and nervous systems; eye, ear, respiratory, circulatory, and gastrointestinal systems.
Prerequisite: SS 112.

**SS 214 Legal Transcription. (1,2) 2 Cr.**
Legal secretarial production work. Dictation emphasizes legal vocabulary and preparation of legal papers, specific instruments, appealing cases, commercial collections. Dictation speeds will range from 110-140 wpm.
Prerequisites: SS 211; SS 240.

**SS 215 Medical Transcription. (3,5) 5 Cr.**
Training in advanced shorthand principles and transcription of medical reports, operative procedures, and autopsies. Emphasis on building speed in dictation and transcription of medical letters and case histories.
Prerequisites: SS 211; SS 213.

**SS 240 Legal Procedures I. (1,2) 2 Cr.**
Typical procedures, civil and criminal, in the judicial system. Training in developing secretarial skills for the law office. Law vocabulary, legal documents, pleadings, and techniques for handling basic law office procedures.

**SS 241 Legal Procedures II. (3,0) 3 Cr.**
Advanced law office procedures, calendaring and docketing of cases, briefs, litigation papers, probate, real estate practice, corporations.
Prerequisite: SS 240.

**SS 250 Office Practice. (2,2) 3 Cr.**
The principles of secretarial office techniques are emphasized with the purpose of preparing the student to qualify as a potential executive secretary.

### Chemical Technology

**CH 103 Chemistry. (2,2) 3 Cr.**
Introduction to basic principles in chemistry. Topics in organic and biochemistry related to the studies in agriculture and horticulture.
Prerequisites: Two units of high school mathematics, two units of high school biology, and chemistry recommended.

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Numbers in parentheses indicate lecture and laboratory hours per week respectively.
CH 104 Chemistry. (2,2) 3 Cr.
Colloidal chemistry, emulsions, the basic components of food, and food additives.
Prerequisite: CH 103.

CH 106 Introduction to Biochemistry. (3,3) 4 Cr.
Prerequisite: One year of successfully completed high school chemistry.

CH 107 General Chemistry. (3,3) 4 Cr.
Prerequisite: One year of successfully completed high school chemistry.

CH 110 Introduction to Organic Chemistry. (3,3) 4 Cr.
Prerequisite: CH 107.

CH 115 General Chemistry. (3,3) 4 Cr.
Metric measurements the states of matter, gas laws, kinetic and atomic theory, electronic configuration of the atoms, chemical bonding, equations, stoichiometry.
Prerequisite: One year of high school chemistry recommended.

CH 116 General Chemistry. (3,3) 4 Cr.
A continuation of CH 115. Chemical kinetics, equilibrium involving ionization constants, solubility products, colloids, electrochemistry, nuclear chemistry.
Prerequisite: CH 115.

CH 157 General Chemistry. (3,6) 5 Cr.
The first semester of a two-semester sequence basic to all further studies in Chemical Technology. Selected laboratory experiments illustrate the chemical principles, and offer opportunities to develop and improve laboratory skills and to gather experience in chemistry.
Principal topics: atomic structure, periodic properties of the elements, modern theories of chemical bonding and molecular orbitals. Properties of ionic compounds, the formation of ions, ions in solids and in solutions. Chemical equations, and quantitative relationships. Thermodynamics, and free energy.
Prerequisites: Two and one half units in mathematics, including intermediate algebra; one unit in physics and one unit in chemistry.

CH 158 General Chemistry. (3,6) 5 Cr.
Prerequisite: CH 157.

CH 201 Chemical Processes. (3,3) 4 Cr.
Unit operations of the chemical industry including fluid flow, heat transfer, evaporation and distillation. Correlation and analysis of data obtained experimentally.

CH 213 Photographic Chemistry. (2,3) 3 Cr.
Instrumentation applied to general chemistry, including the control of temperatures and solutions. Principles of colorimetry, titrimetry, pH measurements, polarography, refractometry, mass-spectrometry, and infrared analysis.

CH 221 Environmental Control I. (3,3) 4 Cr.
Occurrence, nature and properties, major sources and quantities of air and water pollutants. The discussion of specific sources; air and water pollution standards and corresponding analytical techniques; control methods.

CH 222 Environmental Control II. (3,3) 4 Cr.
CH 253 Organic Chemistry. (3,4) 4 Cr.
Principles and theoretical concepts of organic chemistry. Aliphatic and aromatic series, their reactions and their mechanism. Studies in structure, stereochemistry, inductive effects, resonance, conformation, and configuration.
Prerequisite: CH 158.

CH 254 Organic Chemistry. (3,4) 4 Cr.
The structure and reaction mechanism of acids, amines, aldehydes, ketones, and alcohols. Poly-nuclear compounds and modern aspects of synthesis.
Prerequisite: CH 253.

CH 256 Analytical Chemistry. (3,6) 5 Cr.
Theory of quantitative analysis based on modern chemical principles. Practical applications to typical gravimetric, volumetric, potentiometric, and colorimetric analysis.
Prerequisite: CH 158.

CH 257 Analytical Chemistry. (3,6) 5 Cr.
The theory of chemical application of instrumental methods of analysis. Emission spectrography, conductance methods, polarography, amperometry, gas chromatography, coulometry, controlled potential electrogravimetry, absorption spectrophotometry in the visible, U.V., and I.R. regions.
Prerequisite: CH 256.

CH 258 Biochemistry I. (3,3) 4 Cr.
Prerequisite: CH 253 or CH 110.

CH 259 Biochemistry II. (3,3) 4 Cr.
A continuation of Biochemistry I. Biosynthesis of carbohydrates, lipids, and proteins in animals and plants. A study of natural products, vitamins, terpenes, alkaloids, and steroids in view of metabolic functions. Introduction to influence of drugs on metabolic functions.
Prerequisite: CH 258.

CH 275 Elements of Materials Science. (3,3) 4 Cr.
The interpretation of the basic properties of metallic, organic, and ceramic materials in terms of the unifying concepts of the solid state. Atomic structure, crystalline and amorphous solids, types of bonding, phase transformations and phase diagrams, imperfections, and energy bands as related to the mechanical, thermal, electrical, and magnetic behavior of materials.

Civil Technology and Construction Technology

CT 101 Descriptive Geometry. (1,2) 2 Cr.
The fundamentals of drafting techniques in pencil and ink. Practice in line work, lettering, and use of instruments. The elements of descriptive geometry including true lengths, true size and shape, methods of auxiliary views and revolutions, developments, and orthographic projection.

CT 102 Construction Materials and Methods I. (1,3) 3 Cr.
Introduction to basic methods of construction, including sub-soil exploration, excavation, bearing capacities of soils, types of footings, concrete walls, form construction, and laboratory experiments in concrete testing.

CT 103 Surveying I. (2,3) 3 Cr.
Linear measurements with tape with temperature and sag corrections; differential profile and reciprocal leveling; open and closed traverses by bearing azimuth, and deflection methods; error of closure and distribution of error; computations of volumes of cuts and fills by the "average end-area" and prismoid formulae; vertical curves. Field work involves linear measurements, use of level for all types of leveling, and use of transit for running traverses.

CT 104 Structural Detailing. (2,3) 3 Cr.
Structural steel detailing for square framed structures. Beams, girders, columns, and their connection by riveting and welding. Reinforced concrete detailing practices for beams, girders, slabs, and columns. The recommendations of the American Concrete Institute are followed.
CT 106 Statics. (3,0) 3 Cr.
Prerequisite: CT 101.

CT 107 Surveying II. (2,3) 3 Cr.
Computation of areas in closed traverses by the DMD methods; coordinates of stations, horizontal curves; stadia surveying; triangulation; principles of photogrammetry; methods of adjustments of levels and transits. Field work involves use of transit for traverses, triangulation, and stadiawork.
Prerequisite: CT 107.

CT 201 Architectural Design I. (2,3) 3 Cr.
Drafting standards, techniques, and creative design principles related to the field of architecture. A design problem in residential architecture with the development of research notes, preliminary studies, working drawings, and a scale model.

CT 202 Construction Estimating. (2,2) 3 Cr.
Development of a systematic procedure to take off quantities from plans, employing the detailed estimating methods using current wage rates and material costs. Unit costs, comparable costs, percentages, proportions, and square foot methods of estimating. Trades are reviewed in theory with emphasis on coordination, type of workmanship, overhead, expenses, profits, and final application of labor rates and material costs.

CT 203 Highway Design I. (2,3) 3 Cr.
The elements of geometric highway design. Plans for a highway are prepared, using topographic and reconnaissance route surveys made in Route Surveying. Traffic requirements as determined by traffic counts and origin and destination studies are used as a basis for the design. Plans for typical road sections, horizontal alignment, and profiles.

CT 204 Hydraulics. (3,0) 3 Cr.
Properties of fluids, hydrostatic pressures, manometers, flotation. Bernoulli’s equation and its application to flows through Venturi meters, nozzles and orifices; flow in pipes under pressure, flow in open channels and over weirs, use of current meters. Hydrology, runoff, and drainage problems involving determination of sizes of pipes, ditches, and culverts.
Prerequisite: CT 106.

CT 205 Route Surveying. (1,3) 2 Cr.
Reconnaissance surveys, traverse lines, contours, topography, cross-sections, circular curves, compound and reverse curves, parabolic curves, earthwork and drainage surveys.
Prerequisite: CT 107.

CT 206 Strength of Materials I. (3,0) 3 Cr.
Simple stresses; elasticity; tanks under pressure; temperature stresses; riveted, bolted, and welded connections, torsional stresses and angular deflections; shear and moment diagrams for beams; moments of inertia of unsymmetrical sections; flexural and shearing stresses in beams; deflections in beams by “moment of moment-area” method. Use of AISC manual.
Prerequisite: CT 106.

CT 207 Architectural Design II. (2,3) 3 Cr.
Introduction to color theory, problems related to theory of perspective, and the development of architectural renderings. A creative design problem of a commercial, industrial, or public building. Development and presentation of research, preliminary studies, structural design, working drawings, renderings, and a model of this project.
Prerequisite: CT 201.

CT 208 Construction Management and Operations. (1,2) 2 Cr.
An analysis of a contractor’s operation from the initial purchase of land to the completion of a project. A study of the contractor’s relationship to architect, engineer, and client, including land purchase, development, code, and zoning requirements. Trades are considered with respect to coordination, progress charts, equipment, sub-contracts, and architectural specifications. Field trips to construction projects.

CT 209 Highway Design II. (2,3) 3 Cr.
A continuation of Highway Design I. The elements of highway bridge design. Design drawings are made for a grade separation structure and interchange, and drainage for
the highway project. Highway specifications and engineer's estimate of quantities, as they apply to these plans.

Prerequisite: CT 203.

CT 210 Industrial Materials. (1,2) 2 Cr.
Elementary principles of engineering statics and strength of materials. The production and characteristics of materials in industry such as wood, stone, cement, steel, plastic, and aluminum. Laboratory tests demonstrating the physical properties of these materials.

Prerequisites: CT 102, CT 203.

CT 211 Reinforced Concrete Design. (3,0) 3 Cr.
The properties of concrete, derivation of all stress formulae for reinforced beams; analysis and design of slabs and beams; columns and footings under concentric and eccentric loadings; retaining walls of gravity and cantilever types; theory of prestressed concrete beams. ACI specifications and the use of standard charts and tables.

Prerequisites: CT 106, CT 206.

CT 212 Strength of Materials II. (3,0) 3 Cr.
Continuation of Strength of Materials I. Design of wood and steel beams. Virtual work and strain energy methods for statically indeterminate structures; Euler's column formula, design of columns under concentric and eccentric loadings; combined stresses; Mohr's circle for maximum stresses at a point. Laboratory tests and demonstrations. Building codes and use of AISC manual.

Prerequisite: CT 206.

CT 215 Construction Materials and Methods II.
-Civil. (1,3) 2 Cr.
Introduction to soils as a construction material involving both theory and laboratory. Construction methods for site preparation, sub-grades, foundations, pavements, trenching, sheetpiling, installation of drainage, and finish grading.

Prerequisite: CT 102.

CT 216 Construction Materials and Methods II.
-Building. (1,3) 2 Cr.
Masonry walls including block, brick, and tile; framing techniques of residential and light industrial structures including walls, floors and roofs. Interior and exterior finishes. Familiarization with the basic construction materials such as framing lumber, masonry units, roof and wall coverings, insulation and flashing.

Prerequisite: CT 102.

Community Service Assistant

CS 101 Foundations of Social Work. (3,0) 3 Cr.
The concepts involved in the various aspects of social work are examined, social casework, where the importance of the approach to the individual is stressed; social groupwork, where the role of the professional in helping others, using the group process, is discussed; community organization, where the principles of this aspect of social work are evaluated; and in social planning, where community improvement planning methods are studied.

CS 102 Community Social Service Agencies. (3,0) 3 Cr.
This course presents a general overview of the community agencies, public and private, which provide social services for adults and children. The opportunity is provided for visiting and observing typical agencies such as the Nassau and Suffolk Departments of Social Service, the Family Service Association of Nassau County, Central Islip State Hospital and the Luther E. Woodward School for Emotionally Disturbed Children.

CS 103 Introduction to Skills and Techniques in Social Work
This course presents an introduction to the various skills, techniques and methods in the field of social work. It includes consideration of interviewing methods, and an examination of budgeting and financial management techniques in case work. It also reviews the basic processes used in each of the areas of social work, individual counseling in case work, the group methods utilized in group work, and the techniques used in community organization. It considers the ways in which statistics are used and research undertaken in social work.

CS 201 Field Experience. (1,3) 2 Cr.
The field experience course provides the opportunity for the student to enlarge his
scope through direct service in agencies providing help to clients, under professional supervision. The student will be enabled to integrate his educational understanding with the field experience, and learn how he relates to people. The field experience should be with one agency for the two semesters.

**CS 202 Field Experience. (1,3) 2 Cr.**
Part two of a two-semester course. See description for CS 201.

**CS 205 Organization of Community Welfare Services (3,0) 3 Cr.**
An understanding of the nature of community welfare services, both public and private, will be developed, through seeing social welfare as a social institution. Various areas of public welfare services will be studied, as well as related areas of private social welfare services. The course will review the relationship between governmental and private services.

**CS 207 Community Mental Health Programs and Planning. (3,0) 3 Cr.**
The current programs and the future planning for those who have personal, emotional and mental problems are examined in this course. The concepts of community planning for those who have these problems, as well as for preventive mental health for all are reviewed. The contributions of each of the members of the mental health team, social worker, psychologist and psychiatrist, are considered. The various types of treatment in the mental health field to which the community service assistant will be exposed are also discussed.

**CS 208 Community Programs and Planning for the Mentally Retarded. (3,0) 3 Cr.**
This course considers programs which have been established and those which are still needed for the mentally retarded child and adult. It reviews the special methods of education for the children who are intellectually handicapped, including the development of specific educational programs and techniques. It examines the utilization of mentally retarded adults in special workshop settings, as well as in regular employment. It also pays attention to the ways in which the community can be better organized to meet the special needs of the mentally deficient of all ages.

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**Data Processing**

**DP 100 Principles of Data Processing. (1,3) 2 Cr.**
Introduction to concepts of unit record equipment, overview of card design and coding methods. Principles, operating procedures and control panel wiring of basic card machines. Hands-on operation of keypunch, sorter, collator, interpreter, reproducer and accounting machines.

**DP 101 Basic Computer Concepts. (3,0) 3 Cr.**
Fundamentals of electronic data processing, organization and operation of a computer facility. Analysis of basic computer characteristics, principles and methods of internal processing including machine language, operation and function of components, involving magnetic core, direct access disc storage and sequential magnetic tape files.

**DP 104 Introduction to Algorithmic Processes. (2,0) 2 Cr.**
Introduction to problem solving methods analytic, simulation, and heuristic using a digital computer. The idea of an algorithm as a well-defined procedure for solving a problem is developed. Flowcharts and decision tables are presented as a graphic description of an algorithm. Both iterative and recursive algorithms are developed using business and industrial problems.

**DP 105 Systems Analysis and Design I. (3,0) 3 Cr.**
Elements and construction of flowcharts, decision tables and decision trees. Design and development of systems including analysis of information flow, systems specifications, equipment selection, and implementation. Also included are work sampling, simplification and measurement, form design, control and management.
Prerequisite: DP 101 or DP 123.

**DP 108 Principles of Automated Accounting. (2,2) 3 Cr.**
An examination of how the principles of accounting are being integrated with tabulating equipment and the computer. A problem approach will be followed integrating manual accounting flow, punched card systems and comprehensive computer operations.
DP 109 Cost Analysis. (2,2) 3 Cr.
Study of the techniques of differential cost and revenue analysis and alternative capital expenditure determination as well as other management decision-making problems. Use of data processing and computer applications will be stressed for determining financial data flow and costs. Prerequisite: DP 108

DP 110 Fortran and Statistics. (2,2) 3 Cr.
Basic Fortran programming using statistical problems. Fundamentals of statistical decision-making, including elements of descriptive statistics—central tendency and dispersion—, time-series analysis, correlation and regression methods. Approaches and differences between raw data and frequency array analysis by computer. Introduction to probability theory and sampling concepts. Prerequisite: DP 108

DP 115 Programming Systems. (1,2) 2 Cr.
Introduction to monitor systems, real-time processing, data communication network, and fundamentals of sort, merge, and table look-up methods. Hands-on experience with a computer system, including console operation, disc pack and magnetic tape operations. Testing and running programs. Prerequisites: DP 101 and 104

DP 120 Introduction to Behavioral Statistics. (3,0) 3 Cr.
Statistical methods used in collection, analysis, interpretation and presentation of statistical data in the behavioral sciences. Includes frequency distributions, measures of central tendency and dispersion, sampling and questionnaires, correlation and regression analysis. Development of understanding of use of computers and data processing equipment in coding, analysis and presentation of data. Prerequisite: BA 102

DP 121 Basic Machine Operations. (2,2) 3 Cr.
Understanding of purposes and applications of basic data processing machine-keypunch, sorter, reproducer, interpreter, collator and accounting-printer. Class projects will be developed and processed through the operation of the machines. Also included are card design, layout and card coding techniques. Prerequisite: BU 102

DP 122 Principles of Data Processing I. (1,2) 2 Cr.
Course develops an understanding and appreciation of data processing, both unit record equipment and computers. Principles, operating procedures and control panel wiring of basic card machines. Hands-on operation of keypunch, collator, interpreter, reproducer, sorters and accounting-printer. Analysis of computer components, operation and programming methods. Applications are presented in areas of current uses of these machines. Prerequisite: DP 108

DP 123 Principles of Data Processing II. (1,2) 2 Cr.
Continuation of DP 122, principles of Data Processing I. Prerequisite: DP 122.

DP 150 Aircraft Operations Data Processing. (2,0) 2 Cr.
Fundamentals of data processing and computer operations including computer components and peripheral equipment. Elements of computer programming and output analysis. Application of computers in aircraft operation such as preparation and analysis of computerized flight plans, flight control, airport management including ticketing, weather analysis and forecasting. Prerequisite: DP 108

DP 200 Business Data Processing. (3,0) 3 Cr.
Introduction to computer organization including input/output and storage devices. Application of computer information systems and decision-making techniques in business and industrial situations. Overview of programming languages and introduction to programming flowcharting. Concepts of sequential and direct access storage techniques. Prerequisite: BA 102

DP 205 Systems Analysis and Design II. (3,2) 4 Cr.
Planning and evaluating integrated data processing systems including analysis of library write-ups, preparation of program documentation and operator runbooks. Role of systems and data processing departments in management information and control. Fundamentals of RPG-report generator and introduction to assembly language programming. Prerequisites: DP 105 and DP 109.

DP 220 Cobol Programming. (3,0) 3 Cr.
Study of business oriented computer language, Cobol. Preparation and execution of
cobol programs, including microproblems encountered in both business and industry.
Prerequisite: DP 109 or BU 102 and DP 200.

DP 221 Business Programming Applications I. (2,2) 3 Cr.
Business applications involving both tabulating equipment and the computer with emphasis on practical case studies to illustrate the use of data processing as an information gathering and processing tool. Also includes microsystem design, intermediate programming flowcharts and elements of programming languages.
Prerequisites: DP 200 or DP 101 and DP 109.

DP 222 Business Programming Applications II. (2,2) 3 Cr.
A continuation of DP 221, Business Programming Applications I.
Prerequisite: DP 221 or permission of the chairman of the department.

DP 225 Business Data Processing Applications. (4,0) 4 Cr.
Comprehensive study of business applications such as accounts receivable and payable, payroll, inventory control, sales analysis, etc. Projects include flow planning and application through use of unit record equipment and hands-on experience with a computer. A one-hour work-study laboratory is required of all students in this course in addition to the regular class hours.
Prerequisites: DP 115 and DP 220.

DP 226 Industrial Data Processing Applications. (4,0) 4 Cr.
Detailed study of industrial data processing applications such as production line balancing, materials flow scheduling, technical formula translation, production control methods, etc. Projects include flow planning and application through the use of unit record equipment as well as computer and real time systems, providing the student with hands-on experience in solving these problems. A one-hour work-study laboratory is required of all students in this course in addition to the regular class hours.
Prerequisites: DP 110 and DP 115.

DP 230 Computer Approach to Decision Making. (3,0) 3 Cr.
Study of decision models, simulation techniques, basic queuing concepts, linear programming, pert network analysis and forecasting methods involving uncertainty and risk and their application in business and scientific decision situations. Course is integrated with program preparation and hand-on execution of student programs.
Corequisite: DP 225 or DP 226.

Dental Hygiene

DH 101 Dental and Oral Anatomy. (3,3) 4 Cr.
Fundamentals of tooth form and function. The student must draw and carve individual teeth to familiarize herself with the anatomical details. Supporting structures of the mouth and occlusion. The permanent dentition in wax is completed. The identification of extracted teeth.

DH 102 Preventive Dentistry. (2,0) 2 Cr.
Orientation in the fundamental features of dentistry as related to the study of Dental Hygiene. The history of dentistry. Accepted theories of the causes of dental caries and periodontal disease and their control. Professional ethics and jurisprudence. Lectures on techniques are related to the exercises in the oral hygiene laboratory.

DH 103 Dental Assisting. (2,0) 2 Cr.
The procedure followed in the dental practice in chairside assisting, charting, care of equipment, and care of the office. Practice at the chair in nearby hospitals. The economies of dental practice and the efficient management of the office. Simple, efficient methods of bookkeeping; recall systems.

DH 104 Dental Manikin. (0,4) 2 Cr.
Student is taught a tested system of instrumentation and polishing for the removal of deposits and stains on a dental manikin. Stress on instrument design and sharpening techniques.

DH 105 Dental Roentgenology. (1,2) 2 Cr.
The nature of ionizing radiation; the history of x-rays, their production and properties. Theory and practice of exposing, processing, and mounting dental roentgenograms; radiation dosage, radiation hazards, and protective devices for patient and operator.
DH 106 Dental Roentgenology. (0,2) 1 Cr.
Exposure, processing, mounting, and interpretation of intra-oral dental roentgenograms including topographical and cross-sectional exposures of occlusal films. Emphasis is placed on the identification of anatomic landmarks and differentiation of these from conditions which indicate abnormality or disease. Discussion and application of the latest recommendations of the National Committee on Radiation Protection and Measurements and other safety adjuncts.
Prerequisite: Roentgenology I DH 105.

DH 107 Clinical Dental Hygiene. (0,12) 4 Cr.
Clinical experience in the College Dental Clinic. Sharpening techniques. Sterilization techniques. Examination of the oral cavity.
Prerequisite: DH 104.

DH 201 Clinical Dental Hygiene II. (0,5) 5 Cr.
Clinical training in oral prophylaxis in hospitals, schools, and campus clinics. Definite procedures of examining and observing all structures within and surrounding oral cavity; patient education and dental health as an integral part of general health. Importance of sterilization techniques.
Prerequisite: DH 107.

DH 202 Health Services in Schools. (2,0) 2 Cr.
A required course for Provisional Certification as a Dental Hygiene Teacher in New York State. The provisions of the Education Law and the Regulation of the Commissioner that relate to school health services. The nature and objectives of health services in education. The coordination of these services with those of other community health agencies. Students are given an opportunity to make a survey of health services in one of the local school boards.

DH 203 Methods and Materials in Dental Health Education. (2,0) 2 Cr.
Procedures of dental health education and use of visual aids as applied to all types of dental programs with emphasis on a school program. Opportunity for observation and practice teaching.

DH 204 Nutrition. (2,0) 2 Cr.
The fundamental principles of normal nutrition: sources; classification, components, food values, deficiencies, and the application of nutrition to dental practice.

DH 205 Pathology. (2,0) 2 Cr.
The fundamentals of microscopic and gross pathology; discussion of general pathologic processes; diseases of the highly specialized dental and peridontal tissues; their etiology and prevention.

DH 206 Clinical Dental Hygiene III. (0,9) 3 Cr.
Extended clinical training in oral prophylaxis in hospital, schools, and campus clinics.
Prerequisite: DH 201.

DH 207 Dental Materials. (1,2) 2 Cr.
The chemical and physical properties of those dental materials which are most commonly used in dental practice. How such properties affect the care and manipulation of the materials. Understanding of properties of materials as related to the clinical practice of the dental hygienist. Demonstration and performance of basic laboratory procedures.

DH 208 Public Health. (2,0) 2 Cr.
Scope and activities of Public Health programs with specific reference to various health problems and special emphasis on dentistry in public health.

DH 209 Pharmacology. (2,0) 2 Cr.
The principles of drug actions and the uses of more important drugs, especially those used in dentistry. The principles of prescription writing.

Electrical Technology

ET 101 Electrical Circuits I. (5,3) 6 Cr.
A basic course in direct current theory. Current and voltage sources in resistive series, parallel, and combination circuits. Superposition; Kirchhoff's Laws; loop and nodal analysis; Thévenin and Norton equivalents; maximum power transfer. Principles of inductance and capacitance; R-C and R-L circuits; basic instruments.
ET 102 Electricity I. (2,3) 3 Cr.
Direct current fundamentals involving: series, parallel, and combination circuits, capacitance, inductance, magnetic properties and circuits, d-c instruments, and d-c motors.

ET 103 Electrical Circuits II. (3,3) 4 Cr.
Prerequisite: ET 101.

ET 104 Electricity II. (2,3) 3 Cr.
Alternating current principles involving voltage, current, and power relations in single phase circuits containing resistance, capacitance, inductance, and impedance; series and parallel resonance, and elementary analysis of polyphase circuits.
Prerequisite: ET 102.

ET 106 Electronics I. (3,3) 4 Cr.
The fundamentals of electron tubes and semi-conductor devices. General amplifier properties. Biasing, graphical and equivalent circuit analysis of single stage audio amplifiers. An introduction to power supply circuits.
Prerequisite: ET 101.

ET 201 Circuit Construction and Analysis. (0,6) 2 Cr.
The design, construction, testing, and analysis of radio receiver and transmitter circuits; the selection of components, use and understanding of equipment required for measurements, and evaluation of performance of various sections of the receiver and transmitter.
Prerequisites: ET 103, ET 105.

ET 222 Electronics II. (4,3) 5 Cr.
Graphical and equivalent circuit analysis at low and medium frequencies of electron-tube small-signal amplifiers including cascaded amplifiers. Input-output characteristics; gain; impedance levels; and frequency response. Principles of feedback. Power amplifiers, transistor and electron-tube; power supplies; clippers; and clamps. Principles of amplitude modulation and detection.
Prerequisites: ET 108, ET 106.

ET 223 Electronics III. (3,3) 4 Cr.
The application of semiconductor devices, with emphasis of transistor amplifiers; equivalent circuits; small and large signal amplifiers; blasting; stabilization; gain; input and output impedance; frequency response of R-C amplifiers; direct-coupled amplifiers; and FET amplifiers.
Prerequisites: ET 103 and ET 106.

ET 224 Electronics IV. (4,6) 6 Cr.
Radio-frequency voltage and power amplifiers; oscillators; amplitude and frequency modulation; applications to transmitters and receivers. Video system analysis and applications: high voltage supplies, deflection, synchronization, sweep oscillators, and broad-band amplifiers.
Prerequisite: ET 222.

ET 225 Electronics V. (3,3) 4 Cr.
Transistor and digital circuit applications. Introduction to digital logic; binary numbers and codes; Boolean algebra. Design of logic networks, flip-flop counters and registers, and arithmetic circuits. Principles of core memory; Machine language programming. Selected topics in pulse circuits. Operational amplifier applications; and digital-analog and analog-digital converters.
Prerequisite: ET 223.

ET 226 Electronics VI. (3,0) 3 Cr.
The fundamentals of lossless transmission lines, voltage standing wave ratio, reflection coefficients, and traveling waves. Basic antenna principles applied to quarter-wave, half-wave dipoles, dipole arrays and parabolic antennas. Basic concepts of microwave propagation in rectangular wave guides, and voltage standing wave ratio. The development of the Smith Chart and its uses.
Prerequisite: ET 222.
Engineering Science

ES 201 Engineering Mechanics, Statics.  
(3,0) 3 Cr.
A fundamental and rigorous vectorial approach to mechanics. The elements of Vector Algebra, and their operations will be reviewed and given physical insight. Equations of Equilibrium, Equivalent Force Systems, and Frictional Forces will be covered in depth. Properties of Surfaces, and an Introduction to Continuum Mechanics, and to Variational Mechanics—Statics will be discussed.
Prerequisite: PH 151; concurrent MA 152.

(3,0) 3 Cr.
A vectorial approach to dynamics of particles, and rigid bodies. Vector integration and differentiation will be employed, in solution solving. Methods of Momentum, Relative Motion and Motion of a Body about a Fixed Point will be discussed. Emphasis will be placed on the Energy Method formulation and use of The Lagrangian to formulate the equations of motion of a rigid body will be employed. An introduction to Tensor Analysis notation and use via Inertia Tensor will be included in course content. Elementary vibration theory, and a discussion of dimensional analysis will conclude this course.
Prerequisite: ES 201; Concurrent: MA 153.

ES 206 Engineering Circuit Analysis.  
(4,0) 4 Cr.
A first course in electrical circuit analysis. Non-electrical circuits are examined in terms of their electrical analogues. Definition of active and passive circuit elements; electric power, energy, and Kirchhoff’s circuit laws; general loop and nodal analysis; specific characteristics of linear systems and associated network theorems; response of source-free single and double energy linear circuits; response of first and second-order linear circuits to step, ramp, impulse, and sinusoidal excitations; the impedance transform and the sinusoidal steady state.
Prerequisite: PH 152; MA 152 concurrent.

ES 207 Engineering Circuit Analysis.  
(3,0) 3 Cr.
A continuation of ES 206 as applied to first- and second-order linear systems. The sinusoidal steady state and the exponential forcing function; basic transfer functions; pole-zero analysis and Bode plots for non-resonant, resonant, and magnetically coupled circuits; frequency response and its relation to system transient response; the Fourier series and its application.
Prerequisite: ES 206.

ES 208 Engineering Circuit Analysis Laboratory.  
(0,3) 1 Cr.
An experimental laboratory associated with ES 206 and ES 207 theory courses.
Prerequisites: ES 206; ES 207 concurrent.

ES 211 Engineering Circuit Analysis.  
(Non-EE Majors) (3,0) 3 Cr.
The study of the basic concepts, laws, and techniques underlying linear electrical and mechanical circuits and systems. Models are developed for both mechanical and electrical systems and the response of these is analyzed in terms of their transfer functions using the Laplace transformation and/or phasor techniques for different excitations. The analogues between the electrical and mechanical systems are stressed and the student is introduced to analogue simulation and the analogue computer.
Prerequisite: PH 152; MA 152 concurrent.

ES 212 Engineering Circuit Analysis Lab.  
(Non-EE Majors) (0,3) 1 Cr.
Laboratory experiments associated with the material of ES 211 Engineering Circuit Analysis.
Prerequisite: ES 211 concurrent.

ES 213 Mechanics of Deformable Bodies.  
(4,0) 4 Cr.
This course embodies the study of the general concepts of stress and strain, basic laws of elasticity, elementary stress and strain analysis, he special cases of plane stress and plane strain, principal stresses, stress transformations, Mohr’s circles of stress and strain, torsional stresses, combined stresses, thin-walled membranes, shells rings and tubus, thermal stresses, shear and bending stresses in beams, shear and bending moment diagrams, unsymmetrical bending, shear

Numbers in parentheses indicate lecture and laboratory hours per week respectively.
center, curved beams, displacements by double integration and singularly function conjugate beam, superposition, method of virtual work, Castigliano's theorem and general strain energy methods, analysis of statically indeterminate beams, Euler's critical stress in long columns, Secant formula for columns, design formulas for intermediate columns, basic theories of inelastic action, impact, fatigue, creep, relaxation, stress concentrations, practical design problems and failure theories.

Prerequisites: Statics ES 201; Concurrent: MA 153.

Food Processing Technology

FT 101 Food Preservation. (2,2) 3 Cr.
An introduction to the processes of canning, freezing, freeze-drying, jelly and jam making, and brining and pickling, and fermentation. Fruits and vegetables are processed in quantities sufficient to make the process clear and understandable. Quality, grade, variety, yield, cost per pound, packaging, and other basic details will be clarified.

FT 102 Milk and Food Processing. (2,2) 3 Cr.
The production and processing of milk for the manufacturing of dairy products from the farm to the consumer. Pasteurization, blanching, homogenization, and clarification. High temperature pasteurization, filters, washers. Processing line flow patterns for milk and food products.

FT 107 Nutrition. (3,0) 3 Cr.
The basic concepts of human nutritional needs: proteins, carbohydrates, fats, minerals, vitamins for the infant, adolescent, adult, and the elderly. Each student will learn how to apply these basic concepts to himself and others.

FT 108 Principles of Food Preparation. (2,3) 3 Cr.
The basic principles of food preparation are included and applied in lecture and laboratory. Selecting foods for an adequate diet; buying food within a budget; and preparation so as to conserve nutrient value, flavor and texture, are included.

FT 201 Dairy Products Manufacturing I. (2,2) 3 Cr.

FT 202 Food Processing Machinery. (2,2) 3 Cr.
Basic mechanical principles; power transmission; electrical power and equipment; hydraulics and pumping; heat measurement, transfer, and control; steam and its use in the food plant; principles of refrigeration: insulation and cold storage rooms; heaters-coolers and heat exchange equipment.

FT 203 Pre-cooked and Specialty Frozen Foods. (2,3) 3 Cr.
The processing of fresh food materials purchased at retail prices, into prepared or pre-cooked frozen foods. Pies, cakes, puddings, vegetables, meats, poultry, salads and certain specialty items will be made and studied in the foods laboratory. Comparisons of items processed using measurement and weight, percentages by weight and cost are calculated, problems discovered and solutions found. Merchandising by good packaging P. O. P. and advertising.

FT 204 Commercial Processing of Pre-Cooked and Specialty Frozen Foods. (2,3) 3 Cr.
Based on facts learned in FT 203 Specialty and pre-cooked frozen food items are processed in quantity. Problems dealing with uniform consistency, uniformity, mass, heat transfer, percentages of cost, weight, markup and margin, freezing, holding, advertising and marketing of foods are studied and applied in the laboratory and in reports. Each student is required to interview an official of a foods company, study company and write a report of findings. A term paper is required.

FT 205 Dairy Products Manufacturing II. (2,3) 3 Cr.
The manufacturing of cheddar cheese and other hard cheeses; the commercial manufac-
tture of ice cream, sherbets, and ices; ingredients used and their effect on quality of the product; standardization of the ice cream mix, freezing and hardening equipment, and the manufacture and merchandising of ice cream.

**FT 206 Quality Control of Foods.** (2,2) 3 Cr.
Special tests on food products such as Babcock test, acidity test, hydrometer tests, moisture, solids, salt, ash, and ether extraction of fats. Collecting samples, care and preparation of samples. Enzymatic tests on milk and fresh food products. Federal and State standards for food products. Special problems of production.

**FT 208 Salesmanship.** (3,0) 3 Cr.
The fundamentals of selling with application to the sale of foods, food machinery, and motivational advertising: the salesman's opportunities, responsibilities, duties, knowledge required, and experience necessary for success; practice in applying and demonstrating sales techniques.

### Mechanical Technology

**MT 102 Graphics.** (1,3) 2 Cr.
This course combines basic drafting principles and practice with specialty emphasis to suit the requirements of student's curriculum. Basic course includes orthographic projection, dimensioning, section views, fasteners, assembly drawings, and pictorials. For Mechanical Technology students, principles of descriptive geometry are offered. Special topics for Air Conditioning students include construction plans and details plus wiring and piping diagrams. For Automotive Technology students additional emphasis on technical sketching is provided, together with work on gears and cams.

**MT 103 Manufacturing Processes.** (3,0) 3 Cr.

**MT 105 Mechanics.** (3,0) 3 Cr.
Statics: Force systems and static equilibrium; moments, couples, and simple structures. Centeroids and moments of inertia. Prerequisites: SC 131, MA 124.

**MT 106 Kinematics.** (1,3) 2 Cr.
The study of the laws of motion adapted to mechanical devices. Semi-graphical methods are used to determine displacement, velocity, and acceleration characteristics of linkage chains, cams, and gear trains. Prerequisites: SC 191, MT 102.

**MT 107 Engineering Materials and Processes.** (2,0) 2 Cr.
Behavior of metals and plastics as they influence processing methods. Processing from the natural state: casting methods; heat and cold forming; brazing and welding; powdered metals, and machinability. Laboratory demonstrations and field trips.

**MT 111 Machine Tools I.** (1,4) 2 Cr.
The operation of machine tools such as the engine lathe, drill press, shaper, and related measuring and layout tools. Emphasis is placed on the geometries of cutting tools and machine tool methods.

**MT 112 Machine Tools II.** (1,4) 2 Cr.
The operation of machine tools such as milling machines, radial drill press, contour saws, planers, slotters, and production grinders. Emphasis is placed on feeds and speeds, tool selection, set ups, operation sheets and machinability of materials.

**MT 201 Fluid Mechanics.** (3,0) 3 Cr.
An introductory study of fluids at rest and in motion. Basic laws of fluid statics and of ideal and viscous fluids. Application to flow meters, turbo-machinery, pipe and fitting pressure losses. Prerequisites: MA 125, MT 105.

**MT 202 Manufacturing Analysis.** (3,4) 4 Cr.
Advanced machine tool and manufacturing engineering methods. Theory and practice in grinding, hobbing, turret lathe, screw machine, tracer lathe, gear shaping numerical control drilling-milling, and other selected manufacturing methods. Prerequisite: MT 112.

**MT 203 Metallurgy.** (2,3) 3 Cr.
Study of the nature of pure metals and binary alloys: solid solution precipitation.

Numbers in parentheses indicate lecture and laboratory hours per week respectively.

MT 204 Production Control. (2,2) 3 Cr.
Organization of process analysis; methods of development; tool planning; typical analysis for manufacture and fabrication. Control of the manufacturing process; design, production, planning, purchasing, inspection, and sales. Prerequisites: MT 202, MT 207.

MT 205 Quality Control. (1,3) 2 Cr.
Industrial inspection methods applied to the measurement and layout of typical machine parts; thread measuring and gear inspection devices; statistical quality control. Prerequisites: MT 112, MT 102.

MT 206 Strength of Materials. (3.0) 3 Cr.
Basic stress-strain relationships, interpretation of physical test data, applications in design practice. Direct axial stresses, torsional stress, and flexural stress; deformations and modes of failure. Problems in beam, column, and shaft design, welded and riveted joints, and pressure vessels. Prerequisites: MA 125, MT 105.

MT 207 Tool Design. (2,3) 3 Cr.
Manufacturing tools such as drilljigs, milling fixtures, assembly fixtures, and gauges are designed to facilitate economical interchangeable manufacturing. Fundamentals of presswork tools and dies. Prerequisites: MT 112, MT 102.

MT 208 Machine and Product Design. (3,2) 4 Cr.
Application of principles of mechanics and strength of materials to design of machine elements including springs, gears, brakes, clutches, and fasteners. Dynamic loading conditions. Opportunity of creative design effort on a project basis. Prerequisite: MT 206.

MT 210 Plastic Materials and Processes. (1,3) 2 Cr.
Definitions; properties and standard tests; chemistry of plastics. Thermosetting plastics and their properties; processing thermosets. Thermoplastics and their processing. Injection molding. Extrusion and blow molding. Prerequisite: MT 111.

MT 211 Numerical Control. (1,3) 2 Cr.
Principles of point-to-point and contour numerical control programming. Introduction to APT language (computer). Development of program formats. Prerequisite: MT 202.

MT 212 Dynamics. (3.0) 3 Cr.
A study of the forces that cause and accompany motion. The three methods of kinetic analysis are considered: the force-mass acceleration methods, the work-energy method, and the impulse-momentum method.

MT 216 Engineering Measurement. (1,3) 2 Cr.
Collection of engineering test data utilizing measuring devices as potentiometers, wattmeters manometers, gauges, calorimeters, etc. Calibration, data discrimination, and theory of errors applied in presenting extensive technical reports. Prerequisites: MT 201, MT 206.

Nursery Education

ED 100 Introduction to Nursery Education. (3,0) 3 Cr.
An overview of Nursery Education—the history, philosophy, and role of nursery education in the overall educational scheme. Private schools, cooperative nurseries, day care centers, and other agencies will be covered in the course. Visits to nursery schools by the student are required.

ED 101 Creative Activities. (1,2) 2 Cr.
Activities related to the total development of the preschool child, considering varying age levels and development needs. Through dramatic play, block building, music, rhythm, science, and art, the student is given the opportunity to express, explore, and appreciate many media.

ED 102 Creative Activities. (1,2) 2 Cr.
Part two of a two semester course. See description above.
ED 115 Childhood Education. (3,0) 3 Cr.
A consideration of the education of young children in schools. An analysis of measurement and evaluation techniques. The adult role in the learning situation, with emphasis on parent-teacher relationships, professional ethics and responsibilities, and school policies.

ED 120 Observation of Children. (2,3) 3 Cr.
The study of the behavior of children individually and in groups, in light of the current knowledge in child development. The techniques of observation and the recording of behavior. The responses of the child to his environment, i.e., adults, peers, materials.

ED 200 Children's Literature. (3,0) 3 Cr.
A detailed study of appropriate literature for pre-kindergarten children; development of a working knowledge of authors, illustrators, and publishers of children's books with emphasis on language, format, and subject matter. Attention to the selection and use of poetry plus development of storytelling skills. Corequisite: ED 205.

ED 205 Field Experience. (2,6) 4 Cr.
Participation in Nursery Schools and other pre-kindergarten groups. The student will be expected to take some responsibility in the role of assistant teacher. Two seminar hours plus six laboratory hours. Permission of the Chairman of the Department.

ED 206 Field Experience. (2,6) 4 Cr.
Continuation of participation in educational programs for young children. The student will take increasing responsibility in the role of assistant teacher. Two seminar hours plus six laboratory hours. Permission of the Chairman of the Department.

ED 215 Workshop in Early Childhood Education. (3,0) 3 Cr.
Each student will have the opportunity to explore in depth an independent project relating to the profession. Permission of the Chairman of the Department.

ED 216 The Culturally Deprived Child. (3,0) 3 Cr.
For the student who expects to seek employment in Head Start programs and wishes to gain a deeper understanding of the nature and needs of disadvantaged children.

ED 217 The Exceptional Child. (3,0) 3 Cr.
Understanding of the needs and characteristics of exceptional children in normal preschool groups. The special problems involved and their implications for the adults as well as the groups as a whole.

ED 225 Equipment and Play Materials. (1,2) 2 Cr.
Selection, care and maintenance of play materials and equipment that promote good educational experiences for children such as: room planning, budgeting and purchasing of materials, workshop experience with tools, making and repairing of equipment.

Nursing

NU 101 Nursing—Fundamentals. (4,9) 7 Cr.
The study of nursing care common to all patients, and the scientific principles underlying that care. Opportunity to develop nursing skills and apply knowledge through guided learning experiences in the college laboratory and in the care of selected patients in a hospital environment.

NU 102 Nursing—Parental and Child Health. (3,9) 6 Cr.
The study of the developmental tasks of the family life cycle including preparation for marriage, pregnancy, and childbirth. Although emphasis is on the role of the nurse in caring for the well mother, father, and newborn, consideration is given to deviations from the normal. The moral, legal, and ethical roles of the nurse in the community, as well as on the health team, are incorporated. Includes concurrent guided learning experiences in hospitals, doctor's offices, and other community agencies. Prerequisites: NU 101, CH 106.

NU 201 Nursing—Mental and Physical Illness. (6,9) 9 Cr.
The study of major problems of children and adults with medical, surgical, and mental illnesses, with emphasis on the promotion and maintenance of maximum health. Consideration is given to preventative measures in the physical and psychological spheres. Guided learning experiences in nurs-

Numbers in parentheses indicate lecture and laboratory hours per week respectively.
ing care are concurrently provided in the general and psychiatric hospitals and other community agencies.

Prerequisites: NU 102, SC 105.

**NU 202 Nursing—Mental and Physical Illness. (5,9) 8 Cr.**

Further study of major health problems of children and adults with cardiovascular, neurological, and neoplastic disorders.

Prerequisites: NU 201, SC 110.

**NU 204 Nursing in Modern Society. (2,0) 2 Cr.**

The moral, ethical, and legal responsibilities of the technical nurse as a member of the health team and as a citizen in the community. Some areas to be explored are: nursing in a space-oriented society, implications of Medicare, legal aspects, and disaster nursing.

**NU 210 Child, Family and Community Health. (3,0) 3 Cr.**

Factors in daily life which contribute to the health of the child are explored, including the attitudes of the family and community as well as agencies available for the protection of the child's well-being, and the prevention of accidents, emergencies, and disease. Procedures in the care of the convalescent child for optimum physical and mental health are evaluated.

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**Ornamental Horticulture**

**OH 101 Horticulture I. (2,2) 3 Cr.**

The study of soil texture, structure, organic matter, and plant nutrients as related to the use of lime, fertilizers, manures, and peats to raise horticultural soils to high levels of production.

**OH 102 Floriculture. (1,6) 3 Cr.**

Every student is given the opportunity to explore, initiate, and develop cultural proceedings as related to the growing of plants under glass and outdoors. Through participation, students will have the opportunity to acquire knowledge, skills, and judgment. The elements and principles of art for creative design with application in lettering, freehand, and perspective drawing.

**OH 103 Herbaceous Plant. (1,2) 2 Cr.**

Classification, identification, and general culture of perennials, bulbs, and roses commonly used in garden planning. Prerequisite: SC 102.

**OH 104 Horticulture II. (2,2) 3 Cr.**

In this course the student is made aware of the plants' total environment and the forces affecting the plants' growth responses. Specific details are developed to introduce the theories behind plant propagation, and plant growth and control. Prerequisite: CH 103.

**OH 105 Landscape Gardening. (1,6) 3 Cr.**

Classroom studies in landscape appreciation. The elements and principles of art for creative design with application in lettering, freehand, and perspective drawing. Field application in garden improvement and operation.

**OH 106 Nursery Management. (1,6) 3 Cr.**

An introductory nursery course in the techniques and practices used in the commercial production of herbaceous perennials, ground covers, deciduous shrubs and trees, conifers, and broad-leaved evergreens. Greenhouse and nursery procedures and practices. The elements and principles of art for creative design with application in lettering, freehand, and perspective drawing.

**OH 107 Woody Plants I. (2,2) 3 Cr.**

The Woody Plants courses give a picture primarily of the woody plants grown in nurseries for landscape purposes, and secondarily of those found in arboretums, woodlands, and fields of Northeastern United States. Emphasis is on identification, culture, uses, flowers, and fruits, and ecological relationships. Several of the evergreens, broad and narrowleaf, as well as some of the deciduous trees and shrubs will be covered in this first study. Prerequisite: SC 102.

**OH 108 Turfgrass Culture. (2,2) 3 Cr.**

Soil requirements of fine turf, turf propagation, seed and vegetative identification, turf usage. Pest identification, prevention, and control are discussed in detail.
OH 109 Turfgrass Management I. (1,6) 3 Cr.
Laboratory sessions in constructing and maintaining specialized turf areas.

OH 110 Horticulture Theory. (1,3) 2 Cr.
Instruction, orientation, and field experience in the various phases of horticulture. Each week the explanation and demonstration of a new subject precede the assignment to duties. A rounded experience is the objective. Tools, techniques, and standards of workmanship are taught.

OH 112 Ecology. (2,3) 3 Cr.
The study of plants, their environment, and the inter-relationship of the two. Main emphasis is on the individual plant (autecology), plant populations (synecology), and the overall ecosystem or biome. Field trips will be made to study various plant communities found on Long Island.

OH 201 Arboriculture. (1,3) 2 Cr.
Theory and practice of care of shade and ornamental trees. Techniques of climbing, pruning, bracing, cabling, fertilization, bark repair, and cavity repair.

OH 202 Flower Shop Management I. (1,3) 2 Cr.
Instruction and application of principles in the art of floral design as to form, styles, and composition. Designing of floral arrangements, wreaths, sprays, baskets, bouquets, wedding flowers, and corsages are included in the laboratory.

OH 203 Greenhouse Management I. (2,6) 4 Cr.
A study of locations most favorable for the production of cut flowers and pot plants. Wholesale and retail flower establishments are also studied.

OH 204 Herbaceous Plants II. (1,3) 2 Cr.
Continuation of Herbaceous Plants I; annual and biennial flowers, and fall flowering perennials. Landscape uses of herbaceous plants and design of flower borders.
Prerequisite: OH 104.

OH 205 House and Conservatory Plants I. (1,2) 2 Cr.
The identification, culture, and propagation of florist pot plants, conservatory plants, and plants of economic importance. Principles and construction of terrariums and dish gardens.

OH 206 Landscape Contracts and Specifications. (3,0) 3 Cr.
Landscape and nursery cost finding, contract and specification structure, methods of estimating landscape costs. Calculating areas, volumes, and plant quantities for landscape construction projects.

OH 207 Landscape Plans I. (1,6) 3 Cr.
The theory and principles of landscape design applied to selected landscape problems. Preliminary sketches and final presentations in plan, elevation, and perspective form. Grading, construction, planting, and staking plans; basic details of architectural construction.

OH 208 Nursery Management III. (3,3) 4 Cr.
Commercial nursery stock production dealing with plant growth patterns and plant responses in relation to soils, water, fertility, planting techniques and distances, top and root pruning. Plant production cycles, rotations, and treatment for economy production.

OH 209 Planting Plans I. (1,3) 2 Cr.
On-the-job sketching and plan presentation as done by nurseries; planning of small home grounds, utilizing the drafting room and its equipment.

OH 210 Plant Propagation. (2,3) 3 Cr.
This course is designed for the nursery student in order that he may recognize and explore the many and various techniques and facilities used in the propagation of plants as grown by commercial nurseries. Exacting technicalities are examined and practical applications are applied in the production of ornamental plants by both sexual and asexual means.

OH 212 Woody Plants II. (2,2) 3 Cr.
A continuation of Woody Plants I covering additional evergreens, broad and narrowleaf, as well as deciduous plants—trees, shrubs, vines, and ground covers.

OH 213 Arboriculture II. (1,3) 2 Cr.
Advanced theory, practice, and field studies of arboriculture industry, including care and

Numbers in parentheses indicate lecture and laboratory hours per week respectively.
pruning of fruit plants, diagnosis of tree ills, shade tree evaluation, power equipment. Business practices and organization including management, record keeping, estimating, customer relations, ethics, and standards. Prefaced by an overview of the arborist industry.

**OH 214 Horticultural and Turfgrass Equipment. (2,2) 3 Cr.**
A study in the selection, field operation and maintenance of motive power used in the various phases of turf management and horticultural enterprises.

**OH 215 Flower Shop Management III. (1,6) 3 Cr.**
Locating, managing, and operating a flower-shop. The designing of pieces for special occasions. The art of making corsages and arranging flowers for the home, church, hotel, and ballroom. Advertising, buying and selling, and all factors relative to location and equipment.

**OH 216 Greenhouse Management II. (2,6) 4 Cr.**
The study of florist crops, modern technical applications, and cultural requirements as used in the production of cut flowers and pot plants in the College greenhouses.

**OH 218 Indoor Planting. (1,2) 2 Cr.**
The uses of house plants in homes and professional buildings. Plans are drawn of room interiors showing the plants and their value to the decorating scheme. The most widely used and popular house plants are studied.

**OH 219 Landscape Construction. (2,2) 3 Cr.**
Details of steps, walks, seats, walls, fences, and other landscape features and structures. Selection and use of materials used in the construction of these features; irrigation and drainage systems.

**OH 220 Landscape Plans II. (1,9) 4 Cr.**
A continuation of Landscape Plans I with progressively more difficult problems.

**OH 221 Landscape Surveying. (2,3) 3 Cr.**
The theory of plane surveying applied to landscape design and combination. The use of various levels and instruments to measure distances and plot land areas and elevations.

**OH 222 Nursery Management III. (2,3) 3 Cr.**
A continuation of the study of commercial plant production dealing with programming plant production and nursery land use, as related to nursery layout in sections and blocks. Special facilities and structures are oriented into the production programs for economic production. Cost finding techniques, price fixing, and profits are studied and equated.

**OH 223 Plant Breeding. (2,2) 3 Cr.**
The principles of heredity, including Mendelian laws and their application. Techniques of breeding of greenhouse and horticultural plants.

**OH 224 Planting Plans II. (1,6) 3 Cr.**
A continuation of Planting Plans I with added studies in sketching and perspective.

**OH 225 Woody Plants III. (1,3) 2 Cr.**
Advanced study of the plants previously considered, especially of named varieties or cultivars, and of the lesser-known trees, shrubs, vines, and ground covers. An understanding of plant peculiarities and requirements, and the ability to evaluate them for landscape purposes are important objectives.
Prerequisites: OH 107, OH 212.

**OH 230 Turfgrass Management II. (2,3) 3 Cr.**
Business procedures confronting professional turf growers including cost accounting, time study, record keeping, evaluation of equipment and materials.

**OH 231 Turfgrass Management III. (2,3) 3 Cr.**
Constructing and maintaining turf for residential grounds, parks, golf courses, athletic fields, roadsides, etc. Control and prevention of insects, disease, and weed problems.

**OH 235 Turfgrass Problem Reporting. (1,6) 3 Cr.**
Problems in the design and operation of golf courses and other large turf areas. Field trips and use of technical journals.

**OH 236 Drainage and Irrigation. (2,3) 3 Cr.**
The efficiencies of various drainage and irrigation concepts are discussed as they pertain
to terrain, soils, climate, and plants being grown. Water sources, availability and storage are taught along with pressure requirements and means of conveyance. When to irrigate, how to irrigate and rates of application are discussed as they relate to soils and terrain.

Photographic Technology

PT 101 Photographic Processes. (3,4) 4 Cr.
An introduction to the basic concepts underlying the science of photography. The laws of physics and chemistry applied to problems associated with the perpetuation of the optical image. Introduction to sensitometry and densitometry.

PT 102 Photographic Processes. (3,4) 4 Cr.
Expansion of the fundamentals of photographic science introduced in PT 101. The theory and interrelated practices associated with the devices, materials, and processes of black and white photography and graphic reproduction.
Prerequisite: PT 101.

PT 201 Photographic Mechanism I. (1,3) 2 Cr.
Still camera mechanisms. Nomenclature, design, theory, and function of camera components. Industrial standards of operation are stressed.

PT 202 Photographic Processes III. (3,6) 5 Cr.
The theoretical principles and practical aspects of color and color photography. The function of light in color, image formation, color correction, colorimetry, and dye image structure associated principally with contemporary color processes.
Prerequisite: PT 102.

PT 204 Photographic Electronics. (3,3) 4 Cr.
Study of the design and operating principals of electronic circuitry directly related to the automation of photographic devices. Development and use of the two-line diagram in circuit analysis and trouble shooting. Power supplies and special circuitry associated with timing mechanisms, synchronizing mechanisms and specialized light sources of the pulsed xenon and other high-intensity short-duration types.

PT 205 Photographic Mechanisms II. (1,3) 2 Cr.
The mechanisms and related equipment employed in the fields of 8 mm. and 16 mm. motion picture. Nomenclature, function, and design requirements of component parts. Unit layout efficiency and problems in kinetics. Experience with modern motion picture cameras and projectors.
Prerequisite: PT 201.

PT 206 Photographic Processes IV. (3,4) 4 Cr.
Devices, processes, and materials associated with the high-speed and mass production fields of photography where automation plays a vital role. An interrelated application of the theories and practices studied in physics, electronics, chemistry, and photomechanisms, and in the previous courses in Photographic Processes.
Prerequisite: PT 202.

PT 220 Biological Photography. (2,4) 3 Cr.
An introductory course in the basic concepts underlying the science of photography. Photo-chemical theory, photo-optics, and sensitometry are basic to the allied aspects of this course. Assignments and laboratory experimentation include studies of photographic materials, photographic processes, general photography, lighting, composition, elements of motion picture photography, photocopying and office duplicating systems, and photomacographic principles.
Prerequisite: Successful completion of one year of Biological Technology curriculum or its equivalent.

PT 221 Biological Photography. (2,4) 3 Cr.
An expansion of the photographic fundamentals introduced in PT 220, with considerable emphasis on color. Preparation and presentation of visual communication materials, gross specimen photography, photomicrography, slide production and duplication, X-ray duplication and reduction. Use of ultra-violet, infra-red, and other special illumination problems. Special clinical and field problems will be assigned on the basis of the individual area interests of the students.
Prerequisite: PT 220.

Numbers in parentheses indicate lecture and laboratory hours per week respectively.
Police Science

PS 103 Introduction to Law Enforcement. (3,0) 3 Cr.
Philosophical and historical background of policing throughout the free world; special emphasis is placed on the heritage of British, Canadian, and American policing; the governmental role of law enforcement in society; administration of American law enforcement levels and how they fit into the total picture.

PS 104 Patrol Administration. (3,0) 3 Cr.
Patrol as the basic operation of the police function. Purpose, methods, types and means of police patrol. Administration of police patrol, determining the patrol strength, layout, beats, areas, and deployment.

PS 105 Police Traffic Enforcement. (3,0) 3 Cr.
General orientation to highway traffic administration and accident prevention. History of the traffic problem. Function of agencies responsible for highway traffic administration. Introduction to the use of radar, selective enforcement, and other techniques available to law enforcement to cope with the traffic problem.
Prerequisite: PS 104.

PS 106 Police and Traffic Engineering. (3,0) 3 Cr.
The role of the traffic engineer in urban areas; an introduction into the scope of police activity in this area, to include: locating and studying high accident frequency locations, the preparation of collision and condition diagrams, and developing of accident patterns; the role of signs; signals, or pavement markings in traffic safety.
Prerequisites: PS 104, PS 105.

PS 107 Police and Traffic Education. (3,0) 3 Cr.
The role of law enforcement as community leaders in traffic safety education; role of traffic safety organizations at all levels; high school driver education programs; elementary school traffic safety education programs; news media releases of traffic data for public information purposes.
Prerequisite: PS 104.

PS 110 Police Administration. (3,0) 3 Cr.
Principles of organization and management in law enforcement and public safety. The evaluation of administrative devices. An analysis and evaluation of the major problems in police administration, organization problems, and police planning and research. Prerequisite: PS 103.

PS 200 Criminal Investigation. (3,0) 3 Cr.
Introduction to criminal investigation; technical methods used at the crime scene; development of clues, tracing of perpetrator; criminal investigation procedures including the theory of an investigation; conduct at crime scenes; collection and preservation of physical evidence; an analysis of the elements that constitute all crimes.
Prerequisite: PS 103.

PS 201 Criminal Investigation. (2,2) 3 Cr.
The role of the Crime Laboratory in the law enforcement organization; need for a criminalistics operation; scope of a criminalistics operation; organizational orientation of the criminalistics laboratory.
Prerequisite: PS 200.

PS 210 Police Records and Communications. (3,0) 3 Cr.
Records, functions, and types; establishment and administration of a record bureau in law enforcement and public safety agencies. Discussion of forms, analysis of records and report writing. The recognition of the modus operandi of criminals and its importance in the records function. The role of electronic data processing in police records and communications.
Prerequisites: PS 103, PS 110.

PS 212 Police Supervision. (3,0) 3 Cr.
Fundamentals of human relations and supervisory techniques together with their application and development in law enforcement agencies. Emphasis on employee motivation, behavioral differences, leadership, training, and communication.
Prerequisites: PS 103, PS 110. Senior status; or employed in a supervisory capacity in a law enforcement agency.

PS 213 Police Personnel Administration. (3,0) 3 Cr.
The role of personnel administration in the
law enforcement establishment. Emphasis will be given to: selection; qualifications; recruiting; induction and placement; probation; promotion; discipline; ethics and professionalization.
Prerequisites: PS 103, PS 212.

PS 214 Civil Rights and Human Relations. (3,0) 3 Cr.
Emphasis will be placed on controlling racial prejudice; myths; community human relations resources; civil rights and professionalism in police work.

PS 215 Police Planning and Research. (3,0) 3 Cr.
The role of planning and research in the contemporary law enforcement establishment. Emphasis will be given to: the nature of planning; administrative planning; policy planning; operational planning; program departmental activities; and particular emphasis will be placed on independent student research; and electronic data processing. Prerequisites: PS 103, PS 110, and permission of Department Chairman.

PS 218 Criminal Law. (3,0) 3 Cr.
Elements and proof of frequent concern in law enforcement, with reference to principal rules of criminal liability. Importance of criminal law at the enforcement level is considered from crime prevention to courtroom appearance. Case analysis method is employed to study case precedents.
Prerequisite: PS 103.

PS 219 Evidence and Criminal Procedure. (3,0) 3 Cr.
Rules of evidence of particular importance at the operational level in law enforcement, with emphasis on criminal procedure in important areas such as arrest, force, and search and seizure. Particular emphasis will be placed on the New York State Penal Law and Code of Criminal Procedure.
Prerequisite: PS 218.

PS 220 Interviewing and Case Preparation. (1,2) 2 Cr.
Interview and interrogation of complainants, witnesses, victims, suspects, and informants; statements, mechanical means for detection of deception; note-taking and police report writing; development of the case report and case status determination; study and analysis of recent supreme court decisions affecting this area of law enforcement.
Prerequisites: PS 103, PS 218.

PS 224 Comparative Police Administration. (3,0) 3 Cr.
Study of the organization of police agencies on the local, state, and national level. Emphasis will also be made of various law enforcement systems existing in selected nations of the free world.
Prerequisites: PS 103, PS 110.

PS 225 Special Problems in Police Administration. (3,0) 3 Cr.
A seminar discussion course concerning special law enforcement problems affecting an ever growing urban society. Emphasis will be placed on urban, regional, state, and national problems.
Prerequisites: PS 103, PS 110.

PS 226 Juvenile and the Police. (3,0) 3 Cr.
An introduction and an orientation to the causes and treatment of juvenile delinquency; an examination of the methods of handling juvenile offenders; police contact with offenders, including interviewing techniques, screening, and referrals to social agencies.
Prerequisite: PS 103.

PS 250 Jail Practices and Detention Procedures. (3,0) 3 Cr.
Study of detention facilities at the local and county levels with discussions aimed at a practical approach to the related problems. Particular attention will be given to admissions procedures, booking, personal property, fingerprinting and photographing, complete and final search, medical examination, individual segregation, security, and facilities.

Recreation Supervision

RS 100 Introduction to Recreation. (3,0) 3 Cr.
An introduction to the history of recreation and meaning of leisure time; scope of programs concerning various types of recreation

Numbers in parentheses indicate lecture and laboratory hours per week respectively.
agencies; and analysis of urban environment as dictated by the changing times.

**DS 105** Organization of a Recreation Program. (3,0) 3 Cr.
Problems and practices in the organization of a recreation program; the role of the sub-professional in a variety of settings (industrial, hospital, community); on-site visitation; care and maintenance of facilities and equipment, materials used in the program; clerical procedures involved in management.

**RS 110** Recreation Skills & Techniques. (2,2) 3 Cr.
Development of skills in recreational activities including indoor and outdoor activities. Specialization in games of low organization, level-up-sports, relays, tumbling and calisthenics with emphasis upon methods of teaching these skills.

**RS 111** Recreation Skills & Techniques. (2,2) 3 Cr.
Development of skills in recreation activities including indoor and outdoor activities. Specialization in games and activities of high organization, tournaments, special events with emphasis upon methods of teaching.

**RS 205** Field Work in Recreation. (1,4) 3 Cr.
Class discussion and supervised field work assignments in a variety of recreation agency settings; leadership skills in relationship to all age groups; student field reports and class discussions on the different types of field experiences.

**RS 206** Field Work in Recreation. (1,4) 3 Cr.
Continuation of a supervised field work experience with increased student participation in assigned agency experience; possible assignment to a second type of recreation agency for a variety of experience.

**RS 210** Outdoor Recreation and Camping. (3,0) 3 Cr.
History, development and trends in outdoor recreation and camping. Analysis of programs as they apply to camps, parks, nature trails, Federal and State parks; living in the out-of-doors; camp counselor skills.

**RS 212** Recreation for the Ill, Handicapped and Aged. (3,0) 3 Cr.
Introduction to recreation in the promotion of health; prevention of illness and rehabilitation of persons with physical, emotional or social disorders; course includes background of recreation for the ill, handicapped and aged. Programs will include those for hospitals, nursing homes, institutions for the retarded, health agencies, and community programs for the handicapped.

**RS 215** Skills in Cultural Arts. (2,2) 3 Cr.
Music appreciation, folk singing, group singing, guitar, rhythm band, tonnette, square and folk dancing, quiet games, table games, social activities, special events.

**Mathematics**

The department offers a flexible program to provide for variations in students’ needs and backgrounds. By this means any student may progress as far and as rapidly as possible. Engineering Technology students will ordinarily take the MA 124, MA 125, MA 126 sequence. Those Engineering Technology students who have successfully completed 12th year mathematics or its equivalent may, with the approval of the Department Chairman, begin the MA 185, MA 186, MA 187 sequence.

Students completing MA 107 successfully may elect MA 135.

Agriculture, Horticultural, and Food Processing Technology students will ordinarily begin with MA 100 but, if their background warrants it, may start with MA 105.

**MA 100** Mathematics. (3,0) 3 Cr.
Basic concepts and themes in mathematics are developed and expanded to promote understanding rather than mechanical skills. This is a one semester course intended to provide a broad appreciation of the power, structure and beauty of mathematics.

Prerequisite: Two years of high school mathematics or equivalent.

**MA 105** College Mathematics I. (3,0) 3 Cr.
Sets, the real number system, selected algebraic and transcendental functions.

Prerequisite: Successful completion of two years of high school mathematics to include Elementary Algebra and Geometry.
Recommended: Two and one-half years of high school mathematics to include Intermediate Algebra.

MA 107 College Mathematics II. (3,0) 3 Cr.
A continuation of MA 105 including matrices, trigonometric functions, periodicity and the complex field.
Prerequisite: MA 105.

MA 110 Statistics. (30) 3 Cr.
Basic concepts of probability and statistical inference. Included are the binomial, normal, and chi-square distributions. Practical applications are examined.
Prerequisite: Two years of high school mathematics or equivalent.

MA 124 Mathematics. (3,0) 3 Cr.
This is a pre-calculus course designed for students in the Engineering Technologies. The unifying idea of this course is function. Algebraic and transcendental functions are presented along with a detailed section on vectors and complex numbers. Applications to engineering problems are stressed.
Prerequisite: Three years of high school mathematics to include Intermediate Algebra or Eleventh Year Mathematics.

MA 125 Technical Mathematics II. (3,0) 3 Cr.
A course designed for the students in the Engineering Technologies emphasizing topics in analytic geometry and differential and integral calculus using a basically intuitive approach.
Prerequisite: MA 124.

MA 126 Technical Mathematics III. (3,0) 3 Cr.
A continuation of MA 125. Topics covered include differentiation and integration of transcendental functions, applications and methods of integration, partial derivatives and an introduction to differential equations.
Prerequisite: MA 125.

MA 135 Analytic Geometry and Calculus. (3,0) 3 Cr.
Elements of analytic geometry, differentiation of algebraic and trigonometric functions, parametric representations, differentials, antiderivatives and properties of definite integrals.
Prerequisite: MA 107 or 12th year mathematics and the consent of the Department Chairman.

MA 136 Calculus. (3,0) 3 Cr.
Differentiation of logarithmic, exponential and hyperbolic functions, techniques of integration, applications of integration and polar coordinates.
Prerequisite: MA 135.

MA 137 Calculus. (3,0) 3 Cr.
Differentiation of vectors, infinite series, Taylor's formula, methods of approximation, multiple integration.
Prerequisite: MA 136.

MA 140 Differential Equations. (3,0) 3 Cr.
The solving of ordinary differential equations with applications.
Prerequisite: MA 137.

MA 150 Analytic Geometry and Calculus. (4,0) 4 Cr.
Differentiation of functions of one variable. Plane analytic geometry including rotation and translation of axes. Vector analysis including rotation and translation of axes. Vector analysis including the scalar and vector product. Introduction to integration.
Prerequisite: 3½ units of high school mathematics to include Advanced Algebra.

MA 151 Analytic Geometry and Calculus. (4,0) 4 Cr.
A continuation of the calculus of one variable. Differentiation and integration of the transcendental functions. Integration techniques, polar coordinates, and applications.
Prerequisite: MA 150.

MA 152 Analytic Geometry and Calculus. (4,0) 4 Cr.
The calculus of several variables. Multiple integration and partial differentiation. Infinite series. Solid analytic geometry and vector calculus.
Prerequisite: MA 151.

MA 153 Linear Algebra and Differential Equations. (4,0) 4 Cr.
Introduction to linear algebra and vector spaces. The solution of ordinary differential equations. Boundary value problems and applications to electrical circuits and vibra-
tions. Introduction to partial differential equations.
Prerequisite: MA 152.

Physics

PH 112 Physical Science. (3,0) 3 Cr.
A survey of the physical laws applying to classical and modern Physics.

PH 121 General Physics. (3,0) 3 Cr.
An elementary descriptive course designed for the non-technical student. Mechanics, properties of matter, heat, and sound.
Prerequisite: High school algebra.

PH 122 General Physics. (3,0) 3 Cr.
A continuation of PH 121. Light, electricity, atomic and nuclear physics.
Prerequisite: PH 121.

PH 131 Physics Theory. (3,0) 3 Cr.
Mechanics; fundamental concepts of units, vectors, equilibrium, velocity, and acceleration in translatory and rotary motion force, energy, and momentum; fluids at rest and in motion. Wave motion and sound.

PH 131 Physics Laboratory. (0,2) 1 Cr.
Laboratory problems, experiments, and report writing associated with the topics studied in PH 131 Theory.
Prerequisite: PH 131 Theory completed or concurrent.

PH 132 Physics Theory. (3,0) 3 Cr.
A continuation of PH 131 Theory. Fundamental electricity and magnetism. Thermometry, calorimetry and basic principles of light.
Prerequisite: PH 131 Theory and Laboratory.

PH 132 Physics Laboratory. (0,2) 1 Cr.
Laboratory problems, experiments and report writing associated with topics studied in PH 132 Theory.
Prerequisite: PH 132 Theory completed or concurrent.

PH 151 Physics. (5,0) 5 Cr.
Mechanics of particles and “rigid bodies,” work, energy, momentum, internal stress, and conservation laws; fluids at rest and in motion.
Prerequisite: MA 150.

PH 152 Physics. (5,0) 5 Cr.
Coulomb’s Law, the electric field, potential capacitance and properties of dielectrics, current, resistance, and electromotive force. D-C circuits and instruments. The magnetic field and forces, induced EMF, alternating currents, and electromagnetic waves.
Prerequisites: PH 151, MA 151 completed or concurrent.

PH 153 Physics. (4,0) 4 Cr.
Prerequisites: PH 152, MA 151 completed or concurrent.

PH 154 Modern Physics. (4,0) 4 Cr.
Topics in modern physics to be selected.
Prerequisites: PH 151, PH 152, PH 153.

PH 161 Physics Laboratory. (0,3) 1 Cr.
Laboratory experiments associated with PH 151 and part of PH 152.
Prerequisites: PH 151 completed; PH 152 completed or concurrent.

PH 162 Physics Laboratory. (0,3) 1 Cr.
Laboratory experiments associated with PH 152 and PH 153.
Prerequisites: PH 151, PH 152, PH 153, PH 161.

GENERAL EDUCATION

English

EN 100 English Composition. (3,0) 3 Cr.
Expository writing by students is the major concern of the course. Emphasis is placed on the use of acceptable patterns of English and the application of rhetorical patterns.
EN 101  Introduction to Literature.  (3,0)  3 Cr.
Short stories, poetry, plays, novels, and essays are read. Papers are written on forms, techniques, and themes of literature. The form and purpose of the research paper are studied and research papers are written.

EN 102  American Literature: Colonial Period to Civil War.  (3,0)  3 Cr.
A survey of American literature from its beginning in Colonial times to the end of the Civil War. Representative selections from major writers are read and discussed with a view to discovering trends and developments in the American literary tradition.

EN 103  American Literature: Post Civil War to the Present.  (3,0)  3 Cr.
From the emergence of realism at the end of the Civil War, through the naturalistic writers of the 1900's, to the literature of the '20's and '30's and the present. Interpretation of major writers as they reflect the intellectual, social, and political background of their times.

EN 104  English Literature: Old English to the 18th Century.  (3,0)  3 Cr.
A survey of English literature from the beginning to neo-classicism. Special consideration is given to the writings of the Anglo-Saxons, Chaucer, the Elizabethans, Milton and Dryden. English history, religion, and philosophy are studied as they relate to literature.

EN 105  English Literature: 18th Century to the Present.  (3,0)  3 Cr.
The neo-classicists: Pope, Swift, and Johnson; romantics: Byron, Shelley, Keats, and Wordsworth; Victorians: Tennyson, Browning, and Arnold; twentieth century writers Yeats, Joyce, and Eliot are read. Emphasis is placed on the development and continuity of the literary tradition.

EN 106  World Literature.  (3,0)  3 Cr.
Readings in English translations of the principal literary masterpieces of Europe and the East, with emphasis on the basic philosophical, religious, and aesthetic attitudes reflected in them.

EN 107  World Literature.  (3,0)  3 Cr.
A continuation of EN 106 World Literature.

EN 108  Introduction to the Theatre.  (3,0)  3 Cr.
The elements of the theatre, including script, acting, scenery, lighting, and costumes and the roles of the various members of a professional production: producer, director, actor, and audience are investigated. Representative plays, playwrights, and styles from ancient Athens to Broadway are examined.

EN 109  The Short Story.  (3,0)  3 Cr.
An appreciation of the short story as literature through reading short fiction, both American and foreign, that varies widely in theme and form. An understanding of the influence of critical theory on the development of the short story.

EN 110  Report Writing.  (3,0)  3 Cr.
Elements of semantics, particularly the nature of report language. Written reports of various lengths and types, with reference to conduct and research, utilization of references, logical organization of material, and emphasis on lucid and concise expression.

EN 114  Speech.  (3,0)  3 Cr.
A course designed to develop skill in the preparation and delivery of expository and persuasive speeches, to provide experience in committee action and group discussion, and to improve the student's diction and voice production. Some attention is also given to the oral interpretation of prose and poetry.

The Humanities

HU 100  Introduction To Philosophy.  (3,0)  3 Cr.
Basic concepts and issues of philosophy. Major topics considered are the problem of knowledge, logic, ethics, aesthetics, and metaphysics.

HU 101  History of Philosophy.  (3,0)  3 Cr.
Significant contributions in the history of philosophy. Selected readings from the works of major philosophers from the Greeks to the present.

HU 110  Music Appreciation.  (3,0)  3 Cr.
Music is studied through the use of piano.
LP records, and a text with regard to form, style, texture, and historical development. The major goal is to have students understand and enjoy all types of music and to gain insights into the relationships of music to the era in which it was created.

HU 111 Survey of Contemporary Music. (3,0) 3 Cr.
A study of developments of music since 1900. Impressionism, expressionism, polytonality, and atonality, and the rise of American music are evaluated from both the historical and technical viewpoints.

HU 112 Fundamentals of Music. (1,3) 2 Cr.
The elements of music such as the staff, scales, rhythm, melody, harmony, form, dynamics, and phrasing are presented so that this knowledge may be applied to performance on the piano, tonette, and auto-harp.

HU 115 Art Appreciation. (3,0) 3 Cr.
Understanding artistic principles and techniques through an analysis of the artist's work and a study of his objectives, materials, organization, media, and skills.

Health and Physical Education

PE 101 Adapted Physical Education
16 weeks. 2 hrs. per wk.
Students restricted from full participation in the required physical education of PE 102 or PE 103 may be scheduled for adapted physical education activities. Through cooperation an individualized physical education program will be developed to meet special situations.

PE 102 Physical Education
16 weeks. 2 hrs. per wk. ½ Cr.
In this course the emphasis is on the 3 lifetime sports of Badminton, Bowling and Golf. The student is given the history, the basic rules and skills of the above sports. Students must obtain regulation uniforms and gym shoes during the first week of classes.

PE 103 Physical Education
16 wks. 2 hrs. per wk. ½ Cr.
Instruction is given in Tennis and Volley Ball. The emphasis is placed upon the students learning the history and the fundamentals of the above sports. Six hours of instruction will be devoted to covering selected health topics such as narcotics, smoking and alcohol.

PE 105 Safety and First Aid
Course is designed for Recreation Supervision Majors: 1) to provide the student with the essentials of first aid, and 2) to familiarize him with various causes of accidents and the means for their prevention. Opportunity is provided to practice skills in the solution of first aid problems. Completion of the course qualifies the student for both the Standard and Advanced First Aid Certificates issued by the American Red Cross.

PE 204 Physical Education. (0,4) 1 Cr.
A degree of physical fitness and physical agility that will meet the minimum entrance requirements of police departments will be attained through calisthenics, weight training, and agility skills. Self-defense tactics similar to the course taught at many municipal police academies will be conducted.
Prerequisites: PE 102, PE 103, Police Science major.

PE 211 Badminton—1st Semester
16 wks. 2 hrs. per wk. ½ Cr.
An indepth presentation of the game of badminton. A complete history and rules of the game will be presented. Emphasis will be placed on advanced skills and techniques involved in the game of badminton. As the Unit progresses students will be allowed to teach an aspect of the game under the supervision of the college instructor.
Prerequisites: Recreation Supervision Majors only.

PE 212 Tennis—2nd Semester
8 wks. 4 hrs. per wk. ½ Cr.
An indepth presentation of the game of tennis. Provides instruction in basic skills and match play. A knowledge of rules and court etiquette are also required. Emphasis will be placed on advanced skills and techniques involved in the game of tennis. As the Unit progresses students will be allowed to teach an aspect of the game under the supervision of the college instructor.
Prerequisite: Recreation Supervision Majors only.
PE 213 Golf—3rd Semester
8 wks. 4 hrs. per wk. 1/2 Cr.
A comprehensive course for Recreation Supervision Majors including fundamentals of golf, stance, swing, rules and etiquette. Emphasis given to mechanics of swing and effective methods of teaching golf. As the Unit progresses students will be allowed to teach an aspect of the game under the supervision of the college instructor. Practice will be with long irons, short irons and woods.
Prerequisites: Recreation Supervision Majors only.

PE 214 Bowling—4th Semester
16 wks. 2 hrs. per wk. 1/2 Cr.
The purpose of this course is to prepare members of the recreation curriculum in the aspects of teaching bowling to beginners as well as covering advanced aspects of the game of bowling. A complete presentation of the game of bowling will be presented including the history of the game, rules and individual skill development. As the Unit progresses students will be allowed to teach an aspect of the game under the supervision of the college instructor.
Prerequisites: Recreation Supervision Majors only.

Social Sciences

SO 201 U.S. History. (3,0) 3 Cr.
This course traces the development of the United States from its English backgrounds through the "Reconstruction" period. It shows how a new civilization arose out of revolution, independence, new governmental institutions, and equalitarianism. The second major theme deals with the causes and results of expansion. The final part of the term analyzes the causes and the consequences of the Civil War.

SO 202 U.S. History. (3,0) 3 Cr.
The major emphasis is an analysis of the responses of the American people to the complexities and challenges of the last century. It covers such themes as the growth of an urban industrial society, reform movements, America as a world power, the challenge of totalitarianism, and the role of America in the modern world.

SO 206 Economics. (3,0) 3 Cr.
An introductory principles and problems course intended to give a basic understanding of the operation of our economic system. Measuring production and income, economic development, causes and results of economic growth; how various economic events or changes affect the total economy and how various economic theories and points of view have influenced American economic growth.

SO 207 Economics. (3,0) 3 Cr.
Emphasis on micro-economics including economics of the firm, resource allocation, domestic economic problems of monopoly, agriculture, labor relations, the economics of inequality and insecurity, and international economics including the underdeveloped countries and the Soviet challenge.
Prerequisite: SO 206.

SO 208 Economics—Labor and Management. (3,0) 3 Cr.
To provide students with a broad factual and conceptual background in labor economics—exploring such areas as labor markets, wage rate determination, contemporary labor issues and problems, labor history; and to acquaint students with the theory and practice of collective bargaining.

SO 209 Political Geography. (3,0) 3 Cr.
A study of the geographical characteristics of climate, size, location, shape and topography in relation to the political organization of states and nations. Major current political and economic issues are examined in their relationship to geography.

SO 210 Economic Geography. (3,0) 3 Cr.
The location and significance of man's economic activities are related to the production, exchange, and consumption of goods and services. Current issues of world trade, commerce, and balance of international payments are examined in their relationship to geography.

SO 214 History of Western Civilization. (3,0) 3 Cr.
Analysis of the societies of Western civiliza-
tion from its origin through the eighteenth century; the major social, economic, political, religious, and intellectual developments examined; their impact on the development of modern Western civilization traced; particular attention to original sources and documents.

**SO 215 History of Western Civilization.**

(3,0) 3 Cr.

A continuation of SO 214, tracing the growth of the modern world from the eighteenth century to the present; a survey of the political, economic, and social ideas and institutions that are fundamental to contemporary civilization; materials drawn from the text and from original sources and documents.

**SO 217 Political Science.** (3,0) 3 Cr.

The American system of government-local, state, national. Intensive studies of the executive, legislative, and judicial branches on the national level; the office of the President; attention is given to current problems of leadership, administration, federalism, and interest groups. Constitutional foundations and basic issues of American democracy.

**SO 218 Political Science.** (3,0) 3 Cr.

Government and the promotion and regulation of the economy and taxation as the price of freedom are studied. Other topics include: comparative government; democratic capitalism vs. totalitarian communism; foreign policy challenges and opportunities; and the American Republic in transition.

**SO 219 General Psychology.** (3,0) 3 Cr.

Basic concepts in the scientific study of the human behavior are emphasized, including human growth and development, motivation, emotions, perception, and learning and remembering.

**SO 220 General Psychology.** (3,0) 3 Cr.

Emphasis is given to human interaction rather than to development. Included are testing and measurement, heredity, and environment, the self, conflict and adjustment, personality, and group behavior.

**SO 222 Sociology.** (3,0) 3 Cr.

An introductory course which is designed to help the general college student develop insights and tolerance about the social life of man. Attention is given to such key sociological concepts as: social organizations, socialization, social change, culture, social stratification, primary group, and collective behavior.

**SO 223 Sociology.** (3,0) 3 Cr.

This course examines problems in the social life of man which occur within the areas of family life, religion, education, minority groups, crime, delinquency and urban expansion. Throughout the term, the course emphasizes the impact of social systems in the development and resolution of social problems.

Prerequisite: SO 202.

**SO 224 Urban Social Problems.** (3,0) 3 Cr.

A study of the major problems which confront contemporary society. Some of these problems are: population imbalance; the causes of group prejudice; cultural and value conflicts; and the treatment and rehabilitation of the social deviate. Attention is given to current trends in sociological theory.

Prerequisite: SO 222.

**SO 232 Developmental Psychology (Child).**

(3,0) 3 Cr.

Introduction to human growth and development with emphasis on the physical and social development of children. The emphasis is on normal development. Case studies and observations are utilized.

Prerequisite: SO 219.

**SO 233 Developmental Psychology (School Years).**

(3,0) 3 Cr.

This course continues the study of young individuals through the adolescent years. Again, the emphasis is on normal development of youngsters in the home, school, and neighborhood (peer) environments. Case studies and observations are utilized.

Prerequisite: SO 219.

**SO 234 Developmental Psychology (Social).**

(3,0) 3 Cr.

Emphasis is on social growth and development, mental hygiene, dynamics of adjustment and aspects of maladjustment, emotional maturity, interrelationship between personality and cultures.

Prerequisite: SO 219.
SO 237 Anthropology. (3,0) 3 Cr.
This course explores the enormous variety of "ways of behaving" (thinking, feeling and acting) which human beings have developed to meet their needs, individually, in groups, and the groups themselves as real living entities. The tremendous diversity of beliefs, values and life-styles within primitive, simple non-literate societies are compared with those prevailing in the more modern complex, sophisticated societies. Students will learn that basic human needs are universal and gain insight into the origins and causes of human identities, similarities and differences-including their own.

Numbers in parentheses indicate lecture and laboratory hours per week respectively.
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Evening College

Degree Programs

Programs leading to the Associate in Applied Science Degree are open to high school graduates or equivalent.

Advertising Art and Design
Biological Technology:
  Biological Research
  Pest Control Technology
  Oceanic Biology
Medical Laboratory Technology

Business:
  Accounting
  Management
  Marketing
  Secretarial
Electrical Technology—
  Electronics

Mechanical Technology
Police Science

Certificate Programs

Students may elect to follow a comprehensive program extending over a period of three to five years. Upon the successful completion of one of these programs a student will be granted an Evening College Certificate. The certificate programs include the following areas of study:

Advertising Art
Air Conditioning, Heating, and Refrigeration Technology
Automotive and Diesel Technology

Business:
  Accounting
  Computer Programming
  Management
  Marketing
  Secretarial

Construction Technology
Electronics
Graphic Arts and Advertising Technology
Industrial Art
Mathematics and Science
Mechanical Technology:
  Manufacturing Methods
  Mechanical Design

Police Science
STATE UNIVERSITY OF NEW YORK
Office of the Chancellor, 8 Thurlow Terrace, Albany, N. Y. 12201

UNIVERSITY CENTERS
State University at Albany
State University at Binghamton

MEDICAL CENTERS
Downstate Medical Center at Brooklyn (New York City)
Upstate Medical Center at Syracuse

COLLEGES OF ARTS AND SCIENCE
College at Brockport
College at Buffalo
College at Cortland
College at Fredonia
College at Geneseo
College at New Paltz
College at Oneonta
College at Oswego
College at Plattsburgh
College at Potsdam

(Three additional Colleges of Arts and Science are in varying stages of development. Two four-year campuses, in Westchester County at Purchase and in Nassau County at Old Westbury are under development. Old Westbury will admit its first students in limited numbers in September 1968. The third campus will be upper-division (junior-senior years) in concept and located in the Utica-Rome-Herkimer area. Master's level programs will be offered at all three campuses.)

SPECIALIZED COLLEGES
College of Forestry at Syracuse University
Maritime College at Fort Schuyler (Bronx)
College of Ceramics at Alfred University
College of Agriculture at Cornell University
College of Home Economics at Cornell University
School of Industrial and Labor Relations at Cornell University
Veterinary College at Cornell University

AGRICULTURAL AND TECHNICAL COLLEGES (Two-year)
Alfred
Canton
Cobleskill
Delhi
Farmingdale
Morrisville

COMMUNITY COLLEGES
(Locally-sponsored two-year colleges under the program of State University)
Adirondack Community College at Glens Falls
Auburn Community College at Auburn
Borough of Manhattan Community College at New York City
Bronx Community College at New York City
Broome Technical Community College at Binghamton
Community College of the Finger Lakes at Canandaigua
Corning Community College at Corning
Dutchess Community College at Poughkeepsie
Eric County Technical Institute at Buffalo
Fashion Institute of Technology at New York City
Fulton-Montgomery Community College at Johnstown
Genesee Community College at Batavia
Herkimer County Community College at Ilion
Hudson Valley Community College at Troy
Jamestown Community College at Jamestown
Jefferson Community College at Watertown
Kingsborough Community College at Brooklyn
Mohawk Valley Community College at Utica
Monroe Community College at Rochester
Nassau Community College at Garden City
New York Community College of Applied Arts and Sciences at Brooklyn
Niagara County Community College at Niagara Falls
Onondaga Community College at Syracuse
Orange County Community College at Middletown
Queensborough Community College at New York City
Rockland Community College at Suffern
Staten Island Community College at New York City
Suffolk County Community College at Selden
Sullivan County Community College at South Fallsburg
Ulster County Community College at Kingston
Westchester Community College at Valhalla

(Nine additional community colleges to be sponsored by Clinton, Columbia-Greene, Essex-Franklin (North Country), Schenectady and Tompkins-Cortland Counties have been approved by the Board of Trustees and are in varying stages of development. Clinton and North Country plan to admit students in September 1968.)