College Catalog
2011/2012

Farmingdale State College
State University of New York
Welcome to Farmingdale State College.

We are a public college with more than 7,000 students pursuing degrees in business, liberal arts, applied sciences, health sciences and engineering technologies. Farmingdale State College, a campus of the State University of New York, was founded in 1912 as the first public institution of higher learning on Long Island. The College has a rich history and is extensively integrated into the community.

A beautiful, traditional 380-acre campus and central location in the heart of Long Island allows limitless opportunities for internships and careers with vibrant local businesses and industries.

Small classes taught by dedicated faculty who lend academic and personal support ensure that our students are prepared for careers and opportunities to succeed in the ever-changing world of technology. Evening and accelerated Saturday classes, along with online courses and summer and winter sessions, are some of the ways we accommodate students with full or part-time jobs.

Complementing our strong academic programs is a comprehensive athletic program with eighteen men’s and women’s teams and numerous co-curricular clubs and activities.

At Farmingdale State College, we enable students to fulfill their potential in preparation for careers and productive future lives.

Sincerely,

W. Hubert Keen, PhD
President
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General Information

Farmingdale State College, State University of New York, is located on 380 acres in central Long Island. The College is easily accessible via the Long Island Expressway, the Northern and Southern State Parkways, and the Long Island Railroad.

Established in 1912 to serve a largely agrarian community, the College now meets the needs of the region and New York State through its emphasis on the applied sciences and high technology. As Long Island's first public college, Farmingdale offers the bachelor of science, bachelor of technology, and a comprehensive base of associate degree programs, as well as a wide range of non-credit and certificate programs, minors, workshops and seminars.

Mission of the College

Farmingdale State College, a campus of the State University of New York, is a public comprehensive college of applied science and technology. At Farmingdale, students, faculty, and staff form a community committed to diversity and excellence in learning, scholarship, research, and service to society. The educational experience at the College provides students with a foundation of knowledge and skills so that they may be imaginative, critical thinkers and successful problem solvers, who are motivated by a spirit of inquiry and recognized for innovative achievement throughout the region, state, and nation. Offered by outstanding scholar-teachers and professional staff members, a Farmingdale State College education, embracing ethics, culture, and aesthetics, empowers graduates to be exemplary citizens, scholars, professionals, and leaders in an increasingly diverse and interdependent world.

In fulfilling its mission, the College shall:

- provide students with a broad academic foundation, which includes an appreciation of culture, ethics, aesthetics, citizenship, cultural diversity, and the interrelationships among the applied arts and sciences, technologies, and society.
- offer affordable programs to academically qualified students which support their educational aspirations, meet the needs of regional employers, and promote the economic, social and cultural development of the region.
- provide a stimulating environment that results in student learning.
- promote scholarship and research that addresses the Mission of the College, benefits the larger society, and enhances teaching and student learning.
- enhance student activities and services beyond the classroom in order to support and enrich learning and promote career, social, and personal development for diverse student populations.
- provide a physical environment that supports and enriches teaching, learning, scholarship, and research.
- foster an open and transparent campus environment in order to maintain the integrity of the Mission of the College.
- seek and provide ample resources to support the Mission of the College.
- encourage students to aspire to be exemplary citizens, scholars, professionals, and leaders in society.

You are invited to visit the College’s website at www.farmingdale.edu for the most current and up-to-date information.
Farmingdale State College
FSC is fully accredited by the Middle States Association of Colleges and Secondary Schools. At present, approximately 7,000 students are in attendance.

Of those first-time, full-time Associate degree seeking students entering Fall 2004, 10.4% graduated within 150% of the normal time and 23.1% transferred out.

Of those first-time, full-time Bachelor’s degree seeking students entering Fall 2004, 31.6% graduated within 150% of the normal time and 33.8% transferred out.

It should be noted that many students entering our Associate degree offerings transfer to our baccalaureate degree programs. Such students would not be included in our Associate degree completion statistics.

Under the Federal “Student Right-To-Know” Act, the Baccalaureate and Associate degree statistics were combined. It was calculated that of the total cohort of first-time, full-time degree seeking students who entered Fall 2004, 16.4% graduated within 150% of the normal time and 23.1% transferred out. The 4-year average is 20.1% for the graduation rate and 26.7% for the transfer-out rate.

Accreditation and State Education Department Registration
All curricula are registered by the New York State Education Department.

Accreditations:
Middle States Association of Colleges and Secondary Schools
New York State Education Department
Technology Accreditation Commission of the Accreditation Board for Engineering and Technology (TAC/ABET):
- Architectural Engineering Technology
- Computer Engineering Technology
- Construction Management Engineering Technology
- Electrical Engineering Technology
- Manufacturing Engineering Technology
- Mechanical Engineering Technology
Association of Technology, Management and Applied Engineering (ATMAE):
- Industrial Technology - Automotive Management Technology
- Industrial Technology - Facility Management Technology
National Accrediting Agency for Clinical Laboratory Sciences (NAACLS):
- Medical Laboratory Technology
National League for Nursing Accrediting Commission, Inc. (NLNAC):
- Nursing
American Dental Association,
Commission on Dental Accreditation:
- Dental Hygiene

Accreditation inquiries may be directed to:
1 Technology Accreditation Commission, ABET, Inc.
111 Market Place, Suite 1050, Baltimore, MD 21202, 410-347-7700 www.abet.org
2 Association of Technology, Management and Applied Engineering, 1390 Eisenhower Place, Ann Arbor, MI 48108, 734-677-0720 www.atmae.org
3 National Accrediting Agency for Clinical Laboratory Sciences, 5600 N. River Road, Suite 720, Rosemont, IL 60018-5119, 773-714-8880 www.naacls.org

4 National League for Nursing Accrediting Commission, Inc.
3343 Peachtree Road NE, Suite 500, Atlanta, GA 30326,
Phone 404-975-5000, Fax 404-975-5020, www.nlnac.org

5 American Dental Association,
Commission on Dental Accreditation
211 East Chicago Avenue, Chicago, IL 60611, 312-440-4653
Requests to review documents describing accreditation may be addressed to the Provost’s Office, Horton Hall, Room 230.

Air Agency Certification
Federal Aviation Administration: Aeronautical Science - Professional Pilot
Inquiries may be directed to:
Farmingdale Flight Standards District Office, 7150 Republic Airport, Suite 235, Farmingdale, NY 11735
631-755-1300, Ext. 262

Academic Freedom
As cited in the SUNY Policies of the Board of Trustees 2006, Article XI, Title I, it is the policy of the University to maintain and encourage full freedom, within the law, of inquiry, teaching and research. In the exercise of this freedom faculty members may, without limitation, discuss their own subject in the classroom; they may not, however, claim as their right the privilege of discussing in their classroom controversial matter which has no relation to their subject. The principle of academic freedom shall be accompanied by a corresponding principle of responsibility. In their role as citizens, employees have the same freedoms as other citizens. However, in their extramural utterances employees have an obligation to indicate that they are not institutional spokespersons.

Affirmative Action and Equal Employment Opportunity (Faculty, Staff, Students)
Inquiries may be directed to:
Farmingdale Flight Standards District Office, 7150 Republic Airport, Suite 235, Farmingdale, NY 11735
631-755-1300, Ext. 262

Affirmative Action and Equal Employment Opportunity (Faculty, Staff, Students) Farmingdale State College Statement of Compliance
Farmingdale State College, State University of New York, does not discriminate on the basis of race, color, national origin, religion, age, sex, sexual orientation, gender identity, disability, veteran status or marital status, in the recruitment of students, the recruitment and employment of faculty or staff, or the operation of any of its programs and activities, as specified in federal and state laws and regulations. Farmingdale State College policy also prohibits retaliation against any employee or person seeking employment for bringing a complaint of discrimination or harassment pursuant to this policy. This policy also prohibits retaliation against a person who assists someone with a complaint of discrimination or harassment, or participates in any manner in an investigation or resolution of a complaint of discrimination or harassment. Retaliation includes threats, intimidation, reprisals, and/or adverse actions related to employment. The designated coordinator for compliance with Title VI and VII of the Civil Rights Act of 1964 as amended, Title IX of the Education Amendments of 1972, Sections 503 and 504 of the Rehabilitation Act of 1973, as amended, Section 402 of the Vietnam Era Veteran Readjustment Assistance Act of 1974, as amended, and Executive Order 11246 is Dr. Veronica Henry. She can be located during regular business hours in Horton Hall, Room 210, telephone 631-420-2622.
Americans with Disabilities
Farmingdale State College is committed to ensuring that all qualified individuals with disabilities have the opportunity to take part in educational and employment programs and services on an equal basis. The aim is to provide this opportunity in an integrated setting that fosters independence and meets the guidelines of the Americans with Disabilities Act (ADA) and the Rehabilitation Act of 1973.

Sexual Harassment
The President and the College community will not tolerate sexual harassment or sexual assault nor condone it in any form, and are committed to providing and preserving an atmosphere free from harassment of any manner. Sexual harassment is a form of conduct which undermines the integrity of educational pursuits and of employment. Sexual harassment is unwelcome and unwanted sexual advances, inferences, or actions which interfere with an individual’s ability to perform her/his educational pursuits or employment.

No one should be subjected to unsolicited and unwelcome sexual overtures or conduct, whether verbal or physical. A college is a community of scholars where strong emphasis is placed on self awareness and consideration for the lives and feelings of others.

Title IX of the Education Amendments of 1972 (Title IX), 20 U.S.C. §§1681 et seq., and its implementing regulations, 34 C.F.R. Part 106, prohibit discrimination on the basis of sex in education programs or activities operated by recipients of Federal financial assistance. Sexual harassment of students, which includes acts of sexual violence, is a form of sex discrimination prohibited by Title IX.

Sexual violence is a form of sexual harassment prohibited by Title IX. Title IX also prohibits gender-based harassment, which may include acts of verbal, nonverbal, or physical aggression, intimidation, or hostility based on sex or sex-stereotyping, even if those acts do not involve conduct of a sexual nature.

While there exists an atmosphere of freedom of expression, it must always be in conjunction with a responsibility to observe the rights of one another.

In such a setting, there is no place for conduct that diminishes, uses, or abuses another person. For these reasons, harassment of any kind is unacceptable at the College.

A document on Policy and Procedures may be obtained at New Student and Transfer Orientations, or from the Department Chairs, Directors, Deans, Counselors or the Affirmative Action office in Horton Hall.

Campus Safety Report
The Jeanne Clery Disclosure of Campus Security Policy and Campus Crime Statistics Act is a landmark federal law, originally known as the Campus Security Act. It requires colleges and universities across the United States to disclose information about crime on and around their campuses.

In compliance with this federal law, Farmingdale State College provides reports and statistics about campus safety and security programs, incidents of crime on campus, and information regarding registered sex offenders. Copies of the campus safety and crime reports are available on-line at the Farmingdale.edu Home Page (Quick Links - Police) and at the University Police Headquarters.

Bias Crimes Prevention
Hate Crimes and the Law
It is a Farmingdale College policy mandate to protect all members of the Farmingdale College community by preventing and prosecuting bias or hate crimes that occur within the campus's jurisdiction.

Hate crimes, also called bias crimes or bias related crimes, are criminal activity motivated by the perpetrator's bias or attitude against an individual victim or group based on perceived or actual personal characteristics, such as their race, religion, ethnicity, gender, sexual orientation, or disability. Hate/bias crimes have received renewed attention in recent years, particularly since the passage of the federal Hate/Bias Crime Reporting Act of 1990 and the New York State Hate Crimes Act of 2000 (Penal Law Article 485). Copies of the New York law are available from University Police headquarters.

Penalties for bias-related crimes are very serious and range from fines to imprisonment for lengthy periods, depending on the nature of the underlying criminal offense, the use of violence or previous convictions of the offender. Perpetrators who are students will also be subject to campus disciplinary procedures where sanctions including dismissal are possible.

In addition to preventing and prosecuting hate/bias crimes, Farmingdale State College Police also assist in addressing bias-related activities that do not rise to the level of a crime. These activities, referred to as bias incidents and defined by the University as acts of bigotry, harassment, or intimidation directed at a member or group within the Farmingdale community based on national origin, ethnicity, race, age, religion, gender, sexual orientation, disability, veteran status, color, creed, or marital status, may be addressed through the State University’s Discrimination Complaint Procedure or the campus conduct code. Bias incidents can be reported to University Police as well as to AA/EO Office.

If you are a victim of, or witness to, a hate/bias crime on campus, report it to University Police by calling x2111 in an emergency, using a Blue Light or other campus emergency telephone or stopping by the Dean of Students Office. University Police will investigate and follow the appropriate adjudication procedures.

Victims of bias crime or bias incidents can avail themselves of counseling and support services from the campus as follows: Office of Personal Counseling Services in Sinclair Hall or by calling 631-420-2006.

If you are sexually or otherwise assaulted on campus:
- Get to a safe place as soon as you can.
- Try to preserve all physical evidence; do not bathe, douche, or change your clothes.
- Contact Farmingdale State College Police immediately (call 911 in an emergency, or use a Blue Light or other campus emergency phone), at 631-420-2111.

Remember, assaults – sexual or otherwise – are crimes; they are not the victims' fault. Victims have the right to pursue adjudication of crimes that occur on the Farmingdale State College campus through criminal courts and/or through the University’s internal disciplinary process (under the Campus Code of Conduct). University Police are trained to assist with prosecution in both systems.
Campus Safety Advisory Committee

The Campus Safety Advisory Committee was established to provide advice and written reports on issues relating to personal safety on the campus, as well as to perform requirements of the Jeanne Clery Disclosure of Campus Security Policy and Campus Crime Statistics Act. Additionally, it is a purpose of the committee to inform the campus community of prevention programs, intervention programs, awareness programs, and to ensure that all safety policies and regulations are being adhered to by the College such that there exists a safe work and learning environment. The committee is comprised by members of all campus constituencies and, in accordance with State law and State University regulations, must have as its membership a numerical majority being female.

To bring concerns to this committee, you may either ask your student government representative, faculty representative, union representative, or the Chief of University Police as Chair of the committee to represent your views, concerns and/or needs.

Notification of Rights Under FERPA For Postsecondary Institutions

Farmingdale State College complies fully with the Family Educational Rights and Privacy Act of 1974 (FERPA) in its treatment of student educational records. The campus policy statement can be found in Article 7, Section II, Family Educational Rights and Privacy Act of the Student Conduct Rules, University Standards and Administrative Regulations. A copy of the rules can be obtained from the Office of the Registrar, Laffin Hall, Room 225. This Act affords students certain rights with respect to their education records. These rights are:

1. The right to inspect and review the student’s education records within 45 days of the day the University receives a request for access. Students should submit to the registrar, dean, or head of the academic department (or appropriate official) written requests that identify the record (s) they wish to inspect. The University official will make arrangements for access and notify the student of the time and place where the records may be inspected. If the records are not maintained by the University official to whom the request was submitted, that official shall advise the student of the correct official to whom the request should be addressed.

2. The right to request the amendment of the student’s education records that the student believes is inaccurate or misleading. Students may ask the University to amend a record that they believe is inaccurate or misleading. They should write the University official responsible for the record clearly identifying the part of the record they want changed, and specify why it is inaccurate or misleading. If the University decides not to amend the record as requested by the student, the University will notify the student of the decision and advise the student of his or her right to a hearing regarding the request for amendment. Additional information regarding the hearing procedures will be provided to the student when notified of the right to a hearing.

3. The right to consent to disclosures of personally identifiable information contained in the student’s education records, except to the extent that FERPA authorizes disclosure without consent. One exception, which permits disclosure without consent, is disclosure to school officials with legitimate educational interests. A school official is defined as a person employed by the University in an administrative, supervisory, academic, or support staff position (including law enforcement unit and health staff); a person or company with whom the University has contracted (such as an attorney, auditor, or collection agent); a person serving on the Board of Trustees; or assisting another school official in performing his or her tasks. A school official has a legitimate educational interest if the official needs to review an education record in order to fulfill his or her professional responsibility.

(Optional) Upon request, the University discloses education records without consent to officials of another school in which a student seeks or intends to enroll. (Note: FERPA requires an institution to make a reasonable attempt to notify the student of the records request unless the institution states in its annual notification that it intends to forward records on request).

4. The right to file a complaint with the U.S. Department of Education concerning alleged failures by the University to comply with the requirements of FERPA. The name and address of the Office that administers FERPA is:

Family Policy Compliance Office
U.S. Department of Education
400 Maryland Avenue, S.W., Washington, D.C. 20202-4605

Notice for Directory Information

The Family Educational Rights and Privacy Act (FERPA), a federal law, requires that Farmingdale State College, with certain exceptions, obtain your written consent prior to the disclosure of personally identifiable information from your education records. However, Farmingdale State College may disclose appropriately designated “directory information” without written consent, unless you have advised the College to the contrary in accordance with College procedures. The primary purpose of directory information is to allow Farmingdale State College to include this type of information from your education records in certain publications. Examples include:

- A playbill, showing role in a drama production;
- The annual yearbook;
- Honor roll or other recognition lists;
- Graduation programs; and
- Sports activity sheets, such as for wrestling, showing weight and height of team members.

Directory information, which is information that is generally not considered harmful or an invasion of privacy if released, can also be disclosed to outside organizations without prior written consent. Outside organizations include, but are not limited to, companies that manufacture class rings or publish yearbooks. If you do not want Farmingdale State College to disclose directory information from your education records without your prior written consent, you must notify the College in writing. Farmingdale State College has designated the following information as directory information.

- Student’s name
- Participation in officially recognized activities and sports
- Address
- Telephone listing
- Weight and height of members of athletic teams
- Electronic mail address
- Photograph
- Degrees, honors, and awards received
- Date and place of birth
- Major field of study
### Parental Notification Policy

In October 1998, Congress passed the Higher Education Amendment which permits post-secondary institutions to disclose to parents or legal guardians of students under 21, without their consent, information regarding the student’s violation of any federal, state, or local law, or any rule or policy of the institution governing the use or possession of alcohol or a controlled substance. The Office of Student Life or the Office of the Dean of Students normally informs parents of any alcohol or drug violation involving students under 21.

### Freedom of Information Law

As a state agency, Farmingdale State College complies fully with the New York State “Freedom of Information Law” which was enacted to ensure public accountability of state agencies while protecting individuals against unwarranted invasions of personal privacy. The regulations are posted on the College’s website, at the Human Resources Office and at the campus library in Greenley Hall. Freedom of Information Law (FOIL) requests are to be made in writing to the campus Records Access Officer:

Melissa Frisina  
Records Access Officer  
Farmingdale State College  
2350 Broadhollow Road  
Farmingdale, NY 11735  
631-420-2728, frisinm@farmingdale.edu

The request must reasonably describe the record or records that are being requested, and be as specific as possible (i.e., indicate dates, titles, specific files and designations, as appropriate). Reasonable fees may be charged for duplication of materials or for clerical assistance.

### Guidelines for the use of Digital Material: Music, Video, Pictures, Software and Games

The Digital Millennium Copyright Act of 1998 (“DMCA”), which addresses copyright issues regarding digital materials, was signed into law by the President on October 28, 1998. One of the provisions of the DMCA is to limit the liability of educational institutions for damages due to copyright infringement by members of their community. The College complies with all DMCA’s requirements and requires that:

- all members of the College community must follow the College’s Copyright Guidelines for digital material
- all members of the College community must adhere to the College’s Acceptable Use Policy


### Use of College Email

Information Technology Services (ITS) has assigned all students and staff an official Farmingdale email address. It is to this official address that the College will send email communications.

The College has the right to expect that such communications will be received and read in a timely fashion. Official email communications are intended to meet only the academic and administrative needs of the campus community.

Students and staff are obliged to check their email periodically. Any questions regarding the set up or access of the Farmingdale email account should be directed by email to helpdesk@farmingdale.edu or by calling (631) 420-2754.

Students seeking to contact College faculty, staff and/or offices via email must use their Farmingdale State College email address. Emails coming from private email providers may not be answered if doing so violates laws pertaining to the privacy of personal information.

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- Dates of attendance
- Grade level
- The most recent educational agency or institution attended
### Fall 2011

<table>
<thead>
<tr>
<th>Date</th>
<th>Activity or event</th>
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<tbody>
<tr>
<td>August 24 &amp; 25 (Wednesday - Thursday)</td>
<td>Registration activities</td>
</tr>
<tr>
<td>August 25 (Thursday)</td>
<td>Faculty and Staff Convocation</td>
</tr>
<tr>
<td>August 27 (Saturday)</td>
<td>Classes begin</td>
</tr>
<tr>
<td>September 2 (Friday)</td>
<td>Last day for schedule changes</td>
</tr>
<tr>
<td>September 3 (Saturday)</td>
<td>No classes</td>
</tr>
<tr>
<td>September 5 (Monday)</td>
<td>No Classes (Labor Day)</td>
</tr>
<tr>
<td>September 10 (Saturday)</td>
<td>Accelerated Saturday classes begin</td>
</tr>
<tr>
<td>September 28 – 30 (Wednesday – Friday)</td>
<td>No classes day or evening</td>
</tr>
<tr>
<td>October 4 (Tuesday)</td>
<td>AM Governance Meeting (No classes before 12 p.m.)</td>
</tr>
<tr>
<td>October 7 – 8 (Friday – Saturday)</td>
<td>No Friday evening classes and no Saturday classes</td>
</tr>
<tr>
<td>October 10 (Monday)</td>
<td>No classes (Columbus Day)</td>
</tr>
<tr>
<td>October 17 (Monday)</td>
<td>Last day to submit a grade OR Grade extension for Incompletes (Spring &amp; Summer)</td>
</tr>
<tr>
<td>November 6 (Sunday)</td>
<td>Fall Open House</td>
</tr>
<tr>
<td>November 8 (Tuesday)</td>
<td>Classes in session (Veterans Day)</td>
</tr>
<tr>
<td>November 11 (Friday)</td>
<td>Last day to withdraw</td>
</tr>
<tr>
<td>November 15 (Tuesday)</td>
<td>PM Governance Meeting (No classes after 12 p.m. and no evening classes)</td>
</tr>
<tr>
<td>November 23 – 26 (Wednesday – Saturday)</td>
<td>No classes (Thanksgiving holiday)</td>
</tr>
<tr>
<td>December 3 (Saturday)</td>
<td>Accelerated Saturday classes end (Final Exam)</td>
</tr>
<tr>
<td>December 16 (Friday)</td>
<td>Last day of classes</td>
</tr>
<tr>
<td>December 17 – 23 (Saturday – Friday)</td>
<td>Final Exam / Evaluation Period</td>
</tr>
<tr>
<td>December 17 (Saturday)</td>
<td>Winter Commencement: Snow day: December 18</td>
</tr>
<tr>
<td>December 23 (Friday)</td>
<td>Semester ends</td>
</tr>
<tr>
<td>December 27 (Tuesday)</td>
<td>Grades Due</td>
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### Intersession 2012

<table>
<thead>
<tr>
<th>Date</th>
<th>Activity or event</th>
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<tbody>
<tr>
<td>January 3 (Tuesday)</td>
<td>Classes begin and last day for schedule changes</td>
</tr>
<tr>
<td>January 9 (Monday)</td>
<td>Last day to withdraw</td>
</tr>
<tr>
<td>January 16 (Monday)</td>
<td>No classes – Dr. Martin Luther King, Jr. Day</td>
</tr>
<tr>
<td>January 19 (Thursday)</td>
<td>Classes end</td>
</tr>
<tr>
<td>January 24 (Tuesday)</td>
<td>Grades due</td>
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### Spring 2012

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<thead>
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<th>Date</th>
<th>Activity or event</th>
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<tbody>
<tr>
<td>January 19 (Thursday)</td>
<td>Faculty and Staff Convocation</td>
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<tr>
<td>January 18 – 19 (Wednesday – Thursday)</td>
<td>Registration activities</td>
</tr>
<tr>
<td>January 23 (Monday)</td>
<td>Classes begin</td>
</tr>
<tr>
<td>January 27 (Friday)</td>
<td>Last day for schedule changes</td>
</tr>
<tr>
<td>February 4 (Saturday)</td>
<td>Accelerated Saturday classes begin</td>
</tr>
<tr>
<td>February 20 (Monday)</td>
<td>Classes meet (Presidents’ Day)</td>
</tr>
<tr>
<td>March 2 (Friday)</td>
<td>AM Governance Meeting – Classes meet</td>
</tr>
<tr>
<td>March 2 (Friday)</td>
<td>Last day to submit a grade OR Grade extension for Incompletes (Fall &amp; Winter)</td>
</tr>
<tr>
<td>March 23 (Friday)</td>
<td>Last day to withdraw</td>
</tr>
<tr>
<td>April 2 – 8 (Monday – Sunday)</td>
<td>No classes (Spring Break)</td>
</tr>
<tr>
<td>April 13 (Friday)</td>
<td>AM Governance Meeting – Classes meet</td>
</tr>
<tr>
<td>April 21 (Saturday)</td>
<td>Spring Open House</td>
</tr>
<tr>
<td>May 4 (Friday)</td>
<td>Last day of classes</td>
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<tr>
<td>May 5 – 11 (Saturday – Friday)</td>
<td>Final Exam / Evaluation Period</td>
</tr>
<tr>
<td>May 11 (Friday)</td>
<td>Semester ends</td>
</tr>
<tr>
<td>May 12 (Saturday)</td>
<td>Commencement</td>
</tr>
<tr>
<td>May 16 (Tuesday)</td>
<td>Grades Due</td>
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### Summer Sessions 2012

<table>
<thead>
<tr>
<th>Date</th>
<th>Activity or event</th>
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<tbody>
<tr>
<td>May 29 (Tuesday)</td>
<td>Summer Sessions A, C, and E begin</td>
</tr>
<tr>
<td>June 28 (Thursday)</td>
<td>Summer Session A ends</td>
</tr>
<tr>
<td>July 9 (Monday)</td>
<td>Summer Session B begins</td>
</tr>
<tr>
<td>July 25 (Wednesday)</td>
<td>Summer Session C ends</td>
</tr>
<tr>
<td>August 8 (Wednesday)</td>
<td>Summer Session B ends</td>
</tr>
<tr>
<td>August 15 (Wednesday)</td>
<td>Summer Session E ends</td>
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</tbody>
</table>

Please visit: http://farmingdale.edu/calendars/summer_2012.html for the complete Summer Session calendar.
## Residence Life Calendar

### Fall 2011

<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
<th>Time</th>
</tr>
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<tbody>
<tr>
<td>Resident Student Check-In</td>
<td>Sunday 8/28</td>
<td>8:00am – 4:00pm</td>
</tr>
<tr>
<td>Thanksgiving Break</td>
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</tr>
<tr>
<td>Closing</td>
<td>Tuesday, 11/22</td>
<td>Residence Halls close at 8pm</td>
</tr>
<tr>
<td>Opening</td>
<td>Sunday, 11/27</td>
<td>Residence Halls open at 5pm</td>
</tr>
<tr>
<td>Fall Closing Check-Out</td>
<td>Friday, 12/23</td>
<td>Residence Halls close at 8pm</td>
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### Intersession 2012

<table>
<thead>
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<tbody>
<tr>
<td>Intersession Resident Student Check-In</td>
<td>Tuesday, 1/3</td>
<td>8:00am – 12:00noon</td>
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### Spring 2012

<table>
<thead>
<tr>
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<th>Time</th>
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</thead>
<tbody>
<tr>
<td>Resident Student Check-In</td>
<td>Sunday, 1/22</td>
<td>1:00pm – 5:00pm</td>
</tr>
<tr>
<td>Spring Break</td>
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<tr>
<td>Closing</td>
<td>Friday, 3/30</td>
<td>Residence Halls close at 8:00pm</td>
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<tr>
<td>Opening</td>
<td>Sunday, 4/8</td>
<td>Residence Halls open at 5:00pm</td>
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<tr>
<td>Spring Closing Check-Out</td>
<td>Friday, 5/11</td>
<td>Residence Halls close at 8:00pm</td>
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If you are participating in Commencement, you may be granted permission to remain on campus until Saturday, 5/12. Please see your Resident Director.
Undergraduate Instructional Programs

Enrollment in other than registered or otherwise approved programs may jeopardize a student’s eligibility for certain student aid awards. The following undergraduate programs have been registered by the State Education Department for the State University of New York at Farmingdale.

The Baccalaureate Degree

The Bachelor of Science and Bachelor of Technology degrees accept eligible freshmen and transfer students. Graduates of all BS and BTech programs are qualified for gainful and rewarding careers or to pursue their education at the graduate level.

The Associate Degree

The Associate in Arts (AA) and the Associate in Science (AS) degrees are offered as the first two years of a traditional baccalaureate program. The Associate in Applied Science (AAS) programs were originally intended to be “career” rather than “transfer” programs. However, growing numbers of students continue their education after completing one of the career programs primarily oriented to a specific occupation. Anyone considering enrollment in an AAS degree program who is concerned about transfer potential should see an admissions counselor.

The New York State Education Department has authorized the State University of New York at Farmingdale, to award degrees in the following programs.

Bachelor Degrees

<table>
<thead>
<tr>
<th>Program</th>
<th>Degree Granted</th>
<th>Hegis Code</th>
</tr>
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<tbody>
<tr>
<td>Aeronautical Science – Professional Pilot</td>
<td>BS</td>
<td>0510</td>
</tr>
<tr>
<td>Applied Economics</td>
<td>BS</td>
<td>2204</td>
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<tr>
<td>Applied Mathematics</td>
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<tr>
<td>Applied Psychology</td>
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<td>Architectural Engineering Technology</td>
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<td>Aviation Administration</td>
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<tr>
<td>Bioscience</td>
<td>BS</td>
<td>0499</td>
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<tr>
<td>Business Management</td>
<td>BS</td>
<td>0506</td>
</tr>
<tr>
<td>Computer Engineering Technology</td>
<td>BS</td>
<td>0925</td>
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<tr>
<td>Computer Programming and Information Systems</td>
<td>BS</td>
<td>0799</td>
</tr>
<tr>
<td>Construction Management</td>
<td>BS</td>
<td>0925</td>
</tr>
<tr>
<td>Criminal Justice:</td>
<td>BS</td>
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<tr>
<td>Law Enforcement Technology</td>
<td>BS</td>
<td>2105</td>
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<td>Dental Hygiene</td>
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<tr>
<td>Electrical Engineering Technology</td>
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<tr>
<td>Horticultural Technology Management</td>
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<tr>
<td>Industrial Technology – Automotive Management</td>
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<tr>
<td>Facility Management Technology</td>
<td>BS</td>
<td>0925</td>
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<tr>
<td>Manufacturing Engineering Technology</td>
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<tr>
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<td>BS</td>
<td>0925</td>
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<tr>
<td>Medical Technology</td>
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<td>1223</td>
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<tr>
<td>Nursing</td>
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<td>1203</td>
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<tr>
<td>Professional Communications</td>
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<tr>
<td>Security Systems</td>
<td>BS</td>
<td>2105</td>
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<tr>
<td>Sport Management</td>
<td>BS</td>
<td>0599</td>
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<tr>
<td>Software Technology</td>
<td>BS</td>
<td>0799</td>
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Technology Studies                              BS 4904
Telecommunications                                BS 0925
Visual Communications: Art & Graphic Design      BTech 0699

Associate Degrees

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<td>Automotive Technology</td>
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<td>5306</td>
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<tr>
<td>Criminal Justice –</td>
<td>AS</td>
<td>5505</td>
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<tr>
<td>Law Enforcement</td>
<td>AS</td>
<td>5203</td>
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<tr>
<td>Dental Hygiene</td>
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<td>5402</td>
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<tr>
<td>Landscape Development</td>
<td>AAS</td>
<td>5649</td>
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<tr>
<td>Liberal Arts and Sciences</td>
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<td>5301</td>
</tr>
<tr>
<td>Mechanical Engineering Technology</td>
<td>AAS</td>
<td>5205</td>
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<tr>
<td>Medical Laboratory Technology</td>
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<tr>
<td>Nursing</td>
<td>AS</td>
<td>5402</td>
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<tr>
<td>Ornamental Horticulture - General</td>
<td>AAS</td>
<td></td>
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† Higher Education General Information Survey (Not to be confused with curriculum code required on SUNY application)

BS – Bachelor of Science
BTech – Bachelor of Technology
AA – Associate in Arts
AS – Associate in Science
AAS – Associate in Applied Science

Certificate Programs

<table>
<thead>
<tr>
<th>Program</th>
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<tbody>
<tr>
<td>Accounting</td>
<td>5002</td>
</tr>
<tr>
<td>Advanced Programming*</td>
<td>5101</td>
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<tr>
<td>Computer Information Systems</td>
<td>5011</td>
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<tr>
<td>Computer Systems Technology</td>
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<tr>
<td>Health Studies</td>
<td>5299</td>
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<tr>
<td>International Business*</td>
<td>5004</td>
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<tr>
<td>Management</td>
<td>5004</td>
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<tr>
<td>Manufacturing Methods and Numerical Controls</td>
<td>5315</td>
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<tr>
<td>Marketing</td>
<td>5004</td>
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<tr>
<td>Ornamental Horticulture</td>
<td>5402</td>
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<tr>
<td>Practical Nursing</td>
<td>5209.20</td>
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<tr>
<td>Sciences for the Health Professions</td>
<td>5299</td>
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</table>

*local certificate

Each non-local certificate program is approved by the State Education Department and is a comprehensive sequence of courses in a specialized field. For prerequisites and college-level courses in the recommended sequence of study, refer to the certificate program outline under the sponsoring curriculum department.

Additional College Program

The Undeclared Major Program is a two semester program designed to accommodate students who meet admissions requirements to Farmingdale, but are undecided about a career, and therefore, selection of a degree program at the College.
Fields of Study

<table>
<thead>
<tr>
<th>CURRICULUM/DISCIPLINE</th>
<th>DEPARTMENT</th>
<th>DEGREE</th>
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</thead>
<tbody>
<tr>
<td>Anthropology</td>
<td>Sociology &amp; Anthropology Department</td>
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<tr>
<td>Applied Economics</td>
<td>History, Economics and Politics Department</td>
<td>Bachelor of Science</td>
</tr>
<tr>
<td>Applied Mathematics</td>
<td>Mathematics Department</td>
<td>Bachelor of Science</td>
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<tr>
<td>Applied Psychology</td>
<td>Psychology Department</td>
<td>Bachelor of Science</td>
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<td>Arabic</td>
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<tr>
<td>Architecture and Construction Management</td>
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<td></td>
<td>Architectural Engineering Technology</td>
<td>Bachelor of Science</td>
</tr>
<tr>
<td></td>
<td>Construction Management Engineering Technology</td>
<td>Bachelor of Science</td>
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<td>Art</td>
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<tr>
<td>Automotive Technology</td>
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<td>Automotive Management Technology</td>
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<tr>
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<td>Automotive Technology</td>
<td>Assoc. in Applied Science</td>
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<tr>
<td>Aviation</td>
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<td>Aeronautical Science: Professional Pilot</td>
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<td>Biology</td>
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<td>Sciences for the Health Professions</td>
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<td>Marketing</td>
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<td>Bachelor of Science</td>
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<td>Theater</td>
<td>English/Humanities Department</td>
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<tr>
<td>Undeclared Major</td>
<td>Contact Dr. A. Anjana Mebane-Cruz 631-420-2638</td>
<td>Freshman Year Program</td>
</tr>
<tr>
<td>Visual Communications: Art &amp; Graphic Design</td>
<td>Visual Communications Department</td>
<td>Bachelor of Technology</td>
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</tbody>
</table>
Admission Information

Admission to this College and to all other units of the State University of New York is based on the academic qualifications of the respective applicants, and is made without regard to the race, color, creed, age, sex, sexual orientation, national origin, disability, handicap or veteran status of an individual.

Matriculation / Non-Matriculation

A matriculated student is one who has been officially accepted into a degree or certificate program and is making satisfactory progress. A non-matriculated student is one who has not been accepted into a degree or certificate program.

New York State Residents/Non-residents of New York State

A resident of New York State is entitled to pay the in-state tuition rate. To qualify for the in-state tuition rate, a student must have resided in the State of New York for a period of at least one year immediately preceding the time of his/her registration at Farmingdale State College. All other persons shall be considered out-of-state residents and will pay the out-of-state tuition rate. In cases of discrepancy, a student may be asked to supply documentation such as place of voter registration, New York State tax returns or driver’s license, or telephone/electric bills as proof of principal residence.


Health Requirements

All full-time and/or matriculated students are required to submit a Student Information, Medical History, and Physical Report Form to the Health and Wellness Center.

Admission to Degree Programs

General Admission Requirements

Note: In addition to the General Admission Requirements listed, specific high school level courses are required for each major. Please refer to details found later in this section. Furthermore, for admission to programs in Dental Hygiene, Medical Laboratory Technology and Nursing, applicants must meet specific standards which can also be found later in this section.

1. Applicants must be graduates of approved four-year high schools, or hold a General Equivalency Diploma or its equivalent.

2. Applicants applying on the basis of their high school record must have satisfactorily completed the specific course requirements noted under each department’s listing. Additional courses may be required as deemed necessary by each academic department. Students may also qualify for matriculation by completing 6 general education credits (including EGL 101 or EGL 102) and 6 curriculum credits at Farmingdale State, or equivalent coursework at another accredited college. Courses listed as “recommendations” are suggested for additional benefit but are not required.

3. The College requires all first time college applicants to take one of two entrance examinations: the Scholastic Assessment Test (SAT) or the American College Testing Program, with Writing (ACT). When submitted, scores from these examinations may be considered in selecting students for admission as well as for guidance purposes. Additional tests may, at times, be required.

4. Students transferring to the college having completed a minimum of 24 credits with at least a 2.0 grade point average and in good academic standing will have the SAT/ACT requirement waived. The college reserves the right to request SAT/ACT test scores of all applicants whose previous college transcript demonstrates inconsistent academic performance.

5. Any student graduating with a high school transcript or General Equivalency Diploma (GED) prior to June 1998 will not have to take and submit SAT/ACT test scores.

Application Procedures – Degree Programs

All United States citizens and permanent residents applying to a degree program must follow the State University of New York application procedure.

1. The application for admission is available at www.suny.edu/ student.

2. Transcripts may be sent directly to the Admissions Office at the following address.

Admissions Office
Laffin Hall, 2nd floor
Farmingdale State College
2350 Broadhollow Road
Farmingdale, NY 11735

a. For high school seniors, an official copy of the high school transcript should be sent directly to the Admissions Office. Also, SAT (Code 2526) or ACT (code 2918) exam scores should be sent directly to the Admissions Office.

b. Individuals no longer in high school should request that an official copy of their final transcript be sent by the guidance office at the high school from which they graduated, or attended, directly to the Admissions Office.

3. Individuals who have attended any other college must have official high school and college transcripts sent directly to the Admissions Office at the address listed above.

4. Holders of a High School Equivalency Diploma (GED) must send an official copy of test scores and diploma directly to the Admissions Office at the address listed above.

5. Applicants are strongly encouraged to complete the SUNY supplemental application and include essays, letters of recommendation, and any other information that may be of use to the Admissions Committee. Applicants may be requested to appear for a personal interview during the admissions process.

Application Procedures – Undeclared Major Program

Admission to the Undeclared Major Program follows the same procedures as applying to a degree program as stated above with a minimum entrance requirement of 1 unit of defined mathematics. Please note that the Undeclared Major Program is for college freshman only; transfer students with 20 earned credit hours or more are not eligible for consideration.

Contact the Admissions Office for further information.
Application Procedures – Certificate Programs

Admission to certificate programs is based upon proof of graduation from an accredited four-year high school or successful completion of a General Equivalency Diploma or its equivalent. Certain certificate programs may also have specific prerequisite course requirements. Contact the Admissions Office for further information.

Transfer Students

Transfer students are considered for admission to programs at Farmingdale State College based upon their level of achievement in coursework undertaken at other colleges and universities, as well as their high school academic record in some instances.

All applicants admitted to the college as transfer students must supply official transcripts for each college previously attended before the transfer credit evaluation process can begin. Please refer to the section on Academic Information concerning transfer credit.

The Educational Opportunity Program

The Educational Opportunity Program provides for the admission and support of New York State residents who are historically economically and academically disadvantaged. All such students will have demonstrated the academic potential to succeed at the college level and once accepted receive various academic, personal and financial support services. Applicants must select EOP on the SUNY application for consideration and must meet the academic guidelines for admission as determined by the college and the financial guidelines as established by the Office of Opportunity Programs in Albany. For further information, please call 631-420-2230.

Farmingdale First Program

The Farmingdale First Program supports the academic success of a select group of students who are officially accepted to a program. For specific criteria and further information, please see the program details under the Student Life section of this catalog.

Admission of International Students

Student visa requirements are fulfilled only by admission to a full-time program of study as a matriculated student. International students are individuals who are not U.S. citizens, permanent residents, or do not have refugee status in the U.S.

To apply for admission to Farmingdale State College as an international student, the applicant must complete the standard SUNY application and must submit the following:

1. Original certified transcripts with grades from secondary school and college courses are required. These transcripts must be in the original language and accompanied by an English translation with an explanation of the marking system. Secondary school records must reflect academic achievement equivalent to the minimum for admission (B average) when converted to the American grading scale. A 2.0 grade point average is required of international students who wish to transfer from other colleges in the United States.

2. A TOEFL score of 520 on the paper-based test, 190 on the computer-based test, or 68 on the internet-based test will be required as a condition for entrance for:
   a) applicants who are foreign born high school seniors and have had ESL courses in High School or,
   b) applicants with secondary credentials from a foreign non-English speaking country, regardless of any coursework completed in the United States.

Exceptions may be made based on credentials. Individual programs may set higher TOEFL requirements. English proficiency may also be demonstrated by one of the following methods: SAT verbal score of 430 or higher or proof of attendance at an Intensive English Language Institute in the United States with completion of a program at the advanced level. Transfer students may satisfy English proficiency requirements by completing a college-level English Composition course with a grade of C or above.

3. It is also necessary to provide financial documentation indicating that the applicant has sufficient funding to pay for all educational and personal expenses while in the United States. International students must be able to cover all the costs of attendance, as no financial aid is available to international students. The amount considered as sufficient funding may vary from year to year. Forms and details are included in the Application Packet for International Undergraduate Students.

4. Application deadlines for students residing in another country are June 1 for the Fall term and October 15 for the Spring term. The deadlines for applicants residing in the United States currently studying under an F-1 visa are July 1 for the Fall term and November 15 for the Spring term.

Note: International students currently studying in the United States on an F-1 visa must also submit the following items:

2. Completed transfer verification form indicating enrollment status at current institution

For additional information, please contact the Office of Admissions, Laffin Hall or link to the International Student website at the College’s website, www.farmingdale.edu.

Admission Decisions

Admission to programs is on a “rolling” basis, admitting all eligible candidates on a first-come, first-served basis. The College cannot guarantee that applications received after July 31st will be granted consideration. Applicants apply and are accepted to a specific curriculum.

Admissions requirements vary according to program. Decisions are based primarily on grades in all academic courses including the specific prerequisite courses required for each curriculum. Applicants with a subject deficiency can complete the requirement(s) prior to registration. When deemed appropriate and upon approval, schedule adjustments will be made.

Applications to the Dental Hygiene and Nursing programs are not accepted on a rolling basis. Recommended application filing dates are January 15 for Nursing and April 15 for Dental Hygiene. Contact the Admissions Office if you have questions concerning these dates.
Earning a General Equivalency Diploma (GED)
Individuals who have not earned a high school diploma may be issued a General Equivalency Diploma (GED) upon successful completion of 24 college credits. For further information contact the High School Equivalency Program at the New York State Education Department at 518-474-5906.

Articulation, Joint Admissions and Unified Transfer Agreements
Farmingdale State College has entered into several special agreements with local high schools, BOCES, two-year colleges, and four-year institutions designed to provide an easy transition to students both entering and leaving the college's baccalaureate programs to enter into a master's program. These include the Long Island Educational Opportunity Center, BOCES of Western Suffolk, BOCES of Eastern Suffolk, John Bowne High School, Gerald R. Claps Career and Technical Center, Nassau Community College, Suffolk Community College, Broome Community College, Touro College, John Jay College, Dowling, Vancouver College of Dental Hygiene, Toronto College of Dental Hygiene, SUNY Stony Brook, SUNY Old Westbury, Molloy, Hofstra-Army ROTC and Manhattan College-Air Force ROTC. The Nursing Department also participates in the LPN to RN Articulation Program, and further information can be obtained at their link on the Farmingdale website.

Additional information about these agreements and Associate/Bachelor degree parallel programs at Farmingdale is available from the Admissions Office.

Student Immunization Policy
New York State law requires all students born on or after January 1, 1957 who are attending an institution of higher education to show proof of two doses of live measles vaccine given at least one month apart after twelve months of age and after 1968; one dose of live mumps vaccine given after twelve months of age; one dose of live rubella vaccine given after twelve months of age.

In lieu of immunization dates, students may submit physician documentation of disease for measles and mumps (not acceptable for rubella), or have blood tests called titers for each of the three diseases. Titers show the actual level of immunity to each disease (copies of laboratory reports required).

New York State law also requires that all students read and sign a letter about meningitis, the meningitis immunization, and to then make a choice regarding the immunization. Note: all resident students must be immunized for meningitis. Students who fail to comply with either NYS laws regarding MMR immunization or meningitis will be disenrolled and will not receive any refund of their tuition as per NYS law.

Students must comply with these requirements within thirty days of the first day of class (forty-five days for students from a foreign country or transferring from another state). Failure to comply will result in a hold being placed on your account, which will prevent you from any future registrations at Farmingdale State, and may result in your disenrollment from the College. Please be aware that should you be disenrolled and you still fail to comply with the requirements, there will be no refund of money paid to the College. Medical exemptions are granted if a physician provides documentation demonstrating that immunization for measles, mumps, and rubella will be detrimental to a student’s health, and exemptions are also granted for those submitting documentation of sincere religious beliefs against such immunizations.

For further information, contact your physician, high school, county health department or the Health and Wellness Center at: 631-420-2009/2014.

Ex-Offenders/Prior Discipline Policy
In 1998, SUNY added to its application for admission questions asking each applicant to answer regarding felony convictions or dismissals from college for disciplinary reasons. In compliance with SUNY policy and Article 23A of the State of New York Corrections Law, any applicant answering “yes” to either of these questions will be required to provide further information to the Admissions Office for admission considerations. The information will be reviewed by a campus committee. The applicant may be requested to appear, and a decision to admit, deny admission, or admit with conditions will be made.
## Admission Requirements — Bachelor & Associate Degrees

SAT Code: 2526  ACT Code: 2918

### Code  Program Title/Major  Minimum Entrance Requirements  Recommended

1092  Aeronautical Science-Professional Pilot (BS)  2 Units of Defined Math; 1 Unit of Laboratory Science  Laboratory Physics or Chemistry

1966  Applied Economics (BS)  2 Units of Defined Math

0087  Applied Mathematics (BS)  3 Units of Defined Math

1965  Applied Psychology (BS)  Units of Defined Math; 1 Unit of Laboratory Science

2037  Architectural Engineering Technology (BS)  2 Units of Defined Math; 1 Unit of Laboratory Science; Portfolio Review  Laboratory Physics or Chemistry

0257  Automotive Management Technology (BS)  2 Units of Defined Math; 1 Unit of Laboratory Science  Laboratory Physics or Chemistry

0054  Automotive Technology (AAS)  2 Units of Defined Math; 1 Unit of Laboratory Science  Laboratory Physics or Chemistry

1093  Aviation Administration (BS)  2 Units of Defined Math; 1 Unit of Laboratory Science  Laboratory Physics or Chemistry

1676  Bioscience (BS)  2 Units of Defined Math; Laboratory Biology and Laboratory Chemistry

2038  Business Management (BS)  2 Units of Defined Math; 1 Unit of Laboratory Science

1357  Computer Engineering Technology (BS)  2 Units of Defined Math; 1 Unit of Laboratory Science

1510  Computer Programming & Information Systems (BS)  2 Units of Defined Math; 1 Unit of Laboratory Science

1603  Construction Management Engineering Technology (BS)  2 Units of Defined Math; 1 Unit of Laboratory Science  Laboratory Physics or Chemistry

1035  Criminal Justice-Law Enforcement (AS)  2 Units of Defined Math; 2 Units of Science; Laboratory Biology required

2201  Criminal Justice-Law Enforcement Technology (BS)  2 Units of Defined Math; 2 Units of Science; Laboratory Biology required

1489  Dental Hygiene (BS)  Associate Degree in Dental Hygiene from an ADA Accredited Program; Licensure as a Dental Hygienist; GPA to be considered

0545  Dental Hygiene (AS)  2 Units of Defined Math; Laboratory Biology & Laboratory Chemistry; EGL 101; BIO 166; CHM 140  Applications Submitted by 1/15 Receive Priority Consideration

0216  Electrical Engineering Technology (BS)  2 Units of Defined Math; 1 Unit of Laboratory Science  Laboratory Physics or Chemistry

0257  Facility Management Technology (BS)  2 Units of Defined Math; 1 Unit Laboratory Science  Laboratory Physics or Chemistry

0610  Ornamental Horticulture - General (AAS)  1 Unit of Defined Math; 2 Units of Science  Biology; Chemistry

0635  Liberal Arts & Sciences (AA)  2 Units of Defined Math; 2 Units of Science  Foreign Language; Biology; Chemistry or Physics

0261  Manufacturing Engineering Technology (BS)  2 Units of Defined Math; 1 Unit of Laboratory Science  Laboratory Physics or Chemistry

0493  Mechanical Engineering Technology (AAS)  2 Units of Defined Math; 1 Unit of Laboratory Science  Laboratory Physics or Chemistry

0235  Mechanical Engineering Technology (BS)  2 Units of Defined Math; 1 Unit of Laboratory Science  Laboratory Physics or Chemistry

0600  Medical Laboratory Technology (BS)  2 Units of Defined Math; 2 Units of Science; Laboratory Biology and Laboratory Chemistry required

0290  Medical Technology (BS)  2 Units of Defined Math; 2 Units of Science; Laboratory Biology and Laboratory Chemistry required

0291  Nursing (BS)  2 Units of Defined Math; Laboratory Biology; Laboratory Chemistry; NLN PAX-RN Preadmission Exam  Applications Submitted by 12/15 Receive Priority Consideration

0622  Nursing (AS) High School Level Applicants:  2 Units of Defined Math; Laboratory Biology; Laboratory Chemistry; NLN PAX-RN Preadmission Exam All Other Applicants Must Also Complete: NLN PAX-RN Preadmission Exam  Applications Submitted by 12/15 Receive Priority Consideration

1021  Professional Communications (BS)  2 Units of Defined Math; 2 Units of Science  Laboratory Biology; Chemistry or Physics

1319  Security Systems (BS)  2 Units of Defined Math; 2 Units of Science  Laboratory Biology required

2082  Software Technology (BS)  2 Units of Defined Math; 1 Unit of Laboratory Science

0182  Sport Management (BS)  2 Units of Defined Math; 1 Unit of Laboratory Science  Laboratory Physics or Chemistry

1752  Technology Studies (BS)  2 Units of Defined Math; 1 Unit of Science  Laboratory Physics or Chemistry

2251  Telecommunications Technology (BS)  2 Units of Defined Math; 1 Unit of Science

0000  Undeclared Major (not a terminal degree)  1 Unit of Defined Math

1091  Visual Communications: Art & Graphic Design (B Tech)  1 Unit of Art; Art Aptitude Test; Portfolio Review

## Certificate Programs

### Code  Program Title/Major  Code  Program Title/Major  Code  Program Title/Major

0932  Accounting  1299  Health Studies  1307  Marketing

1313  Advanced Programming*  1307  International Business*  0914  Ornamental Horticulture

1497  Computer Systems Technology  1308  Management  0938  Practical Nursing

0953  Computer Information Systems  1311  Manufacturing Methods-Numerical Control  2028  Sciences for the Health Professions * Local Certificate

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School of Health Sciences - Technical Standards for Admission and Retention

Dental Hygiene Department

Dental hygiene education requires that the accumulation of scientific knowledge be accompanied by the simultaneous acquisition of skills essential to the profession. The curriculum is stressful requiring both emotional stability and physical stamina. Candidates seeking enrollment into the Dental Hygiene program at Farmingdale State College must meet the safety and technical standards in the following areas: communication, observation/sensory, motor, intellectual-conceptual, and behavioral-social attributes.

Communication: The student must possess the ability to communicate effectively in English using reasonable grammar and syntax in both oral and written formats. In addition, the student must notice and appreciate both verbal and nonverbal communication when performing dental hygiene care. Examples of communication include but are not limited to:

- Effectively obtain a patient’s history
- Accurately interpret data from medical records
- Document pertinent observations
- Interact effectively with members of the healthcare team
- Explain alternative treatment options
- Communicate directions during and after treatment

Observation/Sensory: Students must be able to observe a patient accurately, both at a distance and close at hand. In addition, the student must have the functional use of the senses of vision, touch, hearing, and smell which are necessary in assessing patients and maintaining their safety. Examples of observation/sensory skills include but are not limited to:

- Auditory ability to monitor vital signs.
- Visual ability to determine variations in color, shape, texture and consistency i.e. early signs of inflammation, skin changes (pallor, cyanosis and ecchymosis).
- Visual acuity to read charts, records, small print, handwritten notations and instrument markings.
- Tactile ability must be sufficient for assessment and performance of dental hygiene procedures, i.e. calculus detection, tooth defect identification.
- Palpation of pulses

Motor: The student is required to perform gross and fine motor movements, maintain consciousness and equilibrium, and possess the physical strength and stamina which are necessary to provide safe patient care. The candidate should have full manual dexterity including the functioning of both arms, both wrists, both hands and all fingers. Examples of motor skills include but are not limited to:

- Instrumentation skills requiring dexterity i.e. grasping, fingerpinching, pushing, pulling, holding, extending, and rotation
- Controlled intraoral and extraoral hand movements of less than one millimeter
- Operation of foot controls for low speed handpieces, ultrasonic scalers, air polishers etc.
- Responding rapidly to emergency situations (cardiac arrest, respiratory arrest, falls)
- Transferring patients

- Protect and remove patients from an area in the event of a fire or disaster

Intellectual-conceptual: The student must possess the ability to problem solve, establish a plan of care, set priorities, calculate, measure, analyze and synthesize objective as well as subjective data. These critical skills are essential for providing quality dental hygiene care. In addition the candidate must possess the ability to understand and comprehend three dimensional and spatial relationships. Examples of intellectual-conceptual skills include but are not limited to:

- Calculate the variations in milliamperage, kilovoltage, distance and exposure time on the resulting dental radiograph
- Measure clinical attachment loss
- Develop care plans based on individual patients needs
- Utilize appropriate instrument adaptation

Behavioral-social attributes: The student must possess emotional stability and flexibility, which will enable him/her to develop the ability to function effectively in stressful situations. This includes the ability to adapt to changing environments, exercise sound judgment, complete assessment and intervention activities and develop sensitive interpersonal relationships with patients, families and others responsible for health care.

Examples of these behavioral and social attributes include but are not limited to:

- Ability to express empathy
- Ability to think and act rationally during a crisis
- Demonstrate appropriate behavior towards staff, peers and patients according to societal norms
- Maintaining confidentiality
- Accepting constructive criticism

Admission to the dental hygiene program is open to all qualified individuals in accordance with the 1973 Vocational Rehabilitation Act (29 U.S.C. 701 et seq.) and the Americans with Disabilities Act (42 U.S.C. 12101 et seq.). However, due to the rigors of the curriculum and the immense responsibility for safe patient treatment a student can be denied admission to the dental hygiene program or disenrolled from the program if accommodating the student’s disability would pose a direct threat to patients or would compromise the academic integrity of the program.

Medical Laboratory Technology Department

Candidates seeking enrollment into the MLT curriculum must complete the College entrance requirement of a physical examination demonstrating satisfactory physical and emotional health, as well as the necessary proof of immunization against measles, mumps, and rubella. Candidates will also be expected to meet the safety and technical standards that are necessary to perform the “essential functions” of a Medical Laboratory Technician. The technical standards are in the following areas: observation-communication, motor, intellectual-conceptual, and behavioral-social attributes.

Observation-Communication: The student must possess the ability to communicate effectively and read, write and use the English language. In addition, the student must have the functional use of the senses of vision, touch, hearing, and smell. Examples of observation-communication include but are not limited to:

- Read and interpret laboratory endpoints such as color, cloudiness/turbidity and texture.
Identify stained and unstained cellular elements using a microscope. Report results in writing, orally, or by computer entry. Possess a sense of touch and temperature discrimination. Work safely with potential chemical, radiological and biological hazards.

**Sensory/Motor:** The student is required to perform gross and fine motor movements, maintain consciousness and equilibrium. Examples of sensory/motor skills include but are not limited to:
- Demonstrate manual dexterity of both upper limbs to operate laboratory equipment, and perform manual laboratory procedures such as pipetting, venipuncture, and plating microorganisms.
- Possess eye-hand coordination to operate a microscope.
- Respond rapidly to an emergency situation (spills, fire, disaster)

**Intelectual-conceptual:** The student must possess the ability to problem solve, prioritize work, calculate, measure, analyze and synthesize objective as well as subjective data. Examples of intellectual-conceptual skills include but are not limited to:
- Perform statistical calculations to interpret test results
- Sample measurement and evaluation
- Interpret quality control results
- Work on multiple tasks simultaneously

**Behavioral-social attributes:** The student must possess emotional stability and flexibility, which will enable him/her to develop the ability to exhibit appropriate professional conduct in stressful situations. Examples of these behavioral and social attributes include but are not limited to:
- Fulfill commitments and be accountable for actions.
- Maintain composure in stressful situations, i.e. under pressure and with time constraints.
- Willingly follow directions.
- Recognize emergency situations and react appropriately.
- Maintain patient confidentiality.

A person who cannot perform the “essential functions” of the profession will not be considered qualified for entrance into the program and may be denied access without being subject to legal action for discrimination. Both section 504 of the Rehabilitation Act. 29 U.S.C.A. Section 794, and the Americans with Disabilities Act prohibit discrimination against “otherwise qualified” persons with a disability. Those persons not meeting the technical standards are not considered “otherwise qualified” to enter into the profession.

**Nursing Department**

Candidates seeking enrollment into the nursing program at Farmingdale State College must meet the safety and technical standards in the following areas: observation-communication, motor, intellectual-conceptual, and behavioral-social attributes.

**Observation-Communication:** The student must possess the ability to communicate effectively and read, write and use the English language. In addition, the student must have the functional use of the senses of vision, touch, hearing, and smell which are essential in assessing patients and maintaining their safety. Examples of observation-communication include but are not limited to:
- Listening to heart and breath sounds
- Responding to alarms
- Visualizing early signs of distress/complications, e.g. changes in skin color; assessing surgical wounds
- Detecting the presence of a foul odor or drainage

**Feeling pulses**
- Effectively obtain a patient’s history
- Accurately interpret data from medical records
- Document pertinent observations
- Interact effectively with members of the health care team

**Sensory/Motor:** The student is required to perform gross and fine motor movements, maintain consciousness and equilibrium, and possess the physical strength and stamina which are necessary to provide safe nursing care. Examples of sensory/motor skills include but are not limited to:
- Transferring patients
- Performing skills requiring dexterity (insertion of tubes, medication injections, instilling injections, inserting suppositories, tracheostomy care)
- Responding rapidly to emergency situations (cardiac arrest, respiratory arrest, falls)
- Protecting and remove patients from an area in the event of a fire or disaster

**Intelectual-conceptual:** The student must possess the ability to problem solve, establish a plan of care, set priorities, calculate, measure, analyze and synthesize objective as well as subjective data. These critical skills are demanded of nurses in today’s complex health care settings. Examples of intellectual-conceptual skills include but are not limited to:
- Calculating medication dosages, IV flow rates
- Measuring intake and output
- Developing teaching plans for individual patients

**Behavioral-social attributes:** The student must possess emotional stability and flexibility, which will enable him/her to develop the ability to function effectively in stressful situations. This includes the ability to adapt to changing environments, exercise sound judgment, complete assessment and intervention activities and develop sensitive interpersonal relationships with patients, families and others responsible for health care.

Examples of these behavioral and social attributes include but are not limited to:
- Ability to express empathy
- Ability to think and act rationally during a crisis
- Demonstrating appropriate behavior towards staff, peers and patients according to societal norms
- Maintaining confidentiality
- Accepting constructive criticism

**School of Engineering Technology – Aviation Professional Pilot Program Technical Standards for Admission and Retention**

Flight training requires that the accumulation of aeronautical knowledge be accompanied by the simultaneous acquisition of skills essential to the profession. The curriculum is stressful requiring both emotional stability and physical stamina. Candidates seeking enrollment into the Pro-Pilot program at Farmingdale State College must meet the safety and technical standards in the following areas: Communication Skills, Sensory Observation Skills, Motor Skills, Intellectual-Conceptual (Thinking) Skills, Behavioral-Social Skills, and Environmental
Examples of motor skills include but are not limited to:
- Respond to engine indications and instruments by making manual adjustments
- Sit for prolonged periods
- Possess quick physical response time

Motor Skills: The student is required to possess sufficient physical strength, flexibility, and dexterity to operate an airplane, perform gross and fine motor movements, and maintain consciousness and equilibrium to provide safe aircraft operation. The candidate should have full manual dexterity including the functioning of both arms, both wrists, both hands and all fingers.

Examples of motor skills include but are not limited to:
- Independently execute all required flight maneuvers including climbs, descents, stalls, turns, take-offs and landings
- Perform manual inspections of the airframe, engine, fuel tanks and oil reservoir requiring the ability to climb while maintaining balance and dexterity
- Respond to engine indications and instruments by making manual adjustments
- Sit for prolonged periods
- Possess quick physical response time

Communication Skills: The student must possess the ability to communicate effectively in English using reasonable grammar and syntax in both oral and written formats. In addition, the student must notice and appreciate both verbal and nonverbal communication when performing the duties of Pilot in Command (PIC). Communication skills will be evaluated upon the student’s pronunciation, structure, vocabulary, fluency, comprehension, and interactions of the English language as per the English language eligibility requirements of 14 CFR parts 61 and 63. Read, write, and understand English as required by FAA standards. Use English to obtain necessary information from acural and written sources. Express information clearly in English both verbally and in writing. Understand and correctly respond to radio and air traffic communication. Communicate clearly by radio with air traffic control. Communicate clearly by radio with other pilots in the air.

Examples of Sensory Observation Skills include but are not limited to:
- Complete a pre-flight inspection of the engine, propeller, and electrical, environmental, hydraulic, pneumatic, fuel, ignition, lubrication, and flight control systems
- Process visual, auditory, and tactile input simultaneously
- Monitor for other air traffic through continuous visual scanning and radio calls
- Monitor instrument panel
- Detect and respond to auditory signals from air traffic control
- Chart flight plan with maps
- Possess quick sensory response time

Sensory Observation Skills: Students must be able to make independent observations and assessments to maintain positive aircraft control and safely pilot an airplane: observe air traffic accurately, both at a distance and near. In addition, the student must have the functional use of the senses of vision, touch, hearing, and smell which are necessary in assessing aircraft preflight actions and maintaining aircraft safety.

Examples of Sensory Observation Skills include but are not limited to:
- Process multi-sensory input and multi-task simultaneously to maintain positive aircraft control
- Keep up with sequence and pace of instructions

Examples of Intellectual-Conceptual (Thinking) Skills include but are not limited to:
- Read, understand, and follow Farmingdale State College, State, and FAA Regulations
- Recognize the design and operation of aircraft components, instruments, and systems
- Evaluate information and conditions to do flight planning, maneuvering, and safety risk management
- Apply principles of flight, weather, aerodynamics, and navigation to complete flight lessons
- Evaluate flight situations and make decisions quickly with sound judgment
- Process multi-sensory input and multi-task simultaneously to maintain positive aircraft control

Examples of Environmental Tolerance Skills include but are not limited to:
- Changes in altitudes
- Changes in temperature
- Changes in air pressure
- Extreme noise
- Gas and Fumes
- Moving objects and vehicles
- Slippery or uneven surfaces
- Variations of lighting
**FAA Medical Certificate Standards:** Please keep in mind that you will have to fulfill additional requirements to be eligible for certification exams or licensure in the field. A medical exam administered by an FAA Aviation Medical Examiner is required prior to flight training. Students must be able to obtain a 1st, 2nd or 3rd class FAA medical certificate. For students pursuing flight as a career choice the department strongly recommends students obtain a 1st class medical certificate. The requirements for medical standards are listed in the Code of Federal Regulations Title 14 Part 67. For specific information on medical standards required for obtaining licenses and ratings through an Aviation Medical Examiner, or to locate an Aviation Medical Examiner in your area, go to http://www.faa.gov/pilots/amelocator/.

**Alien Flight Student Program (AFSP):** The mission of the Alien Flight Student Program (AFSP) is to ensure that foreign students seeking training at flight schools regulated by the Federal Aviation Administration (FAA) do not pose a threat to aviation or national security. Section 612 of the Vision 100 - Century of Aviation Reauthorization Act (Public Law 108-176, December 12, 2003) prohibits flight schools regulated by the Federal Aviation Administration (FAA) from providing flight training to a foreign student unless the Secretary of Homeland Security first determines that the student does not pose a threat to aviation or national security. Vision 100 transferred responsibility for conducting security threat assessments for foreign students seeking flight training from the Department of Justice to the Department of Homeland Security. On September 20, 2004, the Transportation Security Administration (TSA) issued an interim final rule establishing the Alien Flight Student Program (AFSP). Legal notices are available on the Candidate and Provider menus. These include the notices about the Vision 100 - Century of Aviation Reauthorization Act, Paperwork Reduction Act, Information Verification, and Privacy and Security within the AFSP website. For more information, first review the Flight Training for Aliens and Other Designated Individuals; Security Awareness Training for Flight School Employees Interim Final Rule (IFR) 49 CFR 1552, which is at IFR_Alien_Pilot.pdf. Also review the rulemaking docket, which contains exemptions, interpretations, and other legal documents associated with the IFR. The rulemaking docket is available at http://www.regulations.gov. For the AFSP rulemaking docket, click on “Simple Search” and then enter the docket number for the AFSP rulemaking docket (19147) and click on “Search”.

If you have further questions regarding legal notices on AFSP policy, please send questions with all relevant details by e-mail to AFSP.Help@dhs.gov.

**Disability Accomodations:** We have developed our technical standards in compliance with the Americans with Disabilities Act and Section 504 of the Rehabilitation Act of 1973. We will provide reasonable accommodations to qualified students with disabilities. The College may not make inquiry regarding a prospective student’s disability status prior to admission to the institution. However, students may choose, at any time during their association with the College, to disclose a documented disability. Students should be aware that certain disabilities and/or their mitigating therapies might delay or preclude their participation in some of the College’s programs of study due to regulatory limitations of the Federal Aviation Administration. Students are encouraged to discuss these concerns with an Aviation Medical Examiner or directly with the FAA in Oklahoma City, OK by phoning (405) 954-4821.

Farmingdale State College will provide reasonable accommodations but is not required to substantially alter the requirements or nature of the program or provide accommodations that inflict an undue burden on the College. In order to be admitted one must be able to perform all of the essential functions with or without reasonable accommodations. However, due to the rigors of the curriculum and the immense responsibility for safe aircraft operation a student can be denied admission to the Pro-Pilot program or disenrolled from the program if accommodating the student’s disability would pose a direct threat to aircraft safety or would compromise the academic integrity of the program. If an individual’s health changes during the program of learning, so that the essential functions cannot be met with or without reasonable accommodations, the student may be withdrawn from the Pro-Pilot program.

**Graduation Requirements:** All Pro-Pilot Majors must have all FAA certificates/ratings required prior to graduation. Grades earned are issued upon obtaining the FAA certificate/rating specified in the course.
Academic Information
Grades and Achievement Points

The following is the official college grading system:

<table>
<thead>
<tr>
<th>Achievement Points</th>
<th>Grade</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>93 - 100%</td>
<td>A</td>
<td>Excellent</td>
</tr>
<tr>
<td>4.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>90 - 92%</td>
<td>A-</td>
<td></td>
</tr>
<tr>
<td>3.67</td>
<td></td>
<td></td>
</tr>
<tr>
<td>87 - 89%</td>
<td>B+</td>
<td></td>
</tr>
<tr>
<td>3.33</td>
<td></td>
<td></td>
</tr>
<tr>
<td>83 - 86%</td>
<td>B</td>
<td>Good</td>
</tr>
<tr>
<td>3.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>80 - 82%</td>
<td>B-</td>
<td></td>
</tr>
<tr>
<td>2.67</td>
<td></td>
<td></td>
</tr>
<tr>
<td>77 - 79%</td>
<td>C+</td>
<td></td>
</tr>
<tr>
<td>2.33</td>
<td></td>
<td></td>
</tr>
<tr>
<td>73 - 76%</td>
<td>C</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>2.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>70 - 72%</td>
<td>C-</td>
<td></td>
</tr>
<tr>
<td>1.67</td>
<td></td>
<td></td>
</tr>
<tr>
<td>67 - 69%</td>
<td>D+</td>
<td></td>
</tr>
<tr>
<td>1.33</td>
<td></td>
<td></td>
</tr>
<tr>
<td>60 - 66%</td>
<td>D</td>
<td>Minimum Passing</td>
</tr>
<tr>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0 - 59%</td>
<td>F</td>
<td>Failure</td>
</tr>
<tr>
<td>0.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>I</td>
<td>Incomplete</td>
</tr>
<tr>
<td>0</td>
<td>W</td>
<td>Withdrawal</td>
</tr>
<tr>
<td>0</td>
<td>UW</td>
<td>Unofficial Withdrawal</td>
</tr>
</tbody>
</table>

To determine the cumulative grade 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”.

Only grades earned in the college are considered in the computation of averages for all students. A student must attain a 2.0 cumulative grade point average in order to qualify for graduation. If at the end of any semester a student is deficient in achievement points or deficient in a major course (see specific program requirements), the student may be placed on probation or considered for dismissal, depending on the extent of the deficiency. On recommendation of the Department Chair, a student may be required to carry a reduced schedule.

Academic Standing for Matriculated Students

To be eligible for graduation, a Farmingdale student must achieve a cumulative grade point average of at least 2.0. To advance satisfactorily toward graduation, students are advised to remain in “good academic standing” which is defined in the following.

GOOD ACADEMIC STANDING – A student is in satisfactory academic standing when above the level for probation according to the College’s guidelines.

ACADEMIC PROBATION – The purpose of academic probation is to alert the student and the institution to problems associated with the student’s academic performance and to recommend or implement strategies for improvement. According to College policy, students who fail to obtain a minimum grade point average of 2.0 in any particular semester will automatically be placed on academic probation which is a warning that their good academic standing is in jeopardy. However, your major may have higher standards to continue in that major. Students placed on academic probation are permitted to continue with their studies at Farmingdale, but are expected to meet with faculty advisors and to seek tutoring and further assistance.

ACADEMIC SUSPENSION – Students who are on academic probation twice in succession (not including summer or winter intersession) are subject to suspension. A student who has been suspended for poor academic performance is not permitted to enroll at the College in any coursework for one academic semester (fall or spring) from the date of suspension.

Appeal of Academic Suspension

Any student who has been suspended for academic reasons may appeal that decision by submitting a petition, in writing, to the appropriate academic chair requesting a review of the decision. The appeal should include supporting evidence such as medical explanations and changes in grades that might justify a reversal of academic suspension.

Academic Reinstatement Following Suspension

Academic reinstatement refers to the process by which a student is granted permission to return to Farmingdale State College following an absence of one or more semesters due to suspension for reason of poor academic performance. A student seeking reinstatement should petition the academic chair, in writing, requesting permission to return. Supporting evidence, such as successful completion of coursework at another institution while on suspension from Farmingdale State College, must be submitted in writing with the petition. The reinstatement permits the student to resume matriculated status in the same department for the semester immediately following the one during which he/she was suspended.

Academic Readmission

Academic readmission refers to the process by which a matriculated student seeks permission to return to Farmingdale State College after an absence of two or more academic semesters. There are two different processes:
1. For the students who have discontinued their attendance for under five years and wish to apply for readmission to complete their degree, they must meet with the appropriate Chair to discuss their intentions and evaluate their academic record. Students who withdrew in poor standing or who were academically suspended will be expected to present evidence that they are capable of improved academic performance on return. A student who re-enrolls in the same major in which they were last enrolled and re-enrolls within five years of the last date they attended the College is allowed to meet graduation requirements that were in effect at the time the student was originally enrolled. For further information and an application for academic readmission, call the Office of Auxiliary Enrollment Services at 631-420-2733.
2. For students who have discontinued their attendance
for five or more years and wish to apply for readmission to complete their degree, they must file a SUNY application as a “TRANSFER” student and list Farmingdale State College (95) as a prior college. The application fee is non-refundable regardless of the readmission decision. Each application will be evaluated according to the specific admission criteria in place at the time of the readmission application. A student who re-enrolls in the same major in which they were last enrolled and re-enrolls more than five years after they last attended the College must meet the most the current graduation requirements. All course work previously completed will be reviewed on a course-by-course basis to determine whether it meets current graduation requirements. All courses completed will remain on the student’s transcript. Only credits for courses that meet the current requirements will be used in calculating the student’s graduation grade-point average. You can file a SUNY application online at suny.edu/student. For more information contact the Admissions Office at 631-420-2200.

For both processes, a student who re-enrolls in a different major than the one in which they were last enrolled is subject to a course-by-course evaluation to determine whether the completed course work meets the requirements of the new major. Only credits for courses that meet the requirements of the current major will be used in calculating the student’s graduation grade-point average. However, all courses completed will remain on the student’s transcript. A student re-enrolling in a new major is required to meet the graduation requirements at the time of re-enrollment.

Change of Major
Matriculated students who wish to declare or change their program of study must file a curriculum/major change application available in the Office of Auxiliary Enrollment Services in Laffin Hall. For further information, call the Office of Auxiliary Enrollment Services at 631-420-2733.

Course Numbering
Each course is identified by a six digit code.

The three letters in the code identify the department offering the course, and the three digits following the letters identify the course within the department.

Degree credit courses are numbered 100 and above. College courses are numbered from 001 to 099 and for purposes of determining tuition and fees only, these courses are assigned an appropriate number of non-college units (ncu) rather than college credit.

Late Registration and Drop/Add Period
The official Late Registration and Drop/Add period takes place during the first week of classes. This period officially ends at midnight on the seventh day after the first class of the semester. Students may add or drop classes from their schedule during this week. Students who have not yet registered for classes may be permitted to do so during this period under extenuating circumstances only. During this period, students will receive 100% refund for dropped courses and/or cancellation of their schedule.

All registration activities cease AFTER the first week of classes. The College does not guarantee that any student will be allowed to register for classes after the official late registration, add/drop period.

Drop & Withdrawal Period
Courses that are dropped during the first week of classes will not appear on a student’s transcript.

During the first week of classes students will receive 100% refund for courses that are dropped and for schedules that are canceled. During the second week of classes students will be entitled to a 70% refund. During the 3rd week they are entitled to a 50% refund and during the 4th week they are entitled to receive a 30% refund. After the 4th week of classes students are fully liable for all tuition and fees.

The withdrawal process begins on the second week of classes. Starting the second week of classes students who initiate a withdrawal, course or semester withdrawal will receive a “W” for that course on their transcript. The financial liability will be determined by the refund schedule in effect at the time the withdrawal is processed. For further information on the withdrawal procedure, refer to either “WITHDRAWAL FROM A COURSE” or “WITHDRAWAL FROM THE COLLEGE” sections in the catalog.

Permission to Carry Extra Courses
Any student who wishes to carry more than 18 credits during any one semester must receive written permission from the Department Chair and the School Dean of the student’s major. To obtain this permission, a student must display evidence which substantiates the ability to succeed in the additional course work.

Permission to Enroll in Off-Campus Courses
Students who wish to register for courses at other colleges are advised to obtain course descriptions and to consult with the Department Chair and the School Dean. The off-campus approval forms are available in the Registrar’s Office.

Study Abroad
Please refer to the Center for International Students and Study Abroad listed later in this section of the catalog.

Withdrawals
Withdrawal from a Course
A matriculated student who wishes to withdraw from a course should seek the counsel of the curriculum chair.

Students wishing to withdraw from a course must obtain a withdrawal form from the Registrar’s Office, complete it, obtain the instructor’s signature with verification date of last attendance, sign the form, and return it to the Registrar’s Office for processing.

Students who withdraw to enter military service and wish to receive credit for course work or a tuition refund must submit a written request, together with a copy of their orders, to the Registrar’s Office.

A grade of “W” will be given to any student who officially withdraws from a course from the beginning of the second week through the end of the ninth week of classes. Withdrawal after the ninth week of classes is permitted only under extenuating circumstances at the discretion of the instructor.

NOTE: Students receiving financial aid for a financial aid period that includes a shortened session, such as a summer session or Intersession, who drop or withdraw from a course in a session and are not currently attending any classes may be required to submit a “Statement of Intent to Return” to maintain their aid for that period. Please consult with the Office of Financial Aid.
Withdrawal from the College
Any student taking more than one course who wishes to withdraw from every course (i.e. the College) prior to the last two weeks of the semester (including the final examination week) must initiate the withdrawal process at the Registrar’s Office.

Matriculated students will be directed to discuss the withdrawal with their curriculum chair. To be considered officially withdrawn from the College, the withdrawal form must be completed and returned to the Registrar’s Office.

Students who do not follow this procedure will be carried on the College rolls and may 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.

Retroactive Withdrawal Committee
The Retroactive Withdrawal Committee at Farmingdale State College is charged with reviewing requests from students who wish to apply for withdrawal for a previous semester in which they received an “F”, UW, or N grades due to extenuating circumstances. Complete documentation is required. If retroactive withdrawal is granted, every grade for that semester will be changed to a ‘W’.

Extenuating Circumstance Committee
There are times when medical issues, serious family situations or other similar severe circumstances arise that may prevent a student from attending classes for the remainder of a semester in which they are enrolled. These circumstances may compel a student to withdraw from their classes. SUNY Policy establishes criteria where the student may appeal to the Extenuating Circumstances Committee (ECC) to request a refund which is outside the normal refund policy and schedule.

That criterion includes:
- The circumstance must be of a serious enough nature that would preclude the student from continuing their studies for the semester.
- Application for the refund must be made within one year after the end of the term in question. However, it is advisable for appeals to be filed as soon as possible because, once a delinquent account has been referred for collection, it is no longer eligible for refund or relief of liability through the ECC, regardless of the circumstances or the timeframe.
- The student has not completed more than one half of the term.
- The student must have officially withdrawn from their classes (if the semester is over, this would involve appealing first to the Retroactive Withdrawal Committee).
- The student cannot have received academic credit for their classes.

If the circumstances meet all of the above, the student may appeal in writing to the ECC. Along with a letter explaining the circumstances, documentation should be provided which can independently verify the facts presented in the case (doctor’s notes, etc.). The ECC can only review written requests and will respond in writing to the student. No information can be given out via email or phone, as per FERPA laws. All decisions of the ECC are final and cannot be appealed elsewhere. Appeals should be sent to: Extenuating Circumstance Committee Farmingdale State College, Farmingdale, NY 11735

Policy on Non-Attendance
Students who do not attend class at least once during the first two weeks of the semester will be removed from the official class roster and receive a “N” notation, for non-attendance, on their academic record for that class.

Non-attendance does not cancel a student’s financial liability for the class. In order to remove the liability, the official withdrawal procedure must be followed. Refunds will be calculated according to the schedule in effect at the time of withdrawal.

There may be situations where students who never attend class and do not follow the official withdrawal procedure may be eligible for consideration to have their liability cancelled due to extenuating personal circumstances. In such cases, the student must make a written appeal to the Extenuating Circumstances Committee to have his/her case evaluated. The Committee reserves the right to assess an Administrative Cancelled Registration Fee for successful appeals if such action is deemed appropriate. This fee is assessed at one half of the tuition per course for each cancellation of liability, up to a maximum of $250 per semester.

Financial Aid Attendance Policy
Title IV Programs:
Students who fail to attend any classes will be ineligible for Title IV financial aid. Financial Aid eligibility is based on the course load of courses actually attended. If notification of non-attendance in any class is received at any time, the determination of federal financial aid eligibility will be re-evaluated for that term and may result in financial aid forfeiture and/or a balance due to the College.

In addition, the following are circumstances in which a student’s Title IV aid will be adjusted/prorated:

- Withdrawal from classes during the first week may affect the awarding of Title IV aid. Students should be aware that their financial aid is based on the number of credits registered for at the end of the first week of classes. For example, a student who registers as full-time (12 credits or more) and is packaged as a full time student, and subsequently drops to nine credits during the first week, will have their aid adjusted to 3/4 time status, reflecting the nine credit load.
- Federal regulations require the College to prorate Title IV aid for students who stop attending all classes after the first week of school, up until the 60% point of the semester, generally defined as through the ninth week of classes. This recalculation is based on the last date of attendance during the semester regardless of whether the student withdrew officially or simply stopped attending classes (unofficial withdrawal).

New York State Programs:
State Education Law specifies that students be in full-time attendance as defined by the Commissioner of Education, in order to be eligible for State Sponsored Student Aid. The commissioner has defined full-time attendance as enrollment for 12 or more credits per semester and provided that the student is registered for at least 12 credits required for their program. Students should be aware that repeated courses and/or courses not required for their program do not count towards their full-time status.

“TAP Waivers: Students who have not met the state policy for academic progress due to extraordinary circumstances, may apply for a TAP waiver. Applications may be obtained for a TAP waiver from the Office of Financial Aid. This is a state regulated form of appeal, and requires detailed documentation in order to be considered for a one-time waiver for New York State mandated
academic guidelines. Please see the state academic guideline chart in the Financial Aid section of this catalog for additional information on State mandated progress. You may submit your application and evidence of the reasons you failed to meet the academic standards mandated by New York State. Applications will be evaluated and a response will be received within two weeks.”

Title IV Recalculation of Federal Aid

Return of Federal (Title IV) Financial Aid
Students who completely withdraw from classes (through successive dropping of courses until they are no longer registered or in a complete withdrawal from all courses at once) are subject to the Return of Title IV refund calculation as dictated by federal regulations.

NOTE: Students who partially withdraw from courses for the term are not subject to a return of their federal aid but should be aware that their financial aid eligibility will be recalculated.

Determination of Federal Aid Earned
Earned aid is determined based on the number of calendar days the student attended classes divided by the total number of calendar days in the term. The result is a percentage of federal aid funds that the student is entitled to keep. For example, a student who attends 30% of the term has earned 30% of the total aid. If the student attended classes through 60% or more of the term, the percentage of federal aid earned is 100%.

Return of Unearned Federal Aid
The total federal aid disbursed at the point of withdrawal less the earned amount constitutes the unearned aid that must be returned to the federal government. If it is determined that the student has received excess funds, the College must return a portion of the excess equal to the lesser of the student’s institutional charges multiplied by the unearned percentage of funds, or the entire amount of the excess funds.

The College will allocate the return of unearned aid in the following order:
1. Federal Unsubsidized Loan
2. Federal Subsidized Loan
3. Federal Perkins Loan
4. Federal Parent or Graduate PLUS Loan
5. Federal Pell Grant
6. Federal SEOG

Return of Title IV federal funds may result in the student owing the College. If a balance due is created, a registration block will prevent future registration until it is paid.

Placement Testing for English and Mathematics

English—First-time students who have taken the SAT will be placed in English writing courses based upon their score on the essay part of the exam. A score of 7 or above on the SAT writing test places a student in EGL 101; a score of 6 or below places a student in 097. All students placed in 097 will write an essay on the first day of class as a further check on placement accuracy. First-time college students who do not have SAT scores, and transfer or readmitted students who have not attained a grade of C or better in a credit-bearing college-level English course, are required to take the college’s writing placement test, administered by the Admissions Office and graded by English Department faculty.

Mathematics—Most first-time students are placed in mathematics courses based upon their performance in high school on New York State Regents Examinations in Math. The following students are required to take the college’s math placement test administered by the Admissions Office:
1. First-time students who graduated from high school more than five years from the time of application for admission (unless waived by the Mathematics Department)
2. First-time college students who have not passed the appropriate NYS Math Regents Examination

<table>
<thead>
<tr>
<th>Mathematics Placement Level</th>
<th>Condition</th>
<th>Mathematics Placement</th>
</tr>
</thead>
<tbody>
<tr>
<td>High School course / Regents Exam</td>
<td>or</td>
<td>MTH 120, MTH 131, or MTH 150</td>
</tr>
<tr>
<td>Algebra2/Trigonometry or Math B or Sequential Math III: Regents score ≥ 65, AND Pre-Calculus: score ≥ 65%</td>
<td>or</td>
<td>Math Placement Level will be determined by the Math Placement Exam Score.</td>
</tr>
<tr>
<td>Algebra2/Trigonometry or Math B or Sequential Math III: Regents score ≥ 65</td>
<td>or</td>
<td>MTH 117, or MTH 129</td>
</tr>
<tr>
<td>Integrated Algebra or Math A or Sequential Math II: Regents score ≥ 65</td>
<td>or</td>
<td>MTH 102, MTH 103, MTH 107, MTH 110, or MTH 116</td>
</tr>
<tr>
<td>Integrated Algebra or Math A or Sequential Math II: Regents score &lt; 65</td>
<td>or</td>
<td>MTH 015</td>
</tr>
</tbody>
</table>

3. Students applying for admission to Engineering Technology programs and who have not passed the appropriate NYS Math Regents Examination
4. Transfer or readmitted students who have not attained a grade of C or better in a credit bearing college-level mathematics course.

Math Placement Levels: Information about placement testing may be obtained by calling the Admissions Office at 631-420-2629. Students who need special accommodations for testing should contact the Office for Students with Disabilities at 420-2629.

Standardized Testing

A student can obtain college credit by successfully passing standardized tests such as the College Proficiency Examination Program (CPEP), the College Level Proficiency Program (CLEP) and the Defense Activity for Non-Traditional Education Support (DANTES; formerly USAFI). Credit can be obtained in subject areas and for general examination with departmental approval. The student may also receive advanced standing and/or credit for any specific courses (if applicable) taken through the Advanced Placement Program. For further information about these programs and their applicability to the programs at this College, write to the Director of Admissions.
Credit-by-Evaluation

Matriculated students who are enrolled at the College may apply for Credit-By-Evaluation. Credit may be granted for coursework where the individual has gained knowledge and mastery of the subject matter or has attained a satisfactory level of proficiency in a skill through life experience or study at non-accredited institutions. The student will be required to verify his/her level of achievement to the department by demonstrating proficiency in a skill. Wherever applicable and whenever appropriate, the individual will be required to take CPEP or CLEP examinations. A fee of $20.00 per credit will be charged for each examination and is subject to change without prior notice.

Credits gained by means of advanced standing shall be considered full college credits and need not be made up by other courses. However, no Achievement Points shall be awarded for credits gained through advanced standing.

Transfer Credit from Accredited Institutions

All applicants who have attended other colleges must meet curriculum entrance requirements and must submit official transcripts from their previous colleges to qualify for transfer credit. Students must follow the regular admission procedure. Official transcripts must be submitted to the Director of Admissions.

Transfer credit will be granted for coursework completed at accredited colleges with a minimum grade of “C”, provided the level and the content are substantially equivalent to that offered at Farmingdale. Transfer credit may also be awarded for a grade of “C-, D, or D+” if the student can satisfactorily demonstrate proficiency via Credit-by-Evaluation in the subject matter. Transfer credit will be awarded only for those courses applicable to a specific degree or certificate program.

Students who have earned an associate’s degree and are admitted to the college are generally awarded full transfer credit for their associate degree coursework. The specific number of additional credits required for graduation is determined by previous coursework and the degree requirements of the selected major. Transfer students who have not earned a two-year degree are awarded credit for previous work on a course-by-course basis.

All transfer students must satisfy the requirements of both the College and their curriculum as well as the residency requirement. For further information on the transfer credit evaluation process, contact the Office of Transfer Services at 631-420-2733.

Course Applicability to Degree Requirements

To assure viability with current technology, a Curriculum Department Chair may evaluate the suitability and timeliness of all curriculum courses, and whether they will satisfy degree and/or certificate program requirements.

Residency Requirement

Candidates for an associate degree and baccalaureate degree must complete a minimum of thirty (30) semester credits at the college. The thirty (30) credit minimum will consist of the final degree credits. Candidates for a baccalaureate degree must complete a minimum of fifteen (15) upper-division semester credits. Any exceptions to the final degree credit requirement or fifteen credit upper division requirements are at the discretion of the program chair. Credits earned through approved study abroad or exchange programs may count toward satisfaction of the residency requirements. However, credits earned through advanced standing (e.g., credit by evaluation, advanced placement, etc.) do not fulfill the minimum residency requirements.

Preliminary Academic Deficiency Notification ("Early Warning System")

In keeping with the College’s concern that all students be afforded every opportunity to reach their maximum potential, students are notified early each semester if their progress is less than a “C.” This “early warning” allows students sufficient time to meet with an advisor and develop a course of action aimed at improving their grades. A variety of support systems are available to assist students as they move toward the completion of their academic goals.

Repeating Failed Courses

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

A student is advised to consult with the Department Chair when repeat of a failed course is contemplated.

If a student repeats a course at this College, achievement points and credits will be applicable toward the degree. Credits, but not achievement points, will be applicable toward the degree for repeated courses taken at another college.

NOTE: A student’s financial aid may be affected when repeating courses. For federal financial aid, repeated courses for a course previously failed may be counted in a student’s course load until the course is passed. However, all attempts at the course are counted in attempted credits and can affect your Pace of Progressive (cumulative hours earned divided by cumulative hours attempted). Please refer to the Academic Standard for Federal Financial Aid and EOP funding chart found under Satisfactory Academic Progress for Financial Aid. Please seek the advice of the Financial Aid Office before consulting with your department chair. State and other aid program regulations may differ.

Repeating Other Courses

Normally, a student is not permitted to repeat a course he/she has completed and for which he/she has earned a passing grade. In rare instances, a student may have special reason to repeat a passed course. In such cases, a student must have written approval of the Department Chair if a course is to be repeated in order to raise a grade. The most recent grade in the course becomes the official grade for the course.

NOTE: A student’s financial aid may be affected when repeating courses, as repeated courses may not be counted in a student’s course load for financial aid purposes. Repeated courses for a previously passed course can only be counted once in the student’s course load. Please seek the advice of the Office of Financial Aid before consulting your department chair. State and other aid program regulations may differ.
Change of Grade
Grades and grade changes are the responsibility of faculty. Grade changes, which are only initiated for extenuating circumstances (such as medical emergencies, death, family emergencies) must be submitted within a timely manner after the conclusion of the semester in question. Appropriate documentation with a clear explanation must be submitted on the approved grade change form for processing with the Registrar. Faculty may submit a grade change within one year from the date on which the grade was issued as long as it is consistent with the College’s need to maintain academic standards and the integrity of students’ records, as well as conform to Federal and State laws. Only an extreme extenuating circumstance (ex., service to the military) may require a change of grade beyond this one year time period. Any such case must be appealed by the instructor to the Faculty Standing Committee on Admissions and Academic Standards for their consultation and approval.

Incompletes
A grade of “I” (Incomplete) is reported when, for some reason beyond his/her control, the student misses the final examination or has not completed a portion of the required work for the course. The decision to grant an “I” is at the sole discretion of the instructor. No achievement points are awarded for an incomplete. All incompletes must be resolved and a change of grade must be submitted no later than 30 days after the beginning of the next semester (fall to spring, winter intersession to spring, spring to fall, summer session to fall). An instructor may grant an extension of an incomplete (I) grade until the end of the semester by documenting and filing the approved form with the Registrar prior to the conclusion of the 30 day period. Any incomplete (I) grade not finalized or not extended by the instructor within the 30 day time period mentioned above will automatically be changed to an “F.” An Incomplete does not constitute successful completion of a prerequisite.

Computer Literacy Requirement
To meet the diverse needs of its programs, and in the spirit of providing a liberal education to all students, the college requires the use of the computer be integrated into each curriculum.

Requirements for Graduation
1. Recommendation of the faculty.
2. Satisfactory completion of the minimum number of credits required by the specific major.
3. Satisfactory completion of dual major or academic minor (if pursuing either) requirements must be completed at the same time as graduation certification of the major.
4. A 2.0 cumulative achievement average.
5. Satisfactory completion of the General Education and Writing Intensive requirements (please refer to the General Education and Writing Intensive sections in this catalog).
6. All outstanding incomplete grades must be resolved.

Procedure for Degree Candidates
Student “Intent-to-Graduate” forms must be filed in the Registrar’s Office no later than eight weeks prior to the intended date of graduation. Students failing to file by the deadline cannot be considered for graduation scholarships and achievement awards. In addition, such students will not be listed in the Commencement program, nor will they receive information regarding graduation activities.

Amnesty Policy
The Amnesty Policy applies to returning students who have not attended any college on either a full-time, part-time, matriculated, or non-matriculated basis for a minimum period of four years immediately prior to reentry to Farmingdale, and the student’s GPA must be below 2.0. Under amnesty, all prior grades will be excluded from subsequent GPA calculations but will remain on the student’s transcript along with all previous coursework. The GPA will begin at the time that studies are resumed.

Courses in which grades of C or better were earned will be counted towards graduation.

To qualify for amnesty the student must be matriculated and have completed six credits per semester for two consecutive semesters excluding winter and summer sessions, upon returning to the college, maintaining a B average during this time with no grade below a C.

The recomputed GPA under this amnesty policy cannot be used to qualify for any academic honors other than that of the Dean’s or President’s lists, and an application for amnesty can be made only once. The student must file a formal petition, as follows, in order for amnesty to be considered:
After the student has met the requirements for eligibility under amnesty as stated above, the student will file an application with the chair of the Admissions and Academic Standards Committee at least one semester prior to graduation. Upon verification of the student’s eligibility under amnesty, the Chair of AAS will notify the registrar.

The above policy will not supersede the College’s Admissions Policies, specific Curriculum Department requirements, or financial aid guidelines.

Guidelines for Awarding Two Degrees Concurrently or Consecutively
A student who desires to create a varied educational background may do so by seeking to graduate with two significantly different degrees (Dual Degrees) or to major in two disciplines at the same level of degree (Dual Majors). Students interested in these opportunities are directed to the following descriptions and guidelines.

Dual Degrees
Under certain circumstances, a student may pursue a second degree of the same level either concurrently or consecutively. A student seeking to earn two degrees must meet the admission requirements of both degree areas as listed in the College catalog and must receive advisement from the academic department responsible for the second discipline. Further, these programs must lead to two significantly different academic objectives. Once accepted, the student must satisfactorily complete the program requirements of both degrees, the resident credit requirement and the general education core requirements. At a minimum, an additional 30 credit hours must be completed in the second degree area which are significantly different from the first degree.
Students seeking to earn two degrees must seek advisement from the Department Chair of the second degree. Students completing a dual degree must file an “Intent to graduate” form for BOTH degrees in order to receive two separate diplomas.

**Dual Majors**
A student wishing to major in two disciplines at the same degree level (i.e., associate or baccalaureate) concurrently would be awarded a single degree based on the primary major. The student must meet all the admission requirements for both majors as listed in the College catalog and must receive advisement in the second area from the academic department responsible for the second discipline. The student must complete all major, resident credit and general education core requirements of the primary major. Once accepted, the student must meet the course requirements of the second major as defined by that academic department. Both majors will be listed on the official transcript and diploma. **Note:** The dual major option may not apply to all curricula.

Students seeking to earn two majors must seek advisement from the Department Chair of the second major.

**Academic Minors**
Farmingdale State College students are invited to enhance their studies with an “Academic Minor.” A minor is a cluster of thematically related courses drawn from one or more departments. In addition to department based minors (e.g. computer programming & info systems), interdisciplinary minors are also available (e.g. legal studies).

The following requirements must be satisfied for approval of the minor:
- A minor is considered to be an optional supplement to a student’s major program of study.
- Completion of a minor is not a graduation requirement and is subject to the availability of the courses selected. However, if the requirements for a minor are not completed prior to certification of graduation in the major, it will be assumed that the minor has been dropped. Consequently, the student will only be certified for graduation in their primary major.
- Minors available to students are listed below. “Design your own minor” is not permitted.
- Only students in 4 year programs can apply for a minor.
- A minor should consist of 15 to 21 credits.
- At least 12 credits must be in courses at the 200 level or higher.
- At least 9 credits must be residency credits.
- Specific requirements for each minor are determined by the department granting the minor. Each minor and criteria are described in this catalog.
- Students must maintain a minimum cumulative GPA of 2.0 in their minor.
- Students are prohibited from declaring a minor in the same discipline as their major (e.g. one cannot combine an applied math minor with an applied math major).
- Students are permitted to double-count minor courses with general education courses and with free electives. In the case of interdisciplinary minors, a student can double-count up to 6 credits of major coursework toward the minor.

Academic minors are approved by the College-Wide Curriculum Committee and the Provost. Students must make application for an academic minor through the department offering the minor in conjunction with the Office of Auxiliary Enrollment Services. Specific course work must be determined in consultation with a faculty member in the department offering the minor. A statement of successful completion of the academic minor will appear on the student’s transcript at the time of graduation.

The following are the approved academic minors and the departments which offer them:
- **Applied Mathematics**
- **Biology**
- **Business Management**
- **Computer Programming and Information Systems**
- **Economics**
- **History**
- **Italian Studies**
- **Latin American Studies**
- **Legal Studies**
- **Management Information Systems**
- **Ornamental Horticulture**
- **Sustainable Energy and Environment**
- **Web Development**

**Valedictorian Award**
The College shall recognize one student as valedictorian at its annual Commencement ceremonies. The standards for selection are determined by the Office of the Dean of Students. In order for a student to be considered for this award, he/she shall have achieved an outstanding academic record along with notable service to the College and/or the community. A student must be in good standing at the College and have no pending restrictions on his/her records. The student must have completed all necessary degree requirements (anticipated graduation May 2012, January 2012, or summer 2011).

**The Dean’s List and President’s List**

**Full-Time Students**
The Dean’s List is an indicator of high academic achievement earned by full-time matriculated students who obtain an average of 3.30 or better. The President’s List recognizes full-time, matriculated students who distinguish themselves by attaining an average of 3.75 or higher. Students who have failures, incompletes, or “D, D+, W, UW or NA” grades are ineligible for Dean’s List or President’s List designation. The Dean’s and President’s lists are finalized by the Registrar’s Office once all grades are entered and calculated at the end of each semester, and are entered on the student’s permanent record.

**Part-Time Students**
Dean’s List or President’s List candidates can also be currently enrolled part-time students who apply and are accepted for matriculation into a degree program and have completed a minimum of eighteen (18) credits in a maximum of three (3) consecutive semesters. The summer session will be considered...
Farmingdale State College participates in this honors option. Since a faculty member must supervise the contract, interested students should seek, either through the guidance of the department chair or individual faculty members, faculty in the time frame established in the contract, will result in the required. Successful completion of the contract requirements, greater depth in some aspect of the course than what is normally add an academic dimension by allowing the student to go into (Contract for Honors Designation.) The contract project should by the instructor and the student in the form of a contract. level work requires additional learning responsibilities as agreed to by the instructor and the student in the form of a contract. (Contract for Honors Designation.) The contract project should add an academic dimension by allowing the student to go into greater depth in some aspect of the course than what is normally required. Successful completion of the contract requirements, in the time frame established in the contract, will result in the course being identified as “Honors” on the student’s transcript. Since a faculty member must supervise the contract, interested students should seek, either through the guidance of the department chair or individual faculty members, faculty participating in this honors option.

Latin Honors - Degrees of Distinction
Degrees of distinction are conferred upon candidates for the baccalaureate degree who have completed an average of nine continuous credits per calendar year and a residency requirement of a minimum of forty-eight credits. A student may not receive the honors distinction with an Incomplete (I) remaining on his/her record. Averages for levels of distinction are:

- Summa cum laude: 3.9+
- Magna cum laude: 3.7+
- Cum laude: 3.5+

We recognize the potential earned distinctions during commencement exercises. The official distinction will be shown on the student’s record once final grades and graduation have been posted in the semester for which the student applied for graduation.

Student Awards For Academic Excellence
Each year FSC bestows “Awards for Academic Excellence” on two students in each major who have been selected by their faculty as truly outstanding. The primary consideration for selection is the student’s overall grade point average in coursework completed at Farmingdale. Additional consideration is given to exceptional performance in areas including research, internships, special student projects, and contribution to departmental clubs and honor societies. Students eligible for this award are those who have completed the requirements to receive the Student Award For Academic Excellence within the 12 month period prior to Commencement. A minimum average of 3.20 is required. The students must be in good standing at the College and have no pending restrictions on their records.

Honors Courses
Farmingdale offers a unique and highly individualized program, which enables a very motivated student to undertake honors-level study in an existing class setting and to earn an “Honors” designation for the course on his or her transcript. The honors-level work requires additional learning responsibilities as agreed to by the instructor and the student in the form of a contract. (Contract for Honors Designation.) The contract project should add an academic dimension by allowing the student to go into greater depth in some aspect of the course than what is normally required. Successful completion of the contract requirements, in the time frame established in the contract, will result in the course being identified as “Honors” on the student’s transcript. Since a faculty member must supervise the contract, interested students should seek, either through the guidance of the department chair or individual faculty members, faculty participating in this honors option.

Honor Societies

Alpha Phi Sigma
Alpha Phi Sigma is the only National Criminal Justice Honor Society for Criminal Justice majors. The society recognizes academic excellence of undergraduate, graduate students of criminal justice, as well as juris doctorate. Students at Farmingdale must have declared the Criminal Justice Security Systems bachelor program as their major, have a minimum cumulative grade point average of 3.2 and a minimum criminal justice grade point average of 3.2. Additionally, students must have completed at least 36 credits, and of those, 16 credits would be criminal justice courses. Students must be within the top 35% of their class.

For more information, please go to: www.alphaphisigma.org.

Chi Alpha Epsilon
Chi Alpha Epsilon is a national honor society dedicated to recognizing the academic achievements of students admitted to colleges and universities through non-traditional criteria. Its purpose is to promote continued high academic standards, foster increased communication among members, and honor the academic excellence of those students admitted to college via developmental programs. Gamma Eta is the local chapter chartered at Farmingdale State College on December 6, 2001.

To be eligible for membership consideration, students must hold a minimum cumulative grade point average of 3.0 for two (2) consecutive, full-time semesters and have been admitted to Farmingdale State College through the Educational Opportunity Program. National link: www.xaehonor.org.

(Eligible alumni who have graduated with a 3.0 or better cumulative grade point average, prior to the formation of a campus chapter, may also be considered for alumni membership.)

Application forms may be obtained from the Educational Opportunity Program office.

Epsilon Pi Tau
An international honor society for professions in technology, Epsilon Pi Tau recognizes academic excellence of students in fields devoted to the study of technology and the preparation of practitioners for the technology professions. In addition to a recognition program that extends through members’ careers and beyond, Epsilon Pi Tau continually seeks to serve, support, and strengthen the technology professions through publications, conferences, thought leadership, and alliances with corporations, professional associations, government agencies, and non-governmental organizations.

To be eligible for consideration, students must meet criteria as established by the honor society. Information may be obtained at www.episiopitau.org.

Applications for membership will be mailed to eligible students, which is sponsored by the Dean’s Office, School of Engineering Technology.

Golden Key
Golden Key is a mission focused, values based and demographics driven organization. With 30 years of rich tradition, Golden Key remains committed to scholarship, career development, leadership and service. Our mission defines who we are; our core values provide us guidance in executing our activities; and our history reminds us that nearly two million members are counting on us to shape the future through our strategic planning process.
To be eligible for consideration, students must meet criteria as established by the honor society. Information may be obtained at www.goldenkey.org

Applications will be mailed to eligible students.

**Lambda Tau National Medical Technology Honor Society**
The Farmingdale State MLT program has established a chapter of this Society at Farmingdale for those students achieving exceptional academic standing while enrolled in the MLT curriculum. The purposes of this Society are to develop a spirit of cooperation and unity among the students entering any of the fields encompassed by medical laboratory technology; to stimulate a higher ideal for scholastic effort, to encourage research, and to help develop the professional character of the work itself; and to interest other students in these fields. Those MLT students achieving a cumulative GPA of 3.25 or better in their MLT courses at the completion of the third semester will be invited into the Society membership by the Faculty Advisor of the College chapter.

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

To be eligible for consideration, students must be matriculated in an associate degree program, have completed a minimum of 24 credits, and have achieved a minimum cumulative average of 3.5. Students will not be accepted for membership after they have completed degree requirements. National link: www.ptk.org.

Applications will be mailed to eligible students.

**Sigma Phi Alpha**
Sigma Phi Alpha is a National Dental Hygiene Honor Society that promotes and recognizes scholarship, service, and leadership among students and graduates of dental hygiene educational programs. The local component chapter at Farmingdale State College is Alpha Mu. To be eligible for membership, students must rank within the top 10 percent of the sophomore class for the Associate Degree or the senior class for the Bachelor Degree. Membership in the society is offered by the faculty officers of the society.

**Sigma Beta Delta**
The purpose of Sigma Beta Delta is to encourage and recognize scholarship and achievement among students of business, management and administration, and to encourage and promote personal and professional improvement and a life distinguished by honorable service to humankind. To be eligible for membership, a business management student must rank in the upper 20 percent of the junior or senior class and be invited to membership by the faculty officers. Faculty officers operate the Sigma Beta Delta chapter for the mutual benefit of students. Farmingdale State College’s Business Management Bachelor of Science degree sponsors a chapter of Sigma Beta Delta. National link: www.sigmabetadelta.org.

**The Farmingdale Nursing Honor Society**
The Farmingdale Nursing Honor Society supports the learning, knowledge and professional development of nurses committed to making a difference in health globally. The goal of the Nursing Honor Society is to create a community of nurses who lead by using knowledge, scholarship, service and learning to improve the health of all individuals.

To be eligible for membership consideration, students must be enrolled in the bachelor degree nursing program and have completed one half of the nursing program. Students must be within the upper 35% of their class. Students who have graduated may apply as community nurse leaders.

Application forms are available in the Nursing Department Office.

**Grades and Transcripts**
Approximately two weeks after the end of each semester, grades are posted on students’ records. Students are expected to view their grades online. Those with an outstanding financial obligation to the College will not be able to access their grades until the financial obligation has been satisfied (for details contact the Student Accounts Office). If you wish to have a copy of your “official” transcript sent to a third party, an “Official Transcript Request Form” must be completed which can be obtained on the College’s website at www.farmingdale.edu.

**Registrar’s Office**
The Office of the Registrar, located in Laffin Hall, is responsible for student registration, processing official and unofficial transcripts, class scheduling, posting grades and degrees on students’ records, and verifying enrollment for all students, including veterans.

**Placement and Graduate Information**
The Career Service Department issues an annual report on the employment placement of graduates and on graduates who continue their education. The report contains information about curriculum areas and colleges to which graduates transferred as well as places of employment and titles of jobs obtained. The report is available in the Career Development Center in Greenley Hall. For further information, please call 631-420-2296 or email careercenter@farmingdale.edu.

**Attendance and Lateness in the Classroom**
Each instructor shall determine the attendance and lateness policy for his/her class.

To maintain the highest quality of academic work, regular class attendance is necessary. Absence and/or lateness from class are considered serious matters and never excuse a student from classwork. A student must complete all assignments, examinations, and other requirements of any course to receive credit.

At the beginning of the semester, the instructor will explain the attendance and lateness policies for the course in relation to meeting course requirements. It is not incumbent upon the instructor to give make-up work, quizzes or examinations in the case of absence or lateness.

When clinical or laboratory experiences are scheduled in off-campus facilities, each student is required to provide his/her own transportation to these facilities. Lack of transportation cannot be considered an excuse for absence or lateness.
Religious Absences and Equivalent Opportunity

Students unable, because of religious beliefs, to attend classes on certain days are protected under the State Education Law as follows:

1. No person shall be expelled from or refused admission as a student to an institution of higher education for the reason that he/she is unable, because of his/her religious beliefs, to attend classes or to participate in any examination, study or work requirements on a particular day or days.

2. Any student in an institution of higher education who is unable to attend classes on a particular day or days shall, because of such absence on the particular day or days, be excused from any examination or any study or work requirements.

3. It shall be the responsibility of the faculty and of the administrative officials of each institution of higher education to make available to each student who is absent from school because of his/her religious beliefs, an equivalent opportunity to make up any examination, study or work requirements which he/she may have missed because of such absence on any particular day or days. No fees of any kind shall be charged by the institution for making available to the said student such equivalent opportunity.

4. If classes, examinations, study or work requirements are held on Friday after four o'clock post meridian or on Saturday, similar or make-up classes, examinations, study or work requirements shall be made available on other days, where it is possible and practicable to do so. No special fees shall be charged to the student for these classes, examinations, study or work requirements held on other days.

5. In effectuating the provisions of this section, it shall be the duty of the faculty and the administrative officials of each institution of higher education to exercise the fullest measure of good faith. No adverse or prejudicial effects shall result to any student because of their availing themselves of the provisions of this section.

6. Any student, who is aggrieved by the alleged failure of any faculty or administrative officials to comply in good faith with the provisions of this section, shall be entitled to maintain an action or proceeding in the supreme court of the county in which such institution of higher education is located for the enforcement of his/her rights under this section.

6a. It shall be the responsibility of the administrative officials of each institution of higher education to give written notice to students of their rights under this section, informing them that each student who is absent from school, because of his or her religious beliefs, must be given an equivalent opportunity to register for classes or make up any examination, study or work requirements which he or she may have missed because of such absence on any particular day or days. No fees of any kind shall be charged by the institution for making available to such student such equivalent opportunity.

7. As used in this section, the term “institution of higher education” shall mean any institution of higher education, recognized and approved by the Regents of the University of the State of New York, which provides a course of study leading to the granting of a post-secondary degree or diploma. Such term shall not include any institution which is operated, supervised or controlled by a church or by a religious or denominational organization whose educational programs are principally designed for the purpose of training ministers or other religious functionaries or for the purpose of propagating religious doctrines. As used in this section, the term “religious belief” shall mean beliefs associated with any corporation organized and operated exclusively for religious purposes, which is not disqualified for tax exemption under section 501 of the United States Code.

School Closing

In the event that inclement weather or other unforeseen circumstances necessitate the cancellation of classes and/or activities at the College, students are advised to utilize the following media: Radio Stations: (AM) - WCBS[880], WINS[1010], and WHLI[1100]; (FM) - WLNG[92.1], WMJC[94.3], WBAB[95.3 & 102.3], WALK[97.5], KJOY[98.3], B103[103.1], WRCN[103.9], and WBLI[106.1], as well as Channel 4 and Channel 12 Television. The following websites can also be utilized: FARMINGDALE.EDU, NEWS12.COM, WBAB.COM, WBLI.COM, WALKRADIO.COM, 1010WINS.COM, WCBS880.COM, KJOY.COM, B103.COM, WMJCFM.COM, WRCN.COM, WHLI.COM and NEWSDAY.COM. New York State has implemented the New York State All-Hazards Alert and Notification web-based portal, www.nyalert.gov. This website contains critical emergency-related information, public instructions, and life-safety public information. Faculty, staff and students may register with SUNY NY Alert, a multiple technology notification service that will notify them of cancellations. Enrollment in NY-alert for Farmingdale State College specific notifications is available on the University Police website or via the Farmingdale State College OASIS web page.

In order to make up for lost class time, classes that have been canceled may be rescheduled at the discretion of the College. Cancellation of day classes does not necessarily mean that evening classes are also cancelled. Students are to assume that classes are in session unless there is an announcement specifically canceling evening classes.

NEW YORK STATE PUBLIC OFFICERS LAW, as amended
January 1, 1978

The regulations require that each agency post conspicuously and/or publicize in a local newspaper:

- Locations where records are made available. Individuals requesting records of Farmingdale State College are directed to contact the Records Access Officer.
- The name, title, business address and telephone number of the records access officer. The Records Access Officer may be contacted by visiting Horton Hall or by telephone at (631) 420-2728.
- The right to appeal a denial of access and the name and business address of the person or body to whom appeals should be directed.

Appeals to denial of access to records are to be directed to: Geraldine Gauthier, System Administration, State University Plaza, Albany, New York 12246.

Change of Name and Address

The College reserves the right to discontinue mailing information to any student or former student upon notification from the US Postal Service that the address on record with the College is no longer valid.
Campus Resources & Facilities

Institute for Research Technology Transfer (IRTT)
The Institute for Research Technology Transfer (IRTT) was established in 1996 to support the economic growth of Long Island. The Institute provides local industries with ready access to modern, cost-effective manufacturing systems and faculty at the cutting edge of technology. IRTT's services to small and medium-sized companies include: Partnerships to secure R&D funds and Federal and State funds, collaborative applied research, demonstrations of state-of-the-art technologies to enhance industrial competitiveness, professional consulting and the dissemination of current knowledge and new techniques.

Office of Research and Sponsored Program Development
The Office of Research and Sponsored Programs (ORSP) encourages and supports faculty and staff pursuing externally funded research or creative activities. The ORSP works with faculty and staff to determine their interests, identify appropriate external sponsors and collaborate with them to prepare applications, budgets and coordinate timely submission. The ORSP also hosts workshops to train faculty/staff on various aspects of the grants process.

Center for International Students and Study Abroad (CISSA)
International Students:
The CISSA provides a variety of services for all International Students. Working with the Office of Admissions, the Center supplies accepted International Students with the necessary forms which enable them to attain an F-1 or J-1 student visa. The Center provides counseling and assistance to International Students seeking a change of status or applying for special privileges such as Curricular Practical Training or Optional Practical Training, as well as Travel Endorsements necessary for reentry into the country. The Center operates as a U.S. Department of Justice-approved program responsible for reporting student status each semester to the U.S. Immigrations and Customs Enforcement (USICE) of the U.S. Department of Homeland Security through the Student & Exchange Visitor Information System (SEVIS).

Study Abroad:
The CISSA also serves students who wish to study abroad during their college years. CISSA provides information for Study Abroad programs offered by SUNY colleges and other universities. The State University of New York is making great efforts to expand its academic presence throughout the world and to make study abroad an accessible, viable, secure and rewarding option for our students. SUNY is proud to offer an incomparable array of study abroad opportunities, with more than 400 programs in 54 countries, where students can study subjects from anthropology to music composition to zoology, at graduate and undergraduate levels, in several languages and settings. SUNY is working closely with partners, including the leading educational institutions of the world, to ensure a safe and comfortable environment in which to live and learn. Each year, thousands of students from all over the United States choose to participate in Farmingdale's programs, stepping out of their everyday lives and familiar environs, and expanding their educational experience to include exposure to new cultures, peoples and landscapes. The State University's study abroad program listings can be found at www.studyabroad.com/suny. Take a moment to review exciting places described there. For more information, please contact the SUNY campus offices of international education that administer the programs that interest you. The Center for International Students and Study Abroad (CISSA) is located in Laffin Hall, Rooms 301/302 and can be reached at 631-420-2624/2479. The CISSA website can be accessed from the main college website under International Programs.

The Center For Social Science Research
The Center For Social Science Research encourages, supports, and helps to implement multidisciplinary social science research to benefit the residents and organizations of the Long Island region and, more broadly, the State, the nation, and the world. Farmingdale State College seeks concrete benefits for society—expanding human control of time, space and natural systems through science and technology. The Center promotes excellence guided by ethics in fostering scientific and social advances. Altruism and civic engagement together serve as both the means to human success and the goals of cultural and technological progress. The Center for Social Science Research will serve as a clearinghouse for all research projects, host campus symposia, conferences, workshops and other events at which researchers, scholars, students, and professionals may present and discuss their work.

Institute For Networking Systems Technology and Education Programs
The Institute for Networking Systems Technology and Educational Programs (INSTEP) in the School of Business offers credit bearing and non-credit bearing courses in the latest Networking Technologies. Credit bearing courses are offered cooperatively with the Computer Systems Department. These courses can be used as electives in several bachelor degree programs campus. They can also be applied toward Network Training Certification as specified by the CISCO Networking Academy, which operates under the Institute. INSTEP conducts campus seminars and workshops in new technology developments in Computer Networking & Communication that are available to both professionals and students. For additional information, contact Alexis Greenidge at M.Greenidge@farmingdale.edu.

Green Building Institute at FSC
The Green Building Institute (GBI) was established in fall of 2010 with a seed grant from the US Department of Education. The main objective of the Institute is to provide support to faculty members of the College in developing curriculum and teaching various aspects of green building and sustainably built environments. To support these activities, the Institute is engaged in faculty development through research, workshops, seminars and
conferences. The Institute also helps local high school teachers to develop sustainability related curricula for their students. Further, the Institute develops, organizes, and offers green building related courses for industry and the professions.

**Solar Energy Center**
Farmingdale State College established its Solar Energy Center (SEC) in 2000. Since then the SEC has offered workshops on Residential Photovoltaic Systems Installation and Maintenance, Advanced Photovoltaics, Solar Thermal and Solar Marketing areas. In addition, SEC has conducted many free public seminars on solar energy. The Solar Energy Center of Farmingdale State College is accredited as a "Training Institution" and "Continuing Education Institution" on solar energy by the Institute of Sustainable Power. This is the first such center to be accredited in the North East and the fourth in the entire USA.

**Greenley Library**
The Library, with seating for 800 students, supplements classroom instruction by providing printed, digital and audio-visual materials for assignment and recreational reading, reference, research, and independent study.

The Library is open six days a week during the academic year. Hours during the academic year are 8:00 a.m. to 9:00 p.m. on Monday through Thursday, 8:00 a.m. to 5:00 p.m. on Friday, and 9:00 a.m. to 5:00 p.m. on Saturday. Holiday, intersession, and summer hours are posted at the appropriate times.

Librarians provide reference services and instruction for the individual reader, prepare bibliographies for specific subject areas, and, in its new state-of-the-art Information Literacy Lab, offer Information Literacy instruction in the use of the Library, proper research procedures, and the management and evaluation of information.

The Library's online catalog provides access to not only its own collection but also to the collections of all 64 SUNY campus libraries. Open stacks permit browsing through the circulating collection of over 110,000 volumes. Students and faculty have access to material not owned by the Library through the Library's interlibrary loan service; the SUNY Open Access Program, which allows students and faculty to directly borrow materials from all 64 SUNY libraries; the SUNYConnect program, which allows patrons to do an online request to have any of the over 18 million volumes in the SUNY libraries delivered to Farmingdale within 72 hours for their use; and the LIRRC Research Loan Program, which allows students and faculty to do research in specific subject areas at most libraries on Long Island. The Library has a collection of about 550 print journals, including an extensive collection on microfilm. Access to these journals is provided by over 80 web-based index/abstract databases. The full-text journal databases that the Library subscribes to provide access to over 14,000 full-text journal titles. The Library also provides access to approximately 70,000 e-books through Ebrary and Netlibrary. All of these databases are available to students and faculty from any computer on campus and also from home through the library’s remote database service. The librarians who oversee the various collections in the library — circulating books, reference, audio/visual, and serials — work closely with the faculty in the academic departments on collection development, that is both the acquiring of new material and the weeding of old material.

The Library has been designated as a virtual depository for the federal government documents and has a large collection of audio-visual materials, along with viewing and listening equipment.

**Instructional Technologies Support Center (ITSC)**
The Instructional Technologies Support Center assists faculty in integrating emerging and existing instructional technologies into their curriculum. Support options range from design and development consultation and training to digital media production. ITSC staff presently design, install, and maintain the College's Technology Enhanced Classrooms offering orientation seminars and emergency technical support. The Center manages the distribution and maintenance of all general-use video, audio support and computer display equipment as well as instructional media equipment installed in all lecture halls and media viewing facilities. With both C and Ku-band dishes, the ITSC has the ability to downlink, record and/or distribute satellite programming throughout the campus.

**Acceptable Use Policy for Computer Facilities**

**Introduction**
This policy is designed to guide students, faculty, staff and others in the acceptable use of computer and information systems and networks provided by Farmingdale State College. More importantly, it is meant as an application of the principles concerning the use of the network in a legal, ethical, collegial and nondestructive manner.

**Guiding Principles**
The Farmingdale State College community is encouraged to make innovative and creative use of information technologies in support of education and research. Access to information representing a multitude of views on current and historical issues should be allowed for the interest, information and enlightenment of the Farmingdale State College community. Consistent with other University policies, this policy is intended to respect the rights and obligations of academic freedom. The College recognizes that the purpose of copyright is to protect the rights of the creators of intellectual property and to prevent the unauthorized use or sale of works available in the private sector. Also consistent with other College policies, an individual’s right of access to computer materials should not be denied or abridged because of race, creed, color, age, national origin, gender, sexual orientation, or disability. The College cannot protect individuals against the existence or receipt of material that may be offensive to them. As such, those who make use of electronic communications are warned that they may come across or be recipients of material they find offensive. Those who use e-mail and/or make information about themselves available on the Internet should be forewarned that the University cannot protect them from invasions of privacy and other possible dangers that could result from the individual’s distribution of personal information.

**Responsibilities**
Farmingdale State College reserves the right to monitor its computing resources to protect the integrity of its computing systems, workstations, and lab facilities. Users are responsible for all use of their computer-related accounts (including but not limited to automated, online and system accounts). They
should make appropriate use of the system and network-provided protection features and take precautions against others obtaining access to their computer resources. Individual password security is the responsibility of each user. Abuse of computer resources is prohibited. Abuse includes, but is not limited to:

- Using the network for personal profit.
- Attempting to intentionally interfere with the performance of the network.
- Interfering with the legitimate work of other users.
- Accessing another individual's account, private files, or e-mail without permission of the owner.
- Misrepresenting one's identity in electronic communication.
- Unauthorized copying or transmission of software.
- Abusing any interconnected network such as the Internet.
- Using the network to attempt to violate any connected computer system's security.
- Using the network to spread computer viruses, trojan horses, worms or any program designed to violate security, interfere with the proper operation of any computer system or destroy another user's data.
- Disobeying lab and system policies, procedures, and protocol.
- Using computing resources to threaten or harass others.
- Using computing resources to propagate electronic chain letters.
- Using computing resources for extensive or competitive recreational game playing. (Recreational game players occupying a seat in a public computing facility must give up the use of the terminal when others who need to use the facility for academic or research purposes are waiting.)
- Using the network in a manner that violates any federal, state, or local law.

Administration and Implementation

The College encourages all members of its community to use electronic communications in a manner that is respectful to others. While respecting users' confidentiality and privacy, the University reserves the right to examine all computer files. The College takes this step to enforce its policies regarding harassment and the safety of individuals; to prevent the posting of proprietary software or electronic copies of electronic texts or images in disregard of copyright restrictions or contractual obligations; to safeguard the integrity of computers, networks, and data either at the College or elsewhere; and to protect the College against seriously damaging consequences. The College may restrict the use of its computers and network systems for electronic communications when faced with evidence of violation of College policies or federal or local laws. The College reserves the right to limit access to its networks through College-owned or other computers and to remove or limit access to material posted on College-owned computers. All users are expected to conduct themselves consistent with these responsibilities and all other applicable College policies. Abuse of computing privileges will subject the user to disciplinary action, as established by the applicable operating policies and procedures of the College. Abuse of networks or computers at other sites through the use of Farmingdale State College resources will be treated as an abuse of computing privileges at the College.

When appropriate, temporary restrictive actions will be taken by system or network administrators pending further disciplinary action. The loss of computing privileges may result. When a user ceases being a member of the campus community (e.g., withdraws, graduates, or terminates employment, or otherwise leaves the university), or is assigned a new position and/or responsibilities within the State University system, his/her access authorization will be reviewed. A member of the campus community may not use facilities, accounts, access codes, privileges or information for which they are not authorized in their new circumstances.

Farmingdale State College recognizes that all members of the college community are bound by federal and local laws relating to civil rights, harassment, copyright, security and other statutes relating to electronic media. It should be understood that this policy does not preclude enforcement under the laws and regulations of the United States of America, the State of New York, the State University of New York or SUNY networking contracts.

Violations

Policy violations by students will be handled in accordance with the Student Code of Conduct and referred to the Dean of Students or designee for disciplinary action as appropriate. Policy violations by College employees will be referred to the head of that employee’s department and handled in accordance with disciplinary actions set forth in the Professional Handbook or other appropriate document.

In addition, illegal acts involving Farmingdale State College’s computing resources may also subject users to prosecution by state and/or federal authorities.

The Bookstore

A college bookstore, operated by the Barnes and Noble Corporation, is located on campus for the convenience of the entire College community. The bookstore carries required and recommended textbooks, instructional materials, supplies, clothing, and sundry items. The bookstore is open Monday, Tuesday, Wednesday and Thursday from 9:00 a.m. to 6:00 p.m and Friday from 9:00 a.m. to 2:00 p.m. throughout the academic year. B&N offers textbooks in digital format and under a textbook rental program. B&N continues to offer new and used textbooks as well. These options allow students to consider all costs alternatives when purchasing their required textbook materials.

“Textbook Express” is available for students to reserve their textbooks at the bookstore. “Textbook Express” allows students to reserve their textbooks online when students are registering for their classes online. The option to access “Textbook Express” is available via the online registration process through the students Oasis account. All available purchase options available for textbooks is indicated, i.e. new, used, digital, rental.

For the hours of operation during winter session, summer session and vacations, please call the Bookstore at 631-249-3048. Extended hours are offered during registration and during the first week of classes. For additional information, visit the Farmingdale State College Bookstore website at www.bkstore.com/farmingdale.

Auxiliary Service Corporation

The Auxiliary Service Corporation (ASC), with administrative offices located in Laffin Hall, is a not-for-profit educational corporation. The general purpose of ASC is to establish,
operate, manage, and promote educationally related services for the benefit of the College’s faculty, staff and students in harmony with the educational mission and goals of the College.

The Auxiliary Service Corporation provides the following campus services through contractual arrangements: food services for both commuting and resident students, faculty and staff; a bookstore operation; vending machines; laundry, washer and dryer services; photocopy services, and student health insurance.

The Corporation directly provides various student services such as: vouchers, limited check cashing, FAX service, ID replacement, and emergency student loans.

The Auxiliary Service Corporation as a fiscal agent provides all the necessary accounting services for: Farmingdale Student Government, Trust and Agency Accounts, Alumni Association and the Farmingdale College Foundation.

For additional information, visit the Auxiliary Service Corporation website at www.farmingdale.edu/adminfinance/asc.

Child Care Center
Located across from the Bookstore
Monday – Friday Year Round
7:30 a.m.—5:30 p.m.

The Children's Center at Farmingdale State College provides child care services to the children of students, faculty and staff. Priority is given to students who are taking at least 6 credits per semester. Fees are calculated according to income on a sliding scale fee for students and a discounted rate for campus faculty and staff. Students may also be eligible for the SUNY Block Grants when they are available.

The Center cares for children ages eight weeks to five years. The Center utilizes the Creative Curriculum in all classrooms and follows appropriate developmental practices. Children engage in learning activities throughout the day and enjoy the outdoors twice daily. Two healthy snacks are included daily. The children engage in activities sponsored by the College as well as enjoy the campus grounds for walks.

During the summer, The Children's Center also has a summer camp program for children 5 1/2 yrs. - 12 yrs. old. For more information regarding summer camp and The Children's Center, please call 631-420-2125 or visit www.farmingdale.edu/childcare.

Small Business Development Center
In 1984, the State University of New York entered into an agreement with the United States Small Business Administration to establish Small Business Development Centers (SBDCs).

The Farmingdale State College SBDC delivers one-to-one counseling, training and technical assistance in all aspects of small business management. Its services include, but are not limited to, assisting small businesses with financial, marketing, production, organization, and feasibility plans. One-on-one counseling is available at no cost to anyone interested in starting a small business, improving or expanding an existing small business.

The certified Business Advisors take a personal interest in assisting entrepreneurs realize their business goals. The Advisors continually participate in training programs to ensure that their business skills and knowledge are current. Additionally, the Advisors of the SBDC are supported by the SBDC Research Network, one of the most comprehensive and sophisticated business resource libraries in the United States.

Since the inception of the Farmingdale State College SBDC in 1985, over 25,000 clients have been assisted resulting in over $281,000,000 funding and investment. This coupled with creating or saving over 11,880 jobs makes it clear that the economic impact for the Long Island region is striking. The effect of this impact is growing.

The Farmingdale State College SBDC’s goal is to help entrepreneurs, businesses and industries become more productive and profitable. By assisting new and existing businesses, the SBDC contributes to the greater economic development of Long Island and New York State. Interested individuals, businesses or industries may contact the SBDC at 631-420-2765 or visit the SBDC website at www.farmingdale.edu/SBDC. The hours of operation are Monday through Friday, 8:30 a.m. through 5:00 p.m.

Alumni Association
The Alumni Association, a non-profit corporation, provides a positive link between graduates and the College. It also provides ongoing services and programs for students, faculty and staff. A bi-annual newspaper, Alumnus, disseminates relevant information to over 26,000 Alumni. Services to current Farmingdale students include eight scholarships, student and club awards, reunions, cultural programs, career workshops and support of other College programs. Also offered are group insurance plans, a discount buying service and use of many College facilities.

Farmingdale College Foundation
The Farmingdale College Foundation is a non-profit corporation established to provide financial assistance to the College for projects not funded by the State Budget. Its board of directors comprises distinguished corporate and community leaders, as well as college representatives. The Foundation supports on-campus programs; sponsors fund-raising projects; and administers private gifts and endowments to support student scholarships, faculty development awards and campus enhancements.

The Long Island Educational Opportunity Center (LIEOC)
The Long Island Educational Opportunity Center is designed to provide tuition-free, non-degree education for educationally and economically disadvantaged persons who are not attending secondary schools, and who are not eligible for admission to college. Students who enroll in Long Island Educational Opportunity Center courses to complete high school diploma requirements are encouraged to qualify for college admission and/or gainful employment through continuation of coursework in vocational or college preparatory programs.

The Long Island Educational Opportunity Center offers GED and college preparatory courses in communications skills, mathematics and science; English as a Second Language for the foreign-born; vocational skills training and upgrading in business office skills; and home care provider and nurse assistant programs.

The Center further serves the community through various public service programs such as internships or on-the-job training programs with local businesses and industry. It works with community agencies, local employers, and higher education institutions by serving people who desire academic upgrading or vocational skills development.

The Center provides academic and counseling services at three
locations: 269 Fulton Avenue, Hempstead 631-489-8705; 1090A Suffolk Avenue, Brentwood 631-434-3740; and Hooper Hall on the Farmingdale campus 631-420-2280.

Many Long Island Educational Opportunity Center students are also prime college referrals to the Educational Opportunity Programs (EOP) sponsored by New York State at many State University of New York campuses, and Higher Educational Opportunity Programs (HEOP) at private independent colleges and universities.

Office of Communications
The Office of Communications is located in Horton Hall. The Communications Office disseminates all news of the campus and the campus community to various news media.

Office of Business Outreach
Farmingdale State College, as the first public institution on Long Island, has shown its commitment to the community, and especially to business and industry by providing comprehensive adult learning services of the highest quality for more than eighty years.

The Office of Business Outreach develops business partnerships with local industries to address the needs of both large and small corporations throughout Long Island and beyond. At Industry Forums, CEOs share their requirements regarding the training and retraining of their employees, and information that will allow the College to restructure its curricula to better prepare students for a seamless transition from the classroom to the workplace. Farmingdale State College also addresses the needs of the private sector by offering custom-designed training programs for corporate employees.

Likewise, the College and its corporate partners offer students the opportunity to gain valuable “hands-on” experience in actual work situations by means of internships offered by local businesses. These internships will assure careers for the College’s graduates, and will provide employers a highly trained employee pool from which they can draw to guarantee the success of their business.

Please contact the Office of Business Outreach at 631-420-2246. Farmingdale State College also undertakes the specific educational needs of community residents, local business and industry by providing non-credit programs throughout the calendar year which will enhance both the personal and professional lives of those who live and/or work on Long Island.

Because an educated citizenry forges the social, political and economic vitality of the region, the state, and the nation, the College is proud to provide opportunities for lifelong learning.

Specific services provided by the Office of Business Outreach include:

Corporate Training
Responding to the educational needs of corporate Long Island, this Center provides programs aimed at keeping the region’s business and industry globally competitive. High-quality programs in the fields of computer technology, lean, six sigma, manufacturing, business and management are presented on a regular basis throughout the year. The Center also provides customized training programs to meet the specific educational needs of a company. These programs, which are designed with the cooperation of the company, take place on-site or on the campus of Farmingdale State College. For more information, call 631-420-2246.

Online Career Training Programs
Many non-credit, short-term courses are offered throughout the year for interested students whose busy lives make online learning an attractive option. Please access these courses and registration at www.ed2go.com/farmingdale, www.gatlineducation.com/farmingdale.

Other Professional Programs
Offered in conjunction with local business and industry, these programs serve as a way for working professionals to advance their careers or develop skills for a new professional path in such areas as LEED Green Associate/Accredited Professional and Lean Six Sigma/Green Belt Level Certification, EEG Technology, Ophthalmic Assistant, Horticulture Management and Engineering Management. Course registration is attained through one’s employer or through the Office of Business Outreach. For more information, call 631-420-2246.

Test Preparation Courses
The Office of Business Outreach partnerships with Kaplan, Inc., provides for a series of preparation courses for college entrance exams such as GMAT, PSAT, SAT, GRE, LSAT and others. Contact the Office for further information.

Learning In Retirement
The Institute for Learning in Retirement, which is an affiliate of the national Elderhostel Institute Network, offers personal enrichment and educational programs for persons aged 50 and over. The program is developed by Institute members who share a commitment and appreciation for learning. There are no educational requirements for membership. The Institute concept is one that offers programs for and by its members, capitalizing on the wealth of knowledge available from within its fellowship.

Membership is by application, with an annual fee. A lecture series, newsletter, use of the library, cultural events, and eligibility for enrollment in study groups are included in the membership fee.

Members may register for a selection of study groups that vary each semester. Each study group meets for two hours per week for four-week and eight-week sessions. There is a nominal registration charge for each study group that is selected. For more information write to: ILR, Farmingdale State College, Memorial Hall, Farmingdale, New York 11735, or call: 631-420-2161.

Senior Auditing Program
Individuals over age 60 are invited to attend one college class as an auditing senior during the College’s fall and spring semesters. Registration is based on space availability. A registration fee of $50 must be paid to participate in the program. Auditors must make arrangements for (e.g. purchase or borrow) their own texts and/or materials. College credit cannot be earned by auditing courses. For further information on the Seniors Auditing Program, please call 631-420-2144/2246.

Student Life: Paving the road to a lifetime of success

Student Success Center
Beginning in Fall 2003, Farmingdale State College opened the doors of its Student Success Center. Located on the first floor of Greenley Hall, across from the Library, the Student Success Center provides a broad range of services designed to encourage and support students in their academic, personal...
Approximately 500 students live on the Farmingdale campus in our residence halls. The Residence Life program provides a living-learning experience for all students. The goal of the residence program is to provide an on-campus student centered living experience in a clean, safe, and stimulating environment. The residence halls are viewed as an extension of the classroom where learning and socialization takes place. The community atmosphere is conducive to fostering uniqueness and individuality as well as respect for the rights of others.

The Residence Life staff consists of both professional staff members and student staff members. The professional staff are called Resident Director (RD); they supervise the student staff members, called Resident Assistants. Together, they provide counseling, articulate and set limits for acceptable behavior, and support the health and safety of all who reside in the residence halls. The professional and student staff also develop educational, social and cultural programs to complement the learning that occurs inside of the classroom. Students are encouraged to be active participants in the community.

College Union and Student Activities Office
Throughout its history, the College has sought the development of the student through encouragement of extra and co-curricular activities. These activities supplement and complement the academic atmosphere of classroom and laboratory. Farmingdale’s activity program provides outlets for a wide variety of student interests: professional, religious, cultural, social, recreational, journalistic, and governmental.

In the College Union free time may be spent playing pool, exercising, grabbing a bite to eat or enjoying a film or lecture. The College Union houses the Flab Factory, a weight room that houses the latest in exercise equipment, and the Ram’s Den, a game room that includes multi flat-panel televisions hooked to a satellite dish, pool tables, ping-pong tables, and comfortable seating. Across from the Ram’s Den there is a new student lounge, “The Living Room”, perfect for studying or lounging. The Union is also where you will find Teddy’s Place, home to KFC Express and Toasty’s, a sandwich shop with all the fixings.

The Student Activities Office is located in Roosevelt Hall, 631-420-2103.

Student Organizations Fully Funded by the Farmingdale Student Government
Farmingdale Student Government (FSG)
Senators, student Executive Board members and representatives from the Fully Funded Units compose the governing board and act in matters which promote the interests of the College and its students. The Farmingdale Student Government is responsible for the Farmingdale student budget and for distributing the monies collected via Student Activity fees.

In addition, the FSG is involved with recommending changes in campus policy. Some of the College Committees with which the FSG works are: Auxiliary Service Corporation Board of Directors, Judicial Hearing Board, Campus Safety Committee and Student Affairs and Services Committee. FSG also provides opportunities for open recreation in the Flab Factory of the College Union and the Rams’ Den, also in the College Union.

New Student Orientation
Orientation for new students, including transfer students, is mandatory. Once you are accepted to Farmingdale State College, register for Orientation by contacting the Office of Orientation at 631-420-2109.

Student orientation activities give valuable information about the College’s essential services, and provide the opportunity to meet other new students and learn from presently enrolled student leaders. New students will also be able to meet with faculty members who will advise them about academic program requirements. Becoming a part of the campus community through orientation makes it easier to embark upon a successful college experience.

For more information, you can call the Office of the Dean of Students 631-420-2104 or the Student Activities Office at 631-420-2103. There is a $75.00 orientation fee assessed to each new Farmingdale student.

Residence Life
Residence Life, located on the first floor of James H. Sinclair Hall, coordinates all aspects of living on campus. Any registered FSC student is eligible to live on campus. However, preference for spaces will be given to those students who are matriculated and are full time.

and professional growth as they discover and develop their abilities. The Student Success Center serves as the umbrella under which the College coordinates comprehensive services and empowers the academic and cultural experience of being a student at Farmingdale State College.

One of the purposes of the Success Center is to aid all first year students in the transition to becoming a focused and dedicated successful student. It has become a go-to place after their Orientation Programs. The Success Center also provides student success workshops for all students. Students attend seminars that enhance researching, test-taking, and time management and career issues. Additionally, the Success Center coordinates a myriad of student services such as:

- Workshops, Seminars and Programs
- Personal Counseling referrals
- Tutoring
- Peer Mentoring program
- Open computer labs and Common area
- Computers with zoom text and the Kurzweil System and Sigi 3, a Career Assessment Tool
- E-Resource area with flat-screen TV and additional computers
- Professional offices/Reception Area
- Lounge area/coffee bar/comfortable seating
- Wireless networking/laptop ports
- Walk-in service available

In the SSC, students learn to access College services and resources and obtain timely information about the broad spectrum of cultural and specialized activities and events which are happening at the College and the community beyond the College.

For more information, call 631-420-2480. The fax number is 631-420-2767.
For further information, call 631-420-2677/2727 or stop by room 151A in Roosevelt Hall.

The Campus Activities Board (CAB)
This organization provides cultural, social, and recreational programs for the campus community.

The CAB sponsor events such as films, lectures, comedy shows, concerts, and various novelty acts. All events are publicized to the entire student body by the activities calendar and events postings.

Students develop the total program of the Board. Any student who is interested in scheduling activities and selecting speakers, artists, films, and daytime entertainment to benefit the total campus community, should join the CAB and attend the regular meetings, which are generally held during activity hour (Tuesday or Thursday) at 11:00 a.m. in Roosevelt Hall.

Backstage Theatre Company (BSTCo.)
This is a drama-oriented student organization, which performs two productions a year for the campus community. For further information, call 631-420-2404.

Inter-Dormitory Council (IDC)
Students who reside in the residence halls may serve on the Inter-Dormitory Council. The council regularly meets to discuss residence hall policy, make recommendations, and plan activities for the residence hall students. For further information, call 631-420-2404.

Media Related Student Organizations
These important outlets for campus news and opinion are open to all students. Skills in writing, speaking, or the mechanics of publications and engineering are not required. The organizations are the Rambler Newspaper at 631-420-2611, the Islander Yearbook at 631-420-2611 and WRAM Campus FM Radio Station at 631-420-2368.

Recognized clubs/organizations for the academic year are as follows:
- Back Stage Theatre Company (BSTC)
- Campus Activities Board (CAB)
- Farmingdale Student Government (FSG)
- Interdormitory Council (IDC)
- Islander Yearbook
- Rambler Newspaper
- WRAM Campus FM Radio Station

The following is the list of special interest clubs that are recognized. Their charter must be renewed yearly:
- American Association of Airport Executives (AAAE)
- Advancing Productivity Innovation & Competitive Success (APICS)
- Anime & Videogame Club
- Arabian Club, The
- Architectural Construction Tech (ACT)
- Art Club (Abstract Ink)
- Biology Club
- Business Club
- Caribbean Students Organization
- Christian Fellowship Club
- Computer Technology Club
- Criminal Justice/Security Systems
- DESI Club
- DiGamma Omega Xi, Inc. (Service Society)
- Epsilon Pi Tau (Engineering Technology Honor Society)
- Farmingdale Flying Rams
- Farmingdale Music Association
- Farmingdale State Democrats
- Finance & Accounting Society
- Golden Key International Honor Society
- Habitat for Humanity Student Chapter
- Horticulture Club
- Ice Hockey Club
- IEEE
- Kappa Chi - Criminal Justice Honor Society
- LASO
- LGBT Pride
- Liberal Arts & Sciences Club
- Med Lab Tech Club
- Modern Language Club
- Muslim Student Association
- Olympians FC Soccer Club
- Phi Theta Kappa
- Pre-Health Professions
- Professional Communications Club
- Psychology Club
- Quality Club
- RAM Motor Sports
- S.A.D.H.A
- Science Fiction Club
- Sigma Beta Delta (4yr. Business Honorary)
- Society of Automotive Engineers
- Sociology & Anthropology
- Sport Management Club
- Student Nurses Association
- Student Veterans of America
- Women’s Student Union

Student Organizations Partially Funded by the Farmingdale Student Government
Approximately 45 student organizations are at the heart of the activities program.

Curriculum Clubs
Approximately two-thirds of the student organizations are curriculum clubs designed to serve the professional interests of students and relate directly to various academic departments. Some of the curriculum organizations are: Computer Tech Club, Business Club, Student American Dental Hygienist Association, Student Nurses Association, the Horticulture Club and the Med Lab Tech Club.

Special Interest Clubs
The College encourages participation in various leisure time activities. Some of the special interest clubs include: Anime and Videogame Club, Ice Hockey Club, and the Olympians FC Soccer Club.

Cultural and Social Clubs
In order to meet the special needs of the student body, the following are some of the clubs that have been established: the LASO, Latin-American Student Organization, Christian Fellowship and the Women’s Student Union.

For further information, call 631-420-2677/2727 or stop by room 151A in Roosevelt Hall.

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Cultural and Social Clubs
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Intercollegiate Athletics

The purpose of the Farmingdale State College intercollegiate athletic program is to support and expand the total educational experience of our students. The program, available for men and women, offers student-athletes a wide variety of opportunities for participation. The athletics program carries out the general mission of the College and is designed to educate student-athletes in areas such as: good sportsmanship, leadership, teamwork, health, well-being, loyalty and overall character development.

Farmingdale State College is a Division III member of the NCAA (National Collegiate Athletic Association) offering 18 intercollegiate sports, including:

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The College currently holds membership in the Skyline Conference, ECAC, and the Collegiate Track Conference.

The Physical Education Department offers one credit of Physical Education given to a student that participates, in accordance with department guidelines, on an NCAA approved athletic team offered at Farmingdale State College. There will be a maximum of two credits issued per student athlete during their stay at FSC.

Students who are not part of a Varsity team are encouraged to stay involved by way of our athletics facility, George E. Nold Hall. The building features a weight room, racquetball courts, a golf simulator, full gymnasium, including a 10 lap-to-the-mile indoor track. To join the weight room, there is a fee of just $50/ per semester, the golf simulator costs $20/per hour plus $5 for each additional golfer, and all other areas are free of charge with a valid student ID card.

There is no admission to the home games. To view game schedules, intramural activities or follow results of all our teams, check out our Athletics website at www.farmingdalesports.com

Intramurals

Students not wishing to compete in the Intercollegiate Athletic Program may elect to participate in the College Intramural Program. It is open to all enrolled students and operates in the fall and spring semesters. The goal of the Intramural Program is to create opportunities for students to participate in organized athletic activities within the College community. For information, call the Student Activities Office at 631-420-2104.

University Police

The University Police Department provides twenty-four hour service to the campus. In addition to safety, security, and emergency services, the Police Department also offers programs in crime prevention, personal safety and related matters. For assistance, please call 631-420-2111.

Pursuant to the Jeanne Clery Disclosure of Campus Security Policy and Campus Crime Statistics Act, the University Police Department publishes annually A Guide to Campus Safety and Security which contains the annual crime statistics. Copies of the report may be obtained from the campus web site or the Department of University Police.

Identification Cards

The University Police Department issues identification cards to all faculty, staff, students and other tenants of the campus at the University Police Office during normal business hours. All ID cards must be validated the beginning of each semester. There is no charge for the initial identification card. Lost ID Cards are replaced at the University Police Office after the replacement fee has been paid at the Auxiliary Service Office in Laffin Hall.

Parking

In addition to the N.Y.S. Vehicle and Traffic Laws, the University Police enforces Parking Regulations promulgated as part of Section 569.1 of the Education Laws. Each individual operating a vehicle on campus is responsible for complying with these regulations. Copies are available at the University Police Office as well as on the campus web page.

Campus Notification Of Registered Sex Offender (Megan's Law) New York State Registered Sex Offenders Notification Process

As a result of an amendment to New York State’s Megan’s Law, the State University of New York Police Departments will receive direct notification from the Division of Criminal Justice Services (DCJS) when a registered sex offender enrolls, is attending or is employed by a SUNY Campus. This statute authorizes law enforcement agencies that receive notification from DCJS to disseminate relevant information (about the sex offender) at their discretion. The information that can be disseminated to the campus community includes: name, address (either home address if Level 3 offender or zip code if Level 2 offender), physical description, crime of conviction, modus operandi, type of victim targeted, special conditions of parole.

Once Farmingdale State College is properly notified by DCJS that a level 2 or level 3 sex offender is registered and is enrolled, attending or employed at the College a general e-mail announcement will be disseminated to the campus community. Details about sex offenders will not be communicated via e-mail messages; rather interested individuals can chose to go to the NYS Sex Registry site via the University Police Web link and learn more about level 3 offenders (level 3 offenders are the only ones reported by the Department of Criminal Justice on this site) and/or make an appointment with the Chief of University Police, so appropriate and allowable information can be shared about level 2 or 3 sex offenders.

Please be informed that e-mail or phone call inquiries cannot be accepted on this topic.

Office of the Dean of Students

The Office of the Dean of Students is probably best known for administering college judicial action, whereas, it is merely one function of the Office. It is more appropriate to view the Office of the Dean of Students as an area of advocacy for students. It is the primary place for students to receive guidance,
assistance, resource information, and referral to the appropriate person or office. Located in Laffin Hall, Room 314, the Office of the Dean of Students additionally coordinates and administers:

- Campus Judicial Procedures
- New Student Orientation
- Federal Financial Aid Waivers
- Student participation in Commencement

The Office of the Dean of Students can be reached at 631-420-2104 or fax at 631-420-2613.

Student Code of Conduct

Farmingdale State College is committed to providing an environment in which living and learning can occur. In order to function effectively and to provide an educational climate in which members can fulfill their academic pursuits and the educational objectives of the campus community, the college has established guidelines for defining individual rights and responsibilities as outlined in this Student Code of Conduct. This Student Code of Conduct has been adopted for the purpose of maintaining a quality of life that shares rights, privileges and responsibilities among its citizens, not for the purpose of duplicating public statutes. Respect for the dignity and rights of students, staff, faculty, and administration is expected by all individuals and groups in the campus community. Alleged violations of the Student Code of Conduct, local, state or federal statutes on campus will not be tolerated and are subject to the campus judicial process. Each student, as a representative of the College, is expected to uphold the good name of the College and respect the rights and privileges of the College community. As such, incidents which occur off campus that are alleged violations of local ordinances, State or Federal law on or off the College's premises, or at College sponsored or supervised activities where said alleged violations pose a possible threat and/or danger to the safety of the campus community may be adjudicated on campus. The College will exercise this option when:

- The student(s) can be reasonably considered a possible threat and/or clear danger to the safety of the College community.
- The academic integrity, processes and/or functions of the College are violated.

Disciplinary action by the College shall be independent of any criminal or civil proceedings. The campus judicial procedures, established to respond to these alleged violations, do not duplicate public court procedures, but protect the campus community's interests.

The President of the College recognizes the rights of designees including University Police, to enforce all regulations, policies, license agreements, laws and codes on campus. If any individual allegedly violates the laws, Student Code of Conduct or campus policies, a President's designee will institute proceedings against the offenders. Alleged violation of the law or campus policies may result in EXPULSION/SUSPENSION from the College and/or other disciplinary action.

Alleged violation of the Student Code of Conduct is listed under two (2) categories: Level I and Level II. Any violation is strictly prohibited and may result in disciplinary action ranging from a warning letter to probation, suspension or dismissal from the College.

The Student Code of Conduct may be found in its entirety in the Student Handbook and on Farmingdale State's web site under ‘Policies.’

Academic Integrity Policy and Disciplinary Procedures

Each member of the Farmingdale State College campus community is expected to maintain academic integrity. Farmingdale State College has developed regulations concerning academic dishonesty and integrity to protect all students and to maintain an ethical academic environment. This includes prohibiting any form of academic dishonesty as outlined below.

Academic dishonesty cannot be condoned or tolerated in a college community. Such behavior is considered a violation of the Student Code of Conduct, and students found guilty of committing an intentional act of fraud, cheating or plagiarizing will be disciplined and face penalties.

The College regards academic dishonesty as an intentional act of fraud, in which a student seeks to claim credit for the work or efforts of another individual without correct documentation, or uses unauthorized, undocumented or fabricated information in any academic exercise.

The College also considers academic dishonesty to include forging of academic documents, intentionally impeding or damaging the academic work of others, or assisting other students in acts of dishonesty. Academic dishonesty is divided into four categories which are defined as follows:

- Cheating: Intentionally using or attempting to use unauthorized aids in any academic exercise.
- Fabrication: Unauthorized falsification or invention of any information or citation in an academic exercise.
- Facilitating Academic Dishonesty: Knowingly helping someone commit an act of academic dishonesty.
- Plagiarism: Intentionally representing the words or ideas of another as one's own in any academic exercise. This includes words or ideas in either print or electronic format.

Academic dishonesty is morally wrong, and such behavior interferes with learning and intellectual development. Therefore, all members of the campus community have the responsibility to prevent dishonesty, protect honest students, and enforce campus policies. These responsibilities include but are not limited to the following:

- faculty members have the responsibility to establish standards of academic integrity and disciplinary policies in cases of academic dishonesty (consistent with the standards and policies of the College) and to include a statement of those standards on their course syllabi.
- students have the responsibility to abstain from academic dishonesty or facilitating the dishonest behavior of others.

Violation of the academic integrity policy is strictly prohibited and may result in a disciplinary action ranging from a warning letter to probation, suspension, or dismissal from the College with a permanent transcript notation. Please refer to the Student Code of Conduct Article IV and V found on the Farmingdale State College website under “Policies.”
The mission of the Health and Wellness Center is to provide high-quality, cost-effective health and wellness services within a holistic philosophy, working in cooperation with other areas to meet the needs of a diverse student population and enable them to attain their educational goals.

The physical, mental, emotional, spiritual, occupational, environmental, and social/multicultural components of the College's wellness model are incorporated in a multi-disciplinary approach to overall wellness. The Health and Wellness Center is committed to being proactive in addressing overall well-being, quality improvement, and student satisfaction, and in making students partners in their own wellness.

In one setting, two worlds of medicine work in a complementary manner to best address the "whole person" and his/her overall wellness. Acupuncture, chiropractic, massage therapy, yoga/meditation, hypnotherapy, and reiki are available in addition to traditional medical services. A relaxation/romatherapy room is also available to enable students to escape from their busy schedules, to relax, and to alleviate stress.

Nurses are available for immediate assessment, and physicians and a nurse practitioner further evaluate and treat students during clinic sessions. Athletic physical examinations and EKGs are also available, and a women's health clinic is held bi-weekly on Wednesdays, as well. Laboratory services are on site, and many medications are available if needed. Health and Wellness Center staff include registered nurses, physicians, a nurse practitioner, an alcohol and other addictions counselor.

### Student Immunization Policy

Due to New York State law and professional recommendations of the American College Health Association and Centers for Disease Control, all students born on or after January 1, 1957 who are attending an institution of higher education are required to submit proof of immunity to measles, mumps, and rubella. Proof of immunity to measles, mumps, and rubella is required for all students physically taking at least one class on campus, regardless of the number of credits, as follows:

- **Measles** – proof of two measles shots, after one year of age, and at least one month apart; OR physician documentation of measles disease; OR blood test (titer) showing immunity to measles (copy of laboratory report required).
- **Mumps** – proof of one mumps shot given after one year of age; OR physician documentation of mumps disease; OR blood test (titer) showing immunity to mumps (copy of laboratory report required).
- **Rubella** – proof of one rubella shot after one year of age; OR blood test (titer) showing immunity to rubella (copy of laboratory report required).

New York State law also requires that all students read an informational letter about meningitis and available vaccination, which you need to sign and return to the Health and Wellness Center. Resident students must provide proof of meningitis immunization.

Immunization requirements must be fulfilled PRIOR TO THE FIRST DAY OF CLASS, OR STUDENTS WILL BE DISENROLLED AND HAVE A HOLD PLACED ON THEIR STUDENT ACCOUNT.

If students are disenrolled for failure to comply, by law, there will be no refunds issued. Resident students must have the meningitis immunization.

Medical exemptions or deferrals are granted with physician documentation, in accordance with the guidelines of the law. Exemptions are also granted for those submitting documentation of sincere religious beliefs regarding immunizations.

### Personal Counseling Services

The Office of Personal Counseling Services provides a wide range of professional counseling services to all students. These services are free of cost and accepted standards for confidentiality are followed at all times. Counseling is offered for individuals, couples, and groups and every effort is made to arrange meeting times that will fit with a student's academic schedule. Among the areas that can be addressed through the Office of Personal Counseling are anxiety and stress management, coping and problem solving skills, relationship issues, depression, family crisis, trauma and loss, adjustment to college life and living, anger management, communication skills, substance use and abuse, and habit disorders. Specialized assessment services can be arranged and a wide range of educational and personal growth oriented programs are presented throughout the year in settings such as classrooms, residence halls, and student center meeting rooms to provide members of the campus community with opportunities to explore areas of personal interest and development. The Office of Personal Counseling serves as a liaison and information source for students who may be best met by resources in the local community and strives to be available for prompt response to urgent personal and community situations that may arise.

For further information, call 631-420-2006. Personal Counseling is available Monday through Friday, 9:00 a.m. to 5:00 p.m., Tuesday evening by appointment, and 7 days a week, 24 hours a day in an urgent situation.

### Support Services for Students with Disabilities

Farmingdale State College is dedicated to the principle that equal opportunity be available to each student to realize his/her fullest potential. Our services are designed to meet the unique educational needs of currently enrolled students with documented permanent or temporary disabilities. Free services are provided to each student in accordance with his/her needs on a case-by-case basis. The goal is to assist each student with a disability to function as independently as possible, and to participate in university activities according to his/her interests and abilities. Services based on documented individual needs include:

- Pre-enrollment interviews and advisement
- Personal, academic and career counseling
- Registration assistance
- Referral to campus resources for assistance
- Advocacy

Students who seek accommodations (e.g. extra time for tests, readers, sign-language interpreters) are required to meet with the Director of the Office for Students with Disabilities for review of their special needs and present documentation regarding their disability.

For further information contact the Office for Students with Disabilities at 631-420-2411 or 631-794-6174 (Fax 631-794-6173). The Office is located in Laffin Hall.
Career Development Center
The services are available to every student throughout his/her college experience at Farmingdale State College.

Please plan to meet with a counselor during your Freshman year to integrate your academic choices with your career exploration and goals. This is an ideal way to take full advantage of the career development process and prepare for a successful lifetime of career exploration and growth.

The Career Development Center provides the following services to students: career counseling and assessment; resume, interview and job-search preparation; assistance with locating jobs and internships; career workshops; career resource library; on campus recruitment; web-based job search and annual career/job fairs.

The Career Development Center is located on the first floor of Greenley Hall in the Student Success Center area.
To make an appointment to speak with a Career Counselor, please call us at 631-420-2296 or careercenter@farmingdale.edu.

The Academic Advisement and Information Center
The Academic Advisement and Information Center (AAIC) is a hub of activity, essential information, and guidance dedicated to assuring the academic success of all students at Farmingdale State College.

If you have any questions related to academic matters, a good place to turn for answers and referrals is the AAIC. Academic Counselors are available in the AAIC year-round, Monday through Friday (with evening hours) to assist students in many ways:

The Academic Counselors, partnering with faculty advisors, offer guidance to students on degree requirements and course scheduling
The AAIC serves as a one-stop information center where students can have questions answered and receive referrals on such matters as: How do I register for classes? Who is my assigned academic advisor? Is there a pre-health advisor? Where can I get information on study abroad? Where can I get tutoring help in math? Who do I see about my financial aid package? Am I eligible to join an academic honor society? I have been placed on academic probation...what does that mean?

The AAIC, located on the lower level of Greenley Library, is a repository where students can obtain forms and receive guidance pertaining to vital academic matters such as: change of major, course add/drop, application to declare a minor, permission to withdraw from a course.

Hours of operation: Monday through Thursday, 10 am – 7 pm; Fridays, 10 am – 4 pm
Email: advisement@farmingdale.edu or http://csserver.farmingdale.edu/aaic/
Tel: 631-794-6100 Fax: 631-794-6167
The operation of the AAIC is supported by a Title III grant awarded to FSC in 2010 by the U.S. Department of Education.

Educational Opportunity Program
The Educational Opportunity Program (EOP) is an academic and financial aid program that provides admission and ongoing support to eligible disadvantaged students who demonstrate the potential to succeed in college. The EOP provides students with academic, pre-professional and personal counseling services; advocacy; and referrals when appropriate. Eligible students also receive an EOP grant added to their financial package. Students are also provided with various academic support services including tutoring and skill building workshops. All incoming EOP freshman will participate in a mandatory residential summer orientation program designed to strengthen skills and aid in their transition to college. EOP is located in Laffin Hall, Suite 315.

Farmingdale First Program
The Farmingdale First Program is a federally funded TRIO Student Support Services program designed to support the academic success of a select group of students who meet at least one of the following criteria:

- Are first-generation (neither parent/guardian has earned a four-year baccalaureate degree),
- Are low income (as determined by federal guidelines), and/or have a documented disability.

Services provided to chosen participants include a free residential Summer Bridge orientation program for incoming first-year students, a specialized two-semester First-Year Experience course, career exploration and planning (including graduate school preparation), academic advising, financial counseling, referrals to tutoring services, opportunities for undergraduate research or internships, cultural activities, and mentoring. Applications can be completed online at http://csserver.farmingdale.edu/StudentFirstSupport/.

Tutoring Services
The Tutoring Center
The Tutoring Center provides a variety of free services in the area of learning skills to registered students on a walk-in basis. These services include individual and/or group tutoring sessions in most subjects taught at the College and assistance in basic skills in the sciences and business. Study skills workshops, designed to help students develop college-level academic skills, are available in test taking, studying, and note taking. The Tutoring Center provides computer assistance in a number of content areas and also supports remedial work in the basic academic skills.

The Center’s facilities are open to students Monday to Thursday, when classes are in session. The Center is located in Sinclair Hall, Room 160. Those interested in using the services of the Center may do so during open hours or by calling 631-420-2475 or 2476 for an appointment.

Biology Student Resource Center
The Biology Student Resource Center, located in Hale Hall room 114, provides peer tutors and assistance for students taking courses in biology, including majors’ courses in bioscience. The hours of operation and tutors’ schedules are posted outside the room or at the biology department website.

The History, Economics & Politics Student Resource Center
The HEP Student Resource Center located at 223 Memorial Hall provides peer tutors and assistance for students taking courses in history, economics and politics. The hours of operation and tutors’ schedules are posted outside the room or at the HEP department website.
The Language Center
The Language Center provides assistance to students who are taking French, Italian or Spanish and need help reviewing grammar, vocabulary, reading, writing and pronunciation. Tutors are available on a walk-in-basis, at no charge from, Monday through Thursday. Hours are posted outside Room 233 in Memorial Hall or on the modern languages website.

The Math Learning Center
The Mathematics Learning Center provides assistance for students who are experiencing difficulties in mathematics. Tutoring is available on a walk-in-basis, at no charge, from Monday through Thursday. Workshops are given periodically during the semester (particularly for using the TI-89 and for using calculators in statistics). Videos are available for review. Review sessions are given for most courses before final exams. Hours are posted outside Whitman Hall 181 or call the Center at 631-420-2217.

The Writing Center
The Writing Center provides assistance to students who are finding it difficult to prepare written materials for English and other courses. Help is available by appointment or on a walk-in-basis. In addition, students may use the word processors in the Writing Center to compose, revise and print their assignments. Staff members are available to assist students with the use of the word processors. The Writing Center is located in Knapp Hall, 2nd Floor, Room 30.

Veterans Affairs
The Office of Veterans Affairs is affiliated with the Registrar’s Office located in Laffin Hall. It has been established to assist veterans and/or their eligible dependents. The Office of Veterans Affairs coordinates all interaction between the student veteran and the college. Help is offered in areas from admissions and registration to student accounts and course advisement. Acting as a liaison and advocate for the student veteran is of paramount importance in ensuring that the veteran remains at Farmingdale until they receive their degree. The office is also the primary entity behind the Farmingdale chapter of Student Veterans of America. The club focuses on social interaction between veterans and non-veterans alike as well as running fund raisers for various veterans related charities in the region and nationwide. All applications for VA benefits must be filed through this Office. Those eligible to receive benefits must remain in good academic standing and comply with the academic standards for New York State programs. Military coursework may be eligible for college credit. Veterans should contact the transfer credit coordinator at 631-420-2643 to determine eligibility. Upon admission to the College, veterans should contact the VA certifying official to determine how to apply for GI Bill and related benefits. All veterans and/or their dependents must certify attendance monthly. Any changes in the status of the student must be reported to the Veterans Administration within thirty days. In compliance with this requirement, Farmingdale State College monitors the academic progress of all student veterans. Further information may be obtained by calling 631-794-6168.

Finances: Tuition & Fees

Advance Deposits

<table>
<thead>
<tr>
<th></th>
<th>Part-Time</th>
<th>Full-Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuition..........................</td>
<td>$100.00</td>
<td>subject to change</td>
</tr>
<tr>
<td>Room..........................</td>
<td>$50.00</td>
<td></td>
</tr>
</tbody>
</table>

Tuition

<table>
<thead>
<tr>
<th></th>
<th>Part-Time</th>
<th>Full-Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>N.Y.S. Resident</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full-Time..................</td>
<td>$2,635.00</td>
<td>/semester</td>
</tr>
<tr>
<td>Part-Time..................</td>
<td>$220.00</td>
<td>/credit hour</td>
</tr>
<tr>
<td>Non-N.Y.S. Resident</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full-Time..................</td>
<td>$7,160.00</td>
<td>/semester</td>
</tr>
<tr>
<td>Part-Time..................</td>
<td>$597.00</td>
<td>/credit hour</td>
</tr>
</tbody>
</table>

Students taking 12 or more credits are considered full-time and must pay the standard tuition charge.

Room and Board

<table>
<thead>
<tr>
<th></th>
<th>Part-Time</th>
<th>Full-Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residence Hall</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nassau Wing Single........</td>
<td>$3,970.00</td>
<td>/semester</td>
</tr>
<tr>
<td>Nassau Wing Double........</td>
<td>$3,545.00</td>
<td>/semester</td>
</tr>
<tr>
<td>Suffolk Wing Double.......</td>
<td>$3,225.00</td>
<td>/semester</td>
</tr>
<tr>
<td>Quad Single................</td>
<td>$3,610.00</td>
<td>/semester</td>
</tr>
<tr>
<td>Quad Double................</td>
<td>$3,225.00</td>
<td>/semester</td>
</tr>
<tr>
<td>Residence Hall Damage Deposit</td>
<td>$100.00</td>
<td>/academic year</td>
</tr>
<tr>
<td>Common Area Damage Deposit</td>
<td>$75.00</td>
<td>/academic year</td>
</tr>
</tbody>
</table>

Board

- Plan 1: five day meal plan ............ $2,105.00 /semester
- $225 declining dollars
- Plan 2: seven day meal plan ............ $2,175.00 /semester
- $150 declining dollars

College fees

<table>
<thead>
<tr>
<th></th>
<th>Part-Time</th>
<th>Full-Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full-Time Students........</td>
<td>$12.50</td>
<td>/semester</td>
</tr>
<tr>
<td>Part-Time Students........</td>
<td>$.85</td>
<td>/credit hour</td>
</tr>
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</table>

Other registration charges

<table>
<thead>
<tr>
<th></th>
<th>Part-Time</th>
<th>Full-Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student Activity Fee.....</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full-Time..................</td>
<td>$100.00</td>
<td>/semester</td>
</tr>
<tr>
<td>Part-Time..................</td>
<td>$ 8.00</td>
<td>/credit hour</td>
</tr>
<tr>
<td>Health Service Fee........</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full-Time..................</td>
<td>$133.00</td>
<td>/semester</td>
</tr>
<tr>
<td>Part-Time..................</td>
<td>$ 11.00</td>
<td>/credit hour</td>
</tr>
<tr>
<td>Intercollegiate Athletic Fee</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full-Time..................</td>
<td>$169.00</td>
<td>/semester</td>
</tr>
<tr>
<td>Part-Time..................</td>
<td>$ 12.50</td>
<td>/credit hour</td>
</tr>
<tr>
<td>Technology Fee.............</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full-Time..................</td>
<td>$167.50</td>
<td>/semester</td>
</tr>
<tr>
<td>Part-Time..................</td>
<td>$ 13.75</td>
<td>/credit hour</td>
</tr>
<tr>
<td>Transcript Fee.............</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Insurance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Student Insurance*..........</td>
<td>$610.00</td>
<td>/year</td>
</tr>
<tr>
<td>International Student Insurance***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fall (8/15/11-1/14/12)...........</td>
<td>$477.00</td>
<td></td>
</tr>
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</table>
Estimated expenses per academic year:

<table>
<thead>
<tr>
<th></th>
<th>NYS Resident</th>
<th>Non-NYS Resident</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuition*</td>
<td>$5,270.00</td>
<td>$14,320.00</td>
</tr>
<tr>
<td>Fees</td>
<td>1,174.00</td>
<td>1,174.00</td>
</tr>
<tr>
<td>SUBTOTAL – Commuters</td>
<td>6,444.00</td>
<td>15,494.00</td>
</tr>
<tr>
<td>Room and Board (if applicable)</td>
<td>10,800.00</td>
<td>10,800.00</td>
</tr>
<tr>
<td><strong>GRAND TOTALS</strong></td>
<td>$17,244.00</td>
<td>26,294.00</td>
</tr>
</tbody>
</table>

*Non N.Y.S. Resident Students – refer to above for tuition costs.
**Assumes Suffolk Wing Double plus Seven Day Meal Plan

Note: Students should anticipate additional costs for books, supplies, transportation and personal expenses.

Payment of Tuition and Other Charges

Students are afforded the opportunity to complete the registration payment process completely through the mail. For the fall and spring semesters, the front of your student bill indicates the deadline for that particular semester. This information is also available on the Student Accounts web site. The College reserves the right to cancel the schedules of students who have not paid their bill by the payment deadline. Continuing students who register after the prescribed deadline will be assessed a $30 late registration fee. In addition, students who fail to settle their accounts before the first day of classes will be subject to a late payment/administrative fee of up to $50 depending on your liability. The College also reserves the right to assess additional late payment fees, up to a maximum of 4 per semester, inclusive of any assessment made for failure to settle an account before the first day of classes.

Please be aware that once you have registered for classes, you have incurred a financial liability for the cost of these courses. That liability may be cancelled or reduced by subsequent actions taken by the student (withdrawal during the published refund schedule) or by the College (cancellation for non-payment). Students should be aware that if they decide not to attend the College after registering for courses they must withdraw from the course(s) in order to have their liability adjusted and/or a refund processed. Please refer to the Refund Policy section for further details.

The College recognizes that there may be instances such as medical circumstances, serious family situations, deaths and other similar severe events that may prevent a student from attending class(es) for the remainder of the semester for which they are currently enrolled. These serious circumstances may require that the student withdraw from their class(es) and request a refund that is beyond the normal refund schedule and policy. Students should be aware that they have the right to submit such an appeal to the Extenuating Circumstances Committee. The procedure for filing this appeal is detailed under the section Academic Information within this catalog.

Students should be aware that the State University of New York policy required the College to take the following action for students who fail to meet their financial obligations:

1. Deny future registrations
2. Cancel current registrations
3. Withhold transcripts and grade reports
4. Withhold diplomas

Where payment of tuition and other charges is not made, the student’s account is subject to collection actions, including the referral to the Office of the New York State Attorney General.

Tuition Payment Plans

There are payment plans available for students who wish to spread their payments over an extended period of time. For further details, please refer to the Student Accounts web site.
Advance Deposits
An Advance Tuition Deposit of $100 is required according to instructions conveyed in the student’s letter of acceptance. This Advance Deposit is applicable towards tuition due at registration. A Room Deposit of $50 is required of any student who wishes to apply for a room on campus. This fee, which is applicable to the room charge, is due at the time the student submits his/her Housing Application for college housing.

Tuition
Residents of New York State are assessed $5,270 per year as a full-time student. Non-residents of New York State are assessed $14,320 per year as a full-time student. The per credit rates for residents and non-residents are $220 and $597, respectively. Tuition rates quoted above are correct as of the publication of this catalog, and students should be aware that tuition and fees are subject to change without notice by action of the Farmingdale College Council and/or SUNY Board of Trustees.

Fees
The College Fee
The College Fee provides supplemental support to the academic mission of the college.

Placement Testing Fee
Students in need of placement testing in English or Mathematics will be charged a placement testing fee of $30. For criteria on who is required to take the placement test(s), please refer to the Academic Information section of this catalog.

Student Activity Fee
As stated in the policy of the Board of Trustees, this fee supports student activities, including admission to home athletic contests, a subscription to the student newspaper, and a copy of the Islander, the student yearbook for day students. This fee includes week-end use of the pool and gymnasium facilities.

Intercollegiate Athletic Fee
This fee supports the College’s Intercollegiate Athletic program, which offers male and female student athletes a wide variety of opportunities for participation. Intercollegiate Athletics at Farmingdale function within guidelines established by the Board of Trustees of the State University of New York. The College is a Division III member of the National Collegiate Athletic Association (NCAA).

Health Service Fee
A Health Service Fee is required of all students by New York State Law. The fee includes nursing assessment and medical clinics, some medications, and emergency first aid. Students must have a completed Health Report and Physician’s Certificate on file to be eligible for all services except emergency care.

Technology Fee
A Technology Fee has been implemented to support the increased use of computing and communication technology in the delivery of academic course offerings and administrative services available to all students. The Technology Fee will be utilized to support broad-based campus projects which have a positive impact upon technology services and support for use by all students. Examples of projects might include: student Internet access, Web Server/ Browser access to student information, www student course registration, voice response student telephone registration and other activities.

Flight Fee
Students enrolled in the Professional Pilot Program are assessed a $9,000 per semester fee to cover the cost of flight instruction.

Nursing Learning Testing Fee
The Nursing Meds Publishing Learning system is designed to help students to build and use critical thinking and problem solving skills to succeed in the nursing program and the NCLEX licensing exam.

Liability Insurance Fee
Students registered in Dental Hygiene, Medical Laboratory Technology and Nursing programs are assessed a Liability Insurance Fee of $15 per semester to cover the cost of clinical liability insurance.

Late Registration Fee
A late registration fee of $30 may be assessed if students do not register before the prescribed deadline.

Late Payment/Administrative Fee
A late payment/administrative fee of up to $50 will be assessed to all students who do not submit payment for their balance due to the College. For further details, see the Billing Policy.

Drop/Add Fee
A Drop/Add fee of $20 per session will be assessed for all adjustments occurring after the established cut-off date for these transactions.

Vehicle Registration Fee
The Vehicle Registration Fee of $30 covers the cost of the sticker for parking privileges on the campus for the entire academic year.

Parking fines of $35 will be assessed to all vehicles parked illegally, as defined by Campus Traffic regulations. Additionally, a fine of $150 will be assessed to vehicles parked illegally in designated handicapped spaces. Students may obtain parking permits online utilizing their oasis pin by selecting ‘parking’ on the Farmingdale quick links web page and following the links provided for purchasing permits.

Resident Students
Room Charges
Room charges cover the cost of a room on a seven-day-a-week basis. All pertinent information on the subject is provided in the Residence License and “The Guide.”

Board Charges
The College requires that all students residing in residence hall facilities on campus purchase either a 5 day meal or a 7 day meal plan. In addition, a meal plan may be purchased on an optional basis by commuter students. Additional information is available at both the “Food Service-Aramark” and “Auxiliary Services Corporation” links on the Farmingdale State College web page.

Telephone Service
On-campus telephone service is available in all residence facilities. Campus and emergency calls are provided free of charge. Residents are responsible for their own telephone sets.

Residence Hall Damage Deposit
A Residence Hall and common area Damage Deposit is
required from all resident students. If no assessments are made against the student’s deposit, the deposit will be refunded in full at the end of the academic year. This deposit is payable at the time of registration.

**Insurance**

**Resident and Commuter Students**

Resident students will have the student insurance added to their bill and are required to sign a waiver and submit proof of personal insurance if they wish to cancel this coverage. Resident students may waive the insurance during the first ten days of the semester only. Commuter students may add this fee as an optional charge. The Student Health Brochure and other information is available online at Farmingdale.edu under Quick Links, “ Auxiliary Service” and “Insurance/Student Health.”

**International Students**

Students from countries other than the United States are required to be covered by the SUNY International Student and Scholar Health Insurance Program. Please note that tuition and fees are subject to change without notice by action of Farmingdale College Council and/or SUNY Board of Trustees. A charge of $477.00 per semester will be added to the student bill. The complete brochure is available on the Farmingdale State College web page under “Additional Information on Fees” from the “Payment and Fee Information” link.

**Identification Card Replacement Fee**

An Identification Card Replacement Fee is assessed to all students to cover the cost of the material and labor when replacement of an I.D. card is requested.

**Transcript Fee**

This fee is assessed on a per semester basis to all students to cover the cost of printing and mailing transcripts on the student’s behalf to other institutions.

**Returned Check Charge**

A Returned Check Service Charge is assessed against the student when a check is returned unpaid by the bank against which it is drawn. In addition, a late payment fee is assessed to the account at the same time. The College will not accept any more personal checks from a student who has had a check returned against his or her account. All liabilities will have to be paid by cash, or by certified or bank check.

**Refund Policy**

**Refund Policy For Cancelled Courses**

The College takes responsibility to see that any student who is enrolled in a course that is subsequently cancelled by the College will receive a full refund of all appropriate tuition and fees.

**Refund Policy Before Classes Begin**

Students who elect to cancel their schedule through the last business day before classes begin must notify the Registrar either in person or in writing of their intention. Letters can be faxed to 631-420-2275. The College will process a refund for all appropriate tuition and fees.

**Refund Policy After Classes Begin**

If students decide to withdraw from a course or from the College, they must do so by completing the necessary forms. Unless students follow the official withdrawal procedure, their fiscal liability for the courses will remain in place. Failure to submit payment, stopping payment on a check, or not attending classes does not absolve students of this fiscal obligation. Your liability to the College will be determined by the refund schedule applicable at the time the withdrawal process is completed. The refund schedule for the individual fees is as follows:

**Tuition Refunds**

**Fall and Spring Semester**

- First Week: 100%
- Second Week: 70%
- Third Week: 50%
- Fourth Week: 30%
- Fifth Week: 0% refund

**Single Summer Session**

- First week: 100%
- Second week: 25%
- Third week: 0% refund

The College runs several courses that do not fall into the normal 15-week semester. The refund schedule for these courses is published separately and is available in the Student Accounts Office.

**Refund Policy for Dismissals**

Any student who is expelled or suspended from school by the President of the College or his designee, or the Dean of Students, will not be eligible to receive tuition or any other refund.

**Tuition and Fee Refund Policy for Military Service**

There shall be no tuition or fee liability established for a student who withdraws to enter military service prior to the end of an academic term for those courses in which the student does not receive academic credit.

Note: The term “military service” means full-time active duty in the Army, Navy (including Marine Corps), Air Force, Coast Guard of the United States, or qualifying National Guard duty during a war, other military operation, or national emergency as defined in Section 5 of the Higher Education Relief Opportunities for Students (HEROES) Act (Public Law 108-76). Enlistment under a delayed enlistment plan does not constitute “full-time duty” until the student is required to leave school on the effective date of active duty as stated in the student’s orders.

A student who is a member of a National Guard, Army, Navy or Air Force Reserve unit that is not called up for duty as defined above, is entitled to a refund only, if in the judgment of the appropriate campus officer, the student is unable to attend classes due to hardship beyond the student’s control and the student has made bona fide efforts to permit continued class attendance. Documentation of membership on active duty in the military service shall be provided to and retained by the campus. If students decide to withdraw from a course or from the College, they must do so by completing the necessary forms. Unless students follow the official withdrawal procedure, their fiscal liability for the courses will remain in place. Failure to submit payment, stopping payment on a check, or not attending classes does not absolve students of this fiscal obligation. Your liability to the College will be determined by the refund schedule applicable at the time the withdrawal process is completed. The refund schedule for the individual fees is as follows:

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upon proper certification of such change from a base education
service officer or other appropriate military official shall be
deemed to have incurred no liability for tuition and fees due
from the student, as opposed to tuition and fees paid by the
federal government on the student’s behalf (to which federal
regulations on return of such funds apply).

College Fee
The College Fee is not refundable except for the following:
military service, request of the Chief Administrative Officer, and
cancelled course. Exceptions to these limitations will be granted
only under extenuating circumstances and must be documented.

Student Activity Fee, Health Service Fee, Intercollegiate
Athletic Fee, Technology Fee
These four fees are refunded according to the same schedule
as tuition charges.

Sickness Insurance
The student health insurance fee will be refunded only through
the first ten days of classes.

Transcript Fee
The transcript fee is refundable at 100% only through the first
week of classes.

Room and Board
Residence hall and meal plan fees are refundable on a prorated
basis according to the following schedule, providing that the
student follows the check-out procedure through Residence
Life.

Time-Frame............................................Liability............Refund
First week..............................................10%..............90%
Second week ..........................................25%............75%
Third week..............................................50%..............50%
Fourth Week.........................................75%..............25%

Any student who has been accorded due process and has been
dismissed from the residence halls for disciplinary reasons will
receive neither full nor partial refund of room, board or fee payments.

If any student self initiates withdrawal from the residence halls
subsequent to the refund period, the student may retain the
board meal plan to which they originally subscribed. There is no
conversion option.

Any resident student has the opportunity to change their meal plan
during the first two weeks of the fall and/or spring semester. First, go
to the Student Accounts office in Laffin Hall. Then, go to the Dining
Services office in Knapp Hall to update your account.

Room and Board Refunds for Military Service
Students who withdraw from the residence halls to enter military
service (following the same criteria as defined in “Tuition and Fee
Refund Policy for Military Service” above) prior to the end of
the academic term will have their room and board charges prorated
according to the week that the student officially withdraws from
the residence halls. The fall and spring terms operate under a
fifteen week semester, which shall be the denominator for the re-

Advance Tuition Deposit
Requests for refund of the Advance Tuition Deposit should
be directed in writing to the College’s Admissions Office on
or before May 1 for the fall semester, and November 1 for the
spring semester. Refund requests received after these dates will
be honored only for one of the following reasons:

1. Failure on the part of the accepted applicant to fulfill all
admissions conditions as stated in the student’s letter of
acceptance.

2. Circumstances considered to be beyond the control of the
applicant as judged by the Chief Administrative Officer of the
College, or his designee, who is the Chief Fiscal Officer.

3. Advance Deposits received for acceptances which are issued
after April 1 or November 1 will be refundable providing such
requests are received within 30 days after notification of
acceptance, and providing further that such notification is
received before the first day of classes in the term for which
the Advance Deposit was made.

Advance Room Deposit
The Advance Room Deposit will be refunded in full if either of
the following two conditions are met:

1. If the application for refund is made by June 15 or within 30
days after notification of acceptance, whichever is later.

2. If the application for refund is made later than as stated
above, the refund will be granted only if:
   a. The student withdrawals due to the part of the accepted applicant to fulfill all
   b. The student withdrawals due to conditions beyond his/ her control as certified and approved by the Chief
   Administrative Officer of the College.

Advance Deposit Refunds that are not requested within this
timetable will not be refunded and will be forfeited to the State
of New York.

FINANCIAL AID
To determine a student’s financial aid package, we subtract the
calculated Family Contribution, as determined through the FAFSA, from
the College’s Cost of Attendance budget. The Cost of Attendance
includes:

Direct costs (Actual Tuition, Fees, and On Campus Resident charges);
and Indirect costs (Books, Supplies, Transportation, Off Campus Room
and Board allowance, Personal Expenses and others)

Examples of Cost of Attendance at Farmingdale State
College

Full-Time NYS Resident Living Home with Parent(s)
Tuition and Fees ................................................. $ 6,444
Books and Supplies ........................................... $ 1,200
Room and Board ............................................... $ 2,400
Transportation................................................... $ 1,850
Personal Expenses ............................................. $ 1,300
Total................................................................. $13,194

Full-Time NYS Resident Living On Campus
A Verification Worksheet will also be sent to you for completion. If there are any discrepancies in the data that was reported on the FAFSA/Renewal FAFSA, you should be aware that by not submitting the required tax returns, schedules, W2 forms and Verification Worksheet as requested all aid is placed on hold, including loans. When you apply for Federal aid, you sign a certification agreeing to give proof of all the information you have on the form, if asked. As such, if you do not give the proof, you will not receive aid. If you withdraw from the college prior to completing verification you will be given 2 additional weeks to supply the requested verification documents. If you do not submit the documentation, your aid will be cancelled.

**FEDERAL GRANTS AND LOANS:**

**Federal Pell Grant**

Eligibility: This is a federal grant for matriculated students (in a degree granting program) who meet the financial need guidelines of the program, are in good academic standing and are making satisfactory academic progress.

Amount per year: $555 to $5,550 depending on the student’s enrollment status and federal funding for this program.

**Federal Supplemental Educational Opportunity Grant (SEOG)**

This is a federal grant that may be awarded to Pell eligible students. Based amount per year: $100 to $3000

Eligibility: Awarded to students who have exceptional financial need and who are enrolled as matriculated students. This award is renewable annually and is based on the FAFSA determination of continuing need, the availability of funds, good academic standing, satisfactory progress towards a degree and filing the FAFSA each year by the Farmingdale State College filing deadline of April 1st.

**Federal Direct Loan Program – Direct Subsidized and Direct Unsubsidized**

Eligibility: This loan program enables students to borrow funds directly from the federal government to help pay educational costs. Students must file the FAFSA in order to establish eligibility for the Federal Direct Loan Program. Students must be registered at least half-time in a matriculated program, be in good academic standing, and be maintaining satisfactory progress towards a degree in order to borrow a loan. If a student is offered and accepts a Federal Direct Subsidized and/ or a Federal Direct Unsubsidized loan, Entrance Counseling and an electronic Master Promissory Note (e-MPN) must both be completed online at www.studentloans.gov before any funds can be issued to the College on the student’s behalf. A loan may never exceed the cost of education minus other financial aid received. Loan proceeds are not disbursed until at least 30 days after the first day of classes.

Eligibility for the Federal Direct Subsidized loan program is based on financial need as determined by the FAFSA. The federal government will subsidize the loan by paying the interest on the loan while the student is enrolled at least half-time in a matriculated program. Interest will begin to accrue on the loan six months after the student ceases to be enrolled at least half-time or ceases to be enrolled in a matriculated program; this is typically when repayment of the loan principle begins as well.

The chances for each individual to receive financial aid depend on a wide variety of circumstances. Some of which include family income and size, assets and other variables. Since every case is unique, all students who are enrolled in a matriculated (degree granting) program are encouraged to file for financial assistance. Applications and information concerning various types of financial aid may be obtained from the Financial Aid Office, Room 324, Laffin Hall.

Total

<table>
<thead>
<tr>
<th>Category</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuition and Fees</td>
<td>$6,444</td>
</tr>
<tr>
<td>Books and Supplies</td>
<td>$1,200</td>
</tr>
<tr>
<td>Room and Board</td>
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<tr>
<td>Transportation</td>
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<tr>
<td>Personal Expenses</td>
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</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$21,779</strong></td>
</tr>
</tbody>
</table>

*Based on an average of on-campus room rates and meal plans

The costs listed above are for estimating only. Charges for tuition, fees, room and meal plan are re-evaluated each year and are subject to the New York State budget process.

Applying for financial aid can seem to be a complicated and complex procedure. With correct information and assistance from the Financial Aid Office, the process can be simplified. The office is located in room 324, Laffin Hall.

Federal and state governments, businesses, industry, organizations and the University endeavor to provide students with a variety of scholarships, grants, loans and work programs.

The Financial Aid package is a combination of grants, loans, employment and scholarships which will be used to meet a student’s financial need. The mix of the package depends upon the student’s need and the available funds.

Farmingdale State College

The Financial Aid Office is located in room 324, Laffin Hall.

Federal Supplemental Educational Opportunity Grant (SEOG)

This is a federal grant that may be awarded to Pell eligible students. Based amount per year: $100 to $3000

Eligibility: Awarded to students who have exceptional financial need and who are enrolled as matriculated students. This award is renewable annually and is based on the FAFSA determination of continuing need, the availability of funds, good academic standing, satisfactory progress towards a degree and filing the FAFSA each year by the Farmingdale State College filing deadline of April 1st.

Federal Direct Loan Program – Direct Subsidized and Direct Unsubsidized

Eligibility: This loan program enables students to borrow funds directly from the federal government to help pay educational costs. Students must file the FAFSA in order to establish eligibility for the Federal Direct Loan Program. Students must be registered at least half-time in a matriculated program, be in good academic standing, and be maintaining satisfactory progress towards a degree in order to borrow a loan. If a student is offered and accepts a Federal Direct Subsidized and/ or a Federal Direct Unsubsidized loan, Entrance Counseling and an electronic Master Promissory Note (e-MPN) must both be completed online at www.studentloans.gov before any funds can be issued to the College on the student’s behalf. A loan may never exceed the cost of education minus other financial aid received. Loan proceeds are not disbursed until at least 30 days after the first day of classes.

Eligibility for the Federal Direct Subsidized loan program is based on financial need as determined by the FAFSA. The federal government will subsidize the loan by paying the interest on the loan while the student is enrolled at least half-time in a matriculated program. Interest will begin to accrue on the loan six months after the student ceases to be enrolled at least half-time or ceases to be enrolled in a matriculated program; this is typically when repayment of the loan principle begins as well.

For the 2011-12 academic year, the interest rate upon repayment will be 3.4% and fixed. There is a 1% origination fee with a 0.5% up-front interest rebate to borrow the loan.
The Federal Direct Unsubsidized loan is available to all students enrolled at least half-time, regardless of financial need as determined by the FAFSA. Interest will accrue on the loan while the student is enrolled in classes. The student may choose to pay the interest while in school, or defer the interest until repayment of the loan principle begins. For the 2011-12 academic year, the interest rate on the Federal Direct Unsubsidized loan is 6.8% and fixed. There is a 1% origination fee with a 0.5% up-front interest rebate to borrow the loan. A student who is a freshman (0-23 credits earned) dependent student may borrow up to $5,500 for the academic year, and an independent student may borrow up to $9,500 (the Federal Direct Subsidized loan may not exceed $3,500). A sophomore (24-59 credits earned) dependent student may borrow up to $6,500 for the academic year, and an independent student may borrow up to $10,500 (Federal Direct Subsidized loan may not exceed $4,500). Students enrolled in Bachelor degree programs who have earned 60+ credits may borrow up to $7,500 as a dependent student and $12,500 as an independent student (Federal Direct Subsidized loan may not exceed $5,500). A student in an Associate Degree program may not exceed the sophomore loan limit. Certificate students should refer to the Office of Financial Aid for information on their annual loan limits.

Repayment of the Federal Direct loans begin six months after a student graduates, leaves the College, or falls below half-time status. It is therefore mandatory for all students who have borrowed Federal Direct loans to complete Exit Counseling online at the U.S. Department of Education’s website (www.nslds.ed.gov). This will provide information on the Federal Direct Loans including loan types, disbursed amounts, outstanding principal and interest, and the total amount of all loans. Typically, loans may be repaid over the course of ten years. The monthly payment will depend upon the total amount borrowed, interest rate assessed, fees calculated, and repayment period for each different loan.

The Federal Direct Parent Loan (PLUS) enables either a biological, adoptive, or step-parent of a dependent student to borrow a loan up to the cost of education, less financial aid, to meet the costs of education. The PLUS loan is not based on financial need, the student must file a FAFSA to be eligible. The parent must apply for the Federal Direct PLUS loan online at www.studentloans.gov, must pass a credit check, and must complete an E-MPN. The Federal Direct PLUS loan will accrue interest at 7.9% for the 2011-12 academic year. There is a 4% origination fee with a 1.5% up-front interest rebate to borrow the loan. The repayment period for a Direct PLUS Loan begins at the time the PLUS loan is fully issued to the College, and the first payment is due within 60 days after the final disbursement. However, the parent can contact the loan servicer to make arrangements to defer repayment of Federal Direct PLUS if approved. If the parent does not get approved for a Federal Direct PLUS loan, the student may request to borrow additional Federal Direct Unsubsidized Loan funds and should contact the Office of Financial Aid for further details.

Federal Perkins Loans
This is a loan program that is interest free to the student while he or she is attending school at least half-time, in a matriculated program. Campus based amount per year: up to $3,000.

Eligibility: This is a federally funded loan program. This loan may be renewed annually and is based on the FAFSA determination of continuing need, the availability of funds, good academic standing, satisfactory progress towards a degree and filing the FAFSA each year by the Farmingdale State College filing deadline of April 1st.

Repayment: Repayment of the Federal Perkins Loan begins nine months after the student graduates, leaves school or drops below half-time status. The interest rate is currently fixed at 5%. The repayment term may be up to 10 years depending on the total amount borrowed. The minimum monthly payment is $40.

Cancellation: Cancellation of interest and principal may be obtained if the following conditions are met.
1. Full-time teacher in a designated elementary or secondary school.
2. Full-time special education teacher – includes teaching disabled children in a public or other nonprofit elementary or secondary school.
3. Full-time qualified professional provider of early intervention services for the disabled.*
4. Full-time teacher of mathematics, science, foreign languages, bilingual education, or in other fields designated as teacher shortage areas.*
5. Full-time employee of a public or nonprofit child or family service agency, providing services to high-risk children and their families from low-income communities.*
6. Full-time nurse or medical technician.*
7. For loans made on or after November 29, 1990 – service as a full-time law enforcement or corrections officer.
8. Full-time service as a staff member in a Head Start Program.
9. Service as a Peace Corps or VISTA volunteer – up to 70% cancellation.
10. Service in the Armed Forces – up to 50% cancellation for service in areas of hostility.

*This cancellation benefit applies to Federal Perkins Loans made on or after July 23, 1992.

Federal Work Study Program
This program provides part-time jobs both on and off campus. Campus based amount per year: up to $3,000.

Eligibility: Open to all matriculated students who have established financial need and who are in good academic standing and maintaining satisfactory progress towards their degree. The amount of Federal Work Study (FWS) a student is awarded is determined by their need. The maximum award for the year is $3,000. A student may work a maximum of 20 hours per week while school is in session. If the student is awarded FWS he or she must return to the financial aid office for placement and to complete their employment forms. FWS is disbursed to the student via bi-weekly payroll.

STATE AID PROGRAMS
Complete information regarding all scholarships and grant programs from New York State is available at www.hesc.com

Tuition Assistance Program (TAP)
The New York State Tuition Assistance Program (TAP) helps eligible New York residents pay tuition at approved schools in New York State. Depending on the academic year in which you begin study, an annual TAP award can be up to $5,000. Because TAP is a grant, it does not have to be paid back. Effective for the 2007-08 academic year and thereafter, TAP is available for students attending SUNY, CUNY and not-for-
profit independent degree-granting colleges on a part-time basis. To be eligible for Part-time TAP you must have been a first-time freshman in the 2006-07 academic year or thereafter, have earned 12 credits or more in each of two consecutive semesters, and maintain a “C” average.

Amount per year: $500 to $5,000 (as of the 2010-11 academic year). Award amounts are determined each year by the New York State Legislature.

Eligibility: All matriculated students who are New York State residents and whose family New York State net taxable income is within allowable limits in the preceding tax year, are eligible for a TAP grant to attend a New York State institution. Students must file the FAFSA and the Express TAP Application (ETA). The ETA will be forwarded to the student by New York State Higher Education Services Corporation (HESC) after the FAFSA has been processed. The TAP codes for Farmingdale State College are 3025 for students in a program leading to an Associate Degree or students in an Undeclared Major. The TAP code for students enrolled in a Bachelors Degree program is 6025. TAP awards are subject the New York State budget process. TAP must be re-applied for each academic year. In addition to re-filing each academic year, continuing students must meet program pursuit and academic standards established by the State University of New York.

Aid for Part-time Study (APTS)

This program provides assistance for undergraduate students who are New York State residents, attending college part-time, in New York State. Part-time attendance is defined as between 3 to 11 credits.

Amount per year: Actual tuition charges or $1,000 per semester, whichever is less.

Eligibility: The student must be a New York State resident, who is a matriculated student in good academic standing, attending a New York State school. If a student is married, without dependents, the New York State net taxable income may not exceed $34,250. If the student was claimed or was eligible to be claimed as a tax dependent on the parent’s income tax, or the student was eligible to claim his or her own tax dependents other than a spouse, the family’s New York State net taxable income can be as high as $50,550. Income limits are defined each year by the New York State legislature. Awards can not exceed tuition and are based on financial need as defined by APTS legislation. Applicants must file an APTS application, available at the financial aid office on or about July 15th, each year. APTS funding allocations are subject to the New York State budget process and may vary from year to year.

Educational Opportunity Program

This program provides grant assistance to students who meet the EOP academic and financial guidelines for admission to the college and are full-time, matriculated students. Amount per year varies based on the student’s enrollment status, class year, and commuter or residential dorm status. EOP grant awards are subject to the New York State budget process.

Other New York State Grants, Scholarships and Awards

Scholarships

Flight 3407 Memorial Scholarship provide financial aid to children, spouses and financial dependents of individuals killed as a direct result of the crash of Continental Airlines Flight 3407 on February 12, 2009.


The Military Service Recognition Scholarship provides financial aid to children, spouses and financial dependents of members of the armed forces of the United States or of a state organized militia who, at any time on or after Aug. 2, 1990, while a New York State resident, died or became severely and permanently disabled while engaged in hostilities or training for hostilities. For study in New York State.

The NYS Math & Science Teaching Incentive Scholarship provides grants to eligible full-time undergraduate or graduate students in approved programs that lead to math or science teaching careers in secondary education.

The NYS Memorial Scholarship provides financial aid to children, spouses and financial dependents of deceased firefighters, volunteer firefighters, police officers, peace officers, and emergency medical service workers who have died as the result of injuries sustained in the line of duty in service to the State of New York. For study in New York State.

Scholarships for Academic Excellence are awarded to outstanding graduates from registered New York State high schools. Awards are based on student grades in certain Regents exams. For up to five years of undergraduate study in New York State.

The NYS World Trade Center Memorial Scholarship program guarantees access to a college education to the families and financial dependents of the victims who died or were severely and permanently disabled in the Sept. 11, 2001 terrorist attacks and the resulting rescue and recovery efforts.

The Robert C. Byrd Honors Scholarship is a competitive federal honors program that provides scholarships to academically talented high school seniors who are New York State residents and plan to attend any approved institution of higher education in the United States. Statutory authority for the Robert C. Byrd Honors (Byrd) Scholarship ended on April 15, 2011. As a result, no new awards for the 2011-12 academic year will be given. Byrd Scholarship payments for returning students will not be paid.

The Senator Patricia K. McGee Nursing Faculty Scholarship program seeks to increase the number of educators and adjunct clinical faculty teaching nursing education in New York State.

Awards

NYS Aid to Native Americans provides aid to enrolled members of tribes listed on the official roll of New York State tribes or to the child of an enrolled member of a New York State tribe. For study in New York State.

NYS Regents Awards for Children of Deceased and Disabled Veterans provides to students whose parent(s) have served in the U.S. Armed Forces during specified periods of war or national emergency.

Segal AmeriCorps Education Award provides to New York State residents interested in high quality opportunities in community service. Vietnam, Persian Gulf, Afghanistan, or other eligible combat veterans matriculated at an undergraduate or graduate degree-
granting institution or in an approved vocational training program in New York State are eligible for awards for full or part-time study.

**Scholarships and Awards:**
Scholarships and awards are available to all students, based on certain criteria, in both the associate and bachelor degree programs. To receive information on Farmingdale State College scholarship programs, please go to the website at www.faoffice@farmingdale.edu. For private scholarship sources, please visit www.fastweb.com. If you have any questions or need assistance filling out a scholarship application, you may contact the Financial Aid office at 631-420-2578.

**Student Government Emergency Loans**
The Student Government Association has funded, through the mandatory student activity fee, short-term emergency loans under the joint administration of the Student Activities Office and the Auxiliary Service Corporation. These loans are available to day and evening students. Applications for such loans are available at the Auxiliary Service Corporation Office, located in Laffin Hall, and may be granted once per semester in amounts up to $50. Loans are subject to the current Student Government Association guidelines. No loans will be approved in amounts up to $50. Loans are subject to the current Student located in Laffin Hall, and may be granted once per semester in amounts up to $50. Loans are subject to the current Student

**Financial Aid Policies**
1. The Financial Aid Office reserves the right to request additional information and/or documentation from the student or parent(s), as required, before disbursing aid to the student's Farmingdale State College account.
2. Financial Aid is not available to international students who are studying at Farmingdale State College.
3. In order to receive aid, a student must be enrolled in a matriculated program. Aid is based on the number of credits the student is enrolled in at the end of the first week of classes. Adjustments in the amount of financial aid that the student is eligible for may be made for changes to the number of credits the student is attempting.
4. In order to receive financial aid at Farmingdale State College a student may not be in default on a Perkins (formerly National Direct Student Loan) or Stafford Loan. The student can not receive aid if he/she owes a refund on a Pell or SEOG grant.
5. Federal and New York State legislation mandate that all students receiving financial aid meet institutional, New York State and federal standards of Satisfactory Academic Progress as defined qualitatively by Grade Point Average and quantitatively by Pace of Progression (percentage of all credits attempted that are earned within a maximum time frame) in order to continue to receive federal and/or state aid. Farmingdale State College's academic progress requirements are fully explained in the chapter of this catalog titled "Academic Information".
6. The academic progress of a student is reviewed each semester. For students who are receiving financial aid, a determination of continued eligibility is made. Students who no longer qualify for continued financial aid are notified by mail.
7. A student’s enrollment in a program of study abroad approved for credit by the home institution may be considered enrollment at the home institution for the purpose of applying for assistance under the Title IV, Higher Education Amendment programs.

**Satisfactory Academic Progress for Financial Aid**
In order to continue to receive financial assistance in the subsequent semester and thereafter, a student must meet the academic standards below.

**Academic Standards for New York State Programs**
Students are required to complete a certain percentage of courses each term, depending on the number of state awards they have received. The percentage is determined according to the following schedule:

<table>
<thead>
<tr>
<th>No. of Payments</th>
<th>Must Receive a Grade for</th>
</tr>
</thead>
<tbody>
<tr>
<td>1, 2</td>
<td>Pursuit of Program of A-F or P</td>
</tr>
<tr>
<td>3, 4</td>
<td>50% of minimum full time (6 credits)</td>
</tr>
<tr>
<td>5 or more</td>
<td>75% (9 credits)</td>
</tr>
<tr>
<td></td>
<td>100% (12 credits)</td>
</tr>
</tbody>
</table>

Repeated courses will only count toward a full-time schedule and Pursuit of Program if a grade of F or W was received. A course with a grade of F or W can only be repeated once. If this course is repeated again, it would have to be in addition to the 12 credit minimum required in order to be considered full-time. The only exception would be if a minimum grade is required for a particular curriculum. This would have to be approved and documented by the Department Chair in order to be approved.

In addition, a student must meet the minimum academic progress standards. Academic standards for eligibility for TAP programs are available at: http://hesc.com/content.nsf/CA/TAP_Coach. The academic standard requirements can be viewed by clicking on the N-Z link.

A student may have New York State financial aid reinstated if he/she makes up the deficiency without benefit of financial aid or is readmitted to Farmingdale State College after an absence of at least one calendar year. Part-time students receiving New York State assistance (Aid for Part-time Study Program) must meet the academic standards for full-time students as adapted to recognize the reduced enrollment status.

A student who fails to meet the minimum standards whether in Pursuit of Program (number of credits completed every semester with a letter grade of A-F or P) or satisfactory Academic Progress (cumulative number of credits that must be earned, and cumulative (GPA), may apply for a one-time waiver. Students who fail to meet the C-Average requirement (which must be achieved and maintained after receiving the Fourth TAP payment) may apply for a C-Average waiver which may be issued more than once.

The waiver is not automatically approved; a reason for the student’s inability to meet the standards must be documented. In order to apply for a waiver, a student must present exceptional or extraordinary circumstances which must be approved by officials for the institution and maintained on file for review by HESC. Institutional officials are required to deny the waiver if the facts concerning a student’s failure to adhere to standards do not warrant approval.
Academic Standards for NYS Programs

Program: Baccalaureate Program
Calendar: Semester 2010-11 and thereafter (non-remedial students)

Before Being Certified for This Payment

<table>
<thead>
<tr>
<th>1st</th>
<th>2nd</th>
<th>3rd</th>
<th>4th</th>
<th>5th</th>
<th>6th</th>
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<th>10th</th>
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<td>81</td>
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<td>111</td>
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</tbody>
</table>

A Student Must Have Accrued at Least This Many Credits

With At Least This Grade Point Average

0 1.5 1.8 1.8 2.0 2.0 2.0 2.0 2.0 2.0

Academic Standards for NYS Programs

Programs: Associate Program
Calendar: Semester 2010-11 and thereafter (non-remedial students)

Before Being Certified for This Payment

<table>
<thead>
<tr>
<th>1st</th>
<th>2nd</th>
<th>3rd</th>
<th>4th</th>
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<td>6</td>
<td>15</td>
<td>27</td>
<td>39</td>
<td>51</td>
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</tbody>
</table>

A Student Must Have Accrued at Least This Many Credits

With At Least This Grade Point Average

0 1.3 1.5 1.8 2.0 2.0

Academic Standards for Federal Financial Aid and EOP Funding

In order to receive federal grants and/or loans and EOP funds a student must meet the satisfactory academic standards for receipt of federal financial aid.

All credits attempted, whether or not the student ever received financial aid, must be evaluated in order to determine if a student is eligible for financial aid in subsequent terms. Program standards for financial aid will be evaluated at the end of each semester. Non-credit course work will be evaluated according to the University standards. A student who fails to meet the progress standards, but who is permitted to remain in school as a matriculated student, will be allowed one semester on financial aid probation. Only one semester of financial aid probation can be granted to a student.

Academic Standards for Federal Financial Aid

<table>
<thead>
<tr>
<th>Total Credits</th>
<th>Successful Achieved Credits</th>
<th>Cumulative GPA</th>
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Associate Degree

<table>
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</thead>
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<td>0-12</td>
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<tr>
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</tr>
<tr>
<td>177-181</td>
<td>150</td>
<td>2.0</td>
</tr>
</tbody>
</table>

Incompletes, Withdrawals and Repeated Courses will be counted in Attempted Credits and affect your Pace of Progression. Transfer Credits will be included in Total Credits Attempted and Earned.
The ten General Education Competency Areas with the courses which have been approved to fulfill the student learning objectives in each area are as follows:

<table>
<thead>
<tr>
<th>Basic Communication</th>
<th>6 credit requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business 141:</td>
<td>Contemporary Business Communication</td>
</tr>
<tr>
<td>English 101:</td>
<td>Composition Rhetoric</td>
</tr>
<tr>
<td>English 209:</td>
<td>Technical Communications</td>
</tr>
<tr>
<td>Speech 130:</td>
<td>Public Speaking</td>
</tr>
<tr>
<td>Speech 330:</td>
<td>Technical Speech</td>
</tr>
<tr>
<td>Speech 331:</td>
<td>Advanced Oral Communications (also dual listed as PCM 331)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Humanities: 3 credit requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art 200: History of Graphic Design</td>
</tr>
<tr>
<td>Art 201: Survey of Art History: Prehistoric Times through Middle Ages</td>
</tr>
<tr>
<td>Art 202: Survey of Art History: Early Renaissance to Present</td>
</tr>
<tr>
<td>English 102: Composition Literature</td>
</tr>
<tr>
<td>English 201: English Literature Survey</td>
</tr>
<tr>
<td>English 202: English Literature Survey (Modern)</td>
</tr>
<tr>
<td>English 203: American Literature Survey (to 1865)</td>
</tr>
<tr>
<td>English 204: American Literature Survey (1865-present)</td>
</tr>
<tr>
<td>English 206: World Literature Survey (Classics)</td>
</tr>
<tr>
<td>English 207: World Literature Survey (Modern)</td>
</tr>
<tr>
<td>English 212: Introduction to Fiction</td>
</tr>
<tr>
<td>English 307: Special Topics in Literature</td>
</tr>
<tr>
<td>English 314: Major Authors in World Literature</td>
</tr>
<tr>
<td>English 322: Leadership in Fact, Fiction &amp; Film</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>American History: 3 credit requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>*History 121: US History to Reconstruction</td>
</tr>
<tr>
<td>*History 122: History Since Reconstruction</td>
</tr>
<tr>
<td>*History 125: The American Experience</td>
</tr>
<tr>
<td>*Please see individual course descriptions of these courses, as students may not be able to receive credit for taking certain courses in combination.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Other World Civilizations: **3 credit requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anthropology 130: North American Indians</td>
</tr>
<tr>
<td>Anthropology 211: Caribbean Cultures</td>
</tr>
<tr>
<td>History 117: World Civilization I</td>
</tr>
<tr>
<td>History 118: World Civilization II</td>
</tr>
<tr>
<td>*and**History 126: The West and the World</td>
</tr>
<tr>
<td>History 211: The World and Its Peoples</td>
</tr>
<tr>
<td>History 213: Peoples and Cultures of Asia</td>
</tr>
<tr>
<td>History 215: The World of Islam</td>
</tr>
</tbody>
</table>

The Arts: 3 credit requirement

| English 200: Introduction to Shakespeare |
| English 210: Introduction to Drama |
| English 214: Introduction to Poetry |
| English 216: Creative Writing |
| English 225: Images of Women in Drama |
| English 228: Classics and Mythology in Popular Culture |
| English 240: Themes in Science Fiction in Film and Literature |
| English 242: Fiction to Film |
| English 244: Classics of Supernatural Film and Literature |
| English 266: Fantasy in Literature and Film |
| English 269: The Romantic Arts |
| English 308: The City in Literature, Art, Film and Theatre |
| English 309: Voices of Black America in Poetry, Prose & Song |
| English 319: Modern Drama |
| English 330: Classical Greek Tragedy: Aeschylus, Sophocles, and Euripides |
| English 331: Death, Madness and Sex: The Victorians |
| Mod. Lang. 300: International Cinema |
| Mod. Lang. 301: Italian Cinema |
| Mod. Lang. 302: Spanish-Latin American Cinema |
| Mod. Lang. 303: French Cinema |
| Mod. Lang. 307: French and Francophone Fiction and Film |
| Mod. Lang. 309: Arabic Cinema |
| Mod. Lang. 314: Hispanic Fiction to Film |
| Theater 233: Introduction to Theater |
| Visual Comm 101: Introduction to Drawing |
| Visual Comm 102: Interrelationship of Art & Music |
| Visual Comm 103: Introduction to Watercolor |
| Visual Comm 104: Introduction to Calligraphy |
| Visual Comm 105: Introduction to Photography |
| Visual Comm 106: Introduction to Pastels |
**Western Civilization: **3 credit requirement

- History 114: Western Civilization I
- History 115: Western Civilization II
- History 126: The West and the World

This course is cross referenced in the Other World Civilizations competency area and is the only course to fulfill both Other World Civilizations and Western Civilizations competency area requirements.

**Mathematics: **3 credit requirement

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tr>
<td>Math 102</td>
<td>Elementary Discrete Mathematical Models</td>
</tr>
<tr>
<td>Math 103</td>
<td>Set, Probability and Logic</td>
</tr>
<tr>
<td>Math 107</td>
<td>Introduction to Mathematical Ideas</td>
</tr>
<tr>
<td>Math 110</td>
<td>Statistics</td>
</tr>
<tr>
<td>Math 116</td>
<td>College Algebra &amp; Trigonometry</td>
</tr>
<tr>
<td>Math 177</td>
<td>Precalculus Modeling for Life and Social Sciences</td>
</tr>
<tr>
<td>Math 129</td>
<td>Precalculus with Applications</td>
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<tr>
<td>Math 130</td>
<td>Calculus I with Applications</td>
</tr>
<tr>
<td>Math 131</td>
<td>Applied Calculus for Life and Social Sciences I</td>
</tr>
<tr>
<td>Math 132</td>
<td>Applied Calculus for Life and Social Sciences II</td>
</tr>
<tr>
<td>Math 236</td>
<td>Calculus II with Applications</td>
</tr>
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<td>Math 150</td>
<td>Calculus I</td>
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<tr>
<td>Math 151</td>
<td>Calculus II</td>
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**Foreign Languages: **3 credit requirement at Level II or higher.

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<tr>
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<td>Beginner</td>
</tr>
<tr>
<td>Italian</td>
<td>Beginner</td>
</tr>
<tr>
<td>Italian</td>
<td>Intermediate</td>
</tr>
<tr>
<td>Italian</td>
<td>Beginner</td>
</tr>
<tr>
<td>Spanish</td>
<td>Intermediate</td>
</tr>
<tr>
<td>Spanish</td>
<td>Beginner</td>
</tr>
<tr>
<td>Spanish</td>
<td>Intermediate</td>
</tr>
<tr>
<td>Spanish</td>
<td>Beginner</td>
</tr>
<tr>
<td>Spanish</td>
<td>Intermediate</td>
</tr>
</tbody>
</table>

Please refer to the Foreign Language requirement protocols and conditions for waivers at the end of this section.

**Social Sciences: **6 credit requirement

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sociology 200</td>
<td>Introduction to Women's Studies</td>
</tr>
</tbody>
</table>

Please refer to the Social Sciences requirement protocols and conditions for waivers at the end of this section.

**Natural Sciences: **6 credit requirement

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology 170</td>
<td>Human Anatomy and Physiology</td>
</tr>
<tr>
<td>Biology 171</td>
<td>Human Anatomy and Physiology II</td>
</tr>
<tr>
<td>Biology 192</td>
<td>Botany</td>
</tr>
<tr>
<td>Biology 197</td>
<td>Human Biology</td>
</tr>
<tr>
<td>Biology 198</td>
<td>Entomology</td>
</tr>
<tr>
<td>Biology 111</td>
<td>Chemistry and Public Interest Lab</td>
</tr>
<tr>
<td>Chemistry 124</td>
<td>Principles of General Chemistry</td>
</tr>
<tr>
<td>Chemistry 140</td>
<td>Introduction to General, Organic</td>
</tr>
<tr>
<td>Chemistry 152</td>
<td>General Chemistry Principles I</td>
</tr>
<tr>
<td>Chemistry 153</td>
<td>General Chemistry Principles II</td>
</tr>
<tr>
<td>Chemistry 160</td>
<td>Introduction to Organic Chemistry</td>
</tr>
<tr>
<td>Physics 110</td>
<td>Physical Science- Physical Geology</td>
</tr>
<tr>
<td>Physics 111</td>
<td>Physical Science- Historical Geology</td>
</tr>
<tr>
<td>Physics 112</td>
<td>Physical Science Survey</td>
</tr>
<tr>
<td>Physics 113</td>
<td>Physical Science- Physics</td>
</tr>
<tr>
<td>Physics 114</td>
<td>Physical Science- The Environment</td>
</tr>
<tr>
<td>Physics 115</td>
<td>Physical Science- Energy</td>
</tr>
</tbody>
</table>

Please refer to the Natural Sciences requirement protocols and conditions for waivers at the end of this section.
Physics 116: Physical Science- Meteorology
Physics 117: Physical Science- Solar System
Physics 118: Physical Science- Stellar Astronomy
Physics 119: Physical Science- Technology
Physics 120: Physical Science- Extraterrestrial Phenomena
Physics 121: General Physics- Classical
Physics 122: General Physics- Modern
Physics 123: The Theory of Everything
Physics 125: "PHY Science Lab I
Physics 126: "PHY Science Lab II
Physics 135: College Physics I
Physics 136: College Physics II
Physics 143: Physics I (calculus based)
Physics 144: Physics II (calculus based)
Physics 151: University Physics I
Physics 152: University Physics II
Physics 161: University Physics Laboratory I
Physics 262: University Physics Laboratory II
Physics 253: University Physics III
Physics 333: Modern Physics with Algebra

* This Chemistry Lab qualifies for credit towards the General Education Program when taken with Chemistry 111.

** These Physics Labs qualiy for credit towards the General Education Program when combined with any Physics course numbered 110 through 123. Each lab carries 1 credit.

The General Education Program requirements for students in Bachelor of Technology Degree Programs are as follows:
Based on the requirements in the major, our Bachelor of Technology programs will have varying requirements which will satisfy the SUNY mandated requirements for general education. Please speak with your advisor to select the courses to satisfy the general education requirements specific to your program.

The General Education Program requirements for students in Associate degree programs are as follows:
All students enrolled in associate degree programs are required to successfully complete 21 credits of General Education courses distributed among seven of the ten delineated competency areas with the following exceptions:
Students enrolled in the Liberal Arts and Sciences degree program are required to successfully complete all ten competency areas of the General Education Program (38-41 credits).
Students enrolled in the Associate Degree programs in Dental Hygiene and Nursing are required to complete 15 credits of general education courses distributed among five of the ten delineated Competency Areas.

There is no General Education requirement for students enrolled in Associate in Applied Sciences programs.
Critical Thinking and Information Management are infused throughout Farmingdale's General Education program. All baccalaureate programs address specific computer literacy requirements as part of the curriculum and the college catalogue states: "to meet the diverse needs of its programs, and in the spirit of providing liberal education to all students, the college requires that each student receive some type of computer instruction before being awarded a degree."

WAIVERS: Waivers in any specific competency area will be addressed on an individual basis under advisement. AP, CLEP and REGENTS can be considered for waivers.

Foreign Language Requirements Policy
The foreign language requirement for the General Education Program at Farmingdale State College requires all baccalaureate degree students to successfully complete a Level II or higher course in the modern language competency area. Students who wish to register for a Level II course must have successfully completed a college Level I course or take a placement examination. The following provisions exempt a student from this requirement:

- A Regents exam score in a foreign language of 85 or above. Since a Regents score of 85 or higher does not bear credits, the student must take an MLG course or any other course offered in the General Education program to obtain the 3 credits needed for their curriculum.
- An accepted score on a standardized language test offered by the College.
- Advance Placement examination in a foreign language with a score of 3 or above.
- A CLEP exam score of 50 or above.
- An accepted score on a standardized language test offered by the College.

The Modern Languages Department currently provides Proficiency Testing (credit by evaluation) in the following languages: Arabic, Bengali, Chinese (Mandarin), French, German, Greek, Hindi, Italian, Korean, Persian (Farsi), Polish, Portuguese, Russian, Spanish, Turkish and Urdu. Students who successfully pass the exam will have three credits in Modern Language.

If the language is not offered at Farmingdale, the student must take a language test administered by the Foreign Language Proficiency Testing Service of the New York University School of Continuing and Professional Services. If the student achieves a score of 8 or above on this test, he/she may receive up to six credits in a modern language. If the student's score is 5-7, the student must enroll in one of the Modern Language Department's elective culture/cinema courses taught in English to complete this requirement.

If a student is certified by the College (Office of Support Services for Disabled Students), as being learning disabled in the area of foreign languages, the College requires the student to enroll in one of the Modern Language Department's elective culture/cinema courses taught in English to satisfy the foreign language requirement.

Bachelor of Technology degree and Associate degree candidates who choose foreign languages as one of their competency areas are subject to the above guidelines.
### Writing-Intensive Requirement

As of the Fall 2005 semester all students enrolled in a bachelor’s degree program must successfully complete at least one writing-intensive (W) course at Farmingdale beyond EGL 101 and 102 with a grade of “C” or better to meet graduation requirements. This course may be selected from one of the required courses in the student’s major, as listed below, or from elective courses that are designated with a “W” signifying “writing-intensive.” EGL 101 is a prerequisite for all writing-intensive courses. Elective offerings will vary each semester, so students should consult course listings and speak with their advisors to make sure that the requirement is met. Students who are awarded transfer credit for a course listed below are required to take a different “W”-designated course at Farmingdale to fulfill this requirement.

#### Writing-Intensive Courses in the Majors

<table>
<thead>
<tr>
<th>Major</th>
<th>Course Designator</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aeronautical Science/Professional Pilot</td>
<td>AVN 300W</td>
<td>Government in Aviation</td>
</tr>
<tr>
<td>Applied Economics</td>
<td>ECO 490W</td>
<td>Economic Research and Reporting</td>
</tr>
<tr>
<td>Applied Mathematics</td>
<td></td>
<td>Please contact the Applied Mathematics Department Chair or your advisor.</td>
</tr>
<tr>
<td>Applied Psychology</td>
<td></td>
<td>Please contact the Psychology Department Chair or your advisor.</td>
</tr>
<tr>
<td>Architectural Engineering Technology</td>
<td>ARC 350W</td>
<td>Architectural Theory &amp; Design Factors</td>
</tr>
<tr>
<td>Aviation Administration</td>
<td>AVN 300W</td>
<td>Government in Aviation</td>
</tr>
<tr>
<td>Bioscience</td>
<td>BIO 470W</td>
<td>Bioscience Senior Seminar</td>
</tr>
<tr>
<td>Business Management</td>
<td></td>
<td>Please contact the Business Management Department Chair or your advisor.</td>
</tr>
<tr>
<td>Computer Engineering Technology</td>
<td>EET 452W</td>
<td>Design Project</td>
</tr>
<tr>
<td>Computer Programming and Information Systems</td>
<td>BCS 430W</td>
<td>Senior Project</td>
</tr>
<tr>
<td>Construction Management Engineering Technology</td>
<td>CON 401W</td>
<td>Construction Project Management and Scheduling</td>
</tr>
<tr>
<td>Criminal Justice: Law Enforcement Technology</td>
<td>CRJ 200W</td>
<td>Criminal Investigation</td>
</tr>
<tr>
<td>Dental Hygiene</td>
<td>DEN 406W</td>
<td>Proposal and Grant Management for Health Programs</td>
</tr>
<tr>
<td></td>
<td>DEN 401W</td>
<td>Health Science Research: Principles and Methods</td>
</tr>
<tr>
<td></td>
<td>DEN 301W</td>
<td>Current Issues in Dental Hygiene</td>
</tr>
<tr>
<td>Electrical Engineering Technology</td>
<td>EET 452W</td>
<td>Design Project</td>
</tr>
<tr>
<td>Horticultural Technology Management</td>
<td></td>
<td>Please contact the Horticulture Department Chair or your advisor.</td>
</tr>
<tr>
<td>Industrial Technology/Automotive Technology</td>
<td></td>
<td>Please contact the Automotive Technology Department Chair or your advisor.</td>
</tr>
<tr>
<td>Industrial Technology/Facility Management</td>
<td>MET 205W</td>
<td>Material Science</td>
</tr>
<tr>
<td>Manufacturing Engineering Technology</td>
<td>MET 205W</td>
<td>Material Science</td>
</tr>
<tr>
<td>Mechanical Engineering Technology</td>
<td>MET 205W</td>
<td>Material Science Management</td>
</tr>
<tr>
<td>Medical Technology</td>
<td>MLT 325W</td>
<td>Laboratory Management and Informatics</td>
</tr>
<tr>
<td>Nursing</td>
<td>NUR 215W</td>
<td>Developing Nurse’s Ways of Knowing</td>
</tr>
<tr>
<td>Professional Communications</td>
<td>PCM 313W</td>
<td>Communication Theory</td>
</tr>
<tr>
<td>Security Systems</td>
<td>CRJ 200W</td>
<td>Criminal Investigation</td>
</tr>
<tr>
<td>Software Technology</td>
<td></td>
<td>Please contact the Software Technology Department Chair or your advisor.</td>
</tr>
<tr>
<td>Sport Management</td>
<td>SMT400W</td>
<td>Sport Management Research Methods</td>
</tr>
<tr>
<td>(Sport Management students are required to take either this course or an internship course. Please contact the Sport Management advisor to ensure satisfying the writing intensive requirements.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Technology Studies</td>
<td></td>
<td>Please contact the Technology Studies Department Chair or your advisor.</td>
</tr>
<tr>
<td>Visual Communications</td>
<td>VIS 425W</td>
<td>Senior Project</td>
</tr>
</tbody>
</table>
PROGRAMS OF STUDY

Anthropology
Dr. Miriam Deitsch, Chair

Anthropology deals with human evolution, cultural history, language, and sociocultural similarities and differences. Anthropology courses provide knowledge about the history, diversity, and development of the world’s human populations. An anthropological perspective helps students appreciate and understand their position, and the position of others in our rapidly changing world.

(Prefix for Anthropology courses is ANT)

Applied Economics
See History, Economics and Politics Department

Applied Mathematics
See Mathematics Department

Applied Psychology
See Psychology Department

Architecture and Construction Management Department
Dr. Amitabha Bandyopadhyay, Chair

The Architecture and Construction Management Department offers the following programs:
- Architectural Engineering Technology .... Bachelor of Science
- Construction Management
  - Engineering Technology ............................. Bachelor of Science

Architectural Engineering Technology

Bachelor of Science Degree

The Architectural Engineering Technology (ARC) program synthesizes the aesthetic, technical and functional elements of building design and construction. The academic thrust of the program is applied technology. The students in this program will be educated in the process of building design from concept to completion.

The purpose of the Architectural Engineering Technology program is to prepare students for careers in architectural, structural, and mechanical aspects of the design and construction of buildings. The students will be educated in the process of carrying design projects from schematics through construction. In addition to preparing students for meaningful and rewarding careers at the Bachelor’s level, the program will also prepare students for successful entry in the professional and non-professional graduate programs in architecture and other areas.

Program Educational Objectives
- Graduates will have broad background in one or more areas of building design, site, planning, construction, project management and technology. Graduates will assume leadership positions in architectural and building construction industry.
- Graduates will be problem solvers.
- Graduates will be good communicators.
- Graduates will adapt new technologies and processes.
- Graduates will pursue continuing education and professional development opportunities.

This program is accredited by the Technology Accreditation Commission, Accreditation Board for Engineering and Technology, 111 Market Place, Suite 1050, Baltimore, MD 21202 410-347-7700. www/abet.org

Potential Employment/Employment Demand

Employment in the architectural field is strongly tied to the level of local construction, particularly new residential structure such as office buildings, shopping centers, schools and health care facilities. The boom in new construction in the region is expected to continue for a considerable time in the future. As the stock of buildings age, demand for remodeling and repair work should also grow. The needed renovations and rehabilitation of old buildings is expected to provide many job opportunities according to the Occupational Outlook Handbook. Also according to the Occupational Outlook Handbook, employment in this field will grow as fast as the average for all occupations during this period.

Student club - Architecture Construction Technology (ACT) Club

Program of Study

Liberal Arts and Sciences (61 credits)

General Education requirements (including MTH 129 Pre-Calculus with Applications) ........................................ 39
MTH 130 Calculus with Applications ........................................ 4
MTH 236 Calculus II with Applications ...................................... 3
MTH Electives (higher than MTH 236) ........................................ 6
Science/MTH Elective(upper level*) ........................................... 3
EGL 209 Technical Communications ........................................ 3
ECO 321 Engineering Economics ............................................ 3

Please refer to the General Education and Writing-Intensive requirement sections of this catalog and consult with your academic advisor to ensure that graduation requirements are satisfied.

*in consultation with department advisor.

Required:

Architectural Technology Courses (69 credits)

CON 103 Surveying ......................................................... 3
CON 111 Graphics .......................................................... 2
CON 161 Materials & Methods of Construction I .................... 3
CON 101 Introduction to Technology & Applied Programming.. 2
CON 121 Graphics II ....................................................... 2
CON 162 Materials & Methods of Construction II ................. 3
CON 106 Statics ............................................................. 3
CON 207 Elements of Strength of Materials ......................... 3
ARC 263 Mechanical, Electrical, Plumbing & Energy Systems in Buildings ......................................................... 3
ARC 251 Architectural Design I .......................................... 3
ARC 253 Architectural Design II ........................................ 3
ARC 272 Construction Design ............................................ 3
CON 302 Soils, Foundations & Earth Structures ................. 3
CON 356 Estimating Fundamentals for Residential & Commercial Const ......................................................... 3
ARC 350W Architectural Theory & Design Factors ............... 3
CON 401W Construction Project Mgmt. & Sched.................. 3
Construction Management

Bachelor of Science Degree

The Construction Engineering Management Technology program has been designed to respond to the need for skilled professionals possessing the level of sophistication necessary to accommodate state-of-the-art technology which has impacted the construction industry. It will incorporate extensive use of the computer in the technical specialty together with upper level mathematics, economics, and communications.

The Construction Engineering Management Technology program encompasses study in traditional engineering technology offerings (Statics, Strength of Materials, Structural design, Materials testing, etc.) The program is complemented with offerings in project control, scheduling, cost control, quality control, construction productivity, and economics. It prepares students for employment in an emerging occupation within the construction industry. Graduates will possess expertise in construction and specialized administrative skills commensurate with the requirements dictated by the industry to coordinate and execute the construction of the design created by the engineer and the architect.

Program Educational Objectives:

- Graduates will have broad background in one or more areas of infrastructure and building construction, estimating, cost control, project management and technology. Graduates will assume leadership positions in the construction industry.
- Graduates will be problem solvers.
- Graduates will be good communicators.
- Graduates will adapt new technologies and processes.
- Graduates will pursue continuing education and professional development opportunities.

This program is accredited by the Technology Accreditation Commission, Accreditation Board for Engineering and Technology, 111 Market Place, Suite 1050, Baltimore, MD 21202 410-347-7700, www.abet.org.

Potential Employment

Employment opportunities include Project Manager, Assistant Project Manager, Construction Manager, and Project Super.

Student club – Architecture and Construction Technology (ACT) Club

Program of Study

Liberal Arts and Sciences (64 credits)

General Education requirements ........................................... 39
MTH 130 Calculus with Applications ........................................... 4
MTH 236 Calculus II with Applications ........................................... 3
MTH Electives (higher than MTH 236) ........................................... 6
Science/MTH Elective ......................................................... 3

Total Credits: ........................................................................ 130

Automotive Technology

Department

Professor Serdar Elgun, Acting Chair

The Automotive Technology Department offers the following programs:

- Industrial Technology - Automotive Management Technology... Bachelor of Science
- Automotive Technology ........................................ Associate in Applied Science

Industrial Technology - Automotive Management Technology

Bachelor of Science Degree

This is a four-year program offered by the Automotive Technology Department. Students may matriculate on a full-time or part-time basis.

The Bachelor of Science in Automotive Management Technology program is designed to develop the requisite skills
for management positions in automotive or related fields. Specifically, the program will provide advanced training in such areas as personnel management and motivation, customer relations, and community relations. Additionally, training is provided in business related topics such as accounting, financing and leasing, and occupational safety.

Students will learn to enhance their ability to manage personnel, maintain successful and mutually rewarding relationships with customers, and successfully manage the business and financial aspects of the enterprise. This Bachelor of Science degree will provide, for a person with technical training and experience, the skills and credentials necessary to advance into management level positions.

Students are required to take a common core of liberal arts and science courses and a series of curriculum specific business management courses.

**Typical Employment Opportunities:**
Automotive Retail Chain Manager
Automotive Parts Manager
Automotive Service Manager
Automotive Business Manager
Automotive Financing/Leasing Manager
Fleet Management
Vehicle Manufacturer District Service Manager

**Automotive Management Technology (BS)**

**Program Objectives:**
- Graduates will have the technical skills, knowledge and ability to enter their chosen Automotive Technology discipline.
- Graduates will have good written and oral communication skills.
- Graduates will develop and be able to maintain the necessary knowledge to operate within all areas of land, sea and air (ground support) vehicles, equipment, facilities, service and operations.

This program is accredited by the Association of Technology, Management and Applied Engineering, 1390 Eisenhower Place, Ann Harbor, MI 48108, 734-677-0720 www.atmae.org

**Program of Study**

**Liberal Arts and Sciences (60 credits)**

- EGL 101 Composition: Rhetoric ........................................3
- EGL 102 Composition: Literature ........................................3
- Communications .............................................................3
- Modern Language Level II ...............................................3
- Social Science ...............................................................6
- HIS xxx 121/122/125 American History Elec. ....................3
- Western Civilization/Other World Civilizations ..................3
- PHY 135 College Physics 1 ..............................................4
- Natural Science Elective ....................................................4
- MTH 110 Statistics ..........................................................3
- MTH 129 Precalculus with Applications ............................4
- Arts and Science Electives (by Advisement) .......................18

Please refer to the General Education and Writing-Intensive Requirement Sections of this catalog and consult with your advisor to ensure that graduation requirements are satisfied.

**Common Core For All IT Students (9 credits)**

- BUS 101 Accounting I .......................................................3
- BUS 102 Accounting II .....................................................3
- BUS 300 Operations Management .....................................3

**Automotive Management Technology Option (56 credits)**

- AET 103 Principles of Automotive Systems .........................3
- AET 104 Combustion Engine Theory ..................................2
- AET 105 Fuel Systems - SI Engines ...................................2
- AET 106 Mechanical Equipment - Chassis and Suspension ....4
- AET 107W Mechanical Equipment - Engine and Drive Train ..4
- AET 109 Automotive Electrical Principles ..........................1
- AET 150 Automotive Computer Applications .....................2
- AET 208 Automotive Electrical Applications .....................3
- AET 215 Diesel Engines ..................................................4
- AET 255 Automotive Electronics and Computerized Controls ..3
- AET 257 Automatic Transmissions ....................................3
- AET 290 Project Seminar ................................................1
- BUS 109 Management Theories and Practices .....................3
- IND 308 Occupational Safety ..........................................3
- IND 316 Customer Relations and Quality .........................3
- IND 317 Automotive Financing and Leasing .....................3
- IND 320 Fleet Management .............................................3
- IND 408 Automotive Business Management .....................3
- Elective Courses (9 credits)

**Total Credits:** ..........................................................125

**Automotive Technology**

**Associate in Applied Science Degree**

The automotive industry provides employment in the experimental development of gasoline, diesel and turbine powered vehicles and equipment, and their sales and service. Other mechanical, electrical, and fluid power oriented industries and operations provide similar employment.

Courses are designed to prepare the technician graduate for direct entry into automotive and other industries or consumer oriented employment. Many past graduates have continued their studies in a Bachelor’s Degree program in Automotive Management, Engineering Technology, Industrial Technology, Engineering and other related fields.

Each student is assisted in selecting and achieving his/her goal through guidance provided by a faculty member who has a broad background of experience and technical preparation, and a genuine interest in the student’s success.

**Typical Employment Opportunities:**
Automotive Diagnostician
Equipment Designer and Installer
Warranty Processor
Research and Development Technician
Writer-Technical Literature
Dealership: Parts, Sales and Service
Service Instructor
Insurance Adjuster

**Automotive Technology (AAS) Program Objectives:**
- Graduates will have the technical skills, knowledge and ability to enter their chosen Automotive Technology discipline.
- Graduates will have good written and oral communication skills.
- Graduates will develop and be able to maintain the necessary knowledge to operate within all areas of land, sea and air (ground support) vehicles, equipment, facilities, service and operations.

**Program of Study**

**Liberal Arts and Sciences (28 credits)**

- EGL 101 Composition: Rhetoric ........................................3
The graduate in Aeronautical Science – Professional Pilot will have opportunities also exist in Federal/State Government, Corporate/entry-level pilot positions within the air transportation industry. The professional pilot program provides training for Farmingdale State College’s Department of Aviation offers the Bachelor of Science Degree in Aeronautical Science – Professional Pilot.

Aviation Department
Dr. Kamal Shahrabi, Acting Chair

The Aviation Administration major is a specialized aviation management program with concentrations in Airport Management and Air Cargo Management which prepare graduates for entry-level managerial positions in the Airport and Air Cargo segments of the air transportation industry. The Aviation Department offers the following programs:

- Aeronautical Science - Professional Pilot
- Aviation Administration

Aeronautical Science - Professional Pilot

Bachelor of Science Degree

Farmingdale State College’s Department of Aviation offers the premier collegiate aviation program on Long Island, and in the region. The professional pilot program provides training for entry-level pilot positions within the air transportation industry. Opportunities also exist in Federal/State Government, Corporate/ Business Aviation sectors and the United States Military.

The graduate in Aeronautical Science – Professional Pilot will use the knowledge and skills obtained in the program to:

- demonstrate an ability to apply knowledge of mathematics, science, and applied sciences as a professional pilot
- analyze and interpret data relating to aviation
- function on multi-disciplinary teams as a professional pilot
- exhibit an understanding of ethical and professional responsibility of aviation professionals
- communicate effectively, including both written and verbal forms

- recognize the need for, and an ability to engage in, life-long learning
- exhibit knowledge of contemporary issues relating to professionals in the aviation field
- demonstrate an ability to use the techniques, skills, and modern technology necessary for professional aviators
- analyze the national and international aviation environment
- apply pertinent knowledge in identifying and solving problems confronting professional pilots

The Pro-Pilot Program prepares the student with the following Certificates and Ratings:

- Private Pilot Certificate
- Instrument Rating
- Commercial Pilot Certificate
- Certified Flight Instructor (CFI) Certificate

In addition, the student will have the option to complete the following Certificates and Ratings:

- Multi Engine Land
- Multi Engine Instrument Land
- Multi Engine Instructor
- Airline Transport Pilot Certificate

Students pursuing flight training in their program must hold a 1st, 2nd, or 3rd class FAA medical Certificate prior to starting flight training. The Department of Aviation strongly recommends students obtain a First Class Medical prior to enrolling in the Professional-Pilot Program. A listing of FAA medical examiners can be obtained by contacting the FAA’s Flight Standards District Office (FSDO) at Republic Airport (631-755-1300).

Students may select to fly during the summer. Students are required to provide their own transportation to/from our Flight Center located at Republic Airport (FRG) in Farmingdale about two miles from the campus.

Flight Training Costs: Flight training fees and related equipment and publications are in addition to college tuition and fees.

Program of Study

Liberal Arts and Sciences (61 credits)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECO 156</td>
<td>Principles of Economics (Macro)</td>
<td>3</td>
</tr>
<tr>
<td>ECO 157</td>
<td>Principles of Economics (Micro)</td>
<td>3</td>
</tr>
<tr>
<td>EGL 101</td>
<td>Composition-Rhetoric</td>
<td>3</td>
</tr>
<tr>
<td>EGL 102</td>
<td>Composition-Literature</td>
<td>3</td>
</tr>
<tr>
<td>EGL 209</td>
<td>Technical Communications</td>
<td>3</td>
</tr>
<tr>
<td>MTH 129</td>
<td>Pre-Calculus with Applications</td>
<td>4</td>
</tr>
<tr>
<td>MTH 130</td>
<td>Calculus I with Applications</td>
<td>4</td>
</tr>
<tr>
<td>MLG Modern Language elective (level II or higher)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>PHY 135</td>
<td>College Physics I</td>
<td>4</td>
</tr>
<tr>
<td>PHY 136</td>
<td>College Physics II</td>
<td>4</td>
</tr>
<tr>
<td>PSY 101</td>
<td>Intro to Psychology</td>
<td>3</td>
</tr>
<tr>
<td>PSY 331</td>
<td>Industrial/Organizational Psych.</td>
<td>3</td>
</tr>
<tr>
<td>Arts &amp; Science Electives</td>
<td></td>
<td>12</td>
</tr>
<tr>
<td>American History Elective</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Arts Elective</td>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>

Please refer to the General Education and Writing-Intensive Requirement Sections of this catalog and consult with your advisor to ensure that graduation requirements are satisfied.

Support Courses (3 credits)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCS 102</td>
<td>Computer Concepts and Applications</td>
<td>3</td>
</tr>
</tbody>
</table>

Required:
Aeronautical Science - Lecture (54 credits)
AVN 101 Aviation Industry - Historical ........................................3
AVN 102 Meteorology ...................................................................3
AVN 104 Private Pilot Ground.......................................................3
AVN 201 Safety Ethics ..................................................................3
AVN 208 Instrument Pilot Ground ................................................3
AVN 211 Commercial Pilot Ground ..............................................3
AVN 300W Government in Aviation ............................................3
AVN 320 Air Carrier Flight Operations ........................................3
AVN 321 Physiology of Flight ......................................................3
AVN 322 Advanced Aircraft Systems ............................................3
AVN 400 Aviation Law ..................................................................3
AVN 417 Homeland Security in Aviation ......................................3
AVN 421 Gas Turbine Engines .....................................................3
AVN 423 Crew Resource Management ........................................3
AVN 424 Advanced Avionics and Cockpit Automation ...............3
AVN 425 Safety of Flight .............................................................3
AVN Aviation Electives* .............................................................6

Required:
Aeronautical Science - Flight Training (10 credits)
AVN 110 Introduction to Flight .....................................................0
AVN 105 Private Pilot – Flight to solo .........................................1
AVN 106 Private Pilot – Flight to certificate .................................2
AVN 209 Instrument Pilot – Flight ..............................................2
AVN 212 Commercial Pilot – Flight ............................................2
AVN 310 Flight Instructor – Flight ...............................................3

Total Credits: ...........................................................................128

Notes:
1. It is sometimes difficult to complete a flight course during a normal semester due to weather, FAA Temporary flight restrictions, or aircraft downed for maintenance.
2. Students with no prior flight experience are to enroll in AVN 110, Introduction to Flight.
3. Students entering the program with a Private pilot’s certificate must enroll in AVN 112, Private Pilot Proficiency.
4. Flight Courses must be completed within a year from the date a student registers. Within this time frame a student must either 1) Successfully complete the course and be issued a grade, OR 2) Withdraw from the course, due to the following extenuating circumstances: Active Military Obligations, Medical conditions requiring removal from active flight status for a duration of 60 consecutive days or more. If neither of the above occurs, a failing grade will be assigned.

Aviation Administration

Bachelor of Science Degree
The learning outcomes for the Aviation Administration degree are:
- an understanding of the impact of aviation and technology in a global/societal context
- an ability to apply the techniques, skills, and modern aviation management tools to perform business related tasks
- an ability to function on a multi-disciplinary management team which includes technical and management issues
- an ability to apply knowledge of mathematics and science to ensure safe and efficient operations
- an ability to accurately analyze and interpret data, and design experiments for a variety of problems
- an understanding of professional and ethical responsibility
- an ability to communicate with agency representatives, superiors, subordinates, and peers with precision and clarity
- recognition of the need for the ability to engage in lifelong learning
- knowledge of contemporary aviation industry issues

The Aviation Administration major is a specialized aviation management program with concentrations in Airport Management and Air Cargo Management which prepare graduates for entry-level managerial positions in the Airport and Air Cargo segments of the air transportation industry.

The program prepares students to be marketable in the following areas:
- Finance and Labor Relations
- Accounting and Marketing
- Aviation Laws and interaction between the aviation industry and government
- Management of airport capacity and knowledge of the complex highly regulated airspace

Air cargo and air cargo management are emerging fields within the airline industry today. Air cargo is a technical piece to be added to the management structure of any airline.

Program of Study

Liberal Arts and Sciences (60 credits)
EGL 101 Composition: Rhetoric ..................................................3
EGL 102 Composition: Literature ...............................................3
SPE 130 Public Speaking ............................................................3
Am Hist Elective ........................................................................3
Western Civilization/Other World Civilizations .........................3
Arts Elective .............................................................................3
Mod.Lang. Elective (Level II or higher) .......................................3
PSY 101 Intro to Psychology ......................................................3
PSY 331 Industrial & Organizational Psychology .......................3
MTH 129 Pre Calculus with Applications ...................................4
MTH 130 Calculus .....................................................................4
PHY 116 Meteorology ..................................................................3
PHY 121 Descriptive Classical Physics .......................................3
PHY 125 Physical Science Lab I ...............................................4
ECO 156 Principles of Economics (Macro) ...............................1
ECO 157 Principles of Economics (Micro) ..................................3
A & S Electives (see note) .........................................................12

Please refer to the General Education and Writing-Intensive Requirement Sections of this catalog and consult with your advisor to ensure that graduation requirements are satisfied.

Support Courses (27 credits)
BCS 102 Computer Concepts and Applications ........................3
BUS 101 Accounting I ...............................................................3
BUS 102 Accounting II ............................................................3
BUS 111 Introduction to Business ..............................................3
BUS 131 Marketing Principles ..................................................3
BUS 201 Corporate Finance .....................................................3
BUS 109 Management Theories and Practices ..........................3
BUS 240 Statistics ......................................................................3
BUS 266 Personnel/Human Resources Mgmt. .........................3

Required Aviation (24 credits)
AVN 100 General Aeronautics ...................................................3
AVN 101 The Aviation Industry - History ...................................3
AVN 201 Safety Ethics ...............................................................3
AVN 300W Government in Aviation ..........................................3
AVN 400 Aviation Law .............................................................3
Concentration: Choose one:

Air Cargo (15 credits)

AVN 280 Air Cargo Operations - Basic........................................3
AVN 281 Air Cargo Govt. & Industry Regulations..........................3
AVN 380 Air Cargo Sales & Marketing Techniques.........................3
AVN 381 Air Cargo Mgmt. Techniques ...........................................3
AVN 480 Air Cargo Operations - Advanced.................................3

Airport Management (15 credits)

AVN 270 Intro. to Airports/Management ......................................3
AVN 271 Airport Capacity/Delay/Airspace ....................................3
AVN 370 Airport Financial Mgmt. ..................................................3
AVN 371 Airport Planning .............................................................3
AVN 470 Airport Operations ......................................................3

Total Credits: ............................................................................126

*Aviation Administration electives must be chosen from the Aviation Dept. approved list of electives

Biology Department

Dr. Charles N. Adair, Chair

The Biology Department offers the following programs:

- Bioscience .................................................................................. Bachelor of Science
- Sciences for the Health Professions .............................................. Certificate
- Biology .......................................................................................... Minor

In addition to providing the three academic programs described below, the Biology Department supports other academic majors at Farmingdale State College by giving courses that are required for those curricula (either as prerequisite(s) or as part of their curriculum displays), and by offering a variety of courses that qualify as Liberal Arts electives, many of which also fulfill the General Education Natural Science Core requirement.

Policy on Repeating Biology Courses

A student may repeat a failed Biology course in order to earn a passing grade, as stated in the Academic Information section of the College Catalog, but no student (Bioscience major, non-Bioscience major, matriculated, or non-matriculated) may take the same Biology course more than twice (including registration resulting in a W). As stipulated in the Academic Information section of the College Catalog, a student is normally not permitted to repeat any course he/she has completed and for which he/she has earned a passing grade. If a student wishes to repeat a Biology course in which he/she received a passing grade, he/she must receive written pre-approval of the Biology Department Chair.

Bioscience

Bachelor of Science Degree

The Biology Department offers a baccalaureate in Bioscience designed to produce versatile graduates prepared for a wide range of positions in the rapidly developing bioscience field or for entry into graduate or professional programs in the life and health sciences. This program combines a strong foundation in the biological sciences and supporting subjects (emphasizing both theoretical concepts and hands-on laboratory methods) with sequences of Technical Electives that enable the student to acquire advanced preparation in one or more applications of bioscience. Technical Electives are selected with advisement according to the objectives of the individual student, and can be drawn from higher level Biology courses or from other academic majors at the College, thus providing the opportunity to gain breadth and depth in a variety of disciplines.

The Biology faculty are committed to supporting student learning in the classroom and laboratory, and to fostering student scholarly activity. Recommended students in Bioscience have the opportunity to gain work experience in an elective credit-bearing internship. This can be through placement into a pharmaceutical, nutraceutical, or cosmetic manufacturing facility, forensic laboratory, genetic testing laboratory, veterinary facility, research laboratory, or other bioscience-related institution off campus, or by invitation into an on-campus credit-bearing research internship under the mentorship of a Biology faculty member.

Typical Employment Opportunities and Graduate/Professional School Options:

Examples of career paths and graduate/professional school opportunities for which this program can provide preparation are presented below, with sequences of Technical Electives that are recommended to provide the background necessary to pursue these career or postgraduate career goals:

- Bioinformatics (computer-based mapping and comparison of genomic and other biologically-derived data, with applications such as predicting the function of gene products and developing pharmacogenomic treatments of disease): job titles include Scientific Curator, Gene Analyst, Protein Analyst, Structural Analyst, Molecular Modeler, Biostatistician, Pharmacogenetician. Recommended Technical Electives: Computer Concepts/Problem Solving, Foundations of Computer Programming I & II, UNIX Operating System, Database, Perl Programming
- Biopharmaceutical (pharmaceutical, nutraceutical, and cosmeceutical production, ranging from fermentation and raw material extraction to processing and finishing): job titles include Compounding Supervisor, Process Development Associate, Production Planning Scheduler, Quality Assurance Auditor, Quality Control Analyst, Regulatory Affairs Specialist. Recommended Technical Electives: Management Theory & Practices, Contemporary Business Communications, Occupational Safety, Industrial Hygiene, Biopharmaceutical Regulation, Validation & Regulatory Affairs
- Bioscience Laboratory Research & Analysis (life sciences research support, biotechnology research & development, FDA regulated industry production): job titles include Bioscience Laboratory Associate, Bioscience Laboratory Technician, Food Quality Laboratory Technician, Microbiologist, Development Technician, Quality Control Receiving Inspector. Recommended Technical Electives: Precalculus Modeling for the Life & Social Sciences, Organic Chemistry I & II, Biochemistry, Lab Management & Informatics, Laboratory Research/Education
- Forensic DNA Technology (processing and analyzing DNA forensic evidence to produce validated results for use in judicial proceedings): job titles include DNA Analyst, Forensic Processor, Forensic Analyst, Forensic Quality Assurance Manager. Recommended Technical Electives: Criminal Investigation, Criminalistics, Criminal Law, Criminal Procedure Law, Bioethics, Lab Management & Informatics, Forensic Molecular Biology

Graduate/Professional School Admissions: for those students specifically seeking entry into graduate programs in
the life sciences or into professional programs in the health sciences, a sequence of Technical Electives can be chosen to earn the academic credentials necessary to meet admissions requirements of such programs. Recommended Technical Electives: Precalculus with Applications, Calculus I with Applications, College Physics I & II, Organic Chemistry I & II, Biochemistry, Lab Management & Informatics. (see office of Pre-Health Professions Advisement described below.)

Note that training and licensure in Molecular Diagnostics (Molecular Pathology) is available through the BS in Medical Technology rather than through Bioscience.

Program Objectives:
- Graduates will have the ability to effectively seek out and process scientific information, including primary sources and genomic databases.
- Graduates will demonstrate mastery of basic laboratory skills, expertise in the operation of modern instrumentation, adherence to laboratory safety standards, and good practices.
- Graduates will be able to process experimentally derived data and to communicate results effectively by written, graphical, digital, and verbal means.

Program of Study
Of the 124 credits required for the degree, 33 are in the Bioscience Core, 24-26 are in support courses, 36-40 are in General Education and Liberal Arts & Sciences courses, and at least 28 are in Technical Electives (a sequence of additional courses meeting the requirement of the program for advanced preparation in a specialty related to Bioscience). Students should refer to the General Education, Liberal Arts, Writing Intensive, and Modern Language requirements elsewhere in this catalog, and consult with their advisor, to ensure that all graduation requirements are satisfied.

Bioscience Core (33 credits)
BIO 130 Biological Principles I ........................................ 4
BIO 131 Biological Principles II ....................................... 4
BIO 210 Introduction to Bioscience .................................. 3
BIO 212 Bioscience Laboratory Practices .......................... 2
BIO 316 General Microbiology ....................................... 4
BIO 343/344L Principles of Genetics, Genetics Lab ............. 4
BIO 345 Introduction to Bioinformatics ............................ 3
BIO 348/349L Cell Biology/Cell Biology Lab ...................... 4
BIO 441 Molecular Biology ............................................ 5

Support Courses (24-26 credits, of which 21-23 are Liberal Arts)
BCS 102 Computer Concepts/Applications ........................ 3
CHM 152 General Chemistry Principles I .......................... 4
CHM 153 General Chemistry Principles II .......................... 4
CHM 260 Fundamentals of Organic Chemistry* ................ 4
MTH 110 Statistics ..................................................... 3
MTH electives ......................................................... 6-8

*CHM 270 & CHM 271 Organic Chemistry I & II are recommended for certain career/academic goals in place of CHM 160, with the additional 6 credits counted as 200-level Technical Electives & Liberal Arts

General Education (27 credits, of which 21-27 are Liberal Arts)
EGL 101 Composition: Rhetoric ..................................... 3
2nd approved Communication Core course ........................ 3
EGL 102 Humanity: Composition: Literature .................... 3
Approved Arts Core course ......................................... 3
Approved History Core courses ................................... 6

Approved Modern Language course at Level I .................. 3
Approved Social/Behavioral Core courses .......................... 6
Liberal Arts electives (to bring Liberal Arts credits to 60) .... 9-12
Technical Electives
(can also be Liberal Arts electives) ................................. at least 28

At least one Writing Intensive course, within any of the categories above, must be completed to meet graduation requirements.

Total Credits: .................................................................................. 124

Technical Electives must include at least 6 credits at the 200-level or above, 6 credits at the 300-level or above, and 6 credits at the 400-level (with all appropriate prerequisites satisfied). Subject areas from which Technical Electives may be selected are Biology (BIO), Business (BUS), Chemistry (CHM), Computer Systems (BCS), Criminal Justice (CRJ), Industrial Technology (IND), Mathematics (MTH), Mechanical Engineering Technology (MET), Medical Laboratory Technology (MLT), and Physics (PHY). Technical Elective course sequences from additional subject areas may be selected with departmental approval, provided that they represent a specialty related to Biology/ Bioscience and meet the required course level distribution as described above.

To continue in the Bioscience BS degree program, a grade of C or better must be maintained in each and every Biology and Chemistry course required in the program. Earning a grade of less than C in two required Biology and/or Chemistry courses will result in suspension from the Bioscience curriculum for at least one year. Exceptions to this policy can only be made by the Chair of the Bioscience Program when extenuating circumstances exist.

Sciences for the Health Professions Certificate
The Certificate in Sciences for the Health Professions is a post-baccalaureate science program designed to meet the needs of students with bachelor’s degrees in non-science fields who seek a career change into the health professions, but lack some or all of the necessary science and mathematics background. It thus offers an affordable means for academically qualified students to prepare themselves for admission into professional programs in this field. Acceptance into this Certificate program requires an earned bachelor’s degree with a GPA of at least 3.0. (see Office of Pre-Health Professions Advisement described below.)

Program of Study Required (34 credits)
BIO 130 Biological Principles I ........................................ 4
BIO 131 Biological Principles II ....................................... 4
CHM 152 General Chemistry Principles I .......................... 4
CHM 153 General Chemistry Principles II .......................... 4
CHM 270 Organic Chemistry I ......................................... 5
CHM 271 Organic Chemistry II ....................................... 5
PHY 135 College Physics I ............................................. 4
PHY 136 College Physics II ........................................... 4

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### Bio 13 Biological Principles I
4

### Bio 131 Biological Principles II
4

Students must earn at least 12 additional credits, including at least one additional laboratory course, at the 200-level or above with appropriate prerequisites satisfied, selected from the following:

- Bio 210 Introduction to Bioscience
  3
- Bio 220 Medical Microbiology
  4
- Bio 240 Bioethics
  3
- Bio 340 Biopharmaceutical Regulation
  3
- Bio 353 Essentials of Plant Pathology
  3
- Bio 354L Essentials of Plant Pathology Laboratory
  1
- Bio 355 Ecological Topics
  4

#### Biology Minor

This minor is intended for students who wish to incorporate a study of biology into their academic background. In addition to the freshman Biological Principles sequence, the recommended list of courses provides the opportunity to explore various specialties within the field of Biology.

### Program of Study:

**Required: At least 20 credits**

Students MUST take the following two courses:

- Bio 130 Biological Principles I
  4
- Bio 131 Biological Principles II
  4

Students must earn at least 12 additional credits, including at least one additional laboratory course, at the 200-level or above with appropriate prerequisites satisfied, selected from the following:

- Bio 210 Introduction to Bioscience
  3
- Bio 220 Medical Microbiology
  4
- Bio 240 Bioethics
  3
- Bio 340 Biopharmaceutical Regulation
  3
- Bio 353 Essentials of Plant Pathology
  3
- Bio 354L Essentials of Plant Pathology Laboratory
  1
- Bio 355 Ecological Topics
  4

#### PHPA - Office of Pre-Health Professions Advisement

[www.farmingdale.edu/prehealth](http://www.farmingdale.edu/prehealth)

The Office of Pre-Health Professions Advisement offers guidance to students preparing for admission to professional schools of medicine, dentistry, veterinary medicine, chiropractic, pharmacy, optometry, podiatry as well as the allied health discipline of Physician Assistant. The office helps students identify and complete the requirements for application and admission to these programs. These include required and recommended courses, entrance examinations, letters of recommendation, and effective essay or personal statement writing. Matriculated students in any undergraduate curriculum, as well as students enrolled in the post-baccalaureate Certificate in Sciences for the Health Professions may apply for advisement by the office. Due to the highly competitive nature of health professional school admissions undergraduate students must have an overall GPA of at least 3.0 to apply.

Before applying to the PHPA, currently matriculated students should first seek guidance from their regular department advisor regarding their undergraduate degree requirements. Students who are preparing to apply for admission to an undergraduate degree program should consult with the Admissions Office and their intended undergraduate department prior to seeking advisement from the PHPA office.

### Business Management Department

Dr. Francine Federman, Acting Chair

The Business Management Department offers the following programs:

- Business Management Bachelor of Science
- Accounting Certificate
- Management Certificate
- Marketing Certificate
- International Business Local Certificate
- Business Management Minor
- Legal Studies Minor

The Business Management Department strives to provide applied business learning experiences that focus on developing a student’s thinking and analytical skills. Graduates from the Business Management degree programs not only understand the functions and issues facing businesses in the modern world economy but have learned and practiced the skills to creatively solve modern problems. Through classroom experiences, internships, guest speakers, lecturers, and student associations, the Business Management Department connects the classroom to the business world.

Students from the Department of Business Management develop a mastery of intellectual and practical business skills. Classes cross disciplines and incorporate imagination, expression, and the interrelationships of global and multicultural forces on the business environment. Upon graduation, they will be able to transform information into knowledge and knowledge into judgment and action.

The Business Management Department also strives to foster in its students a sense of social responsibility and ethical judgment. Effective decision making and creative problem solving must be mediated by a sense of the larger impact decisions may have. Through applied learning experiences, case study, internship and business simulation, students are develop the ability to analyze the potential outcomes and implications of their decisions.

### Business Management

#### Bachelor of Science

The BS in Business Management is designed to prepare students for a wide choice of business and managerial careers. The program provides for a rich exposure to business issues and functions through introductory and core business courses but also provides a significant portion of the degree to be self defined through elective courses. Through consultation with faculty and program advisors each student is advised with an individualized set of courses designed to best serve the career goals of that student. Students may choose to focus in a single area of business or from a wider array of course clusters in Business, Computer Systems and/or Sport Management.

#### Typical Employment Opportunities:

- Customer Relations Manager
- Entrepreneur/small business manager
- Financial Services Specialist
- Import/Export Administrator
- International Business Facilitator
- Logistics and Supply Chain Manager
Program of Study
Liberal Arts and Sciences (61 credits)
Arts elective .................................................. 3
Communications elective ................................. 3
EGL 101 Composition: Rhetoric ........................ 3
EGL 102 Composition: Literature ...................... 3
EGL 310 Technical Writing ................................ 3
Western Civilization/Other World Civilizations .... 3
American History elective ................................. 3
MTH 129 Precalculus or
MTH 117 Precalculus Modeling for Life & Social Sciences ...... 4
Modern Language (Level II or higher course) ......... 3
ECO 156 Principles of Economics (Macro) ............. 3
ECO 157 Principles of Economics (Micro) ............... 3
Natural Science electives (BIO, CHE, or PHY) ......... 6
Arts and Sciences electives (including 6 credits at 300-level or above) ........................................... 21
Please refer to the General Education and Writing-Intensive Requirement Sections of this catalog and consult with your advisor to ensure that graduation requirements are satisfied.

Required: Business (39 credits)
BUS 101 Accounting I ..................................... 3
BUS 102 Accounting II .................................... 3
BUS 109 Management Theories and Practices ...... 3
BUS 131 Marketing Principles ........................... 3
BUS 201 Corporate Finance ............................. 3
BUS 202 Business Law .................................... 3
BUS 240 Business Statistics ............................. 3
BUS 280 International Business ......................... 3
BUS 300 Operations Management ..................... 3
BUS 404 Financial Markets & Institutions ............ 3
BUS 409 Strategic Management ....................... 3
BCS 102 Computer Concepts and Applications ..... 3
BCS 300 Management Information Systems ........ 3

Electives: (24 credits)
BUS, SMT and/or IND courses (300 level or higher) ........... 9
AET, BCS, BUS, CON, EET, HOR, IND, MET and/or SMT courses .................................................. 12
Free Elective .................................................... 3
Total Credits ................................................... 124

Business Management Certificate Programs:
Certificates in Business Management are offered in Accounting, Marketing, Management and International Business. Certificates are designed to provide a general exposure to a field for students not seeking a degree.

Accounting (36 credits)
BUS 101 Accounting I
BUS 102 Accounting II
BUS 109 Management Theory and Practices and Practices
BUS 111 Introduction to Business
BUS 201 Corporate Finance

BUS 220 Financial Information Systems
BUS 271 Intermediate Accounting I
BUS 272 Intermediate Accounting II
BUS 273 Cost Accounting

Three additional courses (9 credits) in Business

Management (36 credits)
BUS 111 Introduction to Business
BUS 101 Accounting I
BUS 102 Accounting II
BUS 109 Management Theory and Practices
BUS 131 Marketing Principles
BUS 141 Business Communications
BUS 201 Corporate Finance
BUS 266 Personnel/Human Resources Management

Four additional courses (12 credits) in Business

Marketing (36 credits)
BUS 109 Management Theory
BUS 111 Introduction to Business
BUS 131 Marketing Principles
BUS 141 Business Communications
BUS 253 Industrial Marketing
BUS 254 Salesmanship
BUS 257 Advertising Principles

Five additional courses (15 credits) in Business

International Business (12 credits)
BUS 280 International Business
BUS 320 International Marketing or
BUS 322 International Management
ECO 340 International Trade
SOC 231 Challenge of Multiculturalism

or a modern language for Business

Note: Students planning to pursue a degree program after completing the certificate program are urged to select elective courses applicable to the degree program.

Business Management Minor
The Business Management minor, available only to non-Business Management majors, consists of 21 credits distributed as follows:

Required Courses (9 credits):
BUS 101 Accounting I
BUS 109 Management Theories & Practices
BUS 131 Marketing Principles

Electives (12 credits):
Business Management (BUS) courses at the 200-level or higher

Legal Studies Minor
The Legal Studies minor consists of 15 credits (five 3-credit courses). Students will be required to take the introductory course in legal studies (POL 110: Introduction to Legal Studies) plus four additional courses chosen with the approval of the program’s coordinator. Alternatively, the student may elect to substitute either a law focused internship or directed independent study for one of these four additional courses.

This minor is intended for students who are interested in the study of the law in their undergraduate education and may serve as an introduction for students who are interested in pursuing a legal career.
The four additional courses for the minor may be chosen from the following: AVN 300W, AVN 400, BIO 455, BUS 202, BUS 230, BUS 304, BUS 321, BUS 352, BUS 406, CON 361, CRJ 204, CRJ 205, CRJ 404, ECO 312, HST 305, POL 250, POL 251, POL 310, POL 399, SMT 410

Chemistry Department
Dr. Joseph Ursino, Jr., Acting Chair
The Chemistry Department offers courses to students who are planning to enter a baccalaureate program and/or to those whose goals include more immediate employment.
A program which includes an emphasis in chemistry would be applicable to the following career areas: chemistry, chemical engineering, medicine, dentistry, pharmacy, biology, forensic science, allied health professions and other professions which require a foundation in science.
An emphasis in chemistry, which is designed to be transferrable to a baccalaureate program, may be taken under the auspices of the Liberal Arts and Sciences Department (consult the specific department for details).
In its supportive role, the Chemistry Department offers courses to students enrolled in the following areas (consult the department for details): Bioscience, Business Management, Dental Hygiene, Horticultural Technology Management, Industrial Technology-Facility Management Technology, Liberal Arts and Sciences, Manufacturing Engineering Technology (upper division), Mechanical Engineering Technology, Medical Laboratory Technology, Nursing, and Undeclared Major.
(Prefix for Chemistry courses is CHM)

Chinese
See Modern Languages Department

Computer Engineering Technology
See Electrical/Computer Engineering Technology Department

Computer Systems Department
Professor Ruth Sapir, Chair
The Computer Systems Department offers the following programs:
- Computer Programming and Information Systems .................... Bachelor of Science
- Computer Information Systems ................................. Certificate
- Advanced Programming.................................. Local Certificate
- Computer Programming and Information Systems ........ Minor
- Management Information Systems ......................... Minor
- Web Development ........................................ Minor

Computer Programming
and Information Systems

Bachelor of Science
Demand continues to be strong for students skilled in Information Technology. Of the top 10 degrees in demand for bachelor’s degree levels, four are computer related. They include the following degrees:
- Computer Science
- Information Science and Systems
- Computer Engineering
- Management Information Systems/Business Data Processing

By 2012, jobs in scientific, technical, and professional services are expected to add nearly 1.9 million jobs. Of these services jobs, more than 33 percent of them will be related to computer systems design. This growth is marked by the demands placed on information technology and network and system security.

The Computer Programming and Information Systems baccalaureate degree program requires a set of core courses that all graduates must take. The Core courses provide the diverse but fundamental foundation in technology necessary to create a technology savvy individual. In addition, the student selects one of five tracks with concentrations in Programming, Systems Development, Networking, Web Development or Database. Each track offers the student a skill set in one discipline of Information Technology and enables him/her to study a particular area in depth.

This program touches on all aspects of computer programming and information systems. It provides a practical hands-on approach to programming with an emphasis on solving business problems.

Typical employment opportunities include the following:
- Computer Support Specialists
- Information Technology Specialists
- Data Communications Analysts
- Quality Assurance Technicians
- Systems Analysts
- Programmer/Analysts
- Data Base Analysts
- Web Developers
- Network Administrators

Programmers convert project specifications, addressing problem statements and procedures, into detailed coding in a computer language. They will also develop and write computer programs to store and retrieve documents, data and information. The Systems Analyst analyzes business, scientific and technical problems for application to computer-based systems.

For those interested in networking, our program offers courses in conjunction with the Cisco Networking Academy. Students taking and passing these courses receive training certifications for each course directly from Cisco. These courses prepare each student for taking the Cisco Certified Network Associate (CCNA) exam.

Web Development professionals are in demand due to the growth of the Internet and the expansion of the World Wide Web (the graphical portion of the Internet). This rapid growth has generated a variety of occupations related to the design, development, and maintenance of Web sites and their servers. Database professionals will be prepared to design and administer the advanced databases that industry relies on.
Computer Systems (BS) Program Objectives:

- Graduates will be trained as technical problem solvers and will receive the knowledge and skills necessary to function and grow in this high-demand workforce.
- Graduates will have an opportunity to get hands-on experience via Internship opportunities and completion of a capstone project.
- Graduates will be able to analyze an ethical situation and apply ethical guidelines in evaluating the situation.
- Graduates will be prepared to pursue advanced studies beyond the bachelor's degree.

Students entering the CPIS program are required to bring a laptop computer to class.

Program of Study

Liberal Arts and Sciences (61-63 credits)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EGL 101 Composition: Rhetoric</td>
<td>3</td>
</tr>
<tr>
<td>EGL 102 Composition: Literature</td>
<td>3</td>
</tr>
<tr>
<td>EGL 310 Technical Writing or PCM 324 Report Writing and Technical Communications</td>
<td>3</td>
</tr>
<tr>
<td>Communications (from Communications General Education)</td>
<td>3</td>
</tr>
<tr>
<td>Arts (from Arts General Education)</td>
<td>3</td>
</tr>
<tr>
<td>Modern Language (level II)</td>
<td>3</td>
</tr>
<tr>
<td>ECO 156 or ECO 157</td>
<td>3</td>
</tr>
<tr>
<td>PSY 101 or SOC 122</td>
<td>3</td>
</tr>
<tr>
<td>American History General Education</td>
<td>3</td>
</tr>
<tr>
<td>Western Civilization/Other World Civilizations</td>
<td>3</td>
</tr>
<tr>
<td>Natural Science electives</td>
<td>6/8</td>
</tr>
<tr>
<td>MTH 130 Calculus I w Applications</td>
<td>4</td>
</tr>
<tr>
<td>MTH 390 Prob. Methods in Operations Research</td>
<td>3</td>
</tr>
<tr>
<td>300 level Arts &amp; Science electives</td>
<td>3</td>
</tr>
<tr>
<td>Free Arts and Science electives</td>
<td>15</td>
</tr>
</tbody>
</table>

Note: 9 credits from this group must be 300-level or higher.

Please refer to the General Education and Writing-Intensive Requirement Sections of this catalog and consult with your advisor to ensure that graduation requirements are satisfied.

Required:

Business & Computer Systems (48 credits)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCS 101 Programming Concepts and Problem Solving</td>
<td>3</td>
</tr>
<tr>
<td>BCS 1xx Programming I * BCS 120 or BCS 185</td>
<td>3</td>
</tr>
<tr>
<td>BCS 2xx Programming II * BCS 230 or BCS 285</td>
<td>3</td>
</tr>
<tr>
<td>BCS 215 UNIX Operating System</td>
<td>3</td>
</tr>
<tr>
<td>BCS 260 Data Base</td>
<td>3</td>
</tr>
<tr>
<td>BCS 262 Data Communications</td>
<td>3</td>
</tr>
<tr>
<td>BCS 300 Management Information Systems</td>
<td>3</td>
</tr>
<tr>
<td>BCS 301 Systems Analysis and Design</td>
<td>3</td>
</tr>
<tr>
<td>BCS 345 Java Programming</td>
<td>3</td>
</tr>
<tr>
<td>BCS 430W Senior Project</td>
<td>3</td>
</tr>
<tr>
<td>BCS Elective</td>
<td>3</td>
</tr>
<tr>
<td>BCS/BUS Elective</td>
<td>3</td>
</tr>
<tr>
<td>BCS 3XX 300-level elective or above</td>
<td>3</td>
</tr>
<tr>
<td>BCS/BUS 3XX 300-level elective or above</td>
<td>3</td>
</tr>
<tr>
<td>BUS 101 Accounting I</td>
<td>3</td>
</tr>
<tr>
<td>BUS 109 Management Theories and Practices</td>
<td>3</td>
</tr>
</tbody>
</table>

Programming Track (12 Credits)

Students must complete BCS120 and BCS230 for this track.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCS 370 Data Structures</td>
<td>3</td>
</tr>
<tr>
<td>BCS 316 Perl Programming</td>
<td>3</td>
</tr>
<tr>
<td>BCS 360 Advanced Data Base</td>
<td>3</td>
</tr>
<tr>
<td>BCS 410 Computer Architecture or BCS 415 – Operating</td>
<td>3</td>
</tr>
</tbody>
</table>

Systems Track (12 Credits)

Students must complete BCS 301 as a prerequisite(s) for this track.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCS 302 Systems Analysis and Design II</td>
<td>3</td>
</tr>
<tr>
<td>BCS 378 Information Security</td>
<td>3</td>
</tr>
<tr>
<td>BUS 3XX 300-level elective or above</td>
<td>3</td>
</tr>
<tr>
<td>BCS 405 Development Project Management</td>
<td>3</td>
</tr>
</tbody>
</table>

Networking Track (12 Credits)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCS 208 Networking Fundamentals I</td>
<td>3</td>
</tr>
<tr>
<td>BCS 209 Networking Fundamentals II</td>
<td>3</td>
</tr>
</tbody>
</table>

Choose two of the following four courses:

- BCS 311 Local Area Networking
- BCS 320 LAN Switching and Wireless
- BCS 321 Accessing the WAN
- BCS 378 Information Security

Web Track (12 Credits)

Students must complete BCS 130 as a prerequisite(s) for this track.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCS 240 Website Development II</td>
<td>3</td>
</tr>
<tr>
<td>BCS 250 JavaScript</td>
<td>3</td>
</tr>
<tr>
<td>BCS 303 Advanced Website Development</td>
<td>3</td>
</tr>
<tr>
<td>BCS 350 Web Database Development</td>
<td>3</td>
</tr>
</tbody>
</table>

Database Track (12 Credits)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCS 360 Programming in SQL</td>
<td>3</td>
</tr>
<tr>
<td>BCS 380 Advanced Database Programming</td>
<td>3</td>
</tr>
<tr>
<td>BCS 390 Database Administration and Security</td>
<td>3</td>
</tr>
<tr>
<td>BCS 425 Decision Support Systems and Data Warehousing</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Credits: 121-123

Notes:

1: No student will be permitted to remain in the Computer Programming and Information Systems Program if he/she has received three “F’s” in any BCS course or courses. Candidates will be required to have an average 2.0 GPA in BCS courses.

2: Students must complete at least 18 credits with BCS designation at Farmingdale.

3: Students with life experience may challenge up to 3 courses (9 credits via credit-by-evaluation).

Computer Information Systems Certificate

A minimum of 33 credits is required.

A Certificate program in Computer Information Systems is available for those students who do not wish to work toward a degree. The following is a list of courses which a student must take in order to be eligible for the Certificate. Students with experience in the computer field may be excused from specific required courses, but will have to take replacement courses in their stead.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCS 101 Programming Concepts and Problem Solving</td>
<td>3</td>
</tr>
<tr>
<td>BCS 1xx Programming I * BCS 120 or BCS 185</td>
<td>3</td>
</tr>
<tr>
<td>BCS 2xx Programming II * BCS 230 or BCS 285</td>
<td>3</td>
</tr>
<tr>
<td>BCS 215 UNIX Operating System</td>
<td>3</td>
</tr>
<tr>
<td>BCS 260 Data Base</td>
<td>3</td>
</tr>
<tr>
<td>BCS 262 Data Communications</td>
<td>3</td>
</tr>
<tr>
<td>BCS 300 Management Information Systems</td>
<td>3</td>
</tr>
<tr>
<td>BCS 301 Systems Analysis and Design</td>
<td>3</td>
</tr>
<tr>
<td>BCS 345 Java Programming</td>
<td>3</td>
</tr>
<tr>
<td>BCS 430W Senior Project</td>
<td>3</td>
</tr>
<tr>
<td>BCS Elective</td>
<td>3</td>
</tr>
<tr>
<td>BCS/BUS Elective</td>
<td>3</td>
</tr>
<tr>
<td>BCS 3XX 300-level elective or above</td>
<td>3</td>
</tr>
<tr>
<td>BCS/BUS 3XX 300-level elective or above</td>
<td>3</td>
</tr>
<tr>
<td>BUS 101 Accounting I</td>
<td>3</td>
</tr>
<tr>
<td>BUS 109 Management Theories and Practices</td>
<td>3</td>
</tr>
</tbody>
</table>
**Computer Systems Technology - Business Programming & Systems Certificate**

A minimum of 30 credits is required

A Certificate program in Computer Programming is available for those students who do not wish to work toward a degree. The following is a list of courses which a student must take in order to be eligible for the Certificate. Students with experience in the computer field may be excused from specific required courses but will have to take replacement courses in their stead.

- **BCS 1xx Programming I**
- **BCS 2xx Programming II**
- **BCS 215 UNIX Operating System**
- **BCS 260 Data Base**
- **BCS 262 Data Communications**
- **BCS 301 Systems Analysis & Design**
- **BCS elective**
- **BCS elective**
- **BCS elective**

**Choose 3 out of 5 of the following courses**

- **BCS 101 Programming Concepts and Problem Solving**
- **BCS 120 or BCS 185 Programming Language – Level I**
- **BCS 230 or BCS 285 Programming Language – Level II**
- **BCS 303 Advanced Web Development**
- **BCS 405 IS Development Project Management**

**Advanced Programming Certificate**

A minimum of 30 credits is required

This certificate is designed to enhance the skills of those who are currently programmers, or those with an advanced degree who are seeking to amplify their skills in the newer computer technologies. The purpose of this certificate is to provide the education necessary to be competitive in the current computer market. The required and elective courses relate to newer software and technologies rather than the traditional courses in BCS, thereby providing augmentation for the students with a degree as well as those who have received "on-the-job" training in this discipline.

**Required Courses (30 credits)**

- **BCS 120 Foundations of Programming I**
- **BCS 230 Foundations of Programming II**
- **BCS 215 UNIX Operating System**
- **BCS 260 Data Base**
- **BCS 315 Advanced UNIX**
- **BCS 316 Perl**
- **BCS 345 JAVA**
- **BCS 360 Advanced Data Base**
- **BCS 370 Data Structures**
- **BCS 410 Computer Architecture or BCS 415 – Operating Systems Internals and Design**

**Web Development Minor**

The requirements for a minor in Web Development will meet all the requirements of a minor as stated in the college catalog. The following courses will comprise the minor.

**Required Courses:**

- **BCS 101 Programming Concepts and Problem Solving**
- **BCS 130 Web Page Authoring**
- **BCS 215 UNIX Operating Systems**
- **BCS 260 Database**
- **BCS 304 Management Information Systems**
- **BCS 301 Systems Analysis & Design**
- **BCS 405 IS Development Project Management**

**Computer Programming and Information Systems Minor**

The requirements for a minor in Computer Programming and Information Systems will meet all the requirements of a minor as stated in the college catalog. The following courses will comprise the minor:

**Required Courses:**

- **BCS 101 Programming Concepts and Problem Solving**
- **BCS 120 or BCS 185 Programming Language – Level I**
- **BCS 230 or BCS 285 Programming Language – Level II**

**Management Information Systems Minor**

The requirements for a minor in Computer Programming and Information Systems will meet all the requirements of a minor as stated in the college catalog. The following courses will comprise the minor.

**Required Courses:**

- **BCS 101 Programming Concepts and Problem Solving**
- **BCS 120 or BCS 185 Programming Language – Level I**
- **BCS 260 Database**
- **BCS 300 Management Information Systems**
- **BCS 301 Systems Analysis & Design**
- **BCS 405 IS Development Project Management**

**Construction Management Engineering Technology**

See Construction Management Department

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**Criminal Justice Department**

Professor John I. Kostanoski, Chair

The Criminal Justice Department offers the following programs:

- Security Systems....................................................Bachelor of Science
- Criminal Justice: Law Enforcement TechnologyBachelor of Science
- Criminal Justice – Law Enforcement........Associate in Science

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Security Systems
(Managing Security Technology)

Bachelor of Science

The goal of this program is to provide a positive learning and teaching environment in applied science and technology. The program treats the technical aspects of the discipline in order to educate a new breed security director, a manager of technology who integrates crime prevention theory with the design philosophy and hardware and software components of security technology. Criminal justice and security are by their nature information gathering and processing activities and students need to be prepared for a changing work environment where computers will be used extensively. The computer as an integrating technology is emphasized in the program to achieve remarkable effectiveness as well as exceptional efficiency of crime control performance. The Access Control, Computer Forensics, Computer Security, Intrusion Detection, and Security Imaging Sensor laboratories which house state-of-the-art equipment serve as technical resources for the program. The courseware teaches students how to: manage the movement of people in organizations; detect intrusions on the corporate network; deter acts of corporate espionage and sabotage; and prevent theft of company assets. What is different about this program is that it has been shaped as a digital age curriculum. Students do not simply learn about hardware and software but also are taught how to use it to solve protection problems.

Our program offers students a choice of one of two concentrations, 1), a networking concentration; or 2) a transportation security – aviation concentration. These concentrations are supported by courses from Farmingdale’s Aviation and Computer Systems Departments.

Typical Employment Opportunities
Corporate Security
Federal Law Enforcement Agencies
Local, Municipal, and State Law Enforcement Agencies

Security Systems (B.S.) program objectives:
• Graduates will have knowledge of advanced computer-based evidentiary and “discovery” data methods, and will be technically competent to administer procedures for evidence identification, documentation, and chain of custody maintenance.
• Graduates will have knowledge to develop comprehensive computer security programs for organizations.
• Graduates will have knowledge to develop protection programs for organizations using an integrated security systems approach.
• Graduates will have an appreciation and understanding of the necessity for personal integrity, professional ethics, and cultural awareness.

Liberal Arts and Sciences (61-62 credits)
EGL 101 Composition: Rhetoric………………………………………3
EGL 102 Composition: Literature……………………………………3
Communications Elective (other than EGL 101)……………………3
Modern Language (Level II or higher)…………………………………3
Arts Elective………………………………………………………………3
MTH 110 Statistics………………………………………………………3
Math or Science Elective………………………………………………3
BIO 120 General Biology………………………………………………4
Natural Science Elective………………………………………………3-4
Western Civilization/Other World Civilizations………………………3

American History Elective ………………………………………………3
PSY 101 Introduction to Psychology…………………………………3
PSY 235 Abnormal Psychology……………………………………3
SOC 122 Introduction to Sociology …………………………………3
SOC 223 Social Issues and Institutions (or)
SOC 224 Urban Sociology (or)
SOC 225 Sociology of the Family……………………………………3
SOC 229 Minorities in American Society (or)
SOC 231 The Promise and Challenge of Multiculturalism …………3
Arts & Sciences electives ………………………………………………12

Please refer to the General Education and Writing-Intensive Requirement Sections of this catalog and consult with your academic advisor to ensure that graduation requirements are satisfied.

Required Courses in the Major (52 credits)
CRJ 100 Introduction to Criminal Justice…………………………3
CRJ 115 Computer Forensics………………………………………3
CRJ 200W Criminal Investigation…………………………………3
CRJ 217 Computer Forensics II……………………………………3
CRJ 218 Computer Forensics III……………………………………3
CRJ 230 Biometrics and Identity Theft……………………………..3
CRJ 302 Managing Security Systems……………………………..3
CRJ 310 Computer Security I………………………………………3
CRJ 311 Computer Security II………………………………………3
CRJ 312 Computer Security III……………………………………3
CRJ 314 Security Law and Policy……………………………………3
CRJ 321 Access Control………………………………………………3
CRJ 322 Intrusion Detection…………………………………………3
CRJ 404 Cyber Law & Electronic Espionage……………………..3
CRJ 410 Senior Project………………………………………………3
CRJ 420 Physical Security I…………………………………………4
CRJ 421 Physical Security II……………………………………..…3

Network Concentration (12 Credits)
BCS 208 Networking Fundamentals I………………………………3
BCS 209 Networking Fundamentals II……………………………..3
BCS 320 LAN Switching and Wireless…………………………..3
BCS 321 Accessing the WAN………………………………………3

OR

Transportation Security (12 Credits)
AVN 280 Intro to Air Cargo Operations-Basic……………………..3
AVN 300W Government in Aviation……………………………..…3
AVN 400 Aviation Law…………………………………………………3
AVN 417 Homeland Security in Aviation………………………...3

Total Credits:……………………………………………………………125-126

Criminal Justice: Law Enforcement Technology

Bachelor of Science

The Bachelor of Science program in Criminal Justice: Law Enforcement Technology is a technical program that prepares students for careers in law enforcement on the local, state, and federal levels. Other career opportunities exist with private police and military police forces.

The program blends coursework in computers, forensics, crime prevention, and technology to provide students with the necessary skills to control crime as well as to conduct investigations of crimes committed on a computer or at a crime scene. Students are provided with a legal foundation in the study of digital evidence, which is an essential element of cyber investigations.
The program will provide graduates with technical skills to pursue careers in the protective services as well as for in-service personnel who may seek career advancement. Students are also provided with a broad based educational experience that draws from the deep reservoirs of knowledge of the arts and sciences. Graduates who wish to continue their education will find that the program will enable them to transfer to graduate programs in criminal justice.

Students majoring in Criminal Justice: Law Enforcement Technology will take a total of 120 credits of which 60 credits are in criminal justice and 60 credits are in liberal arts and sciences, with 33 credits as free electives. In the first two years of the program, students will have completed basic courses in criminal justice with acquired competencies in criminal and procedural law, criminal investigation and criminalistics. In the third year of study, students will take the more advanced technology courses. The advanced technology courses will provide students with skills in computer forensics, forensic imaging and video analysis, criminal justice database management, crime analysis and mapping, and crime prevention technology. The program concludes with a senior project capstone course which may involve the analysis of a discipline-related technical problem or the development of a research project.

**Program of Study**

**Liberal Arts and Sciences (71 credits)**
- EGL 101 Composition: Rhetoric ........................................... 3
- EGL 102 Composition: Literature ........................................... 3
- Communications General Education ..................................... 3
- Modern Language (Level II or higher) .................................... 3
- Arts General Education ...................................................... 3
- MTH 110 Statistics .................................................................. 3
- Science or Math Elective ...................................................... 3
- BIO 120 General Biology (with lab) ....................................... 4
- Natural Science General Education ........................................ 4
- Western Civilization/Other World Civilizations ...................... 3
- American History General Education .................................... 3
- PSY 101 Intro to Psychology ................................................. 3
- PSY 235 Abnormal Psychology ............................................. 3
- SOC 122 Intro to Sociology .................................................. 3
- Modern Language ................................................................. 3
- Arts and Science Electives .................................................... 12
- Social Science Electives ....................................................... 6

Please refer to the General Education and Writing Intensive Requirement sections of the catalog and consult with your academic advisor to ensure that graduation requirements are satisfied.

**Required courses in the Major (49 credits)**
- CRJ 100 Introduction to Criminal Justice ............................... 3
- CRJ 101 Law Enforcement Community Relations .................. 3
- CRJ 115 Corrections in America ............................................. 3
- CRJ 200W Criminal Investigation .......................................... 3
- CRJ 201 Criminalistics ......................................................... 3
- CRJ 204 Criminal Law .......................................................... 3
- CRJ 205 Criminal Procedure Law ......................................... 3
- CRJ 217 Computer Forensics II ............................................. 3
- CRJ 218 Computer Forensics III ............................................ 3
- CRJ 306 Forensic Technology ................................................ 4

**CRJ 307 Criminal Justice Database Operation ................................ 4
- CRJ 406 Crime Analysis and Mapping .................................... 4
- CRJ 407 Crime Prevention Systems ........................................ 4
- CRJ 410 Senior Project .......................................................... 3
- **Total Credits....................................................................... 120**

**Criminal Justice - Law Enforcement Associate in Science Degree**

The goal of this program is to prepare students to be real-life problem solvers in the field of law enforcement. The program is designed to develop technical competencies and broad-based knowledge in students who wish to pursue careers in Criminal Justice as well as for in-service personnel who seek career advancement in law enforcement. The Department offers a full-time day program and a part-time evening program. Students have the opportunity to interact with faculty who represent a wide spectrum of Criminal Justice experience, expertise and scholarly achievement including technical assistance to the National Institute of Justice and numerous state and local agencies, task forces and professional and learned societies.

We remain faithful to our tradition of providing students with a broad based educational experience by drawing from the deep reservoirs of knowledge of the arts and sciences. Our associate degree program provides students with the educational credentials necessary for many law enforcement careers, and graduates who wish to continue their education will find that the AS degree enables them to transfer to a wide variety of related upper division programs.

**Typical Employment Opportunities**

- Federal Government
- U.S. Armed Forces Police
- State Government
- Local Government
- Business and Industry Security
- Enforcement Agencies
- County, City, Town, Village, Law Insurance Claim Investigation

**Criminal Justice – Law Enforcement program objectives:**

- Graduates will have knowledge of criminal investigation procedures and be able to analyze the elements that constitute crimes as well as apply technical methods at crime scenes.
- Graduates will have knowledge of the major theories of criminal behavior developed by various disciplines of the social and biological sciences, and will be familiar with research evidence on the basic patterns of crime and crime trends.
- Graduates will have knowledge of criminal law at the law enforcement level, including the elements and proof frequently used to establish criminal liability under the New York State Penal Law and important case precedents.
- Graduates will have an appreciation and understanding of the necessity for personal integrity, professional ethics, and cultural awareness

**Program of Study (Pattern for full and part-time students)**

**Liberal Arts and Sciences (31 credits)**
- EGL 101 Composition: Rhetoric ............................................. 3
- EGL 102 Composition: Literature ........................................... 3
- MTH 110 Statistics ............................................................... 3
- BIO 120 General Biology .................................................... 4
- Western Civilization/Other World Civilizations ....................... 3
- **Total Credits....................................................................... 120**
Dental Hygiene Department

Dr. Laura Joseph, Chair
Dr. Maureen Tsokris, Assistant Chair

The Dental Hygiene Department offers the following programs:

- Dental Hygiene Bachelor of Science
- Dental Hygiene Associate in Science

Dental Hygiene

Bachelor of Science
The Bachelor of Science degree program in Dental Hygiene is designed to meet the transfer and continuing education needs of Associate Degree graduates in Dental Hygiene. This program will offer students a foundation of knowledge that will prepare them for the emerging roles within the Dental Hygiene profession. Emphasis is placed on broadening the career paths for practicing hygienists. Foundation courses are in the areas of teaching, research, and public health. As part of the capstone practicum course, students are given the opportunity to further explore a specific area of interest through an internship. Based on personal interest, students may partner with corporations, hospitals, public health programs, facilities, or educational institutions.

As the dental hygiene profession continues to expand, many career opportunities require advanced degrees. This degree completion program in dental hygiene is tailored to provide comprehensive upper-level studies that will prepare dental hygienists to adapt to the emerging new roles in oral healthcare.

**Typical Employment Opportunities:**
- Dental Hygiene Education
- Dental Insurance Companies

**Dental Hygiene (BS) Program Objectives:**
- The dental hygiene graduate will be able to utilize professional judgment and critical thinking skills to determine the treatment needs of geriatric and special needs patients.
- The dental hygiene graduate will understand the role of leadership, management, and technology as it applies to dental hygiene practice.
- The dental hygiene graduate will develop the skills necessary to analyze and apply scientific literature in the dental hygiene process of care.
- The dental hygiene graduate will be able to develop a comprehensive community-based oral health care program.
- The dental hygiene graduate will demonstrate an understanding of the learning process, various teaching methodologies, and evaluation techniques as they apply to the dental hygiene educator.
- The dental hygiene graduate will be able to develop employment opportunities other than traditional clinical practice.
- The dental hygiene graduate will seek educational advancement for continued growth and development following commencement.

**Special Opportunities:**
As a student in the Dental Hygiene Bachelor’s Program, you are eligible to participate in the Student American Dental Hygienists’ Association (SADHA) which promotes student leadership through community outreach, lunch and learn programs and various campus activities.

The Dental Hygiene Department also offers a specialized elective for students interested in the internationalization of dental hygiene. The elective gives students an opportunity to study abroad in Sweden where they will observe the practice of dental hygiene while being emerged in a new culture.

To facilitate transfer into graduate level programs, the Dental Hygiene Department has established seamless transfer agreements with Touro College, School of Health Sciences for a Master of Science in Public Health and Stony Brook University, School of Health Technology and Management for a Master of Science in Health Care Policy and Management.

**Program of Study**

**Liberal Arts and Sciences (30 credits)**

- Arts Elective ................................................................. 3
- MTH 110 Statistics ......................................................... 3
- HIS 121, 122, or 125 American History .......................... 3
- Western Civilization/Other World Civilizations .............. 3
- BIO 240 Bioethics ......................................................... 3
- Modern Language Elective (Level 2) ......................... 3
- *Liberal Arts & Science Electives .............................. 12
  * 200 level or above recommended

Please refer to the General Education and Writing-Intensive Requirement Sections of this catalog and consult with your advisor to ensure that graduation requirements are satisfied. In addition, compare the Liberal Arts and Sciences courses you have successfully completed in your associate degree program to confirm general education requirements that you have met.

**Support Courses (3 credits)**
- BCS 102 Computer Concepts and Applications ............. 3
Ngative for Hepatitis B receive the appropriate vaccine. Students who decline this recommendation will be required to be of good moral character. An applicant for licensure who has been convicted of a crime, or has committed an act which raises a reasonable question as to their moral character, will be subject to review.

**Dental Hygiene (AS) Program Objectives:**
- Graduates will have the knowledge and skills necessary to provide comprehensive dental hygiene care to the general population including the adolescent, geriatric and special needs patient.
- Graduates will develop an expertise in the area of health promotion and disease prevention through assessment, planning, implementation and evaluation of community based oral health programs and effective interaction with diverse population groups.
- Graduates will develop a sense of professionalism as health care providers including self assessment, recognition and management of ethical, legal and regulatory issues, and evaluation of scientific literature as it relates to the profession of dental hygiene.

**Typical Employment Opportunities**

- Private Dental Offices
- Geriatric Facilities
- Public Health Agencies
- Research Laboratories
- School Health Services
- Pharmaceutical Corporations
- Private Care Center
- Dental Supply Companies
- Hospitals
- Armed Forces
- Insurance Companies
- Managed Care Facilities
- OSHA/Infection Control regulations regarding infectious diseases and bloodborne pathogens.

Graduates are prepared for employment in a variety of settings.

- Dental practices
- Health care facilities
- Education
- Government agencies
- Nonprofit organizations
- Dental laboratories
- Other businesses providing dental services

Graduates can be employed in a variety of work settings.

<table>
<thead>
<tr>
<th>Dental Hygiene (AS) Program Objectives:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students must take at least one 3 credit hour course designated as Writing Intensive to graduate.</td>
</tr>
</tbody>
</table>

**Dental Hygiene**

**Associate in Science**

The Dental Hygiene program prepares students for licensure and entry into the profession of Dental Hygiene, as well as certification in the administration of local infiltration anesthesia/nitrous oxide analgesia. The Department of Dental Hygiene is accredited by the Commission on Dental Accreditation.

Graduates receive an Associate in Science degree and are eligible to sit for the National Board Examination in Dental Hygiene, as well as State and Regional Practical Board Examinations for dental hygienists.

As the need for dental hygiene care continues to grow in the Nation, many new and varied opportunities are available for graduates in a wide array of work settings. Although the clinical role is most closely associated with dental hygiene, it is only one of six roles officially designated for the hygienist, which include educator, researcher, administrator, change agent, and consumer advocate. Although special emphasis is placed on educating the clinical hygienist, all the roles are incorporated into the theoretical framework and practical experiences of the curriculum. The program provides general education, as well as specialized courses in the biomedical and oral sciences.

Students perform a variety of comprehensive services at the College's technologically advanced Dental Hygiene Care Center. Among these services are thorough assessment of oral conditions, non-surgical periodontal therapy (scaling and root planing of teeth), exposing, processing and interpreting oral x-rays, patient education and nutritional counseling.

The Dental Hygiene Care Center is in compliance with all OSHA/Infection Control regulations regarding infectious diseases and bloodborne pathogens.

Applicants must submit evidence of satisfactory health including titres for measles, mumps and rubella and Hepatitis B, in advance of registration. It is strongly recommended that students who test negative for Hepatitis B receive the appropriate vaccine. Students who decline this recommendation will be required to receive a waiver of responsibility. All Dental Hygiene students are required to participate in the group liability policy, provided by the college, which will afford malpractice coverage during the time enrolled in the Dental Hygiene curriculum.

New York State Dental Hygiene licensure requires the applicant to complete prerequisite(s) requirements. Therefore, it is highly recommended that students complete prerequisite courses prior to matriculation into the program.

**Required: Dental Hygiene (27-28 credits)**

- DEN 301W Current Issues in Dental Hygiene .......................... 2
- DEN 303 Practice Management for Quality Assurance .......... 3
- DEN 307 Community Oral Health Program Planning ............ 3
- DEN 310 Teaching Strategies for Health Care Educators ........ 3
- DEN 401W Health Science Research: Principles and Methods 3
- DEN 402 Gerontology ..................................................... 3
- DEN 460W Proposals and Grant Management for Health Programs ........................................... 3
- DEN 407 Dental Hygiene Practicum Seminar ....................... 1
- DEN 409 Dental Hygiene Practicum .................................... 3
- Elective ............................................................................ 3
- or Specialized elective - DEN 410 Dental Hygiene Study Abroad in Sweden ......................................................... 4

**Total Credits: ........................................................................ 60-61**

**Note:** Students must take at least one 3 credit hour course designated as Writing Intensive to graduate.
Required:

Dental Hygiene (50 credits)

DEN 102 Dental Materials & Expanded Functions .......... 3
DEN 105 Dental & Oral Anatomy .................................. 3
DEN 106 Oral Radiology I ......................................... 3
DEN 108 Oral Histology & Embryology ........................... 2
DEN 110 Preventive Oral Health Concepts ......................... 2
DEN 115 Clinical Dental Hygiene ................................... 3
DEN 120 Preventive Oral Health Concepts II ....................... 2
DEN 125 Clinical Dental Hygiene II ................................ 3
DEN 126 Periodontology .............................................. 3
DEN 201 Pain Management .......................................... 2
DEN 203 Principles of Nutrition for Oral Health Professionals . 2
DEN 205 Oral Pathology ................................................ 3
DEN 207 Oral Radiology II ............................................. 1
DEN 212 Pharmacology ............................................... 2
DEN 221 Community Oral Health I ................................ 2
DEN 222 Community Oral Health II ................................ 2
DEN 230 Preventive Oral Health Concepts III ..................... 2
DEN 235 Clinical Dental Hygiene III ................................. 4
DEN 240 Dental Practice Management, Ethics & Jurisprudence, ... 2
DEN 245 Clinical Dental Hygiene IV ................................. 5

Total Credits: ............................................................. 80

Once a student has been admitted to DEN105, courses must be completed in semester sequence, without interruption. Any student who misses a semester will not be permitted to continue in the program until approval has been obtained (if granted) from the Admissions and Academic Standards Committee of the Dental Hygiene Department. Students who have been given permission to continue in the program will be required to take the skills refresher course DEN 015. Procedural information may be obtained from the Department Chair of Dental Hygiene in Gleeson Hall.

Notes:
The nature of this program will expose students to bodily fluids and blood borne pathogens. The Dental Hygiene Department adheres strictly to the Occupational and Safety Health Administration (OSHA) Guidelines for infectious disease control. Students must be certified in basic life support procedures prior to entering the clinical sequence. Students are required to provide their own transportation to off campus field experiences. For all field experiences, student dress must conform with field agency protocol.

Students are required to purchase their own instruments and specific clinically related supplies.

A grade of “C” (2.0) or better must be maintained in all courses with a DEN, BIO or CHM prefix. A failure in a clinically related area constitutes withdrawal from the Dental Hygiene curriculum. Students are also required to provide their own patients (approximately 8) for clinic during the second semester of the program.

A TOEFL (Test of English as a Foreign Language) Examination with a minimum score of 550 (paper), 213 (computer), or 79 (internet) will be required as a condition for entrance into the Dental Hygiene program for:

a) applicants who are foreign born high school seniors and
   have had ESL (English as a Second Language) courses in high school or

b) applicants with secondary credentials from a foreign non-English speaking country, regardless of any coursework completed in the United States.

Exceptions may be made based on credentials.

Economics

(See History, Economics and Politics Department)

Electrical/Computer Engineering Technology Department

Professor Socrates Thanasas, Chair

The Electrical/Computer Engineering Technology Department offers the following programs:

- Computer Engineering Technology .......... Bachelor of Science
- Electrical Engineering Technology .......... Bachelor of Science
- Telecommunications Technology .......... Bachelor of Science
- Sustainable Energy and Environment .......... Minor

Computer Engineering Technology

Bachelor of Science Degree

The Bachelor of Science degree program in Computer Technology is designed to address the ever increasing need for graduates possessing skills in both computer programming and computer hardware (digital electronics), and in the underlying principles of Networking.

The program establishes a sound foundation in Applied Mathematics and Physics including the necessary principles of electrical engineering technology, computer technology, elective choices in the arts, sciences and the humanities. Transfer admission is easily available to students from related degree programs.

Graduates of this program, engineering technologists, will be well prepared to fill the wide range of engineering technology positions which rely upon an understanding of hardware and software applications of digital, microprocessor, microcontroller, and computer bases systems.

This program is accredited by the Technology Accreditation Commission, Accreditation Board for Engineering and Technology, 111 Market Place, Suite 1050, Baltimore, MD 21202 410-347-7700 www.abet.org.

Computer Engineering Technology Program Objectives:

- Graduates will be technically competent and will have the necessary skills to enter careers in areas such as the design, development, implementation and project management of computer hardware and software systems and networks using modern procedures and methodologies available in the field of Computer Engineering Technology.
- Graduates will be good communicators and will function effectively in teams.
Graduates will develop and be able to maintain the necessary knowledge as well as an appropriate level of competency in current scientific methodologies so as to be able to formulate and solve technical problems and further develop and maintain their professional skills throughout their careers.

Graduates will have an appreciation and understanding of the necessity for personal integrity, professional ethics and cultural awareness.

**Program of Study**

**Liberal Arts and Sciences (61 credits)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EGL 101 Composition: Rhetoric</td>
<td>3</td>
</tr>
<tr>
<td>EGL 102 Composition: Literature</td>
<td>3</td>
</tr>
<tr>
<td>EGL 310 Technical Writing</td>
<td>3</td>
</tr>
<tr>
<td>MTH 129 Precalculus with Applications</td>
<td>4</td>
</tr>
<tr>
<td>MTH 130 Calculus I with Applications</td>
<td>4</td>
</tr>
<tr>
<td>MTH 236 Calculus II with Applications</td>
<td>3</td>
</tr>
<tr>
<td>MTH 245 Linear Algebra</td>
<td>3</td>
</tr>
<tr>
<td>MTH 322 Advanced Mathematical Analysis</td>
<td>3</td>
</tr>
<tr>
<td>PHY 135 College Physics I</td>
<td>4</td>
</tr>
<tr>
<td>PHY 136 College Physics II</td>
<td>4</td>
</tr>
<tr>
<td>ECO 321 Engineering Economics</td>
<td>3</td>
</tr>
<tr>
<td>Electives*</td>
<td>24</td>
</tr>
</tbody>
</table>

*Please refer to the General Education and Writing-Intensive Requirement Sections of this catalog and consult with your academic advisor to ensure that graduation requirements are satisfied.

**Technical Courses (66-68 credits)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCS 120 Foundations of Computer Programming</td>
<td>3</td>
</tr>
<tr>
<td>BCS 215 Unix Operating System</td>
<td>3</td>
</tr>
<tr>
<td>BCS 230 Foundations of Computer Programming II</td>
<td>3</td>
</tr>
<tr>
<td>BCS 370 Data Structure</td>
<td>3</td>
</tr>
<tr>
<td>EET 105 Introduction to Digital Electronics</td>
<td>2</td>
</tr>
<tr>
<td>EET 110 Computer Applications</td>
<td>3</td>
</tr>
<tr>
<td>EET 111 Electric Circuits I</td>
<td>4</td>
</tr>
<tr>
<td>EET 113 Electric Circuits II</td>
<td>4</td>
</tr>
<tr>
<td>EET 118 Semiconductor Devices and Circuits</td>
<td>4</td>
</tr>
<tr>
<td>EET 223 Digital Electronics</td>
<td>4</td>
</tr>
<tr>
<td>EET 224 Amplifiers</td>
<td>4</td>
</tr>
<tr>
<td>EET 251 Microprocessors</td>
<td>3</td>
</tr>
<tr>
<td>EET 316 Digital Design</td>
<td>4</td>
</tr>
<tr>
<td>EET 418 Microprocessor Interfacing &amp; Control</td>
<td>4</td>
</tr>
<tr>
<td>EET 440 Networking and Data Communications</td>
<td>4</td>
</tr>
<tr>
<td>EET 441 Advanced Networking</td>
<td>4</td>
</tr>
<tr>
<td>EET 450 Design Concepts</td>
<td>2</td>
</tr>
<tr>
<td>EET 452W Design Project</td>
<td>2</td>
</tr>
<tr>
<td>Technical Electives*</td>
<td>6-8</td>
</tr>
</tbody>
</table>

**Total Credits:** 127-129

*Liberal Arts/Science electives are selected in consultation with the student’s academic advisor in areas of student interest which meet the College’s General Education requirements.

**Technical Electives** must be selected from EET 311, EET 317, EET 327, EET 426, EET 428 or other courses in areas of student interest with Departmental approval.

**Electrical Engineering Technology Program Objectives:**

Graduates will be technically competent and will have the necessary skills to enter careers where they can apply their analytical and design skills in the areas of Electronics, Communications and Control Systems as well as technical Project Management.

Graduates will develop and be able to maintain the necessary knowledge as well as an appropriate level of competency in current scientific methodologies so as to be able to formulate and solve technical problems and further develop and maintain their professional skills throughout their careers.

Graduates will have the knowledge and skills needed to be lifelong learners.

Graduates will have an appreciation and understanding of the necessity for personal integrity, professional ethics and cultural awareness.

**Program of Study**

**Liberal Arts and Sciences (61 credits)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>EGL 101 Composition: Rhetoric</td>
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<tr>
<td>MTH 129 Precalculus with Applications</td>
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<td>4</td>
</tr>
<tr>
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<td>3</td>
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</tr>
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</tr>
<tr>
<td>PHY 135 College Physics I</td>
<td>4</td>
</tr>
<tr>
<td>PHY 136 College Physics II</td>
<td>4</td>
</tr>
<tr>
<td>PHY 323 Electromagnetic Theory</td>
<td>3</td>
</tr>
<tr>
<td>ECO 321 Engineering Economics</td>
<td>3</td>
</tr>
<tr>
<td>Electives*</td>
<td>21</td>
</tr>
</tbody>
</table>

*Please refer to the General Education and Writing-Intensive Requirement Sections of this catalog and consult with your academic advisor to ensure that graduation requirements are satisfied.

**Electrical Engineering Technology (66-68 credits)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EET 105 Introduction to Digital Electronics</td>
<td>2</td>
</tr>
<tr>
<td>EET 110 Computer Applications</td>
<td>3</td>
</tr>
<tr>
<td>EET 111 Electric Circuits I</td>
<td>4</td>
</tr>
<tr>
<td>EET 113 Electric Circuits II</td>
<td>4</td>
</tr>
<tr>
<td>EET 118 Semiconductor Devices and Circuits</td>
<td>4</td>
</tr>
<tr>
<td>EET 223 Digital Electronics</td>
<td>4</td>
</tr>
</tbody>
</table>
Telecommunications Technology

Bachelor of Science Degree
The Bachelor of Science degree program in Telecommunications Technology is designed to prepare students for careers in the telecommunications industry as well as to address the transfer and continuing education needs of associate degree graduates in Telecommunications or other related disciplines.

The program has a sound foundation of Mathematics and Physics, provides a variety of electives in the Arts, Sciences and the Humanities and is focused on applying current engineering technology methods to the solution of technical problems.

Program graduates, known as Telecommunications technologists, are well prepared for a wide range of industry positions in the areas of telecommunication systems and networks, transmission and switching systems, security in communication networks, optical and wireless communications, internet technologies, as well as other emerging telecommunication technologies.

Telecommunications Technology (BS) program objectives:

- Graduates will be technically competent and will have the necessary skills to enter careers in areas such as the design, development, implementation and management of Telecommunications systems and networks.
- Graduates will be good communicators and will function effectively in teams.
- Graduates will have the knowledge and skills needed to be lifelong learners.
- Graduates will have an appreciation and understanding of the necessity for personal integrity, professional ethics and cultural awareness.

Program of Study
Liberal Arts and Sciences (61 credits)

EGL 101 Composition: Rhetoric ................................................. 3
EGL 102 Composition: Literature .............................................. 3
EGL 310 Technical Writing ......................................................... 3
MTH 129 Precalculus with Applications .................................... 4
MTH 130 Calculus I with Applications ....................................... 4

Electives ................................................................................. 33

Curriculum Courses (58 Credits)

EET 224 Amplifiers .................................................................... 4
EET 225 Communications Electronics ....................................... 4
EET 251 Microprocessors ........................................................... 3
EET 311 Network Analysis ......................................................... 2
EET 316 Digital Design ............................................................... 4
EET 317 Industrial Electronics .................................................... 4
EET 327 Automated Testing and Signal Processing .................... 4
EET 418 Microprocessor Interfacing & Control ......................... 4
EET 420 Linear Systems & Controls .......................................... 4
EET 450 Design Concepts ......................................................... 2
EET 452W Design Project .......................................................... 2
Technical Electives** ................................................................ 6-8
Total Credits: ........................................................................... 127-129

*Liberal Arts/Science electives are selected in consultation with the student’s academic advisor in areas of student interest which meet the College’s General Education requirements.

**Technical Electives must be selected from EET 414, EET 426, EET 428, EET 440 or other courses in areas of student interest with Departmental approval.

Sustainable Energy and Environment Minor
Requirements:

- All Farmingdale State College students are eligible.
- Students in the programs may use up to 6 credits of their major’s requirement towards the minor. Specific courses listed below will qualify as part of the minor.
- Should complete 15 credits of course work.
- Minimum of 9 credits must from the Sustainable Energy and Environment (ENV) courses.
- Must be advised by the coordinator of the minor to qualify to take courses.
- Some courses have prerequisites. The prerequisite courses do not count towards the minor total credit requirements.
- Must maintain a minimum cumulative GPA of 2.0 in the minor.
- At least 12 credits contained in the academic minor must be in advanced courses; advanced courses are those courses identified as 200 level or higher.

List of Energy & Environment courses for the minor:
(Minimum 9 credits)

ENV 101 Energy Environment and Sustainability 3 credits
ENV 210 Energy Policy and Standards 3 credits
ENV 305 Renewable Energy Systems 3 credits
ENV 301 Renewable Energy Systems II 3 credits
ENV 203 Sustainability in Architecture 3 credits
ENV 310 Energy in Electronics and
Computer Systems 3 credits
ENV 450 Capstone Project /Research 3 credits

List of College Wide qualified courses for the minor:
(Maximum 6 credits)
(This is an initial list of courses that qualify for the minor under this category. Speak to the advisor of the minor for further information.)
IND 308 Occupational Safety 3 credits
IND 315 Facilities Planning 3 credits
IND 406 Energy Management 3 credits
MET 410 Senior Project - related to Energy 3 credits
CON 161 Materials and Methods of Construction I 3 credits
CON 399 Applied Research Topic 3 credits
EET 450 Design Concepts 2 credits
EET 452 Design Project - related to Energy 2 credits
PHY 114 Physical Science – The Environment 3 credits
PHY 115 Physical Science – Energy 3 credits
CHM 124 Principles of Chemistry 4 credits
CHM 152 General Chemistry Principles I 4 credits
CHM 153 General Chemistry Principles II 4 credits
BUS 230 Environmental Law 3 credits
BUS 267 Small Business Management 3 credits
ECO 321 Engineering Economics 3 credits
BIO 135 Marine Sciences 4 credits
BCS 120 Foundations of Computer Programming I 3 credits

English/Humanities Department
Dr. Margery Brown, Chair
The English/Humanities Department offers the following program:

- English Literature .................................................................Minor

English:

English offerings in English are designed for a variety of purposes. Developmental English prepares students in the communication skills necessary for successful college-level work. Composition and literature courses involve the students in the achievement of greater writing and reading skills and in gaining insight into the human experience. All courses are designed to provide the necessary background for a college education. (Prefix for English courses is EGL).

Note: All students will be enrolled in a writing course commensurate with their writing abilities. A score of 7 or above on the SAT writing test places a student in EGL 101; a score of 6 or below places a student in 097. All students placed in 097 will write an essay on the first day of class as a further check on placement accuracy. Placement tests are offered in the case of certain transfer students or in the case of hardship and special circumstances.

Humanities:

Offerings in the Humanities are designed to expose students to the humanistic tradition in the disciplines of philosophy, speech and the creative arts.

All courses are designed to provide the necessary background for a college education. (Prefix for Art is ART, for Humanities is HUM, for Philosophy is PHI, for Speech is SPE, for Music is MUS and for Theater is THE).

English as a Second Language:
The ESL Program is designed for the student whose native language is not English. Its purpose is to bring the student who needs improvement in English language skills to college-level proficiency in comprehension, speaking, reading and writing. Course topics include pronunciation, conversation, grammar, vocabulary development, critical reading techniques, sentence structure and paragraph writing.

Non-College units are not applicable to any degree program. (Prefix for English As A Second Language is ESL)

English Literature Minor
The English Department offers an undergraduate Literature minor to students who have completed EGL 101 and EGL 102 and are enrolled in baccalaureate degree programs at Farmingdale State College. The English Literature minor consists of 18 credits. Students must complete nine core credits and nine elective credits. Students must apply through the English Department, and specific course work must be determined in consultation with a full-time faculty member of the English Department.

Core: 9 credits
One course must be from the following part one survey courses offered by the Department:
EGL 201: English Literature: Old English through the 18th Century
EGL 203: American Literature: Beginnings to 1865
EGL 206: World Literature: Early Classics

One course must be from the following part two survey courses offered by the Department:
EGL 202: English Literature: 19th Century to the Present
EGL 204: American Literature: 1865 to the Present
EGL 207: World Literature: The Moderns

One course must be chosen from the following genre courses offered by the Department:
EGL 210: Introduction to Drama
EGL 212: Introduction to Fiction
EGL 214: Introduction to Poetry

Electives: 9 credits
Three courses must be chosen from this list; at least two of the three courses must be above the 200 level:
EGL 200: Shakespeare
EGL 222: Women in Literature
EGL 225: Images of Women in Drama
EGL 228: Classics and Mythology in Popular Culture
EGL 230: The Literature of the Bible
EGL 232: Immigrant Literature: Voices of Multicultural America
EGL 240: Themes in Science Fiction in Film and Literature
EGL 242: Film and Literature
EGL 244: Classics of Supernatural Film and Literature
EGL 246: Themes in Literature
EGL 266: Fantasy in Literature and Film
EGL 269: The Romantic Arts: Art, Dance, Literature & Music
EGL 302: Nineteenth Century English Novel
EGL 307: Special Topics in Literature
EGL 308: The City in Literature, Art, Film and Theatre
EGL 309: Voices of Black America in Poetry, Prose and Song
EGL 312: Major Authors in American Literature
EGL 314: Major Authors in World Literature
EGL 316: Women in Modern American Literature
EGL 317: Studies in Shakespeare
EGL 319: Modern Drama
EGL 322: Leadership in Fact, Fiction and Film
EGL 323: Major Authors in British Literature
EGL 330: Ancient Greek Tragedy: Aeschylus, Sophocles and Euripides
EGL 331: Death, Madness and Sex: The Victorians

French
See Modern Languages Department

German
See Modern Languages Department

**History, Economics and Politics Department**
Dr. Richard Vogel, Chair

The History, Economics and Politics Department offers the following program:
- Applied Economics .................................. Bachelor of Science
- Economics ................................................... Minor
- History ...................................................... Minor

The History, Economics and Politics department offers a four year degree program in Applied Economics, as well as provides a broad range of introductory courses and electives in support of the various two and four year curricula offered by the college. Students enrolled in courses such as Principles of Macroeconomics or Microeconomics, as well as other offerings, will be able to satisfy their Social Science General Education requirements and additional elective or program requirements.

The History program seeks to develop a broad historical perspective necessary for an understanding of our contemporary world. The course offerings include a study of the Ancient World, European and American History and non-Western History. These courses serve as part of a liberal arts education and also provide the necessary background to pursue upper division courses. (Prefix for History is HIS)

The department offers a wide range of economics courses that provides students with a broad understanding of our economic system and its application to modern economic problems. These courses include basic Macroeconomics and Microeconomics that satisfy the Social Science requirements of the General Education Program and also serve as foundations for the Applied Economics and Business Management degree programs. The department also offers a number of service and elective courses such as Labor Economics and Labor Relations, and Engineering Economics to satisfy the curricular needs of other programs on campus. (Prefix for Economics is ECO)

The objective of Politics courses is to provide students with an understanding of the political system of the United States and other countries. Courses cover the structure of state, local and national government, comparison of the political processes in foreign governments, and the study of America's post-World War II foreign relations. Students are prepared for upper division courses in Political Science as well as to pursue careers involving knowledge of our political system. (Prefix for Politics is POL)

### Applied Economics

**Bachelor of Science Degree**

The Bachelor of Science program in Applied Economics is a comprehensive course of study that prepares students for careers in business, financial institutions, national, state, and local government, public and private research organizations and nonprofit organizations. Consistent with the mission of the College, the program trains students to be real-life problem solvers so that upon graduation they are ready to be employed in entry and junior-level positions in business and industry, the public sector, and non-profit sector.

Graduates will have the skills and abilities to meet the diverse needs of regional, national, and international employers in both the private and public sectors, working in occupations such as entry-level economist, quantitative analyst, business analyst, financial analyst, regional planner, manager, and research analyst. The program exposes students to a broad spectrum of economic concepts and applications, providing them with a strong background from which to pursue graduate study in economics and the social sciences, business and finance, law, public administration, journalism, and education.

Students must complete 60 hours in the liberal arts (inclusive of the general education core). In their first two years of the program, students will complete their general education requirements including mathematics, the two introductory courses in economics, and begin to take courses in the economics core.

The program culminates with a capstone course sequence of Economics Research and Reporting followed by Applied Economic Analysis/Senior Project. In the first course, students receive extensive instruction in the methods and techniques of economic research and report writing, including data and statistical analysis, and the generation and presentation of reports for the general public. Students, in Applied Economic Analysis/Senior Project are asked to undertake, complete, and present the results of an applied research project in their individual area of interest.

**Program of Study**

**General Education Requirements (36-39 credits)**

<table>
<thead>
<tr>
<th>Category</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communications</td>
<td>6</td>
</tr>
<tr>
<td>Humanities</td>
<td></td>
</tr>
<tr>
<td>Arts</td>
<td>3</td>
</tr>
<tr>
<td>American History</td>
<td></td>
</tr>
<tr>
<td>Western Civilization</td>
<td>3</td>
</tr>
<tr>
<td>Other Worlds Civilization</td>
<td></td>
</tr>
<tr>
<td>Modern Language</td>
<td></td>
</tr>
<tr>
<td>ECO 156 and ECO 157: Social Sciences</td>
<td>6</td>
</tr>
<tr>
<td>Natural Sciences</td>
<td></td>
</tr>
<tr>
<td>MTH 110, Statistics: Mathematics</td>
<td>3</td>
</tr>
</tbody>
</table>

**Notes:**

1. Students may satisfy the Western Civilization and Other World's Civilization requirement of General Education by taking either HIS 126, which satisfies both requirements, or taking one course that satisfies the Western Civilization component and one course that satisfies the Other World’s Civilization component.

2. Students are required to take ECO 156 and ECO 157 as part of the required core which satisfies the General Education social science category. Students are further required to take two additional courses in the social sciences outside of Economics which includes courses from Anthropology,
Political Science, Psychology and Sociology.

3 - Applied Economics majors will satisfy the Mathematics General Education requirement upon completion of either of the two mathematics courses that are required to take: MTH 110 Statistics or MTH 129 Precalculus with Applications or MTH 117 Precalculus Modeling for Life and Social Sciences or equivalent.

Required Core Courses: Economics (33 credits)
ECO 156 Principles of Economics (Macro)..........................(Gen Ed) 3
ECO 157 Principles of Economics (Micro).........................(Gen Ed) 3
ECO 250 Quantitative Analysis for Economics..................3
ECO 255 Money and Banking...........................................3
ECO 260 Intermediate Microeconomics..........................3
ECO 262 Managerial Economics.....................................3
ECO 270 Intermediate Macroeconomics.........................3
ECO 380 Econometrics...................................................3
ECO 490W Economic Research and Reporting................3
ECO 491 Applied Economic Analysis/Senior Project.........3
Upper level Economics Electives (300 level and above)......15

Notes:
1 - Economics electives include: ECO 303, ECO 304, ECO 310, ECO 312, ECO 320, ECO 321, ECO 330, ECO 340, ECO 341, ECO 342, ECO 350, ECO 401, ECO 410, ECO 412, ECO 415, ECO 420, ECO 430, ECO 435, ECO 440, ECO 480, and ECO 489
2 - Students must take at least two 400 level Economics electives
3 - Students must receive a grade of C or better in required core courses.

Additional Required Courses (10 credits)
MTH 129 Precalculus with Applications or MTH 1117 Precalculus Modeling for Life and Social Sciences or equivalent ........4
Social Sciences Electives (ANT, POL, PSY, SOC)..............6

Additional Electives - (41 credits)
Additional free electives .................................................41

Total Credits: ..................................................................120 - 123

Economics Minor

The Economics minor equips students with the foundational skills for higher education in economics and the social sciences, business and law. Students choosing to minor in Economics will take a total of 18 credits, which includes required core courses (9 credits). Students exposed to these economics courses will have skills and ability to compete or increase employability that the marketplace demands.

Economics Minor: 18 credit hours (6 courses)
Required: ECO 156 and ECO 157 (6 credits)
At least one from ECO 260 or ECO 262 or ECO 255 or ECO 270 (3 credits).
Any three additional economics courses, 200 level or above from the list below (9 credits):
ECO 250; ECO 259; ECO 303; ECO 304; ECO 310; ECO 312; ECO 320; ECO 321; ECO 330; ECO 340; ECO 341; ECO 342; ECO 350; ECO 358; ECO 380; ECO 401; ECO 410; ECO 412; ECO 415; ECO 420; ECO 430; ECO 435; ECO 440; ECO 441; ECO 480; ECO 489; ECO 490; ECO 491

History Minor

The History minor is designed for students who are interested in deepening their knowledge of American, Western, and World History in order to support their long-term career goals.

Selection of courses will depend on the interest of the student. Students seeking to gain an M.A. in teaching will be particularly well-served by this minor program. The history minor consists of 18 hours of history courses (HIS prefix) with no more than 2 courses at the 100 level, and at least 2 courses must be 300 level or above. All History minors must complete HIS 200 (Introduction to Historical Methods) with a C or better.

History Minor: 18 credit hours (6 courses)
All History minors must complete HIS 200 (Introduction to Historical Methods) with a grade of C or above.
No more than 6 credit hours (2 courses) at the 100 level.
At least 6 credit hours (2 courses) at the 300 level or above.
At least 12 credit hours (4 courses) must be taken at Farmingdale State College.
All courses must be in history.*

*(Note: In consultation with their advisor students may apply up to--but no more than--2 of the following courses to the History Minor: ANT 120; ANT 130; ANT 210; ARC 362; ART 123; ART 201; ART 202; AVN 101; AVN 401; BUS 450; CRJ 100; ECO 320; ECO 330; EGL 430; HIS 321, HIS 334, HIS 335, HIS 342, HUM 200; HUM 305; IDP 305; IDP 306; MLG 304; MLG 305; MLG 306; MLG 308; MLG 315; MTH 315; MUS 108; PHY 119; POL 168; POL 263; POL 267; SOC 200; SOC 245; SOC 305; SOC 320; and TST 400—all other courses must carry an HIS prefix).

Humanities

See English/Humanities Department

Industrial Technology Program

The Industrial Technology Program offers the following concentrations:

- Automotive Management Technology ......Bachelor of Science
- Facility Management Technology ............Bachelor of Science

The Industrial Technology program offers two concentrations, Automotive Management Technology, and Facility Management Technology. We have designed it to prepare individuals for technical-based careers in a broad framework of operations management. The proliferation of technical advances in production operations, manufacturing systems, commercial and industrial facility maintenance and industrial production has become more complex and is projected to continue at an ever increasing rate. The curriculum includes instruction in engineering technologies, management accounting, psychology, technical communications, industrial and labor relations and corporate planning. Students will develop interdisciplinary skills necessary to articulate meaningful dialogue between management, staff and workers.

Automotive Management Technology

Professor Serdar Elgun, Acting Coordinator

The Automotive Management Technology concentration is designed to develop the requisite skills for management positions in automotive or related fields. Specifically, the
program will provide advanced training in such areas as personnel management and motivation, customer relations and community relations. Additionally, training is provided in business related topics such as accounting, financing, leasing, and occupational safety.

**Typical Employment Opportunities**
- Retail Chain Manager
- Automotive Parts Manager
- Automotive Service Manager
- Automotive Business Manager
- Automotive Financing/Leasing Manager
- Fleet Management
- Vehicle Manufacturing District Service Manager

**Note:** See Automotive Technology Department for program of study.

This program is accredited by the Association of Technology, Management and Applied Engineering, 1390 Eisenhower Place, Ann Harbor, MI 48108, 734-677-0720 www.atmae.org

**Facility Management Technology**

Professor Serdar Elgun, Acting Coordinator

The Facility Management Technology concentration is designed to serve the growing need for technically competent facility managers. These managers must be able to provide the services required to ensure the safe, convenient, and efficient operation of office buildings, manufacturing companies, school districts, shopping centers, colleges, etc. Experienced faculty teach courses to educate students in the service areas of security, fire protection, electrical, heating, cooling, ventilation, space planning, maintenance, management, custodial, grounds, environmental, occupational safety, energy use, etc. Electives are available to allow students to investigate areas of further interest.

**Typical Employment Opportunities**
- Director of Facility Management
- Director of Physical Plant
- Facilities Maintenance Manager
- Commissioner of Public Works
- Vice President for Facilities Engineering
- Superintendent of Buildings and Grounds
- Plant Engineer

**Note:** See Mechanical Engineering Department for program of study.

This program is accredited by the Association of Technology, Management and Applied Engineering, 1390 Eisenhower Place, Ann Harbor, MI 48108, 734-677-0720 www.atmae.org

**Interdisciplinary Studies**

Although many of the interdisciplinary courses may be considered as part of the general education requirement, students are advised to speak to their curriculum chair to determine which degree requirements any one of these courses satisfy. (Prefix for Interdisciplinary is IDP)

**Italian**

See Modern Languages Department

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**Liberal Arts and Sciences Department**

Dr. Marlene Groner, Acting Chair

The Liberal Arts and Sciences Department offers the following program:

- Liberal Arts and Sciences ................. Associate in Arts Degree

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**Liberal Arts and Sciences**

**Associate in Arts Degree**

The Liberal Arts and Sciences Department provides its students with a broad-based liberal arts education which prepares them for junior level study in a variety of majors in the Liberal Arts and Sciences such as communications, education, English, history, law, psychology, sociology, social work, medicine, the applied health professions, biology, and all the physical sciences. Liberal Arts and Sciences students are required to fulfill all ten General Education requirements.

A broad range of elective courses in the Liberal Arts and Sciences allows students who are undecided about their majors to experiment with possible choices. Moreover, students who have majors or careers in mind may test those choices by taking elective courses that are prerequisite(s) for their chosen majors.

Each student’s schedule of courses is arranged after careful consultation with a program advisor every semester.

Joint admissions agreements have been developed with other schools in the SUNY system. Admission as a junior is guaranteed upon completion of the AA degree at Farmingdale and fulfillment of other specific requirements.

**Liberal Arts and Sciences (AA) Program Objectives:**

- Graduates will develop the broad-based knowledge and skills necessary for upper division study and success in a variety of career choices.
- Graduates will develop a firm appreciation of culture, ethics, esthetics, cultural awareness, and lifelong learning.

**Program of Study**

**General Education Requirements (38-41 credits)**
- EGL 101 Composition: Rhetoric ........................................3
- EGL 102 Composition: Literature ..................................3
- Communications .......................................................3
- Arts .................................................................3
- American History ..................................................3
- Western Civilization and Other World Civilization ..........3-6
- Mathematics .........................................................3
- Modern Languages (Level II) ....................................3
- Social and Behavioral Science ......................................6
- Natural Sciences (Labs required) ................................8

Consult with your advisor to ensure that the general education graduation requirements are satisfied and are appropriate to your goals.

**Elective Courses (21-24 credits)**

Electives* .................................................................21-24

**Total Credits: ..................................................62-65**

*Courses chosen in consultation with faculty advisors based on each student’s interests and needs.
Mathematics Department
Dr. Carlos Marques, Chair

The Mathematics Department offers the following programs:
- Applied Mathematics: Bachelor of Science
- Applied Mathematics: Minor

Applied Mathematics
Dr. Yajun Yang, Program Director

Bachelor of Science Degree
The Applied Mathematics Bachelor of Science program provides a solid background in mathematics and its applications within a highly supportive and stimulating learning environment. Mathematics is the language of Science and Technology. Thus the Applied Mathematics program is at the very heart of the mission of Farmingdale State College. Students benefit from small class size, personal attention, and a network of social and academic opportunities including our Mathematics Club, the Center for Applied Mathematical Sciences, the Mathematics Tutoring Center, and the Undergraduate Teaching Assistant program. Students will acquire strong quantitative and analytic skills, incorporating the use of powerful state-of-the-art computational technology in advanced problem solving and research projects. In particular graduates will:
- know the methods and techniques of applied mathematics and will understand the underlying theoretical foundations
- have the knowledge and skills needed to be productive problem solvers and critical thinkers
- possess both depth and breadth in the mathematical sciences
- possess important contextual skills including computer skills, communication skills, and the ability to collaborate with others on mathematical projects.

All students will complete a major project in our Seminar in Applied Mathematics which will involve collaborative work. The students have a choice of two tracks within the Bachelor of Science program: the Traditional Track and the Financial Mathematics Track. Both of these tracks share a common core of required General Education courses and of required Mathematics courses. Students in the Traditional Track choose additional elective courses in mathematics and in other fields of their interest, while students in the Financial Mathematics Track must take a set of prescribed courses in financial mathematics and in related fields such as Economics, Business, as well as some elective courses. (See the Program of Study below.)

Students can combine the Bachelor of Sciences in Applied Mathematics (Major) with a Minor in another field, or even obtain a Dual Major in mathematics and a related field. These minors and dual majors enable students to pursue inter-disciplinary interests which enhance future employment opportunities.

Applied Mathematics graduates possess the skills to enter a wide variety of excellent careers. An applied mathematics degree provides the background for jobs in business, telecommunications, finance, actuarial science, operations research, transportation, and education. Appropriate elective courses in areas such as computer science, engineering technology, economics, or natural sciences permit students to apply their mathematical knowledge to these fields, opening employment opportunities in additional careers, including pharmaceutical research, information services, and quality control. Applied Mathematics graduates are also well prepared to continue their studies at the graduate level in various fields of applied mathematics, finance, applied sciences, or mathematics education.

Typical Employment Opportunities
Financial Analyst
Economical Analyst
Marketing Researcher
Actuarial Assistant
Statistician
Bio Statistician
Environmental Mathematician
Insurance Manager
Secondary Education Teacher
Information Consultant
Imaging Scientist
Quality Control Manager

Program of Study
Required General Education Courses (33-35 credits)
- EGL 101 Composition: Rhetoric
- EGL 102 Composition: Literature
- Communications Elective (other than EGL 101)
- Arts Elective
- American History Elective
- Western Civilization/Other World Civilizations
- Modern Language Elective (Level II or higher)
- Social and Behavioral Sciences Electives
- Natural Sciences Electives

Required Mathematics Courses for both Tracks (40 credits)
- MTH 150 Calculus I
- MTH 151 Calculus II
- MTH 245 Linear Algebra
- MTH 250 Introduction to Graph Theory and Combinatorics (for Traditional Applied Mathematics Track) or MTH 246 Introduction to Financial Mathematics (for Financial Mathematics Track)
- MTH 252 Calculus III
- MTH 253 Differential Equations
- MTH 290 Methods of Proof in Advanced Mathematics
- MTH 354 Principles of Real Analysis
- MTH 360 Applied Probability and Statistics
- MTH 365 Vector Calculus
- MTH 405 Seminar in Applied Mathematics
- CMP 130 Principles of Computing or BCS 120 Foundations of Programming I

Traditional Applied Mathematics Track (48 credits)
- Math Upper Division Electives
- Math Related Electives
- General Electives
- Upper Division Electives

Financial Mathematics Track (48 credits)
- MTH 346 Continuous-Time Finance
- MTH 490 Topics in Applied Mathematics (Financial Engineering)
- BUS 101 Accounting I
- ECO 380 Econometrics
- Math Related Elective
Applied Mathematics Minor
A minor in Applied Mathematics offers students majoring in another discipline the opportunity to strengthen their mathematical expertise and analytical skills in general, and to incorporate more mathematics courses into their major area of study.

To minor in Applied Mathematics students must complete three sequential semesters of calculus up to and including MTH 252 or MTH 322, and meet all the college requirements for a minor as stated in the College Catalog, including completing at least 15 credits in mathematics (no more than six of these 15 credits can be taken from mathematics courses required for the major).

We note that some mathematics intensive curriculums such as technology will require up to 26 credits in mathematics for a mathematics minor. In this case the student may wish to consider the advantages of doing a dual major.

Mechanical Engineering Technology Department
Professor Serdar Elgun, Acting Chair
The Mechanical Engineering Technology Department offers the following programs:
- Industrial Technology - Facility Management Technology ............Bachelor of Science
- Manufacturing Engineering Technology ..........Bachelor of Science
- Mechanical Engineering Technology ..............Bachelor of Science
- Software Technology ..................................Bachelor of Science
- Mechanical Engineering Technology ..................Associate in Applied Science
- Manufacturing Methods and Numerical Controls ....Certificate

Industrial Technology - Facility Management Technology
Bachelor of Science Degree
This is a four-year program offered by the Mechanical Engineering Technology Department. Students may matriculate on a full-time or part-time basis. The Bachelor of Science program in Facility Management Technology is designed to serve the growing need for technically competent facility managers, and to meet the transfer and continuing education needs of associate degree graduates (or transferring students from a related field of study).

Facility Management Technology (BS) Program Objectives:
- Graduates will have the knowledge and skills and will assume leadership positions in maintenance and operation of buildings and grounds, management of structural and electrical maintenance, energy management, personnel management, budgeting and space planning.
- Graduates will be able to apply the latest technologies of heating, ventilation and cooling systems, security and fire protection systems, occupational and environmental health and safety to the solution of facility maintenance, operation and management problems.
- Graduates will exhibit an understanding of the necessity for personal integrity, ethical behavior, cultural awareness and lifelong learning.

The Facility Management Technology Program has an Advisory Committee of professional societies representing the facility management field in the metropolitan area. This committee, through periodic meetings with the faculty, provides the guidance required in maintaining a relevant and viable program.

This program is accredited by the Association of Technology, Management and Applied Engineering, 1390 Eisenhower Place, Ann Harbor, MI 48108, 734-677-0720 www.atmae.org

Typical Employment Opportunities
- Plant Engineer
- Facilities Maintenance Manager
- Facility Manager
- Commissioner of Public Works
- Director of Physical Plant
- Superintendent of Building & Grounds
- Director of Facility Management
- Vice President of Facilities Engineering

Program of Study
Liberal Arts and Sciences (60 credits)
- EGL 101 Composition: Rhetoric ..............................................3
- EGL 102 Composition: Literature .........................................3
- Arts Elective ........................................................................3
- Communications Elective .................................................3
- Modern Languages Elective Level II ..................................3
- PSY 101 Introduction to Psychology ....................................3
- PSY 331 Industrial Organizational Psychology ..................3
- HIS 121/122/125 American History Elective ....................3
- Western Civilization/Other World Civilizations ..................3
- ECO 321 Engineering Economics .......................................3
- BIO 120/130 General Biology Elective ..............................4
- CHM 124/152 General Chemistry Elective .........................4
- PHY 135 College Physics I ..................................................4
- PHY 136 College Physics II ..................................................4
- MTH 110 Statistics ..............................................................3
- MTH 129 Precalculus w Applications ................................4
- MTH 130 Calculus w Applications .......................................4
- Math Elective .....................................................................3

Please refer to the General Education and Writing-Intensive Requirement Sections of this catalog and consult with your advisor to ensure that graduation requirements are satisfied.

Required:
- Industrial Technology Common Core (9 credits)
  - BUS 101 Accounting .........................................................3
  - BUS 102 Accounting II .....................................................3
  - BUS 300 Operations Management ....................................3

- Facility Management Technology (56 credits)
  - IND 308 Occupational Safety ..........................................3
  - IND 309 Security and Fire Protection Systems ..................3
  - IND 310 Industrial Hygiene ..............................................3
  - IND 315 Facilities Planning ..............................................3
  - IND 402 Facility Maintenance Management ....................3
  - IND 405 Heating Ventilating, & Air Conditioning Systems ..3
  - IND 406 Energy Management ..........................................3
  - GPH 103 Technical Drafting ............................................1
  - GPH 104 Introduction to Computer Graphics ....................1
  - MET 109 Computer Programming and Applications ..........2
Manufacturing Engineering Technology

Bachelor of Science Degree
This is a four year program offered by the Mechanical Engineering Technology Department. Students may matriculate on a full-time or part-time basis. Students receive hands-on experience using industrial equipment in the department’s well-equipped computer, strength, design, materials, manufacturing, quality control, electromechanical control systems, and robotics laboratories. The department is particularly proud of its new Institute for Research and Technology Transfer (IIRT) which contains the latest automated commercial CNC Turning Center, CNC Milling Center, Coordinate Measuring Machine (CMM), Vision Controlled Pick and Place Robot, Laser Cutting Machine, Thermal Spray (HVOF) Machine, Rapid Prototyping Machine and Fuel Cell Research. Advanced manufacturing computer programs such as: Manufacturing Resource Planning (MRP), Computer Aided Manufacturing (CAM), and Computer Integrated Manufacturing (CIM) are run on the latest PC’s. Up-to-date courses in Statistical Quality Control (SQC), Electronic Packaging Applications, Robotics, Electromechanical Control Systems and Tooling for Composites complement traditional courses such as Statics, Dynamics Strength of Materials, Material Science, Applied Fluid Mechanics and Applied Heat Transfer providing graduates with a well-balanced background. Students also benefit from the close relationship between the College and local industry through a required senior project that is an integrating/capstone experience.

The graduate serves as the integrator of the design, manufacturing and production operations. He or she provides the applied technical expertise to translate design information into the necessary tools, instruction, procedures, operation sequences and controls to coordinate the cost-effective manufacturing of products.

Typical Employment Opportunities
Industrial Designer
Mechanical Designer
Process Designer
Junior Designer
Manufacturing Designer

Technical Electives.....................................................................15
(AET, BCS, BUS, CON, EET, HOR, IND, MET courses)

Total Credits:...............................................................................125

Part-Time Program
Students who elect to complete the Bachelor degree requirements on a part-time basis are required to take the same courses as those attending full-time. Part-time students may register for day or evening courses. When registering, students must follow the correct course sequence and pay particular attention to course prerequisite(s). Part-time students must meet with a Faculty Advisor or the Department Chair prior to registration.

Technical Writer
Chief Designer
Senior QC Supervisor
NC Programmer

Manufacturing Engineering Technology (BS)
Program Objectives:
- Graduates will have the knowledge and skills and will assume leadership positions in process and systems design, manufacturing operations, maintenance, technical sales or service functions in a manufacturing enterprise.
- Graduates will be able to apply the technologies of materials, manufacturing processes, tooling, automation, production operations, maintenance, quality, industrial organization and management, and statistics to the solution of manufacturing problems.
- Graduates will exhibit an understanding of the necessity for personal integrity, ethical behavior, cultural awareness and lifelong learning.

This program is accredited by the Technology Accreditation Commission, Accreditation Board for Engineering and Technology, 111 Market Place, Suite 1050, Baltimore, MD 21202, 410-347-7700 www.abet.org.

Program of Study

Liberal Arts and Sciences (60 credits)

EGL 101 Composition: Rhetoric..................................................3
EGL 102 Composition: Literature..............................................3
EGL 209 Technical Communication..........................................3
Arts Elective...............................................................................3
Modern Languages Elective Level II.........................................3
HIS 121/122/125 American History Elective..........................3
Western Civilization/Other World Civilizations......................3
ECO 321 Engineering Economics............................................3
Social & Behavioral Sciences Electives.....................................6

CHM 152 General Chemistry Principles I...............................4
CHM 153 General Chemistry Principles II..............................4

PHY 135 College Physics I.......................................................4
PHY 136 College Physics II.....................................................4
MTH 110 Statistics..................................................................3
MTH 129 Precalculus with Applications..................................4
MTH 130 Calculus with Applications......................................4
MTH 236 Calculus II with Applications..................................3

Please refer to the General Education and Writing-Intensive Requirement Sections of this catalog and consult with your advisor to ensure that graduation requirements are satisfied.

Support Courses (2 credits)
GPH 103 Technical Drafting....................................................1
GPH 104 Intro. to Computer Graphics....................................1

Required:

Mechanical/Manufacturing Courses (65 credits)
MET 109 Computer Programming and Applications..............2
MET 117 Manufacturing Processes.................................2
MET 127 Advanced Manufacturing Processes.....................2
MET 201 Statics.................................................................3
MET 205W Material Science..............................................3
MET 206 Strength of Materials...........................................4
MET 207 Tool Design.........................................................3
MET 211 Advanced Computer Graphics.............................1
MET 230 Electrical Principles...........................................3
MET 252 Quality Control (Metrology).............................3
MET 305 Tooling for Composites.................................3
Technical Writer
Field Service Rep
Power Plant Supervision
Equipment Testing

**Mechanical Engineering Technology (BS) Program Objectives:**

- Graduates will have the technical skills and will assume leadership positions in the design, installation, manufacturing, testing, evaluation, technical sales, or maintenance of mechanical systems.
- Graduates will have the technical background in the analysis, applied design, development, implementation, and oversight of advanced mechanical systems and processes.
- Graduates will exhibit an understanding of the necessity for personal integrity, ethical behavior, cultural awareness and lifelong learning.

This program is accredited by the Technology Accreditation Commission, Accreditation Board for Engineering and Technology, 111 Market Place, Suite 1050, Baltimore, MD 21202, 410-347-7700 www.abet.org.

**Program of Study**

**Liberal Arts and Sciences (60 credits)**

- EGL 101 Composition: Rhetoric ............................................. 3
- EGL 102 Composition: Literature ........................................... 3
- EGL 209 Technical Communication ....................................... 3
- Arts Elective ............................................................................ 3
- Modern Languages Elective Level II ..................................... 3
- Social & Behavioral Sciences Electives................................. 6
- HIS 121/122/125 American History Elective ......................... 3
- Western Civilization/Other World Civilizations ..................... 3
- ECO 321 Engineering Economics ......................................... 3
- CHM 152 General Chemistry Principles I ............................. 4
- CHM 153 General Chemistry Principles II ............................ 4
- PHY 135 College Physics I ..................................................... 4
- PHY 136 College Physics II ................................................... 4
- MTH 110 Statistics .................................................................. 3
- MTH 129 Precalculus with Applications ............................... 4
- MTH 130 Calculus with Applications ..................................... 4
- MTH 236 Calculus II with Applications ................................. 3
- Please refer to the General Education and Writing-Intensive Requirement Sections of this catalog and consult with your advisor to ensure that graduation requirements are satisfied.

**Support Courses (8 credits)**

- GPH 103 Technical Drafting .................................................. 1
- GPH 104 Intro. to Computer Graphics .................................... 1
- IND 405 HVAC Systems ......................................................... 3
- IND 406 Energy Management ............................................... 3

**Mechanical/Manufacturing Courses (61 credits)**

- MET 109 Computer Programming and Applic.......................... 2
- MET 117 Manufacturing Processes ......................................... 2
- MET 127 Advanced Manufacturing Processes ....................... 2
- MET 201 Statics .................................................................... 3
- MET 205W Material Science .... 3 MET 206 Strength of Materials 4
- MET 207 Tool Design .......................................................... 3
- MET 210 Applied Thermodynamics ....................................... 3
- MET 211 Advanced Computer Graphics .................................. 1
- MET 212 Applied Fluid Mechanics ....................................... 3
- MET 230 Electrical Principles ................................................. 3
- MET 252 Quality Control (Metrology) ..................................... 3
- MET 300 Computer Aided Design (CAD) ............................... 2
MET 307 Electromechanical Control Systems .................. 3  
MET 308 Machine and Product Design ......................... 3  
MET 351 Computer Aided Manufacturing(CAM) .............. 3  
MET 405 Dynamics .............................................. 3  
MET 406 Electronic Packaging Applications .................. 3  
MET 410 Senior Project ........................................ 3  
MET 411 Applied Heat Transfer ................................ 3  
MET 415 Robotics ................................................. 3  
Technical Elective ................................................... 3  

Total Credits: ......................................................... 129  

Part-Time Program  
Students who elect to complete the Bachelor degree requirements on a part-time basis are required to take the same courses as those attending full-time. Part-time students may register for day or evening courses. When registering, students must follow the correct course sequence and pay particular attention to course prerequisite(s). Part-time students must meet with a Faculty Advisor or the Department Chair prior to registration.

Software Technology

Bachelor of Science Degree  
The Software Technology Program encompasses the technical and professional background needed to customize and apply industry standard software for a wide variety of functions in such industries as business, manufacturing, engineering, and service. As a project intensive and professional practice oriented program, it will focus on the skills and competencies needed to work with and apply the most prominent software in the global market. The program also includes provisions to gain computer hardware and networking skills to function as a computer networking technologist.

The program has been developed in compliance with the TAC/ABET accreditation criteria and will seek accreditation in 2013. As per the guidelines of the New York State Education Department, the name of the program will change to BS Software Engineering Technology immediately upon receiving TAC/ABET accreditation.

Career Opportunities for Software Technology Graduates:

- Software Applications Engineer
- Computer Network Technologist
- CISCO Computer Network Technologist
- SAP Applications Specialist for Materials Management / Supply Chain / Human Resource Management /Quality Control
- SAP / ERP Software Configuration Specialist
- SAS Software Applications Engineer
- Oracle Software Applications Engineer
- Engineering Design / Manufacturing Graphics Technician

Program Objectives:

- Graduates will have the technical skills to customize and apply industry standard software for a wide variety of functions in such industries as business, manufacturing, engineering, and service.
- Graduates will have the technical background in computer hardware and networking skills to function as a computer networking technologist.
- Graduates will exhibit an understanding of the necessity for personal integrity, ethical behavior, cultural awareness and lifelong learning.

Liberal Arts (60 credits)

MTH 116 College Algebra and Trigonometry .................... 4  
MTH 129 Pre Calculus ............................................ 4  
MTH 130 Calculus with Applications ............................ 4  
MTH 110 Statistics ................................................ 4  
PHY 135 College Physics ........................................ 3  
Math / Science Elective ......................................... 4  
EGL 101 Composition: Rhetoric ................................ 3  
EGL 102 Composition: Literature ............................... 3  
EGL 209 Technical Communication ............................ 3  
Humanities Elective .............................................. 3  
Arts Elective ......................................................... 3  
HIS 125 The American Experience ................................ 3  
Western Civilization/Other World Civilizations ............... 3  
Modern Language ................................................ 3  
Social Science Elective ......................................... 3  
Social Science Elective ......................................... 3  
Natural Science Elective ....................................... 3  
Natural Science Elective ....................................... 4  

Software Technology Core (38 credits)

EET 104 DC/AC Circuits ......................................... 4  
EET 105 Introduction to Digital Electronics .................... 2  
SET 220 Internetworking ........................................ 3  
SET 230 Wireless Technology and Applications .............. 3  
SET 310 Software Applications for ERP Solutions ........... 3  
SET 320 Software Applications in Supply Chain Management 3  
SET 400 Network Planning and Implementation .............. 3  
SET 402 Software Applications in Statistical Analysis & Manufacturing Mgmt ............................. 3  
SET 405 Software Applications in Manufacturing & Service Functions ............................................. 3  
SET 410 Senior Project ............................................ 3  
EET 440 Networking & Data Communications ............... 4  
EET 441 Advanced Networking ................................ 4  

Related Courses (15 credits)

BCS 120 Foundations of Computer Programming I .......... 3  
BCS 230 Foundations of Computer Programming II ........ 3  
BCS 345 Java Programming ..................................... 3  
BCS 260 Database ............................................... 3  
BCS 301 Systems Analysis and Design ....................... 3  
Electives: ................................................................ 15  
Can be selected from BCS, BUS, EET, MET, GPH, IND courses (by advisement only)

Total Program Credit Requirement ................................ 128

Mechanical Engineering Technology

Associate in Applied Science Degree  
This program is taught in well-equipped laboratories, utilizing the latest high speed PC computers to write analysis and design programs, construct drawings, and machine space age materials for commercial and industrial applications.

The mechanical engineering technology field is rich with opportunities for students with a broad range of interests, motivations and abilities. Graduates are well prepared for positions in four areas: Manufacturing & Production – including tool design, process specification, computerized numerical (CNC), quality control, and materials handling; Mechanical Design – including computer aided design and drafting (CADD), design specification and manufacturability; Thermal Sciences –
including fluid flow and thermal efficiency analysis; and Material Science – including material specification, corrosion, corrosion control and failure analysis. Graduates are employed as technicians in companies which manufacture equipment used in hospitals, dental offices, computers, automobiles, aircraft, ships, buildings, highways, electronics, heating and air conditioning, prosthetics, physical therapy and bar coding. The power generation industry and heating, ventilating and air conditioning industries also employ our graduates as technicians.

All theory and laboratory courses are based on studies made of graduates in industry, advice from our Industrial Advisory Committee and accreditation requirement of the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology (TAC/ABET). Graduates are automatically accepted into our Bachelor programs in Manufacturing Engineering Technology, Facility Management Technology or Mechanical Engineering Technology.

Typical Employment
Tool DesignerCad Operator
CNC Programmer
Quality Control Specialist
Materials Technician
NC Programmer
Test Technician
Computer Aided Designer
HVAC Technician
Utility Co. Technician

Mechanical Engineering Technology (AAS)

Program Objectives:
■ Graduates will have the knowledge and skills to enter careers in the design, installation, manufacturing, testing, operating, evaluation, technical sales, or maintenance of mechanical systems.
■ Graduates will develop and maintain the knowledge and skills needed to identify, formulate and solve problems throughout their careers and will be able to enter the B.S. degree programs in Mechanical and Manufacturing Engineering Technology.
■ Graduates will exhibit an understanding of the necessity for personal integrity, ethical behavior, cultural awareness and lifelong learning.

This program is accredited by the Technology Accreditation Commission, Accreditation Board for Engineering and Technology, 111 Market Place, Suite 1050, Baltimore, MD 21202 410-347-7700.

Program of Study
Liberal Arts and Sciences (31 credits)
EGL 101 Composition: Rhetoric ........................................3
EGL 102 Composition: Literature ....................................3
EGL 209 Technical Communication ................................3
Social Science Electives ...................................................6
MTH 129 Precalculus with Applications ..........................4
MTH 130 Calculus I with Applications .............................4
PHY 135 College Physics I .............................................4
PHY 136 College Physics II ............................................4

Support Courses (2 credits)
GPH 103 Technical Drafting ........................................1
GPH 104 Introduction to Computer Graphics ..................1

Required:
Mechanical Engineering Technology (35 credits)
MET 109 Computer Programming and Applications ........2

MET 117 Manufacturing Processes .................................2
MET 127 Advanced Manufacturing Processes .................2
MET 201 Statics .......................................................3
MET 205W Material Science .........................................3
MET 206 Strength of Materials ......................................4
MET 207 Tool Design ................................................3
MET 210 Applied Thermodynamics ................................3
MET 211 Advanced Computer Graphics ........................1
MET 212 Applied Fluid Mechanics ................................3
MET 230 Electrical Principles .......................................3
MET 251 Numerical Control .........................................3
MET 252 Quality Control .............................................3

Total Credits: ..........................................................68

Part-Time Program
A Minimum of 68 credits is required.

Students who elect to complete the Associate degree requirements on a part-time basis are required to take the same courses as those attending full-time.

Part-time students may register for day or evening courses. When registering, students must follow the correct course sequence and pay particular attention to course prerequisite(s). Part-time students must meet with a Faculty Advisor or the Department Chair prior to registration.

Manufacturing Methods and Numerical Control
Certificate Program
Admission Requirement: High School Diploma
This Certificate program is offered by the Mechanical Engineering Technology Department through the School of Academic Services and Lifelong Learning. The program is approved by the State Education Department and requires the completion of 30 credits. Applicants should contact a Faculty Advisor or the Department Chair for more information.

Required Courses for Certificate Program
GPH 103 Technical Drafting
GPH 104 Introduction to Computer Graphics
MET 109 Computer Programming and Applications
MET 117 Manufacturing Process
MET 127 Advanced Manufacturing Process
MET 205W Material Science
MET 207 Tool Design
MET 211 Advanced Computer Graphics
MET 230 Electrical Principles
MET 251 Numerical Control
MET 252 Quality Control
MET 351 Computer Aided Manufacturing
MET 417 Modern Manufacturing Systems

Medical Laboratory Technology Department
Dr. Karen Escolas, Chair

The Medical Laboratory Technology Department offers the following programs:
■ Medical Technology ....................... Bachelor of Science Degree
■ Medical Laboratory Technology .. Associate in Science Degree
Bachelor in Science Degree

The BS program in Medical Technology (BSMT) prepares graduates for a wide range of positions in the clinical laboratory profession. The curriculum includes development of the theoretical knowledge, technical skills, and problem-solving abilities necessary for entry into practice at the technologist level. While enrolled in the program, students experience a supportive learning environment in the Medical Laboratory Technology campus laboratories, where the theoretical background introduced during lecture sessions is linked to clinical laboratory practice through the development of technical proficiency. The educational experience includes clinical internships at local affiliated clinical laboratories in which the students are prepared for the transition into the clinical laboratory workplace.

The BS in Medical Technology program is specifically designed to meet the educational requirements for licensure as a Clinical Laboratory Technologist in New York State. As a result, graduates of the program will have the educational background that prepares them for the NYS licensure examination and will be eligible to apply for NYS licensure, a necessity to work in a clinical laboratory in New York State. The BS in Medical Technology program is also designed to meet the accreditation standards outlined by the National Accrediting Agency for Clinical Laboratory Science (NAACLS). Accreditation of the BS program is currently being sought so that graduates of the program will be eligible to take the national certification examination offered by the American Society for Clinical Pathology Board of Registry (ASCP-BOR). Passing of this certification examination designates the graduate as MT(ASCP). Traditionally, both program accreditation and graduate certification eligibility have been necessary components of programs in clinical laboratory science, and the achievement of certification is often a requirement for employment within the field throughout the United States.

All matriculated students must provide evidence of appropriate immunizations, as well as titers for measles, mumps, rubella, varicella, and Hepatitis B. It is strongly recommended that students who test negative for Hepatitis B receive the appropriate vaccine. A Mantoux test for tuberculosis is required on a yearly basis during program enrollment. Each student is also required to participate in a liability insurance policy provided by the college which will afford malpractice coverage during the time enrolled in the MT curriculum. Students are responsible for providing their own laboratory coat and transportation to and from clinical sites. A laboratory fee that covers lab coat maintenance, personal protective equipment, and other general supplies for use during laboratory sessions will be collected from students enrolled in laboratory courses offered in the MLT department.

Please refer to the Safety and Technical Standards in the front section of this catalog.

Typical Employment Opportunities:

Graduates may obtain employment as medical technologists/clinical laboratory technologists in hospitals, private clinical laboratories, physician office laboratories, research and industry laboratories, and in the sales, development and technical support of clinical laboratory equipment and supplies.

Program Objectives:

- Graduates will be prepared with the knowledge and technical skills to obtain a NYS license and national certification at the technologist level of practice.
- Graduates will be proficient in performing the full range of clinical laboratory tests in areas such as hematology, clinical chemistry, immunohematology, microbiology, serology/immunology, coagulation, molecular, and other emerging diagnostics.
- Graduates will be prepared to play a role in the development and evaluation of test systems and interpretive algorithms.
- Graduates will have diverse responsibilities in areas of analysis and clinical decision-making, regulatory compliance with applicable regulations, education, and quality assurance/ performance improvement wherever laboratory testing is researched, developed or performed.
- Graduates will possess basic knowledge, skills, and relevant experiences in: Communications to enable consultative interactions with members of the healthcare team, external relations, customer service and patient education; Financial, operations, marketing, and human resource management of the clinical laboratory to enable cost-effective, high-quality, value-added laboratory services; Information management to enable effective, timely, accurate, and cost-effective reporting of laboratory-generated information, and; Research design/practice sufficient to evaluate published studies as an informed consumer.

Program of Study

Liberal Arts and Sciences (71-74 credits)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 130 Principles of Biology</td>
<td>4</td>
</tr>
<tr>
<td>BIO 166 Principles of Anatomy &amp; Physiology</td>
<td>4</td>
</tr>
<tr>
<td>BIO 343/344 Genetics with Laboratory</td>
<td>4</td>
</tr>
<tr>
<td>BIO 348/349L Cell Biology with Laboratory</td>
<td>4</td>
</tr>
<tr>
<td>BIO 441 Molecular Biology</td>
<td>5</td>
</tr>
<tr>
<td>CHM 152 General Chemistry I</td>
<td>4</td>
</tr>
<tr>
<td>CHM 153 General Chemistry II</td>
<td>4</td>
</tr>
<tr>
<td>CHM 260 Fundamentals of Organic Chemistry</td>
<td>4</td>
</tr>
<tr>
<td>CHM 380 Biochemistry</td>
<td>4</td>
</tr>
<tr>
<td>EGL 101 Composition: Rhetoric</td>
<td>3</td>
</tr>
<tr>
<td>EGL 102 Composition: Literature</td>
<td>3</td>
</tr>
<tr>
<td>HIS 125 American Experience</td>
<td>3</td>
</tr>
<tr>
<td>Western Civilization/Other World Civilizations</td>
<td>3</td>
</tr>
<tr>
<td>MTH 110 Statistics</td>
<td>3</td>
</tr>
<tr>
<td>MTH 117 Precalculus Modeling for the Life and Social Sciences</td>
<td>4</td>
</tr>
<tr>
<td>PSY 101 Introduction to Psychology</td>
<td>3</td>
</tr>
<tr>
<td>SOC 228 Society and Health</td>
<td>3</td>
</tr>
<tr>
<td>Arts requirement – Gen Ed</td>
<td>3</td>
</tr>
<tr>
<td>Communications – Gen Ed</td>
<td>3</td>
</tr>
<tr>
<td>Modern Language Requirement – Gen Ed</td>
<td>3-6</td>
</tr>
</tbody>
</table>

Please refer to the General Education and Writing Intensive Requirement Sections of this catalog and consult with your advisor to ensure that graduation requirements are satisfied.

Required:

Support Courses (3 credits)

BCS 102 Introduction to Computers                                      | 3       |

Required:

Medical Laboratory Technology (59 credits)

MLT 105 Medical Laboratory Techniques                                 | 2       |
The Medical Laboratory Technology program prepares students with the knowledge, technical skills, and problem-solving ability to meet the needs of regional clinical laboratory employers. Students experience a supportive learning environment in the Medical Laboratory Technology campus laboratories, where the theoretical background introduced during lecture sessions is linked to clinical laboratory practice through the development of technical proficiency. The educational experience culminates in a clinical internship at a local affiliated clinical laboratory at which the students are prepared for the transition into the clinical laboratory workplace.

The curriculum meets the educational requirements of both the New York State Education Department for state licensure and the National Accrediting Agency for Clinical Laboratory Science (NAACLS) for national accreditation. As a result, graduates are eligible to apply for a New York State license at the technician level of practice and to take the American Society for Clinical Pathology (ASCP) Board of Registry examination to obtain national certification as a medical laboratory technician (MLT(ASCP)).

All matriculated students must provide evidence of appropriate immunizations, as well as titers for measles, mumps, rubella, varicella, and Hepatitis B. It is strongly recommended that students who test negative for Hepatitis B receive the appropriate vaccine. Students who decline this recommendation will be required to sign a waiver of responsibility. A Mantoux test for tuberculosis is required on a yearly basis during program enrollment. In addition, each student is required to participate in a liability insurance policy provided by the college which will afford malpractice coverage during the time enrolled in the MLT curriculum. Students are responsible for providing their own laboratory coat and transportation to and from clinical sites. A laboratory fee that covers lab coat maintenance and other personal protective equipment for use during laboratory sessions must be paid by all students enrolled in MLT courses.

Students enrolled in the MLT program will have the opportunity to participate in the MLT Club on campus, as well as to choose to complete one of the optional clinical internships in Molecular Pathology or Histological Techniques.

Please refer to the Safety and Technical Standards in the front section of this catalog.

**Typical Employment Opportunities:**
Graduates may obtain employment as medical laboratory technicians in hospitals, private clinical laboratories, physician office laboratories, research and industry laboratories, and in the sales, development and technical support of clinical laboratory equipment and supplies.

**Program Objectives:**
- Graduates will be prepared with the knowledge and technical skills to obtain a NYS license and national certification at the technician level of practice.
- Graduates will be prepared for entry-level technician positions in the clinical laboratory workplace, including having the ability or predisposition for additional on the job learning of new instrumentation and techniques.
- Graduates will develop an understanding of the need for integrity and personal ethics in the practice of clinical laboratory medicine.
- Graduates will have the educational background necessary for entry into baccalaureate programs in clinical laboratory science.

**Program of Study**

**Liberal Arts and Sciences (37 credits)**
- BIO 130 Biological Principles ......................................................... 4
- BIO 166 Principles of Human Anatomy & Physiology .................... 4
- CHM 152 General Chemistry Principles I ....................................... 4
- CHM 153 General Chemistry Principles II ....................................... 4
- EGL 101 Composition:Rhetoric ..................................................... 3
- EGL 102 Composition:Literature ................................................... 3
- MTH 110 Statistics .......................................................................... 3
- PSY 101 Introduction to Psychology ................................................. 3
- Social Science Elective .................................................................. 3
- General Education Electives ......................................................... 6

Please refer to the General Education Section in the front of this catalog and consult with your advisor to ensure that the general education graduation requirements are satisfied.

**Required:**

**Medical Laboratory Technology - Campus (28 credits)**
- MLT 105 Medical Laboratory Techniques ......................................... 2
- MLT 223 Hematology ....................................................................... 4
- MLT 227 Immunology & Serology ..................................................... 4
- MLT 228 Immunohematology ............................................................. 4
- MLT 243 Clinical Chemistry ............................................................... 4
- MLT 244 Clinical Practice ................................................................. 3
- MLT 257 Clinical Microbiology I ....................................................... 3
- MLT 258 Clinical Microbiology II ..................................................... 4

**Medical Laboratory Technology - Clinical Sites (4 credits)**
- MLT 281 Practicum in Immunohematology ....................................... 1
- MLT 282 Practicum in Clinical Chemistry and Serology .................... 1
- MLT 283 Practicum in Hematology and Urinalysis ......................... 1
- MLT 284 Practicum in Clinical Microbiology ..................................... 1
The Modern Languages Department
Dr. Ligia Rodríguez, Chair

The Modern Languages Department offers the following program:

- **Italian Studies** .......................................................... Minor
- **Latin American Studies** .................................................. Minor
- **Spanish** ........................................................................ Minor

The Department of Modern Languages offers courses in elementary, intermediate and advanced Arabic, Chinese, French, German, Italian and Spanish which fulfill the foreign language requirement. In addition, the department offers several courses, some taught in English, which can be used as electives.

The study of foreign languages, provides insight into the culture and civilization of other peoples and develops critical and analytical thinking. In addition, language learning can be a specialized, career-oriented educational experience that meets life's practical needs. Knowledge of a second language can be an asset to those students seeking career and professional advancement in areas such as business, health, social services, and travel. (Prefix for Modern Languages is MLG, all other courses bear language prefix—ARA, CHI, FRA, GER, ITA, SPA.)

**Italian Studies Minor**

The Italian Studies minor consists of 18 credits (six 3-credit courses). Students will be required to take MLG 306 and Italian 223, and four additional courses chosen with the approval of the program’s coordinator. Students interested in learning the Italian language and perhaps teaching Italian should concentrate on courses taught in the Italian language, while those interested in different careers should choose courses in other disciplines (film, sociology, art, etc.). Students are encouraged to study abroad in Italy. Courses taken in Italy will be reviewed by the coordinator and considered toward the minor requirements.

The four additional courses for the minor may be chosen from the following: MLG 301, ITA 224, ITA 301, ITA 302, SOC 263, ART 202, ART 242, HOR 228, BUS 320, POL 265, POL 273

**Latin American Studies Minor**

This minor consisting of 18 Credits (six three-credit courses). Students will be required to take MLG 305 and SPA 243 and four additional courses chosen from Anthropology, Culture and Civilization, Literature and Cinema. Students who are fluent in Spanish may take additional courses in literature to fulfill the credit requirement with permission of the program’s coordinator. Students are encouraged to study abroad in Spain where the college has an exchange program or any other Spanish-speaking country.

The four additional courses for the minor may be chosen from the following: ANT 211, MLG 302, *MLG 310, *MLG 312, MLG 314, MLG 315, *MLG 320. *Students can take a maximum of two literature courses.

**Spanish Minor**

The Spanish minor consists of 18 credits (six 3-credit courses). Students will be required to take SPA 301 and SPA 302 (Advanced Spanish V and VI), and four additional courses one in cinema (SPA 303), one in Spanish culture (spa 315), one in Latin American culture (SPA 305) and one in literature (to be chosen from SPA 310, SPA 312, SPA 320). Students who are fluent in Spanish may take additional courses in literature to fulfill the credit requirement with permission of the program’s coordinator. Students are encouraged to study abroad in Spain and/or Mexico where the college has exchange programs.

**Nursing Department**

Dr. Jennifer Bryer, Chair
Prof. Mary Stedman, Associate Chair
Prof. Fran Cherkis, Assistant Chair

The Nursing Department offers the following program:

- **Nursing** ............................................................... Bachelor of Science Degree
- **Nursing** ............................................................... Associate in Science Degree
- **Practical Nursing** ................................................ Certificate
- **Health Studies** ........................................................ Certificate

**Nursing**

**Bachelor of Science Degree**

The Nursing program prepares students for entry into the profession of Nursing. Upon graduation, students receive the Bachelor of Science degree with a major in Nursing and are eligible to take the National Council of State Board Licensing Exam for RNs (NCLEX-RN).

The curriculum will prepare graduates to provide professional nursing skills to individuals, families and groups in a variety of structured and unstructured healthcare settings, as well as the leadership skills needed to supervise nursing care delivered in community settings. The curriculum offers a balance of courses in general education and nursing. The students are provided with the theoretical knowledge and clinical practice needed to administer care for individuals throughout the life cycle. Graduates are prepared as beginning practitioners to help address the regional need for nurses. Learning experiences take place in the classroom, College nursing laboratory and in a variety of clinical settings. All students are assisted in the development of their potential with guidance offered by faculty who possess broad nursing experience and academic preparation in the field. Students participate in the Student Nurse Association and have opportunities to volunteer through the Department’s Outreach Program.

Applicants MUST submit evidence of satisfactory mental and physical health in advance of registration. Evidence of appropriate immunization, as well as titers for measles, mumps, rubella, varicella, and Hepatitis “B” are required. Mantoux test for
tuberculosis is also required yearly. It is strongly recommended that students who test negative for Hepatitis “B” receive the appropriate vaccine. Students who decline this recommendation will be required to sign a waiver of responsibility.

All matriculated students are required to have CPR certification for health care providers. Each student is required to participate in liability insurance policy provided by the college which will afford malpractice coverage during the time enrolled in the Nursing curriculum. Students must provide their own transportation to and from clinical sites. For all field experiences, student dress must conform with agency protocol. New York State RN licensure requires the applicant to be of good moral character. An applicant for licensure who has been convicted of a crime, or has committed an act which raises a reasonable question as to his/her moral character will be subject to review.

Please refer to the Safety and Technical Standards in the front section of this catalog.

(All applications submitted for the program by January 15 receive equal consideration.)

The Nursing Curriculum is accredited by the National League for Nursing Accrediting Commission, Inc., 3343 Peachtree Rd NE, Suite 500, Atlanta, GA 30326, Phone 404-975-5000, fax 404-975-5020, www.ninac.org

**Typical Employment Opportunities**

First level nursing positions in hospitals, home health agencies, long-term facilities, and primary and preventive care throughout the community. Registered nurses with a Bachelor degree are prepared to assume leadership responsibilities in the roles of provider of care, manager of care, and member of the profession.

**Nursing (BS) Program Objectives:**

At the completion of the BS Program in Nursing graduates will:

- Provide and direct nursing care for individuals, families, and communities with complex and unpredictable health care challenges.
- Provide health promotion and illness prevention services in structured and unstructured environments.
- Evaluate research for its applicability to nursing practice.
- Act as leaders to improve health care delivery and to advance the nursing profession.
- Serve as health care advocates and change agents to influence health care policy reform

**Program of Study**

**Liberal Arts and Sciences (60 credits)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 170</td>
<td>Human Anatomy and Physiology I</td>
<td>4</td>
</tr>
<tr>
<td>BIO 171</td>
<td>Human Anatomy and Physiology II</td>
<td>4</td>
</tr>
<tr>
<td>BIO 220</td>
<td>Medical Microbiology</td>
<td>4</td>
</tr>
<tr>
<td>BIO 240</td>
<td>Bioethics</td>
<td>3</td>
</tr>
<tr>
<td>EGL 101</td>
<td>Composition: Rhetoric</td>
<td>3</td>
</tr>
<tr>
<td>EGL 102</td>
<td>Composition: Literature</td>
<td>3</td>
</tr>
<tr>
<td>HIS 121/122/125</td>
<td>American History Gen Ed</td>
<td>3</td>
</tr>
<tr>
<td>Western Civilization Gen Ed</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MTH 110</td>
<td>Statistics</td>
<td>3</td>
</tr>
<tr>
<td>Modern Language Level I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Modern Language Level II</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>PSY 101</td>
<td>Introduction to Psychology</td>
<td>3</td>
</tr>
<tr>
<td>PSY 232</td>
<td>Child Development</td>
<td>3</td>
</tr>
<tr>
<td>SOC 228</td>
<td>Society and Health</td>
<td>3</td>
</tr>
<tr>
<td>SPE 201</td>
<td>Oral Communications</td>
<td>3</td>
</tr>
</tbody>
</table>

**Arts requirement - Gen Ed** | 3

**Humanities requirement – Gen Ed** | 6

Please refer to the General Education and Writing-Intensive Requirement Sections of this catalog and consult with your advisor to ensure that graduation requirements are satisfied.

**Required: Nursing (61-65 credits)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>NUR 110</td>
<td>Foundations of Nursing Practice</td>
<td>1</td>
</tr>
<tr>
<td>NUR 111</td>
<td>Foundations of Nursing Practice II</td>
<td>1</td>
</tr>
<tr>
<td>NUR 100</td>
<td>Health Assessment</td>
<td>2</td>
</tr>
<tr>
<td>NUR 114</td>
<td>Clinical and Theoretical Foundations of Baccalaureate Nursing Practice</td>
<td>7</td>
</tr>
<tr>
<td>NUR 215</td>
<td>Developing Nurses’ Ways of Knowing</td>
<td>3</td>
</tr>
<tr>
<td>NUR 216</td>
<td>The Art of Nursing</td>
<td>2</td>
</tr>
<tr>
<td>NUR 211</td>
<td>Clinical Pharmacology for Nursing</td>
<td>3</td>
</tr>
<tr>
<td>NUR 302</td>
<td>Pathophysiology</td>
<td>3</td>
</tr>
<tr>
<td>NUR 305</td>
<td>Health Promotion and Patient Education</td>
<td>3</td>
</tr>
<tr>
<td>NUR 217</td>
<td>Care of Individuals Experiencing Acute Health Changes</td>
<td>6</td>
</tr>
<tr>
<td>NUR 306</td>
<td>Care of Individuals Experiencing Chronic Health Challenges</td>
<td>6</td>
</tr>
<tr>
<td>NUR 307</td>
<td>Nursing Care of Children and the Child Bearing Family</td>
<td>6</td>
</tr>
<tr>
<td>NUR 401</td>
<td>Modes of Inquiry</td>
<td>3</td>
</tr>
<tr>
<td>NUR 404</td>
<td>Nurse as Advocate and Change Agent</td>
<td>3</td>
</tr>
<tr>
<td>NUR 301</td>
<td>Care of Individuals in the Community</td>
<td>4</td>
</tr>
<tr>
<td>NUR 402</td>
<td>Community and Mental Health Nursing</td>
<td>4</td>
</tr>
<tr>
<td>NUR 405</td>
<td>Nursing Practicum</td>
<td>9</td>
</tr>
<tr>
<td>NUR 406</td>
<td>Senior Leadership Practicum</td>
<td>5</td>
</tr>
<tr>
<td>HST 301</td>
<td>Healthcare Organizations</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total Credits:** | 121-125

To continue in the nursing program a grade of C+ or better must be maintained in all nursing courses. BIO 170 and BIO 171 requires a grade of C+. A grade of C is required in BIO 220. All science courses must be within 5 years.

**Nursing Associate in Science Degree**

The Nursing program prepares students for entry into the profession of Nursing. Upon graduation, students receive the Associate in Science degree in Nursing and are eligible to take the National Council of State Board Licensing Exam for RNs (NCLEX-RN).

The curriculum offers a balance of courses in general education and nursing. The students are provided with the theoretical knowledge and clinical practice needed to administer care for individuals throughout the life cycle. Graduates are prepared as beginning practitioners to help address the regional need for nurses. Learning experiences take place in the classroom, College nursing laboratory and in a variety of clinical settings. All students are assisted in the development of their potential with guidance offered by faculty who possess broad nursing experience and academic preparation in the field. Students participate in the Student Nurse Association and have opportunities to volunteer through the Department’s Outreach Program.

Applicants MUST submit evidence of satisfactory mental and physical health in advance of registration. Evidence of appropriate immunization, as well as titres for measles, mumps, rubella, varicella, and Hepatitis "B" are required. Mantoux test for
At the completion of the AS Program in Nursing graduates will:

Nursing (AS) Objectives:

• Be employed in a variety of healthcare settings.
• Will exhibit professional development through participation in formal and informal education programs, and membership in professional organizations.

Typical Employment Opportunities

First level nursing positions in hospitals, skilled nursing facilities, and community agencies.

NUR 100 Health Assessment ...................................................2
NUR 108 Concepts & Practice of Nursing I ............................6
NUR 109 Concepts & Practice of Nursing II ............................6
NUR 211 Clinical Pharmacology for Nursing ..........................3
NUR 212 Concepts & Practice of Nursing III ............................7
NUR 214 Concepts & Practice of Nursing IV ............................7

Total Credits: ...........................................................................72

To continue in the nursing program a grade of C+ or better must be maintained in all nursing courses. A grade of C is required for BIO 220 and CHM 285. Courses in BIO 170 and BIO 171 must have a grade of B or better to receive transfer credit and be within 5 years.

Practical Nursing

Certificate Program

The Practical Nursing Certificate Program is designed to satisfy the educational requirements for licensing as a practical nurse. The practice of nursing as a licensed practical nurse is defined as performing tasks and responsibilities within the framework of case finding, health teaching, health counseling, and provision of supportive and restorative care under the direction of a registered professional nurse or licensed physician, dentist or other legally authorized licensed health care provider. The curriculum is designed to prepare students to provide basic nursing skills to individuals in a variety of healthcare settings. Upon completion of the program graduates are eligible to take the National Council Licensure Examination for Practical Nurses (NCLEX-PN). Students participate in the Student Nurse Association and have opportunities to volunteer through the Department’s Outreach Program. Graduates are prepared as beginning practitioners to help address the regional need for nurses.

Applicants MUST submit evidence of satisfactory mental and physical health in advance of registration. Evidence of appropriate immunization, as well as titres for measles, mumps, rubella, varicella, and Hepatitis “B” are required. Mantoux test for tuberculosis is also required yearly. It is strongly recommended that students who test negative for Hepatitis “B” receive the appropriate vaccine. Students who decline this recommendation will be required to sign a waiver of responsibility.

All matriculated students are required to have CPR certification for health care providers. Each student is required to participate in liability insurance policy provided by the college which will afford malpractice coverage during the time enrolled in the Nursing curriculum. Students must provide their own transportation to and from clinical sites. For all field experiences, student dress must conform with agency protocol.

New York State RN licensure requires the applicant to be of good moral character. An applicant for licensure who has been convicted of a crime, or has committed an act which raises a reasonable question as to his/her moral character will be subject to review.

Please refer to the Safety and Technical Standards in the front section of this catalog.

(All applications submitted for the program by January 15 receive equal consideration.)

The Nursing curriculum is accredited by the National League for Nursing Accrediting Commission, Inc., 3343 Peachtree Road NE, Suite 500, Atlanta, GA 30326, Phone 404-975-5000, Fax 404-975-5020, www.nlnac.org

Program of Study

Liberal Arts and Sciences (37 credits)

BIO 170 Human Anatomy and Physiology I .........................4
BIO 171 Human Anatomy and Physiology II ......................4
BIO 220 Medical Microbiology ............................................4
CHM 285 Physiological Chemistry ....................................4
EGL 101 Composition: Rhetoric .........................................3
EGL 102 Composition: Literature ......................................3
PSY 101 Introduction to Psychology ...................................3
PSY 232 Child Development ..............................................3
SOC 122 Introduction to Sociology or SOC 228 Society and Health .................................................................3
SPE 201 Oral Communications ...........................................3
Elective by advisement to meet Gen. Ed. Requirements (Math, History, Arts or Language) ...........................................3

Required: Nursing (35 credits)

NUR 100 Health Assessment ................................................2
NUR 108 Concepts & Practice of Nursing I ............................6
NUR 109 Concepts & Practice of Nursing II ............................6
NUR 211 Clinical Pharmacology for Nursing ..........................3
NUR 212 Concepts & Practice of Nursing III ............................7
NUR 214 Concepts & Practice of Nursing IV ............................7

The Practical Nursing Program is designed to meet the basic needs of individuals in a variety of health care settings safely and effectively according to nationally established patient health and safety goals.

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Meet the requirements for the National Council Licensing Examination in practical nursing.

Demonstrate professional qualities and characteristics essential to the role of the practical nurse according to the Statewide Nursing Education Articulation Model of New York.

Utilize the nursing process collaboratively, when performing the duties of the practical nurse.

Participate in professional organizations and community activities that promote and maintain health.

Identify learning as a self-motivating, lifelong responsibility and process through continuing educational activities.

Demonstrate entry-level competencies of graduates of educational programs in practical nursing according to National Association of Practical Nursing Education and Service (NAPNES).

**Program of Study**

**Liberal Arts and Sciences (10 credits)**
- BIO 170 Human Anatomy & Physiology I ........................................ 4
- EGL 101 Composition Rhetoric ..................................................3
- PSY 101 Introduction to Psychology .............................................3

**Required: Nursing (28 credits)**
- LPN 100 Medication Dosage Calculations .......................................1
- LPN 101 Fundamentals of Nursing ...............................................8
- LPN 102 Nursing Care of Patients Across the Lifespan ......................8
- LPN 103 Nursing Care of Patients in Alternate Settings .....................8
- NUR 211 Clinical Pharmacology for Nursing ..................................3

**Total Credits:**.............................................................................38

To continue in the nursing program a C+ or better must be maintained in all nursing courses. BIO 170 must be within 5 years and have minimum grade of B or better.

**Health Studies**

Professor Dolores Bradley, Coordinator

**Certificate Program**

The Health Studies Certificate Program is designed to provide a path that will enable students to meet entrance requirements to a degree program in a health care curriculum: Nursing, Dental Hygiene, or Medical Laboratory Technology. Students will work closely with their faculty advisors to ensure the required program of study will meet individual educational needs. Upon completion of this program, students may apply for acceptance to a specific health curriculum.

**Program of Study**

**Liberal Arts and Sciences (21 credits)**
- BIO* ................................................................. 4
- BIO* ........................................................................4
- CHM* .......................................................................4
- EGL 101 Composition: Rhetoric ..................................................3
- EGL 102 Composition: Literature ...............................................3
- PSY 101 Introduction to Psychology .............................................3

**Support Courses (6 credits)**
- BCS 102 Computer Concepts and Applications ..........................3
- HST 101 Current Issues in Health .............................................3

**Total Credits:** ........................................................................27

*Based on curriculum advisement

Ornamental Horticulture Department

Prof. Michael Veracka, Chair

The Ornamental Horticulture Department offers the following programs:

- Horticultural Technology Management............... Bachelor of Technology
- General Horticulture .................... Associate in Applied Science
- Landscape Development ........ Associate in Applied Science
- Ornamental Horticulture ............................... Certificate
- Ornamental Horticulture ............................. Minor

The Department of Ornamental Horticulture offers courses for those who would engage in business or obtain employment in the field of ornamental horticulture.

This program prepares students to be real-life problem solvers in the emerging fields of ornamental horticulture and landscape design.

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

**Program Objectives:**

- Provide students with a well-rounded education in horticultural science and landscape design, including computer, business and communication skills.
- Provide students opportunities within their education coursework/training for interfacing with real world employment sources.
- Provide all students multiple opportunities for enrolling in our Department’s course offerings.
- Recruit full-time faculty with terminal degrees in their respective fields and to assist all faculty to improve their teaching skills.

The department offers the Bachelor’s degree in Horticultural Technology Management with concentrations in General Horticulture and Landscape Development in addition to two Associate’s degree programs in General Horticulture and Landscape Development. A certificate program in Ornamental Horticulture is also available.

There are a number of scholarships and internships available to students in the various Ornamental Horticulture curricula. An active student horticulture club provides students with numerous opportunities to visit area gardens and arboretums, tour industry facilities and participate in international student competitions such as the Professional Landcare Network (PLANET) Student Career Days.

Horticultural Technology Management

**Bachelor of Technology**

The Horticultural Technology Management program is designed to produce versatile graduates prepared for a wide range of entry-level and middle management positions in the extensive green industry on Long Island and beyond. The horticultural green industry is a diverse conglomerate of growers, retailers, designers, installers, and maintenance personnel serving public and private gardens, homeowners, golf courses, parks and recreational facilities.
Through a selection of required and elective courses in the concentration, students will become progressively more specialized and advanced in their chosen area of interest. The Horticultural Technology Management program has a common business and horticulture core which serves as the foundation for the two concentrations in the program.

The two major concentrations are: General Horticulture and Landscape Development. Each concentration offers a sequence of courses that build upon a strong foundation in the discipline and draws from a multi-disciplinary array of course work in Horticulture, Business and the Arts and Sciences.

The broad scope of courses allows students to experience various phases of horticultural operations as well as business procedures and practices. The mix of horticulture and business maximizes their employment opportunities and career choices. Graduates of this program may develop careers owning and operating their own businesses, propagating plants, designing interior and exterior landscapes, managing golf courses, estates, and garden centers, merchandising plant products or numerous other possibilities within the green industry and beyond.

Program of Study

Liberal Arts and Sciences: (46 credits)

Communication (6 credits)

EGL101 Composition: Rhetoric...........................................3
Communication Elective ..................................................3
EGL102 Composition: Literature........................................3
Arts 300+ Level Elective................................................3
American History Elective...............................................3
Western Civilization/Other World Civilizations...............3
Mathematics Elective....................................................3
Modern Language Level II or higher Elective...............3
(or if waived: MLG 300+ Elective)
Social and Behavioral Sciences Electives..............6
BIO 192 Biology I (Botany).............................................3
BIO 198 Entomology.....................................................4
BIO 353 Essentials of Plant Pathology..........................3
BIO 354 Essentials of Plant Pathology Laboratory........1
CHM 124 Principles of Chemistry.................................4

Required: Business/BCS Courses (39-45 credits)

BCS 102 Computer Concepts & Applications................3
BUS 111 Introduction to Business................................3
BUS 109 Management Theories and Practices...............3
BUS 131 Marketing Principles.....................................3
BUS 141 Contemporary Business Communications........3
BUS 230 Environmental Law.........................................3
BUS 300 Operations Management................................3
BUS 301 Financial Accounting....................................3
BUS 316 Customer Relations.......................................3
BUS 401 Quality Management.....................................3
IND 308 Occupational Safety......................................3
2-4 BUS 300+ Level Electives......................................6-12

General Horticulture: The program in General Horticulture provides a generalized study of horticulture and business. Through a wide range of electives, students can develop specific areas of expertise. The program of study includes training in plant identification, botany, entomology, soil science, business, and computer business applications. Students may elect additional courses in plant propagation, landscape construction, commercial floral design, arboriculture, ecology, and turf and grass management. Laboratory hours provide students valuable “hands-on” experience in the College’s extensive greenhouses and ornamental gardens.

General Horticulture Concentration: (40-46 credits)

HOR 101 Soil Science..................................................3
HOR 103 Herbaceous Plants I.......................................3
HOR 104 Horticulture II..............................................3
HOR 110 Horticulture I...............................................3
HOR 131 Landscape Drafting I....................................3
HOR 133 Landscape Drafting II..................................3
HOR 204 Herbaceous Plants II...................................3
HOR 211 Woody Plants I.............................................3
HOR 212 Woody Plants II............................................3
HOR 238 Turfgrass Culture.........................................3
HOR 250 Plant Propagation.........................................3
HOR 410 Plant Production Technology.........................4
1-3 HOR 300+ level Elective........................................3-9

Landscape Development: The focus of this specialization is to prepare students for business in professional landscape contracting and landscape design. The student is trained in landscape drafting, landscape graphics, landscape plans, landscape construction, landscape surveying, computer-aided design, plant materials, professional practices, business, and computer business applications.

Landscape Development Concentration: (40-46 credits)

HOR 101 Soil Science..................................................3
HOR 104 Horticulture II..............................................3
HOR 110 Horticulture I...............................................3
HOR 131 Landscape Drafting I....................................3
HOR 133 Landscape Drafting II..................................3
HOR 207 Landscape Plans I.........................................3
HOR 211 Woody Plants I.............................................3
HOR 212 Woody Plants II............................................3
HOR 220 Landscape Plans II........................................4
HOR 238 Turfgrass Culture.........................................3
HOR 370 Landscape Professional Practices...................3
HOR 371 Landscape CAD I............................................3
HOR 372 Site Engineering I..........................................3
0-2 HOR 300+ level Elective........................................0-6

Total Credits:..........................................................131

General Horticulture

Associate in Applied Science

This program is designed to provide a generalized study of horticulture requiring basic introductory courses while offering a wide range of electives so that the students can develop their desired areas of expertise.

Students receive training in plant identification, botany, entomology, soils, and horticulture. Students may elect courses such as: greenhouse management, plant propagation, landscape drafting, landscape construction, commercial floral design and arboriculture. The laboratory hours provide students with valuable “hands-on” experiences in our extensive greenhouses and ornamental teaching gardens.

Professional development opportunities are varied since the program offers students three horticulture electives. This allows students to choose their own areas of specialization within the program.
Typical Employment Opportunities
Floral Designer
Retail Florist
Flower Shop Manager
Private Estate Flower Grower
Sales Manager
Woody Plant Specialist
Interior Landscape Designer
Commercial Grower
Interior Horticultural Service Technician
Wholesale Distributor
Garden Center Salesperson/Manager
Arboretum Technician
Nursery Salesperson/Manager
Wholesale Nursery Manager
Municipal & Urban Forestry Manager
Commercial or Utility Arborist
Landscape Maintenance Technician/Proprietor

Program of Study
Liberal Arts and Sciences (22-23 credits)
EGL101 Composition:Rhetoric.....................................................3
EGL102 Composition:Literature....................................................6
Social Science/Humanities Elective...............................................3
Bio 192 Biology I (Botany)..............................................................4
Bio 198 Entomology.............................................................3-4
Science/Math Elective..........................................................3-4

Support Courses (3 credits)
BUS Business Elective .............................................................3
or
BCS 102 Computer Concepts and Applications..............................3

Required:
Horticulture (37 credits)
HOR 101 Soil Science .................................................................3
HOR 103 Herbaceous Plants I .................................................3
HOR 104 Horticulture II .............................................................3
HOR 110 Horticulture I .............................................................3
HOR 127 Horticulture Seminar ..................................................1
HOR 204 Herbaceous Plants II ....................................................3
HOR 211 Woody Plants I ..............................................................3
HOR 212 Woody Plants II .............................................................3
HOR 218 Indoor Plants ...............................................................3
HOR 238 Turfgrass Culture ........................................................3
HOR Horticulture Electives .......................................................9

Total Credits: ...........................................................................64-65
Electives need not all be from a single interest grouping.

Floriculture Courses
HOR 120..............................Commercial Floral Design I
HOR 121..............................Commercial Floral Design II
HOR 205..............................Advanced Floral Design

Garden Center/Nursery Courses
HOR 250..............................Plant Propagation
HOR 208 Nursery Production
HOR 248 Woody Plant Diagnostic Techniques

Landscape Maintenance Courses
HOR 201..............................Arboriculture I
HOR 219..............................Landscape Construction

Recommended Additional Electives
HOR 203..............................Greenhouse Management I

Landscape Development

Associate in Applied Science
This program is intended to prepare students for the professional world of landscape contracting and landscape design. The Landscape Development program trains students in: landscape drafting, landscape graphics and design, landscape plans, planting plans, landscape construction, landscape surveying, computer-aided design, plant materials, and professional landscape practices.

Graduates are trained landscape horticulturists prepared to begin a career in the landscape contracting profession.

Typical Employment Opportunities
Landscape Designer
Landscape Technician
Landscape Consultant
Landscape Inspector
Landscape Contractor
Landscape Maintenance Proprietor
Landscape Construction Supervisor
Landscape Planting Supervisor

Program of Study
Liberal Arts and Sciences (22-23 credits)
EGL 101 Composition:Rhetoric ................................................3
EGL 102 Composition:Literature................................................3
Social Science/Humanities Electives .........................................6
Bio 198 Entomology.................................................................3
Bio 192 Biology I (Botany)..................................................4
Mathematics (by advisement)..................................................3-4

Required:
Horticulture (41 credits)
HOR 101 Soil Science .................................................................3
HOR 103 Herbaceous Plants I or
HOR 204 Herbaceous Plants II .................................................3
HOR 104 Horticulture II .............................................................3
HOR 110 Horticulture I .............................................................3
HOR 127 Horticulture Seminar ..................................................1
HOR 131 Landscape Drafting I ....................................................3
HOR 131 Landscape Drafting II ....................................................3
HOR 207 Landscape Plans I ........................................................3
HOR 211 Woody Plants I ..............................................................3
HOR 212 Woody Plants II .............................................................3
HOR 219 Landscape Construction ................................................3
HOR 220 Landscape Plans II .......................................................4
HOR 227 Computer Landscape Graphic Design.............................3
HOR 238 Turfgrass Culture ........................................................3

Total Credits: ...........................................................................63-64

Ornamental Horticulture

Certificate Program
A minimum of 34 credits is required.

The objective of the Certificate program is to develop and prepare individuals for careers in horticulture. Openings exist for technically-oriented specialists as sales representatives, managers, supervisors, and production managers in turf, nursery, parks, florists, landscaping, and closely related fields.
Liberal Arts and Sciences (4 credits)
BIO 192 Biology I (Botany) ..............................................................4

Required:
Horticulture
HOR 101 Soil Science .................................................................3
HOR 103 Herbaceous Plants I .......................................................3
HOR 104 Horticulture II ..............................................................3
HOR 110 Horticulture I .................................................................3
HOR 211 Woody Plants I .............................................................3
HOR 212 Woody Plants II or HOR 218 Indoor Plants* .................3
HOR Horticulture Electives* .........................................................12
Total Credits: ........................................................................34

Students with a particular interest in the wholesale and retail florist industry are encouraged to include the following courses.
HOR 120 Commercial Floral Design I
HOR 218 Indoor Plants
HOR 121 Commercial Floral Design II
HOR 205 Advanced Floral Design
* Student with varied interests may select electives based on advisement and course availability.

Ornamental Horticulture Minor
The Department of Ornamental Horticulture offers an undergraduate minor in Ornamental Horticulture to all baccalaureate degree students at Farmingdale State College. The field of Ornamental Horticulture is a diverse array of growers, retailers, designers, installers, and maintenance personnel serving public and private gardens, homeowners, golf courses, parks and recreational facilities.

The minor is designed to give the student a basic core of horticultural skills that can be amplified through a series of elective courses. Students who wish to complete this minor must be matriculated in a baccalaureate program at Farmingdale State College and must apply through the Department of Ornamental Horticulture.

The Ornamental Horticulture minor consists of 21 credits in Ornamental Horticulture. The selection of electives should be done in consultation with a full-time member of the Department. Nine credits are required core courses (HOR 101, HOR 104, HOR 110) and twelve credits must be selected from Horticulture courses at the 200-level or higher. Students must maintain a cumulative GPA of 2.0 in their horticulture courses.

Physical Science
(see Physics Department)

Physics Department
Dr. Lloyd Makarowitz, Chair

The Physics Department provides its students with an understanding of the interactions among all forms of matter, energy, and space. Toward this end, the Department offers each student a physics education carefully tailored to suit his/her needs.

Students pursuing science-related or technically-oriented degrees take either the algebra-based College Physics sequence (PHY 135 and PHY 136) or the calculus-based Physics sequence (PHY 143 and PHY 144). Students who complete these sequences may also choose from a number of electives covering such fields as electromagnetic theory and modern physics. (Prefix for Physics is PHY)

A student who is not pursuing a science-related field of study may choose from among a diverse assortment of physical science courses, including astronomy, meteorology, geology, and the environment. These specialized courses for non-science students are taught by faculty with strong interest and expertise in the respective sub-disciplines. The student has the opportunity to taste the flavor of science and to appreciate its value to humanity in a technical society. (Prefix for Physical Science is PHY)

Politics
(see History, Economics and Politics Department)

Professional Communications Department
Dr. Vicki K. Janik, Chair

The Professional Communications Department offers the following program:

Professional Communications...Bachelor of Science Degree

Professional Communications

Bachelor of Science

The Bachelor of Science degree program in Professional Communications is a four-year course of study in professional communication: writing, speaking, and software applications. Graduates begin careers in a variety of areas including but not limited to business and marketing, engineering and science, or health and bioscience. They may work as researchers, writers, editors, or graphic specialists, or in other language-related professional positions. Students may also prepare for postgraduate study in such areas as education, library science, business, journalism, or law.

Professional writers and presenters create proposals, articles, speeches, specifications, marketing materials, educational materials, instruction manuals, grant applications, legal documents, or financial reports. Often professional writers work in teams with programmers, graphic artists, and financial experts.

This Bachelor of Science degree program offers students a broad range of courses in the liberal arts and sciences, which include 36-38 credits that fulfill the General Education requirements defined by the State University of New York and 24-30 additional arts and sciences credits. Students complete 24 credits in professional writing, as well as 6 credits in speech and 3 credits in psychology, computer graphics and desktop publishing, and public relations and business organization. Finally, in consultation with a professor, students select four courses in a discipline of concentration outside professional communications (PCM courses) in order to broaden their understanding of another discipline.

According to the Long Island Association, the Long Island economy is primarily based in the so-called FIRE industries (finance,
insurance, and real estate) and high tech businesses ranging from nanotechnology to bioscience and computer software. As a result, the need for professional writers is expected to grow.

**Professional Communications (BS) Program Objectives:**

Students who graduate with a Bachelor of Science degree in Professional Communications will have -

- a foundation of knowledge in the liberal arts and sciences that will encourage their aspirations to be exemplary citizens, scholars, professionals, and leaders in society, and
- mastery of a variety of communications skills, which are essential to professional and business careers in such areas as education, business, law, librarianship and information resources, publishing, and other media.

**Goals for PCM graduates include the following major learning outcomes:**

- Students will be able to identify, gather, synthesize, and cite information and sources in order to support their ideas using primary and secondary research and a variety of information management resources and scholarly, professional source materials.
- Students will be able to organize and produce written documents and oral presentations in a variety of professional formats using language that is lucid, concise, precise, grammatically correct, and appropriate to the topic, audience, and occasion.
- Students will be able to effectively revise and edit documents for both content and organization demonstrating accuracy in the use of diction, mechanics, and syntax.
- Students will be able to deliver oral presentations using effective eye contact, posture, use of notes, voice, and nonverbal communication and incorporate original and imported visual aids such as graphics and charts in oral presentations.
- Students will be able to create and revise publications on the web and in hard copy composed with a variety of current software.

**Program of Study**

**Liberal Arts and Sciences (60 credits)**

Core Requirements—Generally offered each fall, spring and summer semester.

- English/Humanities .......................................................... 12
- Social Sciences ............................................................... 12
- Mathematics/Science ...................................................... 12
- Liberal Arts Electives ...................................................... 24

Please refer to the General Education and Writing-Intensive Requirement Sections of this catalog and consult with your advisor to ensure that graduation requirements are satisfied.

**Program Discipline Courses (33 credits) will be offered at least once each academic year**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCM/EGL 301 Advanced Grammar and Vocabulary</td>
<td>3</td>
</tr>
<tr>
<td>PCM 305 Media in Communications</td>
<td>3</td>
</tr>
<tr>
<td>PCM/EGL 311 Introduction to Writing for Electronic Media</td>
<td>3</td>
</tr>
<tr>
<td>PCM 313W Communications Theory</td>
<td>3</td>
</tr>
<tr>
<td>PCM 315 Research Techniques</td>
<td>3</td>
</tr>
<tr>
<td>PCM 328 Advanced Writing and Editing</td>
<td>3</td>
</tr>
<tr>
<td>PCM 450 Internship in Professional Communications</td>
<td>3</td>
</tr>
<tr>
<td>Two courses selected from among the following seven offerings:</td>
<td></td>
</tr>
<tr>
<td>PCM/EGL 226 Journalism</td>
<td>3</td>
</tr>
<tr>
<td>PCM 320 Communications in Business I</td>
<td>3</td>
</tr>
<tr>
<td>PCM 324 Report Writing and Technical Communications</td>
<td>3</td>
</tr>
<tr>
<td>PCM 325 Writing in Health and Disease</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total Credits: 126 credits**

**Note:** Many courses have specific prerequisite(s), co-requisites and sequence requirements. Please consult with your academic advisor for additional information.

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**Psychology Department**

Dr. Gene Indenbaum, Chair

The Psychology Department offers the following program:

- **Applied Psychology** Bachelor of Science

Courses offered by the Psychology Department have been designed to expose the student to a broad spectrum of opinion regarding the nature of scientific study of human behavior. In addition to meeting the specific requirements of Farmingdale State College, the courses assist the student in understanding and coping with processes experienced on a personal and societal level. The course offerings in Psychology seek to inform, stimulate, and promote an inquisitive attitude regarding scientific study of human behavior. (Prefix for Psychology is PSY)

**Applied Psychology**

Dr. Michael Goodstone, Program Director

**Bachelor of Science Degree**

The Applied Psychology program leads to a Bachelor of Science degree with a concentration in Industrial/Organizational Psychology. The program focuses on developing the student’s ability to use the core knowledge and analytical skills of the discipline in order to address practical problems important to local business and industry. This program prepares students to be real-life problem solvers in the emerging field of Applied Psychology. Students will learn the foundations of Industrial/Organizational Psychology including personnel management, organizational behavior, and organizational development. The program’s career objectives are to prepare students for meaningful and rewarding entry-level positions in business and human resource management. This “hands on” program will
develop skills that will enable its graduates to help businesses efficiently recruit, develop, and organize their human resources. Commensurate with the expectations of a BS in Applied Psychology and the current requirements of entry-level jobs in the area of Industrial/Organizational Psychology, students will successfully complete an applied research project or an internship. Furthermore, if the program graduates’ educational aspirations include advanced professional training, they will have had the theoretical knowledge, analytical skills, and exposure to effective writing necessary for successful entry and performance in the increasingly competitive and specialized graduate programs across many fields of psychology.

**Applied Psychology (BS) Program Objectives:**

- Graduates will have the knowledge and skill to successfully conduct and report research in Applied Psychology.
- Graduates will demonstrate technical competence with regard to general psychological concepts and theories as well as the content and technologies of Applied Psychology.
- Graduates will possess the competencies required to perform entry level positions in business and human resource management.

**Program of Study**

**General Education Requirements (38 credits)**

- EGL101 Composition Rhetoric ..................................................... 3
- SPE130 Public Speaking .............................................................. 3
- EGL102 Composition Literature .................................................. 3
- Arts Elective .............................................................................. 3
- HIS121 U.S. History to Reconstruction or
- HIS122 U.S. History Since Reconstruction or
- HIS125 The American Experience ......................................... 3
- Western Civilization/Other World Civilizations ..................... 3
- MTH110 Statistics ...................................................................... 3
- Modern Language Elective (Level II) ....................................... 3
- PSY101 Introduction to Psychology ......................................... 3
- SOC122 Introduction to Sociology ........................................... 3
- Natural Sciences: (6 credits required by General Education, but 8 credits for the program)
- Biology elective with lab .......................................................... 8
- Free Electives ............................................................................ 12

**Arts & Sciences Courses (21-23 credits)**

- Social Science (non Psychology) electives.............................. 6
- Math/Science electives by advisement ..................................... 6-8
- Arts and Sciences electives ....................................................... 9

**Support Courses (6 credits)**

- EGL209 Technical Communications ..................................... 3
- BCS102 Computer Concepts and Applications .................... 3

**The Major (46-47 credits)**

**Psychology Core (16 credits)**

- PSY248 Statistics for Psychology ........................................... 3
- PSY260 Research Methods ..................................................... 4
- PSY272 Cognitive Psychology ............................................... 3
- PSY234 Social Psychology ...................................................... 3
- PSY301 Learning ............................................................... 3

**Psychology Electives 5 courses by advisement (15 credits)**

- PSY230, PSY231, PSY232, PSY233, PSY235, PSY237, PSY238, PSY240, PSY242, PSY252, PSY253, PSY255, PSY257, PSY261, CRJ/PSY 300, PSY 304, PSY311, PSY320, PSY324, PSY328, PSY330, PSY414

**Psychology Concentration (15 credits)**

**Industrial/Organizational Psychology Concentration**

- PSY311 Industrial/Organizational Psychology ......................... 3
- PSY414 Applied Personnel Psychology .................................. 3
- PSY442 Applied Psychology/Internship/Senior Project I .......... 3
- PSY443 Applied Psychology/Internship/Senior Project II ....... 3

**Total credits.............................................................................. 123-125**

**NOTE:** The Bachelor’s Degree in Applied Psychology does not lead to licensure. All licensure in Psychology in New York State requires an advanced (Masters or Doctoral) degree.

**Security Systems**

*See Criminal Justice Department*

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**Sociology and Anthropology Department**

Dr. Miriam Deitsch, Chair

Sociology is the scientific study of human social interaction. We study society and social groups, social processes, institutions and problems, by describing and explaining, that is, by employing the systematic methods and perspectives of the scientific approach.

Our courses present the research and insights developed by sociologists – past and present -- as they address such important topics as the complexities of intimate relationships and family life, the causes and contours of inequality, the workings of social institutions like education, politics, religion, and the media, as well as understanding diversity, and the challenges we face as members of a complex and rapidly changing society.

Students who take our courses have an opportunity to explore their own life experiences in relation to broader social patterns. Our overriding goal is to develop what the sociologist C. Wright Mills called the “sociological imagination,” that is, to encourage students to understand their own personal lives and experiences in the context of larger social forces and processes, and to become more engaged and aware as citizens of the local and global community.

Courses in sociology are an excellent preparation for a variety of career fields involving undergraduate and graduate studies, including business, management, criminal justice, social work, health care, education and the technologies.

(Prefix for Sociology courses is SOC)

For further information on courses offered by our department, please see ANTHROPOLOGY.

**Sociology Minor**

The Sociology-Anthropology Department offers an undergraduate minor in Sociology to all baccalaureate degree students at Farmingdale State College.

The discipline of sociology provides students with a unique perspective to solve social problems in the workplace and in their personal lives. Building on the basic concepts, theories and research methodologies of sociology through an academic minor in sociology can provide students with useful tools not only for the workplace, but for solving problems in their...
personal lives as well.

The sociology minor program is designed to enhance students' understanding of this society and this culture – as well as other cultures and societies.

Students seeking a baccalaureate degree at Farmingdale State College have the option of seeking a baccalaureate minor in sociology. Students who opt to complete a minor in Sociology must be matriculated in a baccalaureate program at Farmingdale State College and must apply through the Sociology-Anthropology Department.

The Sociology minor consists of 15-21 credits in sociology. The final number of credits depends on the individual student's advisement and choice, determined in consultation with a full-time member of the Department. At least twelve of the credits must be in advanced courses in sociology at the 200-level or higher. Students enrolled in the Sociology minor program must maintain a cumulative GPA of 2.0 in their sociology courses. Students in the Minors program are allowed a maximum of six credits in General Education sociology courses.

**Core ~ 9 Credits ~ Required of all Sociology Minors:**
SOC 122 Introduction to Sociology
OR SOC 223 Social Issues and Institutions
SOC 266 Sociological Research Methods
SOC 260 Classical Sociological Theory
AND: Any two related courses in sociology, examples of which are provided below:

**General Sociology Minor:**
Completion of Core Courses and 6-12 credits in Sociology at the 200 level/above. The final number of credits (15-21) would depend on the individual student's advisement and choice.

**Family Dynamics:**
Completion of Core Courses and any two of the following courses:
SOC 225 Sociology of the Family
SOC 226 Contemporary Marriage
SOC 220 Aging
SOC 200 Introduction to Women's Studies
SOC 240 Women, Men, and Social Change

**Urban Life:**
Completion of Core Courses and any two of the following courses:
SOC 224 Urban Sociology
SOC 240 Women, Men and Social Change
SOC 229/SOC 231 Minorities in America/Multiculturalism
SOC 235 Mass Media and Popular Culture
SOC 320 The American Dream: Myth or Reality

**Sociology of Women:**
Completion of Core Courses and any two of the following courses:
SOC 200 Introduction to Women's Studies
SOC 222 Critical Thinking About Society
SOC 245 Society, Technology, and Social Change
SOC 303 Work and Occupations

SOC 320 The American Dream: Myth or Reality

**Sociology of Popular Culture/Mass Media:**
Completion of Core Courses and of the following courses:
SOC 235 Mass Media and Popular Culture
SOC 315 Sociology in Film

**Sociology in the Workplace**
Completion of Core Courses and any two of the following courses:
SOC 303 Sociology of Work and Occupations
SOC 228 Health and Society
SOC 229/231 Minorities/Multiculturalism
SOC 240 Women, Men and Social Change
SOC 200 Introduction to Women's Studies
SOC 320 The American Dream: Myth or Reality
SOC 229/231 (Minorities in the United States/Multiculturalism)

**Social Welfare**
Completion of Core Courses and any two of the following courses:
SOC 229/231 Minorities/Multiculturalism
SOC 228 Health and Society
SOC 220 Sociology of Aging
SOC 320 The American Dream: Myth or Reality
SOC 225 Sociology of The Family

**Education**
Completion of Core Courses and the following courses:
SOC 201 Sociology of Education
SOC 222 Critical Thinking About Society

**Software Technology**
See Mechanical Engineering Technology Department

**Spanish**
See Modern Languages Department

**Speech**
See English/Humanities Department

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**Sport Management Department**

Dr. Francine Federman, Acting Associate Dean
Michael Harrington, Program Coordinator

The Sport Management Department offers the following programs:

- Sport Management ............................................ Bachelor of Science
- Sport Management ............................................. Minor

**Sport Management**

**Bachelor of Science**

The Sport Management program prepares students for ever-widening professional careers in the sport management industries. Our program provides students with fundamental and advanced-level courses taught by expert, experienced faculty in this dynamic
and academically-rigorous subject area. In conjunction with advisors, students may tailor their degree program to best suit their career goals and professional development. Optional internships are available to sport management students during their third and fourth years of study.

**Typical Employment Opportunities:**
- Sports Marketing/Sales Positions
- Sports Camp Director
- Intramurals Director
- Professional Sports Organizations
- Collegiate Sport Management and Marketing
- Sports Information Director/Media Relations
- Event Manager
- Assistant Athletic Trainer/Academic Coordinator
- Sport Agent
- Associate Athletic Director/Compliance
- Director of Athletics

**Program of Study**

**Liberal Arts and Sciences (61-64 credits)**

**Required Courses (30 credits)**

- SMT 210 Introduction to Sport Management
- SMT 320 Sport Administration
- SMT 324 Sport Law
- SMT 410 Sport Management Internship I (by advisement)
- SMT 419 Strategic Sport Management
- SMT 420 Sport Administration Internship
- SMT 421 Sport Law Internship

**Electives (15 credits)**

- BUS/BCS/IND/SMT electives
- Electives: 15 credits
- Free elective (any college-level course or PED courses that equal 3 credits)

**Total Credits**: 124-127

**Sport Management Minor**

The Sport Management minor consists of 15 credits distributed as follows:

**Required Courses (6 credits):**

- SMT 210 Introduction to Sport Management
- SMT 320 Sport Administration

**Electives (6 credits):**

- Sport Management (SMT) courses at the 200- level or higher

**Physical Education electives (3 credits):**

- Physical Education (PED) courses from the following: PED NC1 and PED NC2 – NCAA Physical Education Credit, PED 121 Introduction Weight Training and Fitness, PED 125 Introduction to Racquetball; PED 131 Introduction to Golf, and PED 135 Introduction to Volleyball

For a general description of Academic Minor Programs, please refer to the front section of the catalog.

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**Technology Studies Department**

Dr. Jeffrey S. Gaab, Chair

The Technology Studies Department offers the following program:

- Technology Studies .................Bachelor of Science Degree

**Technology Studies**

**Bachelor of Science Degree**

The Bachelor of Science degree program in Technology Studies is designed to train students in the interconnectedness of science and technology with broader currents in society through the arts and sciences. The Technology Studies program addresses the employment needs of the region and the diverse academic interests of students by providing students with a multi-disciplinary program that incorporates the practical applications of technological knowledge. The Technology Studies program does not offer a technology specialty, but rather a broader set of skills that emphasizes the study of several different but related technologies. Specifically, the area of specialization for the Technology Studies degree is Technology Studies rather than an individual technology such as, but not limited to, electrical engineering technology, management technology, security systems, and/or computer programming and information systems.

**Therefore, the Technology Studies program:**

- provides students with an opportunity to broaden their view of the applications of science and technology upon society,
- fosters an appreciation of the ways in which science and technology interact with the social sciences.

This is achieved through a multi-disciplinary approach in which students are provided with the knowledge and skills to explore and connect the interrelated worlds of the scientist, engineer, engineering technologist, politician and citizen. These learning
objectives are compatible with the mission of the college in that they aim to prepare students to be "real life problem solvers in traditional as well as emerging fields" so that students, through employment, can better contribute to the economic vitality of the region.

Graduates of the Technology Studies program are suited for employment in industrial, business and governmental settings where their broad view of the technologies, applied sciences, social sciences and humanities are desirable for the solution of problems. Various industries throughout Long Island that have indicated future employment needs for graduates who possess the skills developed by students completing the Technology Studies program include cosmetics, direct mailing, human resources, heating/air-conditioning, general contractors, food related industries, transportation, staffing office services, and newspaper/magazine publishers. While the primary goal of the Technology Studies program is for graduates to obtain employment in the local Long Island region or throughout New York State, graduates of the Technology Studies program do have other options available to them upon graduation. For example, graduates of the Technology Studies program may wish to pursue additional training in an area that they investigated as one of their clusters in the Focused Depth or Clustered Depth sequences or may elect to pursue graduate studies in a related field of study or even teaching. As a result, the Technology Studies program provides students with a breadth of choices to embark upon once they have completed the program.

Program of Study
Students who wish to fulfill the academic requirements for the Bachelor of Science Degree in Technology Studies must complete the general education requirements for a bachelor's degree at the college. In addition, students must select electives in the liberal arts and sciences that are pertinent to their special interests, a common core of Technology Studies courses and either a Focused Depth1 or Clustered Depth2 concentration from the wide range of technology offerings at the college.

Required:
Liberal Arts and Sciences

General Education Requirements^1

Communications..............................................................6
Humanities............................................................................3
Arts......................................................................................3
American History.................................................................3
Other World Civilizations and
Western Civilization ................................................................3-6
Mathematics^4.................................................................3-4
Modern Languages............................................................3
Social and Behavioral Sciences..............................................6
Natural Sciences^1............................................................6-8

General Education Credits: ....................................................36-42

Liberal Arts and Sciences Electives: 12-13 credits

Technology Studies Core Requirements: 24 credits

Lower Division Technology Studies Core: 12 credits

Twelve (12) additional credits are to be selected from the following:

ANT 210 Modern Anthropology & Globalization..................3
ANT 250 Forensic Anthropology...........................................3
ART 200 History of Graphic Design......................................3
AVN 101 Aviation Industry-History......................................3
BCS 102 Computer Concepts and Applications....................3
BCS 130 Website Development...........................................3
BCS 202 Computer Applications for Business......................3

Upper Division Technology Studies Core: 12 credits

Twelve (12) additional credits are to be selected from the following:

BUS 303 Just-In-Time Inventory Management........................3
ECO 310 Health Economics and Policy.................................3
ECO 320 Economics of the Internet Age...............................3
ECO 321 Engineering Economics.........................................3
ECO 340 International Trade.................................................3
ECO 341 International Finance..............................................3
EGL 306 From Farm to Factory: The Transformation of America 1820-1920.................................................................3
EGL 308 The City in Literature, Art, Film and Theatre..............3
EGL 310 Technical Writing....................................................3
EGL 311 Introduction to Writing for Electronic Media.............3
HIS 305 Culture and Technology: The Industrial Revolution in England, 1750-1880 .........................................................3
HIS 306 From Farm to Factory: The Transformation of America 1820-1920.................................................................3
HIS 307 Iron and Blood – Technology and Politics in Germany 1815 – Present .................................................................3
HIS 310 Revolution and Reform: Technology and Society in Russia, 1917 – Present ........................................................3
HIS 320 Prometheus Unbound: Science, Technology, and Society in Europe 1700 – Present ........................................................3
HIS 341 Terrorism and the Modern World............................3
IND 308 Occupational Safety...............................................3
IND 309 Security and Fire Protection Systems......................3
IND 310 Industrial Hygiene....................................................3
IND 311 Logistics & Supply Chain Management....................3
IND 316 Customer Relations & Quality.................................3

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while in the Undeclared Major program are generally applicable to the college through Admissions, not directly to the Undeclared Major Department. The college-level courses taken by students to shore up their skills and enhance the likelihood of success in college. (The course prefix for Undeclared Major is FRX)

Most students enrolled full time in the Undeclared Major program enroll in a Freshman Experience course. These courses are college-level courses, but count only as extra elective credits and cannot be applied towards a degree and are not part of the General Education curriculum. However, students placed in an 015 or 097 class or who enter with a GPA below the college requirement will be required to take FRX 101, a skills building course that assists new students in time management, organization, and other tools necessary for success. Other students may request this course in order to shore up their skills and enhance the likelihood of success in college. (The course prefix for Undeclared Major is FRX)

Program of Study
Required:
Liberal Arts and Sciences (12-16 credits)
EGL 101 Composition: Rhetoric ...........................................3
EGL 102 Composition: Literature ........................................3
MTH Elective** .............................................................3-4
Social Science elective .....................................................3-6
Electives: Based on advisement .......................................12-19

Support Courses: Based on advisement
FRX 101 The Freshman Experience ..................................1
or
FRX 103 Career Planning for Freshmen ............................2

Total Credits: .....................................................................24-31
* See “Testing” under “Academic Information”
** Determined by curriculum choice and Department Coordinator’s approval.

Failure in a prerequisite course (e.g. EGL 097; MTH 015) may require a withdrawal from this program.

Visual Communications: Art & Graphic Design Department
Professor William Steedle, Chair
The Visual Communications Department offers the following program:

Visual Communications: Art & Graphic Design ....................Bachelor of Technology

NOTE: THIS PROGRAM IS CURRENTLY UNDER REVIEW FOR REVISION

Bachelor of Technology
The Visual Communications Baccalaureate Degree program consists of a comprehensive and demanding curriculum which has been carefully designed by professional graphic designers,
art directors and illustrators to prepare students for careers within the field of art and graphic design. (This industry is often referred to by several different names including: commercial art, computer graphics, graphic communications, desktop publishing, visual arts, communication arts, etc.).

In addition to highly relevant coursework, students may participate in our active Art Club and go on numerous field trips on Long Island and beyond. There are also possibilities for travel and study abroad, as well as special internship opportunities and our “in-house” advertising agency that enable students to gain essential professional experience. This gives graduates a competitive advantage when seeking employment within this exciting and growing field.

The Visual Communications Department has a history of more than a half-century of tradition, excellence and innovation. The dedicated faculty and support staff have a diverse range of professional and academic experience, and most are active professionally. The curriculum is continually updated to keep pace with this rapidly changing industry. Graduates of this program have established successful careers at some of the best-known advertising agencies, art studios, and in-house art departments on Long Island, in New York City and across the country.

In addition, many of our more than 2,000 alumni have become successful entrepreneurs and opened their own art studios, ad agencies, art-related businesses or work as freelance designers. For additional information, or to set up an interview and tour of our facilities, please contact the Visual Communications Department at (631) 420-2181.

Typical Employment Opportunities
Web Page Designer
Art Director
Editorial Designer
Creative Director
Package Designer
Multi-Media Designer
Computer Artist
Photographer
Graphic Designer

Visual Communications (BT) Program Objectives:
- Graduates will receive a strong foundation in design, and master manual skillsets in traditional disciplines.
- Graduates will exhibit the knowledge necessary to understand graphic design from an historical perspective, as well as current and future trends of industry.
- Graduates will have gained the technical and digital skills and knowledge required to perform professionally in today’s graphic design environment.
- Graduates will have learned specific professional skills addressing resume development, self-promotion, job search skills, and freelance procedures.
- Graduates will have created a portfolio of work which will meet industry demands in order to successfully compete in the current job market.

Program of Study
Liberal Arts and Sciences (45 credits)

| English and Humanities Electives | 18 |
| History | 6 |
| Social Sciences | 6 |

Mathematics & Science Electives ................................. 9
Modern Language .......................................................... 3
Arts .................................................................................. 3
Please refer to the General Education and Writing-Intensive Requirement Sections of this catalog and consult with your advisor to ensure that graduation requirements are satisfied.

Support Courses (3 credits)
Business ....................................................................... 3

Required:
Visual Communications (75 credits)
VIS 110 Drawing I ............................................................. 3
VIS 112 Two-Dimensional Design ....................................... 3
VIS 114 Principles of Color .................................................. 3
VIS 115 3D Design .............................................................. 3
VIS 120 Drawing II ................................................................ 3
VIS 122 Typography I .......................................................... 3
VIS 210 Digital Media .......................................................... 3
VIS 214 Figure Drawing I ..................................................... 3
VIS 220 Desktop Publishing I .............................................. 3
VIS 222 Graphic Design ...................................................... 3
VIS 225 Photographic Imaging I ......................................... 3
VIS 228 4D Design ............................................................... 3
VIS 230 Digital Illustration .................................................... 3
VIS 310 Digital Imaging I ...................................................... 3
VIS 322 Typography II .......................................................... 3
VIS 326 Pre-Press Production .............................................. 3
VIS 352 Graphic Design II ..................................................... 3
VIS 370 Desktop Publishing II ............................................. 3
VIS 372 Campaign Production ............................................ 3
VIS 412 Web Page Design ................................................... 3
VIS 414 Interaction Design ................................................... 3
VIS 422 Advanced Web Page Design ................................... 3
VIS 425W Senior Project .................................................... 3
VIS 474 Agency I ................................................................. 3
VIS 476 Agency II ............................................................... 3
VIS 477 Career & Portfolio .................................................. 3

Curriculum Electives (6 credits)
VIS 214 Figure Drawing I .................................................. 3
VIS 250 Photography II ....................................................... 3
VIS 252 Drawing & Painting Techniques ................................ 3
VIS 253 Internship ............................................................... 3
VIS 254 Package Design ..................................................... 3
VIS 255 Printmaking ............................................................. 2
VIS 256 Foundations of Illustration ..................................... 3
VIS 312 Art & Creative Direction .......................................... 3
VIS 353 Editorial Design .................................................... 3
VIS 354 Corporate Identity .................................................. 3
VIS 355 Advanced Package Design ..................................... 3
VIS 371 Animation .............................................................. 3
VIS 381 Figure Drawing II ................................................... 3
VIS 383 Painting & Sculpting the Figure .............................. 3
VIS 410 Digital Imaging II ................................................... 3

Total Credits: ................................................................. 126

To continue in the Visual Communications Program, a grade of C+ (75) or better must be maintained in all core curriculum courses. This policy also applies to transfer students accepted into the Visual Communications Program. Transfer credit is granted at the discretion of the faculty based on grades and a portfolio presentation. All students entering the program,
including transfer students, will be required to take VIS 210 Digital Media.

**Women’s Studies**

Dr. Ann Shapiro, Coordinator

Women’s Studies contains interdisciplinary offerings that invite students to include in traditional academic disciplines the story of women. Courses provide students with an additional way to think about traditional fields of study, reading back into those fields the social, historic, economic, scientific and cultural contributions of women. The underlying assumption of all courses in Women’s Studies is that gender is socially constructed. Particular emphasis will be placed on women’s experiences and contributions in an advanced technological society.

Many courses will be cross-listed with other academic disciplines. Students may not receive credit for completion of this course in more than one area. Where some courses may involve more than one academic discipline, students may choose, but in no case will credit for a particular course be given in more than one discipline.
CATALOOG COURSE DESCRIPTIONS

Courses are listed alphabetically by course designator.

Note: For those courses which do not indicate term offered, contact the department chair.

Course Code Designators

AET Automotive Engineering Tech
ANT Anthropology
ARA Arabic
ARC Architectural Technology
ART Art History
AVN Aviation
BCS Business and Computer Systems
BIO Biology
BUS Business Management
CHI Chinese
CHM Chemistry
CMP Computer Science
CON Construction/Architectural
CRJ Criminal Justice
DEN Dental Hygiene
ECO Economics
EET Electrical Engineering Technology
EGL English
ENV Environmental
ESL English as a Second Language
FRE French
FRX Freshman courses
GER German
GPH Computing Graphics
HIS History
HOR Horticulture
HST Health Studies
HUM Humanities
IDP Interdisciplinary Studies
IND Industrial Technology
ITA Italian
LPN Licensed Practical Nursing
MET Mechanical Engineering Technology
MLG Modern Languages
MLT Medical Laboratory Technology
MTH Math
NUR Nursing
PCM Professional Communications
PED Physical Education
PHI Philosophy
PHY Physics & Physical Science
POL Politics
PSY Psychology

SET Software Technology
SMT Sport Management
SOC Sociology
SPA Spanish
SPE Speech
TEL Telecommunications
THE Theatre
TST Technology Studies
VIS Visual Communications
WST Women’s Studies

AUTOVOTIVE TECHNOLOGY

AET 104 Combustion Engine Theory
This is a theory course designed to introduce the student to basic heat engine types, their physical configurations and various engine operating cycles. Analytical pressure-volume diagrams are utilized to illustrate the effects of gasoline engine design on performance and combustion requirements. Engine-vehicle performance parameters are analyzed, utilizing individual and group problem solving techniques.
(2,0) 2 credits

AET 105 Fuel Systems - SI Engines
This is a theory/laboratory course developed to give the student a basic understanding of spark ignited internal combustion engine fuel systems. Topics discussed include engine aspiration and combustion using the principles of fluid dynamics and thermodynamics as they apply to the intake, exhaust, volumetric efficiency and fuel metering systems. Engine air/fuel requirements are examined along with state of the art fuel delivery systems (carburetion and fuel injection), with consideration given to fuel economy and exhaust emissions. Performance characteristics of SI Engines utilizing alternate types of fuels are also examined. Related laboratory activities and demonstrations are included.
(1,2) 2 credits

AET 106 Mechanical Equipment-Chassis and Suspension
A theory/laboratory course designed to provide a thorough understanding of the design, construction and operation of automotive chassis and suspension systems. Topics will include a study of the vehicle frame, suspension, steering and braking systems. Emphasis is directed to the analysis of the vehicle’s systems during operation. Related laboratory activities and demonstrations are included.
(3,3) 4 credits

AET 107W Mechanical Equipment-Engine and Drive Train
A theory/laboratory course designed to provide a thorough understanding of the vehicle’s engine and drive train. Topics will include the design, construction, inspection techniques, service and associated repair operations of the internal combustion engine and its component parts. Drive train topics will include clutches, manual transmissions, differentials and other components used in both front and rear wheel drive systems. Related laboratory activities and demonstrations are included.
(3,3) 4 credits

AET 109 Automotive Electrical Principles
This is an automotive theory course designed to introduce students to basic automotive-oriented electrical principles as they relate to both A.C. and D.C. circuits utilized in contemporary automotive electrical systems. Related demonstrations and problem-solving activities are included.
(1,0) 1 credit
AET 150 Automotive Computer Applications
This is a theory/laboratory course designed to introduce the student to basic computer utilization and programming. Topics include a thorough introduction to personal computers, instruction in and development of basic programming. Students will be required to develop basic programs for technical automotive problem solving and practical automotive applications. Extensive use of computer laboratory will be required. (1,2) 2 credits

AET 208 Automotive Electrical Applications
This is a theory/laboratory course designed to introduce the students to automotive electrical and electronic systems and their application. The student is required to utilize and understand the operation of various types of electronic equipment, including both computerized engine and emissions analyzers. Related laboratory activities & demonstrations are included. Prerequisite(s): AET 109 (2,2) 3 credits

AET 209 Engineering Materials and Manufacturing Processes
This is a theory/laboratory course designed to introduce the student to basic engineering materials and manufacturing processes. Topics include classifications, structure, properties, phase transformation and heat treatment of metals, inspection and testing techniques of automotive engineering materials. Additional topics covered are casting, cold and hot metal forming, machining and joining processes. Related laboratory activities include projects and experiments with technical reports. (2,3) 3 credits

AET 215 Diesel Engines
This is a theory/laboratory course designed to provide a thorough understanding of basic diesel engines. Topics will include the study of current high-pressure diesel fuel-injection systems and the diesel engine combustion process with respect to fuel injection and combustion changer design. Specific examination of design and performance characteristics of diesel engine air induction, scavenging, supercharging and turbo-charging systems will be covered. Students will also analyze engine governing methods and devices necessary for control, as well as current methods and devices utilized in solving common diesel engine starting problems. Co-generation systems, including diesel, gas turbine, and steam will be examined. Related laboratory activities and experiments are included. (3,2) 4 credits

AET 216 Engineering Measurements
This is a theory/laboratory course designed to provide an understanding of engineering measurements theory, methods and devices utilized in today's technology. Topics will include examination of industrial methods of testing, analysis and reporting in the areas of pressure, temperature, speed (time and velocity), fluid flow and exhaust emissions and the testing of common fuels and lubricants. Also included is the evaluation of a series of gasoline engine performance tests and their resulting data, including computer programmed computation and graphical analysis of the completed testing, as presented in a student developed technical paper. Typical engineering measurement instruments and devices will be encountered and utilized in laboratory support of this course. (2,2) 3 credits

AET 217 Applied Mechanics
This is a theory/laboratory course designed to introduce the fundamental principles of applied engineering mechanics. Topics include forces, couples, equilibrium, friction, kinematics of rectilinear and rotational motion, work, energy and power. Principles and applications of hydraulics are also discussed. Related laboratory and problem-solving activities are included. (3,0) 3 credits

AET 255 Automotive Electronics and Computerized Controls
This is a theory/laboratory course developed to provide the student with a working understanding of automotive electronics and computerized engine control systems. The course includes computerized fuel and emission control systems, with emphasis on the diagnosis of basic engine malfunctions. The student will also analyze the principles and operation of feedback type systems. Electronic diagnostic equipment is used to identify system malfunctions in order to indicate necessary corrective actions. Laboratory activities provide an opportunity for a practical application of diagnostic procedures on current vehicles. Prerequisite(s): AET 208 (2,2) 3 credits

AET 257 Automatic Transmissions
This is a theory/laboratory course dealing with the transmission of power in automobiles, emphasizing contemporary automatic transmissions. Topics covered include applications of the principles of the planetary gear systems, fluids, seals, hydrodynamic drives, hydraulic controls and application devices. The powerflow within selected automatic transmissions is discussed and is supported with related laboratory activities. (2,2) 3 credits

AET 290 Project Seminar
This course is designed to provide the student with the challenge of an independent project. Requirements will include the completion of an extensive faculty approved research/construction project. This project must be related to the automotive field. The student is responsible for the original project concept, which must be supported by preliminary, progress and final technical reports. A video-taped oral presentation is also required. (0,2) 1 credit

ANT 100 Introduction to Anthropology
Anthropology is the scientific study of humankind. This course offers an introduction to its four major sub-fields, namely: Physical or Biological Anthropology (human evolution, the fossil record, ethnology); Archaeology (extinct cultures, classical civilizations, pre-history); Linguistics (language origins, development, diffusion, structure, and change); Sociocultural Anthropology (pioneers in the field, cross-cultural research, case studies, and the future). By focusing on the broad cultural implications and complexities of social communication and interaction, Anthropology seeks to understand the whole human experience. (3,0) 3 credits

ANT 110 Sociocultural Anthropology
Sociocultural Anthropology is concerned with the examination of the social and cultural similarities and differences in the world’s human populations. Subsistence patterns, social organization, economic structures, political systems, religion, and creative behavior are the major areas we cover. By examining examples ranging from small gathering and hunting groups to large modern day communities, this course provides a broad perspective on the sociocultural realities of our world. (3,0) 3 credits
ANT 120 Archeology
Archeology is the study of the cultural evolution of humankind using the material remains of past human behavior. This course introduces the methods, logic and history of archeology through an examination of several ancient civilizations as understood through their architecture and artifacts. Topics include theoretical issues, fieldwork, interpretation of artifacts and reconstruction of past cultural patterns. Examples will be drawn from such cities and civilizations as Mesopotamia, Crete, Troy, Ancient Egypt, Pompeii, and North and South America. Students will visit at least one relevant site, exhibit or museum as a course requirement.
(3.0) 3 credits

ANT 130 North American Indians
This course provides a comprehensive history of the human groups who populated North America before, during and after this continent became involved with the culture, politics and economics of Europe. It focuses on the dynamic heritages, languages, knowledge, technology, arts, and values that have been passed on through the generations. Students will be introduced to the anthropological literature concerned with the study and understanding of Native American cultures and societies. Some field study may be required.
(3.0) 3 credits

ANT 210 Modern Anthropology and Globalization
Cultural change and the social processes involved are major areas of cultural anthropological research. By introducing students to the application of anthropological methodologies such as field work and cross-cultural comparison, the course examines some of the major issues which confront human beings in a complex, rapidly growing and changing world, including: globalization, migration and immigration, population changes, social conflict, agricultural/technological development, nutrition, commodity/cultural exchange, and the future of small scale homogeneous societies.
Prerequisite(s): Any 100 level Social Science or Business course
(3.0) 3 credits

ANT 211 Caribbean Cultures
This course covers: pre-European cultures in the Caribbean, the post-Columbus plantation system, contemporary economics and politics, community structure, religion, marriage and family, ethnic diversity, immigration and the arts. An in-depth study of these topics will provide knowledge, understanding and appreciation of this region while offering insights into the development of communities in the US with Caribbean heritage.
(3.0) 3 credits

ANT 220 Topics in Anthropology
This course encourages students and faculty to study, explore, examine and analyze areas of special, short-term interest in anthropology. Each topic builds on knowledge learned in the 100 level course.
Prerequisite(s): ANT 100, ANT 110, or SOC 122
(3.0) 3 credits

ANT 240 Women, Men and Social Change
This course studies men's and women's changing roles, relationships, and participation in the labor force both cross-culturally and historically. We give special emphasis to those changes which occur as technology changes. A major part of the course concerns how and why today's women and men arrive at their social, economic, political and legal statuses.
Note: Students completing this course may not receive credit for SOC 240 or WST 240.
(3.0) 3 credits

ANT 250 Forensic Anthropology
This course provides a broad overview of Forensic Anthropology—an applied field within Anthropology-dealing with the osteological (skeletal anatomy and biology) analysis of human remains. We will employ and discuss scientific methods used to explore a broad range of problems associated with identification and trauma analysis using data gathering methods such as: characteristics of the human skeleton; identification of ancestry, age, sex; recovery methods; use of appropriate technologies for analysis, including DNA.
Prerequisite(s): Any 100-level Anthropology or Sociology or Biology course with lab
(3.0) 3 credits

ARABIC

ARA 131 Arabic I (Elementary)
A beginning course in Arabic emphasizing the gradual development of the four language skills: listening, speaking, reading and writing with stress on communicative competence and cultural awareness.
(3.0) 3 credits

ARA 132 Arabic II (Elementary)
A continuation of Arabic 131 or for students who have had 2 to 3 years of high school Arabic, this course emphasizes the gradual development of the four language skills: listening, speaking, reading and writing with stress on communicative competence and cultural awareness.
Prerequisite(s): ARA 131 or 2 to 3 years of high school Arabic
(3.0) 3 credits

ARA 233 Arabic III (Intermediate)
For those students who have taken ARA 132 or 4 or more years of high school Arabic, this intermediate course further emphasizes the development of the four language skills: listening, speaking, reading, and writing with stress on communicative competence and cultural awareness. A literary and cultural reading will be introduced.
Prerequisite(s): ARA 132 or 4 or more years of high school Arabic
(3.0) 3 credits

ARA 234 Arabic IV (Intermediate)
For those students who have taken ARA 233 or 4 or more years of high school Arabic, this course emphasizes structural review, intensified practice in oral expression with increased emphasis on reading and writing skills. Continued attention will be given to contemporary Arabic culture. Selections from Arabic authors will be read.
Prerequisite(s): ARA 233 or 4 or more years of high school Arabic
(3.0) 3 credits

ARCHITECTURE

ARC 251 Architectural Design I
Studies the principles of form, space and order that underlie architectural design. Concepts include: mass void modeling, volume and space construction, enclosing planes, circulation, organization, hierarchy, and structure. The diagram and sketch model are introduced as methods of understanding design. Concepts are explored in both three dimensional and graphic form.
Prerequisite(s): CON 111, CON 121
(2,3) 3 credits

ARC 253 Architectural Design II
Continuation of Architectural Design I. Emphasis is placed on the process by which design decisions are made and the methods of analysis in context to the existing environment. Topics include: structure, form and function, building in context, light and construction.
Prerequisite(s): ARC 251
(2,3) 3 credits

ARC 263 Mechanical, Electrical, Plumbing and Energy Systems in Buildings
An overview of mechanical, electrical and plumbing (MEP) aspects
of buildings. Intended to develop students’ ability to analyze energy requirements of buildings and various methods of energy conservation and thermal efficiency. Topics covered include heat flow, system and equipment for heating and cooling. Also included are water supply and wastewater treatments for buildings. 

Prerequisite(s): CON 162 

(3,0) 3 credits

ARC 272 Construction Design

Construction Design is a technology-based design studio emphasizing a methodological approach to the assembly of the building’s envelope, materials and systems. The integration of building code requirements, life safety, accessibility, building energy systems, structure, construction, and materials are central to effectively achieving design intent. Knowledge from Materials and Methods of Construction I and II. Energy in Buildings and Graphics are applied to specific drawing assignments. A residential Type V construction, and a commercial Type II or Type III construction, building project will be advanced resulting in a set of construction documents.

Prerequisite(s): CON 121, CON 162, & CON 261 or ARC 263 

(2,2) 3 credits

ARC 350W Architectural Theory and Design Factors

This course will examine a series of architectural theories and design factors that attempts to explain, predict or influence design decisions that result in the built environment. Topics include: historical theory, form and aesthetics; architectural technology; the urban, natural and human environment; economic, zoning and code factors; the social and behavioral implications of architecture, the design process itself and the architectural profession.

Prerequisite(s): ARC 253 and ARC 362 

(3,0) 3 credits

ARC 362 History of Western Architecture

A study of the development of building design from the Ancient Egyptians and Greeks through the major historical periods to the present. Emphasis is on the evolution of the forms derived from indigenous technologies of the period surveyed.

Note: Students completing this course may not receive credit for CON 362.

Prerequisite(s): Department approval 

(2,3) 3 credits

ARC 363 Site Planning & Design

An advanced course in utilization of engineering and architectural principles from the concept through the construction techniques of site development. Computer aided programs in site design and survey data management will be introduced. Drainage, soil stabilization and erosion control parameters, and design techniques are applied to site designs. Safety and geometric standards for roadway design and construction are incorporated into the course.

Prerequisite(s): CON 103 

(2,2) 3 credits

ARC 366 Architectural Design III

Continuation of Architectural Design II. Emphasis is placed on the urban and natural environment. The role of aesthetics, symbols, and the use of historical elements in the making of places, spaces and communicating meaning are explored. Topics include: building on Main Street, the making of an urban space and a cemetery or park design.

Prerequisite(s): ARC 253 

(2,3) 3 credits

ARC 399 Applied Research Topics

A program of applied research and independent study on topics a faculty member is currently working on. This course is meant to enrich the learning experience by introducing the student to methods and analysis in applied research. This is a fully faculty directed and supervised structural research experience. Applied research work will be presented in an appropriate forum. 

Prerequisite(s): Junior/Senior status, department approval 

(1,6) 3 credits

ARC 466 Architectural Design IV

This course is the culmination of the Architectural Design sequence. A single project will be given that integrates principles of architectural design and includes elements of building systems, structural and site design, zoning and building codes, etc. on an actual site in the area. Students will present their final project to the faculty at the end of the semester.

Prerequisite(s): ARC 366 

(2,3) 3 credits

ARC 496 Design Capstone Project

This capstone course integrates several architectural and engineering design philosophies and methodologies into a comprehensive studio project. This course introduces very little new material; rather, it is to synthesize knowledge learned in the following areas of design and analysis: architectural, structural, construction, site, energy (mechanical/electrical) and building systems and cost estimating. This multidisciplinary project uses a student design team approach.

Prerequisite(s): Department approval, ARC 466, ARC 363, CON 404 

(2,2) 3 credits

ART HISTORY

ART 123 Art History

An analysis of the social, physical and psychological influences affecting the artist during various historical periods through the present. Emphasis is on the interrelationship between the changing purposes of art and variations in the meaning and form of artistic expression. 

(3,0) 3 credits

ART 200 History of Graphic Design

Graphic design has great power and has both reflected and influenced our society and culture throughout history. This course identifies the key movements within the history of graphic design from the Graphic Renaissance through today and highlights how these movements have mirrored and changed the course of our society and the field of graphic design. Lectures, images and texts will be used in the exploration of each of the following periods: Graphic Renaissance, the Industrial Revolution, Mid-Century Modernism, Late-Modernism, Post-Modernism and the Digital Age.

Prerequisite(s): EGL 101 

(3,0) 3 credits

ART 201 Survey of Art History: Prehistoric Times through The Middle Ages

A survey of the history of the visual arts from their beginnings in prehistoric times to the end of the Middle Ages. Works of art are studied both as monuments of intrinsic aesthetic value and as expressions of the needs, ideals, and aspirations of the societies in which they were created.

Prerequisite(s): EGL 101 

(3,0) 3 credits

ART 202 Survey of Art History: Early Renaissance to The Present

A survey of the history of the visual arts from the Early Renaissance to the Present. Works of art are studied both as monuments of intrinsic aesthetic value and as expressions of the needs, ideals, and aspirations of the societies in which they were created.

Prerequisite(s): EGL 101 

(3,0) 3 credits
ART 242 Italian Renaissance Art
This course is designed to introduce students to Ancient through Baroque art found in Italy. Students will be required to meet on campus prior to departing for Europe to study the great masterpieces of the Ancient, Medieval, Renaissance and Baroque periods of art found in their original contexts throughout Italy. Works of Painting, Sculpture, Architecture, Illuminated Manuscripts and other applied arts will be studied as they relate to the periods in which they were created.
Prerequisite(s): EGL101
(3, 0) 3 credits

ART 244 Visual Studies & Studio in Northern Europe
This course is designed to introduce students to Medieval through 19th Century European art found in the countries of France, Belgium and Holland. The class will meet four times on campus prior to departing for Europe to study the great masterpieces of the Gothic Medieval, Renaissance, Baroque, Rococo, Neo Classical, Romantic, Realist and Impressionist and Post-Impressionist periods of art found in their original contexts throughout Europe. The great institutions to be visited may include: the Louvre, the Rijks Museum and the Hague to name just a few. Works of painting, sculpture, architecture, illuminated manuscripts and other applied arts will be studied as they relate to the periods in which they were created. Students will be required to create a drawing, photograph and painting portfolio based on works studied, at the completion of this class.
Prerequisite(s): EGL 101, VIS 101, or VIS 110, permission of instructor.
(3,0) 3 credits

ART 245 Visual Art Studies and Studio in Greece
This course will introduce the Ancient through Byzantine periods of art as they occurred in Greece. Students will study the art and the history surrounding the art’s creation during three lectures on the campus of Farmingdale State College. This will occur before departing to Europe to visit the country of Greece to study the original art firsthand over the period of two weeks. In Europe, students will explore the Aegean, Classical, Hellenistic, Roman and Byzantine art styles by studying works of architecture, sculpture, painting, illuminated manuscripts, archaeological and other applied arts in the contexts of churches, archaeological sites and art museums. Mythology and Homeric literature will be introduced in order to gain an insight into the cultural foundations of Western Art and civilization. Students will be assigned a term paper based on specific works studied, and will also be expected to maintain a journal including notes, drawings, and other entries related to their experience abroad.
Prerequisite(s): EGL 101
(3,0) 3 credits

ART 301 The Arts in the Twentieth Century
An analysis of the development of music, art, film, theater, dance, architecture, and design through the nine decades of the twentieth century. Field trips to various cultural events and extensive use of audio-visual materials are included.
Prerequisite(s): EGL 102
(3,0) 3 credits

ART 302 Art History: Survey of American Art
A survey of the development of painting, sculpture, and architecture in the United States from the early colonial period to the present. Lectures, supplemented by slides and textbook illustrations, will provide the basis for an analysis of the “schools” styles, and influences that determined and are affecting the direction of American Art.
(3,0) 3 credits

AVIATION
AVN 100 General Aeronautics
This course provides introductory orientation and practical information essential to the career progression of both pilots and aviation administrators. Topics include: attributes of an aviation professional; aircraft design, components, performance, operation, maintenance and safety with human factors emphasis. Required for flight training.
(3,0) 3 credits

AVN 101 Aviation Industry-History
This course is a basic survey of the aviation industry viewed from a historical perspective. Topics covered will range from the early days of flight to the present. At the conclusion of this course the student will have a comprehensive knowledge of the air transportation/aviation industry and will understand it’s significant social/economic impact upon the United States and the world.
(3,3) 3 credits

AVN 102 Meteorology
A basic course in Aviation Weather. Weather theory including differential heating, air mass development, wind frontal activity and systems, weather hazards, weather reporting and weather forecasting is covered. Charts which are studied include Surface Analysis and Weather Depiction Charts, Constant Pressure Charts, Composite Moisture Stability Charts.
(3,0) 3 credits

AVN 104 Private Pilot Ground
Private Pilot-Ground Training will enable the student to meet the prerequisite(s) specified in CFR 14 Part 61.105 as well as CFR 14 Part 141 Appendix B. Selected subject areas will include airplane systems, aerodynamic principals, flight environment, communication and flight information, meteorology for pilots, FAR’s, NTSB, AC’s, interpretation of weather data, aircraft performance, navigation, human factors, and cross country flight planning. Upon completing this course, the student will be able to take the FAA “Knowledge Examination” necessary for the Private Pilot certificate.
Corequisite: AVN 105
(3,0) 3 credits

AVN 105 Private Pilot Flight To Solo
Private Pilot Flight to Solo will enable the student to meet the requirements necessary to perform a solo flight with the aircraft in the traffic pattern. Selected subject areas will include engine starting, normal and cross wind taxiing, radio communications, normal takeoffs, power on and power off stalls, maneuvering during slow flight, traffic patterns, go around from a rejected landing and normal landings. Aero fees will be charged. Students must have a FAA Student Pilot Certificate/FAA 3rd Class Medical Certificate. At the conclusion of the course, the student pilot will have successfully soloed an aircraft.
Note: Flight Courses must be completed within a year from the date a student registers. Within this time frame a student must either 1) Successfully complete the course and be issued a grade, OR 2) Withdraw from the course, due to the following extenuating circumstances: Active Military Obligations, Medical conditions requiring removal from active flight status for a duration of 60 consecutive days or more. If neither of the above occurs, a failing grade will be assigned.
Corequisite: AVN 104
(0,2) 1 credit

AVN 106 Private Pilot Flight To Certificate
Private Pilot Flight To Certificate will enable the student to meet the requirements necessary to obtain a Private Pilot certificate. Selected subject areas will include cross country flying, radio navigation, cockpit management, low level wind shear precautions, airport and runway marking and lighting, constant airspeed climbs and descents stall spin awareness and steep turns. Aero fees will be charged.
Prerequisite(s): AVN 104, AVN 105
Note: Flight Courses must be completed within a year from the date a student registers. Within this time frame a student must either 1) Successfully complete the course and be issued a grade, OR 2) Withdraw from the course, due to the following extenuating circumstances: Active Military Obligations, Medical conditions requiring removal from active
Upon completing this course, the student will be able to take the FAA resource management, including crew communication and coordination. And conditions, Recognition of critical weather situations and wind shear recognition and avoidance, and the use of aeronautical weather reports and forecasts, safe and efficient operation of aircraft weight and balance computations, use of performance charts, significance and effects of exceeding aircraft performance limitations, use of aeronautical charts and a magnetic compass for pilotage and dead reckoning, use of air navigation facilities, aeronautical decision making and judgment, principles and functions of aircraft systems, maneuvers, procedures, and emergency operations appropriate to the aircraft, night high altitude operations, procedures for operating within the National Airspace System, and procedures for flight and ground training for lighter than air ratings. Upon completing this course, the student will be able to take the FAA “Knowledge Examination” necessary for the Instrument Pilot Certificate. Prerequisite(s): AVN 104; FAA Private Pilot Knowledge Test (passed); Private Pilot Certificate; or approval from this department chair (3,0) 3 credits

AVN 209 Instrument Pilot Flight
Instrument Pilot Flight will enable the student to meet the requirements necessary to obtain an Instrument Rating. Selected subject areas will include airplane attitude control by instrument use only, use of full and partial panel reference, accurate use of navigation systems by maintaining positional awareness, holding patterns, instrument approaches, and IFR cross country procedures. Prerequisite(s): Private Pilot Certificate Note Flight Courses must be completed within a year from the date a student registers. Within this time frame a student must either 1) Successfully complete the course and be issued a grade, OR 2) Withdraw from the course, due to the following extenuating circumstances: Active Military Obligations, Medical conditions requiring removal from active flight status for a duration of 60 consecutive days or more. If neither of the above occurs, a failing grade will be assigned. (0,4) 2 credits

AVN 210 Private Pilot Proficiency
Private Pilot Proficiency will evaluate the entering student with a Private Pilot or higher Certificate and, if necessary, enable them to gain required experience, skill and knowledge for meeting or surpassing FAA FAR141 Private Pilot Certificate Practical Test Standards. Aero fees will be charged. Prerequisite(s): FAA Private Pilot Certificate (0,4) 2 ncu (non-credit units)

AVN 211 Commercial Pilot Ground
Commercial Pilot Ground Training will enable the student to meet the prerequisite(s) specified in CFR 14 Part 61.125(b). Selected subject areas will include, Accident reporting requirements of the National Transportation Safety Board, basic aerodynamics and the principles of flight, meteorology to include recognition of critical weather situations, wind shear recognition and avoidance, and the use of aeronautical weather reports and forecasts, safe and efficient operation of aircraft weight and balance computations, use of performance charts, significance and effects of exceeding aircraft performance limitations, use of aeronautical charts and a magnetic compass for pilotage and dead reckoning, use of air navigation facilities, aeronautical decision making and judgment, principles and functions of aircraft systems, maneuvers, procedures, and emergency operations appropriate to the aircraft, night high altitude operations, procedures for operating within the National Airspace System, and procedures for flight and ground training for lighter than air ratings. Upon completing this course, the student will be able to take the FAA “Knowledge Examination” necessary for the Commercial Pilot Certificate. Prerequisite(s): AVN 208; FAA Instrument Rating Knowledge Test (passed); obtainment of an Instrument Rating; or approval from this department chair (3,0) 3 credits

AVN 212 Commercial Pilot Flight
Commercial Pilot Flight will enable the student to meet the requirements necessary to obtain a Commercial Pilot Certificate. Selected subject areas include accurate planning of VFR cross country flights, pilotage, dead reckoning, navigation systems, commercial maneuvers as well as provide the skill necessary to safely fly a complex airplane. Prerequisite(s): Private Pilot Certificate with Instrument Rating Note Flight Courses must be completed within a year from the date a student registers. Within this time frame a student must either 1) Successfully complete the course and be issued a grade, OR 2) Withdraw from the course, due to the following extenuating circumstances: Active Military Obligations, Medical conditions requiring removal from active flight status for a duration of 60 consecutive days or more. If neither of the above occurs, a failing grade will be assigned. (0,4) 2 credits

AVN 218 Aircraft Power Plants
This course covers the theory and principles of operation of aircraft reciprocating engines and their subsystems such as carburetor, ignition, lubrication and propeller. Theory of operation of jet engines to include: classification and identification of turbosjets, turbofans, turboprops, ramjets and rockets and their internal parts and subsystems. (3,0) 3 credits

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AVN 220 Instrument Flight and ATC Procedures
This course is the introduction to flying under the Instrument Flight Rules (IFR) in the National Airspace System. The student will learn air traffic control system, airports, departure, enroute, and approach procedures, emergency flight procedures, low and high level weather conditions in IFR flight planning. Prerequisite(s): AVN 100, AVN 102, AVN 111, FAA Private Pilot Certificate (3,0) 3 credits

AVN 230 Airline Management
This course will give the student an integrated study of airline operations and functions. Domestic and international regulation of air carriers and the industry's changing structure due to alliances and globalization are addressed. Topics include the annual profit plan, uniform system of accounts and reports, demand analysis, scheduling, the theory of pricing, fleet planning, facilities planning, airline financing, airline economics, airline marketing and pricing, computer reservation and revenue management systems, fleet planning and scheduling, aircraft maintenance, aircraft finance, labor relations, organizational structure, and strategic planning. Prerequisite(s): AVN 100 or approval from this department chair (3,0) 3 credits

AVN 270 Intro to Airports Management
An introductory course, which provides foundational information and strategic concepts about the air transportation/airport system. Topics include: Overview of Air Transport/Airport system, Department of Transportation/Federal Aviation Administration, Intro to Airports/Management, Organizational Development, Management Roles and Theories, Motivational and Communications Principles/Processes. Prerequisite(s): AVN 100 or approval from this department chair (3,0) 3 credits

AVN 271 Airport Capacity/Delay/Airspace
This course covers the following topics: Airport Capacity & Delay, Technological & Weather Solutions, Air Traffic Control, U.S. Airspace, Air Navigation & Navigational Aids, Runway Lighting Systems, FAA FAR Part 77, Environmental Regulations and Airport Noise, Land Use Compatibility. Prerequisite(s): AVN 100 or approval from this department chair (3,0) 3 credits

AVN 280 Intro to Air Cargo Operations-Basic
The course introduces the student to the growing, technical and multi-faceted air cargo industry. The student will understand the role that air cargo has played in the development of the air carrier industry, contractual and legally binding regulations, and national and international trade. A visit to off-campus air cargo facilities will complement classroom discussions, lectures and videos. Prerequisite(s): AVN 100 or approval from this department chair (3,0) 3 credits

AVN 281 Air Cargo Government & Industry Regulations
This course exposes the student to the study and process of regulations of the Air Cargo Industry. It includes a study of and compliance with government and air carrier regulations; with practical applications of the specialized manuals and penalties of non-compliance. It includes the influence that organizations such as ICAO and IATA have on the Air Cargo industry. Prerequisite(s): AVN 100 or approval from this department chair (3,0) 3 credits

AVN 291 Air Cargo Cooperative Experience II
This Cooperative Experiences or Internships is an elective for second year Aviation Administration students. The course will provide employer/student designed internship experience. The student will acquire work skills and cooperative attitudes that will complement and enhance the academic competencies learned during the prior year. (3,0) 3 credits

AVN 300W Government in Aviation
This course focuses on many of the regulatory subjects in AVN101 (Aviation History). It is a study of the constitutional, legislative, executive and judicial control of aviation from the local, state, federal and international perspective. This course forms the foundation for AVN400 Aviation Law. Prerequisite(s): AVN 101 or CRJ 100, Junior or Senior Standing (3,0) 3 credits

AVN 310 Flight Instructor – Flight
This course prepares the Commercial Pilot to acquire the initial Flight Instructor Certificate for Airplane. Training will consist of at least 30 hours flight and 40 hours ground training. Emphasis will be placed on successfully passing the FAA Fundamentals of Instruction (FOI) and Flight Instructor – Airplane Knowledge tests for completion of the course. Prerequisite(s): FAA Commercial Certificate with Instrument rating Note: Flight Courses must be completed within a year from the date a student registers. Within this time frame a student must either 1) Successfully complete the course and be issued a grade, OR 2) Withdraw from the course, due to the following extenuating circumstances: Active Military Obligations, Medical conditions requiring removal from active flight status for a duration of 60 consecutive days or more. If neither of the above occurs, a failing grade will be assigned. (3,2) 3 credits

AVN 320 Air Carrier Flight Operations
A study of the operational considerations and procedures of air carrier flight operations. Flight Operations conducted under 14CFR121 (Part121 air carriers) are highlighted. Also included are 14CFR135 (Part135) Air Carriers, supplemental air carriers and Operators of Large Aircraft flight operations. Prerequisite(s): AVN 220, FAA Private Pilot, Commercial Certificates (3,0) 3 credits

AVN 321 Physiology of Flight
Operational and lifestyle considerations and consequences arising from physiological factors will be introduced, with an emphasis on the atmosphere and high-altitude flight (Hyperbarism). General fundamentals of anatomy and psychology will be reviewed to impart career-prolonging health maintenance and stress reduction techniques. Subtle yet critical aviation issues such as situational awareness and crew resource management will be explored. Prerequisite(s): AVN 100 or approval from this department chair, Sophomore Advanced Standing (3,0) 3 credits

AVN 322 Advanced Aircraft Systems
This course exposes the student to the advanced aircraft systems commonly found in air carrier aircraft. Included are Electrical Systems, Hydraulics, Pneumatics, Flight Controls, Landing Gear Systems, Auto-pilots and Cockpit Automation, Master Warning and Caution Annunciation Systems. At the conclusion of this course, the student should have a good level of operational understanding of these systems. Prerequisite(s): FAA Commercial Pilot Certificate with Instrument rating (3,0) 3 credits

AVN 323 Air Carrier Flight Planning
This course exposes the student to the area of flight planning for the major air carrier's operations. The main areas of study will include the following subjects: High Altitude Aviation Meteorology, Transport Category Aircraft Weight and Balance, Take-off, En-route and Landing Performance and Emergency Procedures. Advanced Flight Planning, Just Route Structure, Jeppesen IFR High Altitude En-Route Charts NOS & Jeppesen IFR Approach Plates & Published Minimums; U.S Air Traffic Control Systems / Airspace; Airline Positive Operational Control Concepts; Federal Aviation Regulations Part 121/1199/135; Airline Com-unications Systems – Selical/ARINC/ACARS/Satcom; Captain/Dispatcher Joint Authority/Decision Making. Prerequisite(s): AVN 322 (3,0) 3 credits
AVN 330 Airline Marketing
This course examines the principles of marketing used by the major U.S. airlines and how they are applied for long term financial success in the industry. There will be an initial review of the structure of the air transport market and the industry marketing environment. This will be followed by a detailed study examining the airline business and marketing strategies, product design, pricing, revenue management, distribution channels, and selling and advertising policies.
Prerequisite(s): AVN 100, AVN 230 (3,0) 3 credits

AVN 370 Airport Financial Mgmt.
This course covers the following topics: Financial Management, Managerial Accounting, Airport Fees, Rates, Charges, Airport Capital Development/Funding, Airport Improvement Program (AIP) Funding, Passenger Facility Charge (PFC) Funding.
Prerequisite(s): AVN 270 (3,0) 3 credits

AVN 371 Airport Planning
Prerequisite(s): AVN 270 (3,0) 3 credits

AVN 380 Air Cargo Sales & Marketing Techniques
The students will be introduced to the variety through a variety of pedagogical methods that will include lectures, hands-on use of the most prominent manuals, regulations related to the industry, group discussions, and videos.
Prerequisite(s): AVN 280 (3,0) 3 credits

AVN 381 Air Cargo Management Techniques
The students will be introduces to the topic through a variety of pedagogical methods that will include lectures, hands-on use of the most prominent manuals, regulations related to the industry, group discussions, and videos. Study includes leadership, safety, problem solving, IATA Standard Ground Handling contracts.
Prerequisite(s): AVN 280 (3,0) 3 credits

AVN 391 Air Cargo Cooperative Experience III
This Cooperative Experiences or Internships is an elective for third year Aviation Administration students. The course will provide employer/student designed internship experience. The student will acquire work skills and cooperative attitudes that will compliment and enhance the academic competencies learned during the prior year.
(3,0) 3 credits

AVN 400 Aviation Law
Aviation Law develops the student's knowledge to the application level of learning by emphasis on real cases to demonstrate the legal, regulatory and government theory previously discussed in AVN101 and AVN300. Emphasis will be on the FAA's roles in regulating aviation including the rule making process, certification of airmen, medical certification and enforcement are studied.
Prerequisite: AVN 300W (3,0) 3 Credits

AVN 401 Aviation Economics
This course covers the economic history of the air carrier industry from 1911 to the present. The details of airline deregulation prior to 1978 are discussed as is the transition from regulation to deregulation – 1978 to present and Marketing and financial practices as they exist today under deregulation.
Prerequisite(s): ECO 156, BUS 102, AVN 300W, AVN 320 (3,0) 3 credits

AVN 404 Corporate and Business Aviation
Study of the flight operations, administration, maintenance and financial functions of a corporate flight department. The FBO and small airplane business will be discussed including applications in aerial photography and spraying, aircraft sales and financing.
Prerequisite(s): AVN 300W (3,0) 3 credits

AVN 410 Commercial Pilot Multi-Engine Pilot Rating
This course prepares the Commercial Pilot with single-engine and instrument ratings to add an airplane multi-engine airplane to his/her certificate. 15 hours flight and 15 hours ground instruction run concurrently. The passing of the FAA practical exam and attainment of the Multi-Engine rating will successfully complete the course.
Prerequisite(s): FAA Commercial Certificate with Instrument Rating (1,1) 1 credit

AVN 411 Flight Instructor Instrument Pilot
This course prepares the student with a CFI to acquire the Flight Instructor – Instrument rating. Training will consist of at least 20 hours flight and 15 hours ground instruction. Passing the FAA Flight Instructor- Instrument-Airplane Knowledge test and the FAA flight test will complete the course.
Prerequisite(s): AVN 310, FAA Flight Instructor-Airplane Certificate (2,1) 2 credits

AVN 412 Flight Instructor Multi-Engine Pilot
This course prepares the student with a CFI to acquire the Flight Instructor – Multi-Engine rating. Training will consist of at least 25 hours flight and 20 hours ground instruction. Passing the FAA Flight Instructor- Multi-Engine Knowledge test and the FAA flight test will complete the course.
Prerequisite(s): AVN 310, FAA Flight Instructor-Airplane Certificate (1,1) 1 credit

AVN 417 Homeland Security in Aviation
This course will expose the student to the importance of Homeland Security in the aviation industry and the important role each employee in the industry is charged with. Students will gain experience in identifying false travel documents and identifying suspicious air travelers. This course will focus on current national security threats in the aviation industry. Upon the successful completion of this course the student will meet the requirements of the initial and recurrent security training requirements currently mandated by the Transportation Security Administration (TSA) under Title 49 CFR 1552.
Prerequisite(s): AVN 300W (3,0) 3 credits

AVN 419 Airline Transport Pilot (ATP)
Airline Transport Pilot (ATP) will allow pilots who already hold the Commercial Pilot Certificate with either Single or Multiengine Land Airplane, and Instrument Rating Airplane, and who meet the prerequisite(s) 1,500 hours along with other requirements, to acquire the Airline Transport Pilot Certificate. This certificate is required in order to act as a pilot in command for most airlines. Flight training will include preparation for completing all practical test tasks. Students must have passed the FAA ATP Airplane knowledge exam, and must meet all requirements specified in FAR 61 subpart G prior to the practical exam. At the conclusion of the course, the student will successfully pass the practical exam for course completion and credit.
Prerequisite(s): Commercial Certificate Airplane single/multi land, Instrument, 3rd class medical (2,2) 3 credits

AVN 421 Gas Turbine Engines
An in depth study of gas turbine engines as found in air carrier and high performance aircraft. Topics include the history of turbine development, jet propulsion, theory engine design and construction and control systems. 

Prerequisite(s): AVN 321, FAA Commercial Pilot Certificate with Instrument Rating

(3,0) 3 credits

AVN 422 Aerodynamics and Aircraft Performance
Advanced aerodynamic principles will be introduced following extensive review of fundamentals. Emphasis will be on practical design and performance considerations including mission, cost, and feasibility. Laboratory exercises will primarily software simulations, culminating in actual student project wind-tunnel testing.

Prerequisite(s): AVN 100, PHY 136

(3,1) 4 credits

AVN 423 Crew Resource Management
This course deals with flight crew decision making. It includes, but is not limited to: optimum decision-making techniques; personality profiling; crew communication; high risk areas of a flight; maintaining situational and spatial awareness; crew discipline; and airline-level standard operating procedures.

Prerequisite(s): Junior Advanced Standing and Completion of an AVN 300W level course, FAA Commercial Certificate with Instrument Rating

(3,0) 3 credits

AVN 424 Advanced Avionics and Cockpit Automation
Introduction to modern cockpit avionics suites as found in Corporate Jets and Transport Category aircraft. Principles, operation and limitations of advanced avionics suites typically found. Topics include: automatic flight control, flight director systems, stability augmentation systems, power management systems, flight management systems, autoland/go around systems. Latest technology navigation systems: INS, IRS, GPS LAAS WAAS.

Prerequisite(s): AVN 322, FAA Commercial Certificate with Instrument Rating

(3,0) 3 credits

AVN 425 Safety of Flight
This course undertakes a cross-curricular review of factors influencing aviation safety, such as airport and aircraft design, crew training, and air traffic and navigation facilities. Relevant government regulations will be introduced although the primary emphasis will be on case studies and statistical analysis. Guest speakers and field trips may supplement lecture materials.

Prerequisite(s): FAA Commercial Certificate with Instrument Rating

(3,0) 3 credits

AVN 432 Aviation Insurance
This course covers the basic foundations of Aviation Insurance and Risk Management. Topics to be covered include hull and liability coverage, subrogation and the insurer’s interests after covering a loss, underwriting and claims management. This course helps students to explain the various types of insurance coverage found in aviation such as, hangar keepers, employers, pilots, airlines and airport operators.

Prerequisite(s): AVN 400

(3,0) 3 credits

AVN 441 Seminar in Air Carrier Operations
This course provides students the opportunity to acquire experience through research on, observation of, and internships within the aviation industry. Information will be exchanged via reports, presentations, and seminar discussion.

Prerequisite(s): Junior Advanced Standing

(3,0) 3 credits

AVN 442 Large Airshow Operations and Seminars
A field study course allowing the student under faculty guidance to put together a rich aviation experience by attending the Experimental Aircraft Association (EEA) Airventure in Oshkosh, WI or the EAA Sun-and-Fun Fly in Lakeland, FLA. Prior to attending the shows, the class will meet to discuss the range of activities available during the exhibition. The student must attend a specified number of industry seminars, demonstrations, static displays and museum presentations. A paper is required.

Prerequisite(s): AVN100, AVN101 or Department approval

(2,2) 3 credits

AVN 443 Specialty Flying
Specialty flying is a vital area in General Aviation although it does not attract the attention that airline and military flying do. This course will deal with Agricultural Aviation; Bush Flying using float, large wheel and ski equipped aircraft.

Prerequisite(s): Junior Advanced Standing

(3,0) 3 credits

AVN 470 Airport Operations

Prerequisite(s): AVN 371

(3,0) 3 credits

AVN 480 Air Cargo Operations -- Advanced
The course will expand upon the introductory concepts learned in AVN 280. Students will be exposed to various in-class exercises that will address the importance of identifying the variables involved in the flow of typical air cargo operations. Students will gain expertise in “troubleshooting” and solving problematic situations such as flight delay due to mechanical and or weather, late delivery of high priced cargo products, emergency response to live animal and or perishable equipment, damage to aircraft and or cargo ULD’s or other equipment, and employee injury. The real world applications of Quality Work Programs (QWP) and current advances in air cargo automation and or computer controlled processes will be explored. Communication skills in air cargo operations management will also be stressed.

Prerequisite(s): AVN 280

(3,0) 3 credits

AVN 490 Aviation Internship I
This course is designed to give students the opportunity to earn elective credit for acquiring hands-on industry experience. Prior work site approval by the Aviation Department is required before enrolling in this course.

Prerequisite(s): Completion of 30 credits in Aviation courses with an overall GPA of 2.5 and a GPA of 3.0 in Aviation curriculum courses

(1,6) 3 credits

AVN 491 Air Cargo Cooperative Experience IV
This Cooperative Experiences or Internships is an elective for fourth year Aviation Administration students. The course will provide employer/student designed internship experience. The student will acquire work skills and cooperative attitudes that will compliment and enhance the academic competencies learned during the prior year.

(3,0) 3 credits

COMPUTER SYSTEMS

BCS 101 Programming Concepts and Problem Solving
This course will provide an introduction to programming logic and problem solving techniques using different programming languages. The topics covered in this course will provide the skills needed to learn
languages such as Visual Basic, C++ and JAVA. Topics include such items as constants and variables, data types, scope of variables, basic logic constructs, subroutines and functions.

**Note:** Students who have completed BCS 120 or BCS 185 or equivalent cannot take BCS 101.

(3,0) 3 credits

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**BCS 102 Computer Concepts and Applications**

This is an introductory course in the use of personal computers in today's society. Students will receive instruction in basic computer concepts and terminology, the fundamentals of the Windows operating system and have hands on experience at the beginning to intermediate level using Microsoft Word, Excel, Access and PowerPoint. The Internet will be used to supplement textbook and lecture materials.

(3,0) 3 credits

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**BCS 105 Basic Networking Fundamentals I**

This course covers a basic introduction to networking terminology and concepts. It begins with an overview of Industry standards and the OSI reference model. It then moves on to cover different network topologies and IP addressing. The students are then introduced to the concept of subnetworking using subnet masks. Basic networking design different networking components and safety issues are covered extensively. The practical part of the course concentrates on making different types of networking cables and implementing a basic infrastructure.

Prerequisite(s): BCS 102 with a grade of C or better

(3,0) 3 credits

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**BCS 106 Basic Networking Fundamentals II**

A continuation of the Basic Networking Fundamentals which incorporates concepts of subnet planning, OSI model layers, and network layers with routing and best path selection. Dynamic Routing Operation, Link State versus Distance Vector is covered in detail. The course then moves on to configuring routers, different modes and commands, as well as the hardware and software components of the routers. The laboratory part of the course is a series of hands on experiments on Cisco routers including the proper wiring and setting up.

Prerequisite(s): BCS 105 with a grade of C or better

(3,0) 3 credits

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**BCS 120 Foundations of Programming I**

This course introduces the C++ Programming Language as a means of developing structured programs. Students will be taught to develop algorithms using top-down stepwise refinement. Students will be introduced to the concept of Object Oriented programming through the use of pre-defined classes. In addition, students will get a thorough exposure to C++ syntax and debugging techniques.

Note: BCS 101 cannot be taken concurrently with BCS 120.

Prerequisite(s): BCS 102 or EET110 (with a grade of C or better) or permission of the department chair

(3,0) 3 credits

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**BCS 130 Website Development I**

This is an introductory web page authoring course in which students will learn how to design a web page using HTML (Hyper Text Markup Language) and CSS (Cascading Style Sheets). Besides the introductory topics of changing text appearance and layout, advanced topics such as tables, frames, graphics and styles will also be covered.

(3,0) 3 credits

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**BCS 136 Programming in COBOL - 1**

The fundamental skills and knowledge of computer programming using COBOL are developed in this course. Among the topics studied are elements of the COBOL programming language and application of the language to solving business computer applications.

(3,0) 3 credits

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**BCS 148 8086/88 Assembler Programming I**

This course examines the architecture and instruction set of the INTEL 8086 and 8088 chips used on the IBM-PC. Topics include: machine execution; addressing; input/output; arithmetic; branching, and control instructions. Students use the IBM-PC macro assembler to code and debug typical business applications.

(3,0) 3 credits

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**BCS 185 Programming in Visual Basic**

The Visual Basic language is used to develop Windows applications in a fast, reliable and efficient manner. This course will present the main components of a Visual Basic program, and will use these components to develop increasingly more complex Windows applications. The standard Windows forms and controls will be explored in providing the skills and knowledge necessary to write these event driven graphical interfaces.

Note: BCS 101 cannot be taken concurrently with BCS 185.

Prerequisite(s): BCS 101 with a C or better or permission of the department chair

(3,0) 3 credits

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**BCS 202 Computer Concepts for Business/Sport Management**

In this course, students will learn the fundamentals of computer applications for business including sport management. This course will cover file management and have hands on experience at the beginning through advanced level using microcomputer spreadsheet and database applications. Students will use a spreadsheet program to enter formulas, create charts, execute functions and macros, create, sort and query lists; create pivot tables, create templates, and work with multiple worksheets and workbooks. Students will use a database program to create data table structures, queries, reports, and forms, create switchboards, pivot tables, and pivot charts. Please note: This course may not be used to satisfy the requirements of the B.S. in Computer Programming and Information degree.

Note: Students completing this course cannot receive credit for SMT 202.

Prerequisite(s): BCS 102 with a grade of C or better

(3,0) 3 credits

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**BCS 204 Comparative Programming Languages**

A study of programming languages with an emphasis on general concepts and constructs such as repetition, decisions and modularization. Procedural vs. object-oriented program design paradigms and examples of each will be a major portion of the course. Examples comparing how different kinds of languages approach the same problem will also be included.

Prerequisite(s): BCS 100 or BCS 102

(3,0) 3 credits

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**BCS 205 Hardware and Software Selection**

This course provides a hardware and software overview of the microcomputer industry. The designs of various commercially available computers and their input/output devices will be explored in detail. Criteria for equipment selection decision making will be provided. Among the topics to be covered are microcomputer systems, monitors, printers, plotters, modems, A/D and D/A converters and operating systems.

(3,0) 3 credits

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**BCS 208 Networking Fundamentals I**

This course covers a basic introduction to networking terminology and concepts. It begins with an overview of Industry standards and the OSI reference model. It then moves on to cover different network topologies and IP addressing. The students are then introduced to the concept of subnetworks using subnet masks. Basic networking design, different networking components and safety issues are covered extensively. OSI model layers and network layers with routing and best path selection theory are also presented. Dynamic routing operations, as well as Link State versus Distance Vector Protocols are covered in detail. The practical part of the
course is implementing and testing basic LAN infrastructure configurations. This course may also be applied towards CISCO certification. 
Prerequisite(s): Sophomore standing

(2,2) 3 credits

BCS 209 Networking Fundamentals II
This course picks up where BCS 208 leaves off, then moves on to configuring routers, using different modes and routing protocols and commands, as well as exploring the features of the hardware and software components of the routers. Theories of routing protocols and their algorithms, including RIP and IGRP are explored in depth. The practical part of the course involves a full series of hands-on exercises and Labs using CISCO routers and switches to demonstrate the proper configuration, ACL settings, wiring and verification/testing of operational networks as required. Network Management issues are also addressed. This course may also be applied towards CISCO certification. 
Prerequisite(s): BCS 208 with a grade of C or better

(3,0) 3 credits

BCS 215 UNIX Operating System
This course develops the fundamental knowledge of computer operating systems using UNIX. Topics include basic understanding of the UNIX system, utilizing the file system, programming language and security system. 
Prerequisite(s): BCS 101 or BCS 120 or BCS 185 – with a grade of C or better

(3,0) 3 credits

BCS 230 Foundations of Computer Programming II
This course expands the knowledge and skills of Foundations of Computer Programming I. Among the topics covered are: arrays, pointers, strings, classes, data abstraction, inheritance, composition and overloading. 
Prerequisite(s): BCS120 with a grade of C or better

(3,0) 3 credits

BCS 232 Electronic Commerce
This cross-listed business management and business computer systems course covers electronic commerce (EC) foundations, retailing methodologies, and marketing research. Focus will be on the various forms, strategies, and implementations of EC including business-to-business (B2B), business-to-consumer (B2C), and consumer-to-consumer (C2C). Also covered will be social networking, electronic payment systems, and public policy issues including privacy and intellectual property matters as well as recent information technology advancements. 
Note: Students completing this course may not receive credit for BUS 232
Prerequisite(s): BUS 109 or Management course and BCS 101 or BCS 102

(3,0) 3 credits

BCS 237 Intermediate Cobol Programming
This course expands the skills and knowledge of computer programming using COBOL. Topics to be covered include multi-level control break processing, file handling techniques for both sequential and indexed files, table processing, and searching and sorting methods. 
Prerequisite(s): Completion of BCS 136 with a grade of C or better

(3,0) 3 credits

BCS 240 Website Development II
This is a course for future developers and designers on creating successful Web sites. Topics covered will include planning, analysis, designing, and developing well-organized Web sites that combine effective navigation and their algorithms, including RIP and IGRP are explored in depth. The practical part of the course involves a full series of hands-on exercises and Labs using CISCO routers and switches to demonstrate the proper configuration, ACL settings, wiring and verification/testing of operational networks as required. Network Management issues are also addressed. This course may also be applied towards CISCO certification. 
Prerequisite(s): EGL 101 and BCS 130 with a grade C or better

(3,0) 3 credits

BCS 250 JavaScript
This course introduces students to Web scripting languages. Students will utilize variables, objects, and events in the creation of Web pages with JavaScript. They will learn techniques such as control of flow, windows, frames, forms, debugging techniques, and dynamic HTML.

(3,0) 3 credits

BCS 255 Operating Systems
This course develops the fundamental knowledge of computer operating systems. Topics included in this study are types of operating systems, facilities and features of the different systems and user techniques.

(3,0) 3 credits

BCS 260 Database
This course provides the fundamental knowledge of database concepts. Topics studied will include the history and advantages of database systems, and the process of database design including entity-relationship diagrams and database normalization. Students will have hands-on experience using a relational database system. 
Prerequisite(s): BCS120 or BCS185 with a grade of C or better

(3,0) 3 credits

BCS 262 Data Communications
This course is an introduction to the concepts and applications of computer networking and its role in the business world today. Topics include: history of networking and applications, voice and data communications, hardware, transmission, network topologies, network analysis, the OSI model design, implementation, and management issues.

(3,0) 3 credits

BCS 285 Advanced Programming in Visual Basic
This course provides an in-depth study of the skills and knowledge of Visual Basic programming. It is intended to reinforce and build upon the introductory Visual Basic course by extending coverage of the programming language and introducing more advanced features of the language. Some of the advanced topics covered will include multilayer applications, database programming, programming for the web and web forms, using report mechanisms, object-oriented terminology, creating classes and instantiating objects. 
Prerequisite(s): BCS 185 with a grade of C or better, BCS 260 as a prerequisite or corequisite

(3,0) 3 credits

BCS 300 Management Information Systems
Managers have increasing responsibility for determining their information system needs and for designing and implementing information systems that support these needs. Management information systems integrate, for purposes of information requirements, the accounting, financial, and operations management functions of an organization. This course will examine the various levels and types of software and information systems required by an organization to integrate these functions. 
Prerequisite(s): Junior status and BUS 109 or BUS 111

(3,0) 3 credits

BCS 301 Systems Analysis and Design
This course explores the major issues in the analysis and design of a system, including methods of data collection, information requirements analysis, and the analysis process are discussed. Emphasis is placed on the importance of the user in the design process and focuses on approaches that improve the successful implementation of a computer system. Topics include general systems theory, Systems Development Life Cycle, data flow diagrams, data dictionary, hardware and software evaluation, feasibility analysis, CASE tools and prototyping. Students are required to demonstrate their skill in using project management and diagramming application software. 
Note: Credit cannot be given for both BCS265 and BCS301.
Prerequisite(s): BCS120 with a grade C or better, or BCS185 with a grade C or better, and Junior level standing

(3,0) 3 credits
**BCS 302 Systems Analysis and Design II**
This is an advanced course in Systems Analysis and Design. Students will utilize the tools covered in BCS301 to analyze system designs. Topics covered in the design phase will include input, output, database and user interface design. A CASE Tool and/or other rapid application development tools will be used to create the interfaces. Additional topics in the implementation and maintenance phases will include testing, implementation, and maintenance. Object-oriented systems and UML will also be covered. Students will analyze and prepare various case projects and will present and document their results.

*Prerequisite(s): Completion of BCS 301 with a grade of "C" or better (3,0) 3 credits*

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**BCS 303 Advanced Website Development**
Students will learn the advanced concepts of Web site development using a language such as XML document. Students will be introduced to the basic programming concepts including creating an XML document, displaying an XML document, binding XML elements to HTML tags, working with the data source object, working with table bindings and table pages, declaring, document elements, working with attribute types, working with namespaces, schemas, and XSL stylesheets.

*Prerequisite(s): BCS 130 and a semester of a programming language, both with a grade of C or better (3,0) 3 credits*

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**BCS 311 Local Area Networks and System Administration**
This course will provide an introduction to local area networking concepts. These ideas will be explored in conjunction with an introduction to the concepts and tools necessary to implement, administer and troubleshoot a current industry standard Network Operating System. Hands-on experience will be used in the presentation of system administration tools.

*Prerequisite(s): BCS 262 with a grade of C or better (3,0) 3 credits*

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**BCS 315 UNIX Operating System II**
This course further develops the knowledge of computer operating systems using UNIX. It will augment the knowledge gained in BCS215. Topics to be covered include an in-depth examination of the design of the UNIX system, using advanced text processing utilities, advanced Shell programming and an introduction to the setup and administration of UNIX networks.

*Prerequisite(s): BCS 215 with a grade of C or better (3,0) 3 credits*

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**BCS 316 Perl Programming**
This course provides an introduction to programming in the Perl language. Students will learn the Perl syntax, the basics of using regular expressions, how to use Perl data types, and how to access and manipulate files. Students are also introduced to database connectivity and debugging techniques.

*Prerequisite(s): BCS 215 and BCS 230 or BCS 285 all with a grade of C or better (3,0) 3 credits*

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**BCS 317 Enterprise Resource Planning**
This course is an organizational and information systems approach that integrates planning, customer relationship management, decision making, master scheduling, material requirements planning, marketing, forecasting, sales, finance, electronic commerce and human resources. The course will include lectures and extensive use of supporting ERP software.

*Note: Students who have previously completed BUS/IND 313 cannot receive credit for BUS/BCS 317. Students completing this course cannot receive credit for BUS 317. Prerequisite BUS 109 (3,0) 3 credits*

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**BCS 320 LAN Switching and Wireless**
This course provides a comprehensive, theoretical, and practical approach to learning the technologies and protocols needed to design and implement a converged switched network. Students learn about the hierarchical network design and how to select devices for each layer. The course explains how to configure a switch for basic functionality and how to implement Virtual LANS, VTP, and inter-VLAN routing in a converged network. The different implementations of Spanning Tree Protocol in a converged network are presented, and students develop the knowledge and skills necessary to implement a WWLAN in a small to medium network. This course may also be applied towards CISCO training certification as defined by the CISCO Academy.

*Note: Students who have completed BCS 330 or BCS 335 may not receive credit for BCS 320. Prerequisite(s): BCS 208 with a grade of C or better (3,0) 3 credits*

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**BCS 321 Accessing the WAN**
This course discusses the WAN technologies and network services required by converged applications in Enterprise Networks. The course uses the Cisco Enterprise Composite model (ECM) to introduce integrated network services and explains how to select the appropriate devices and technologies to meet ECM requirements. Students learn how to implement and configure common data link protocols and how to apply WAN security concepts, principles of traffic, access control and addressing services. Finally, students learn how to detect, troubleshoot, and correct common enterprise network implementation issues. This course may also be applied towards CISCO training certification as defined by the CISCO Academy.

*Note: Students who have completed BCS 330 or BCS 335 may not receive credit for BCS 321. Prerequisite(s): BCS 209 and BCS 320 with a grade of C or better (3,0) 3 credits*

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**BCS 345 JAVA Programming**
This course is designed for students with some experience with programming. The syntax of the Java programming language, object-oriented programming, creating graphical user interfaces (GUI), exceptions, file input/output (I/O), and how to create Java applications and applets will be covered.

*Prerequisite(s): Completion of BCS 230 or BCS 285 with a grade of C or better (3,0) 3 credits*

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**BCS 346 Advanced C++ for Programmers**
This course is designed as the advanced extension of BCS 196. The skills learned in the previous course will be applied to creating structured programs for solving practical problems using advanced algorithm development and focus on Object Oriented techniques available through C++’s class construction as well as class and template libraries.

*Prerequisite(s): BCS 196 with a grade of C or better (3,0) 3 credits*

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**BCS 350 Web Database Development**
This advanced course prepares the student to use database management systems with web server software to develop and maintain the information content of a web site. Students in the course should have prior knowledge of programming and database management systems.

*Prerequisite(s): BCS 260 with a grade of C or better (3,0) 3 credits*
BCS 360 Programming in SQL
The second in a two course sequence applies the knowledge of BCS260 to administer and implement a relational database system. Topics covered may include: embedded SQL; PL/SQL; advanced/optimized SQL queries; transaction management including concurrency and recovery; schema refinement; higher-level normal forms; integrity; security; and database administration development.
Prerequisite(s): BCS 260 with a grade of C or better (3,0) 3 credits

BCS 370 Data Structures
This course will present sequential and linked representations of various built-in and abstract data structures including arrays, records, stacks, queues, and trees. Algorithms will be developed relating to various sorting and searching techniques, merging and recursion. A high-level programming language, such as C++, will be used in exploring and developing these algorithms with an emphasis on object oriented programming techniques and static and dynamic storage concepts.
Prerequisite(s): BCS 230 with a grade of C or better (3,0) 3 credits

BCS 378 Information Security
Topics include cryptology principles, security, accuracy and privacy in computer systems with an analysis of hardware and software measures and counter-measures. A study of the National Bureau of Standards - DES (Data Encryption Standard), and other hardware and software techniques are included.
Prerequisite(s): Two semesters of a programming language and BCS 262, all with a grade of C or better (3,0) 3 credits

BCS 380 Advanced Database Programming
This course will provide a detailed examination of a relational database management system and its procedural language such as Oracle and PL/SQL or SQL Server and T-SQL. General programming concepts such as conditional and iterative control, error handling and built-in exceptions will be discussed. Covered in more detail will be topics such as cursors, triggers, and the stored functions, procedures and packages. These topics will then be explored through laboratory assignments using a RDBMS such as Oracle or SQL Server.
Prerequisite(s): BCS 360 with a grade of C or better (3,0) 3 credits

BCS 390 Database Administration and Security
This course provides the knowledge necessary to handle database administration and database security. Topics studied will include installation and configuration of a database, managing and securing user resources and privileges, data integrity, and optimization.
Prerequisite: BCS 360 with a grade of C or better (3,0) 3 credits

BCS 405 IS Development Project Management
This course will cover Project Management tools and techniques for Systems Development projects. Students will learn Project Management, Scope Management, Time Management, Cost Management, Quality Management, Human Resource Management and Communications Management all in the context of running successful information systems development and implementation projects. MS Project will be used as a tool to managing all of these areas.
Prerequisite(s): BCS 300 with a grade of C or better (3,0) 3 credits

BCS 410 Computer Architecture
Computer Architecture is the study of hardware and software components of business information systems. Thorough understanding of the workings of the digital computer system is expected. Topics include: hardware components, the machine cycle, binary arithmetic, systems software, and assembly language. These topics are evaluated with respect to their impact on the development of business information systems.
Prerequisite(s): Two semesters of a programming language and BCS 262 all with a C or better (3,0) 3 credits

BCS 413 Advanced Enterprise Resource Planning
This advanced-level Enerprise Resource Planning (ERP) course includes high-level information technology coverage of Scheduling, Planning, MRP, Logistics, Warehousing, Procurement, Quality, Vendor Management, Cost Accounting, Forecasting, KPI, Supply Chain and Customer Resource Management. Also covered are concepts and software applications pertaining to product design, development, manufacturing (production), marketing, sales and field service. This course emphasizes proficiency in the skill sets typically required within industry practices.
Prerequisite(s): BUS 300 or BCS 300 and BUS/BCS 317 (3,0) 3 credits

BCS 415 Operating System Internals and Design
This course will involve the study of the fundamentals of operating systems design and implementation. The concepts covered include process management, memory management, file systems, I/O system management, distributed systems, and security. Students will examine how these concepts are found in several current open-source operating systems, including Vista, UNIX and/or Linux.
Prerequisite: BCS 215 and one year of programming (3,0) 3 credits

BCS 420 Client/Server Computing
Included in this course are a wide range of issues, methods, techniques and case examples for developing the managing client/server and distributed systems. These include client/server development using (RAD) methodologies, transaction process monitors, types of aboveware and middleware, middleware standards (DCE, RPC, and CORBA), managing client/server environments, software installation and distribution, electronic mail architectures in C/S systems, evaluation of vendor strategies, issues in selecting C/S products, legacy system migration issues, interoperability, scalability, network and security concerns, the role of network computers and thin clients, and the emergence of the WWW as an extension of the client/server environment.
Prerequisite(s): BCS 260 (3,0) 3 credits

BCS 425 Decision Support Systems and Data Warehousing
This course integrates systems analysis, programming, database and networking for better decision making. Decision Support Systems (DSS) characteristics are covered followed by a survey of the various DSS models. Topics covered will include hardware and software technologies that support a DSS, Expert Systems, Data Warehousing, OLAP and Data Mining. Case studies will be used to illustrate these systems. The course will provide a strong foundation for the use of models within the context of building and using decision support systems, and it will focus on multi-dimensional databases.
Prerequisite(s): BCS 262, BCS 260, BCS 300, BCS 301 (3,0) 3 credits

BCS 427 Game Programming
This course provides an introduction to two-dimensional game programming. Students will learn how to draw and manage game objects. Techniques for adding sound to a game will be discussed. Creation of computer controlled game objects will also be covered. Students will receive hands-on experience with a current game development platform. Students will be expected to create their own two-dimensional game by the end of the course.
Prerequisite(s): BCS 345 with a C or better (3,0) 3 credits
BCS 430W Senior Project
The primary objective of this capstone course is to give Computer Programming and Information Systems students an opportunity to integrate techniques and concepts acquired in their other courses. Elements will be drawn primarily from BCS301 (Systems Analysis and Design) and BCS260 (Database), in addition to other courses in the student’s selected track of study. The course is experimental in nature, i.e., the student will be required to produce results for use by real individuals and will be evaluated both on process and product.
Prerequisite(s): EGL 101; BCS 260, BCS 301 and a second level programming course (BCS 230 or BCS 285) all with a grade of C or better; and Senior-level standing
(3,0) 3 credits

BCS 440 CPIS Internship
In this course the student works under the tutelage of a professional who serves as site supervisor in an organization that provides information services. The work done by the student is guided by learning objectives agreed to by the site supervisor, the faculty member and the student. Students are required to submit a written proposal, progress reports, and a final report on their experience to the client and to the department. The course offers an ideal opportunity to test theory in practice and to gain experience in a realistic information provision situation. The experience is expected to be mutually beneficial for the organization and student.
Prerequisite(s): Junior status; GPA >=3.0
(3,0) 3 credits

BCS 450 Special Topics in Computer Programming & Information Systems
This course will cover topics not covered in the regular curriculum. Topics may vary from term to term and reflect the interests of students, faculty and industry. Topics may include wireless communications, rapid application development and other emerging technologies.
Prerequisite(s): Permission of department chair
(3,0) 3 credits

BCS 460 Independent Study
This is an independent study course designed to offer the student experience in research of a specialized area of interest. The student will have an opportunity to work individually or with a group in designing, developing and presenting a research project. The topic must be approved by a faculty member. Students will be required to submit full documentation and present their final results.
Prerequisite(s): Permission of department chair
(3,0) 3 credits

BIOLOGY

BIO 120 General Biology
A survey of life from the standpoint of humans, including structural and behavioral evolution, functional characteris-tics, and relationship to the natural world. Recent developments in Biology are explored, including applications of DNA analysis and recombinant DNA technology. The laboratory exercises involve simple investigations of the life processes by utilizing basic research tools. A range of life forms are studied in the laboratory, with particular emphasis on animals ranging from planaria to preserved frogs.
Note: BIO 120 is approved in the Natural Sciences General Education Competency Area and can serve as a lower-level laboratory science elective within the Liberal Arts. However, it does not satisfy Bioscience Core requirements and cannot be used as a substitute for either BIO 130 or BIO 131.
(3,2) 4 credits

BIO 123 Human Body in Health & Disease
This course is an inquiry into the mechanism of diseases that plague human beings. A systemic approach is taken in which all the major systems of the human body and the significant diseases that affect these systems are studied. Emphasis is on failures of homeostasis as the basic mechanisms of disease. Included are discussions on available treatments and therapies, the impact of new technological developments, and maintaining health and avoiding disease. The laboratory component contains both traditional and computer-generated exercises that illustrate the onset and development of a variety of diseases and pathological states.
Note: BIO 123 is approved in the Natural Sciences General Education Competency Area and can serve as a lower-level laboratory science elective within the Liberal Arts. However, it does not satisfy Bioscience Core requirements and cannot be used as a substitute for either BIO 130 or BIO 131.
(3,2) 4 credits

BIO 125 Principles of Nutrition
This course provides a basic background in the nature and biochemical function of essential and non-essential nutrients, the molecular basis of metabolism and nutrient requirements of living cells and organisms. The role of nutrients in gene expression, genetically modified foods and the role of diet in the treatment of chronic and other existing states will be explored through research and lecture.
(3,0) 3 credits
BIO 166 Principles of Human Anatomy and Physiology
This is a one-semester integrated survey of human anatomy and physiology, covering the major physiological and morphological relationships of the human organ systems. The design of this course is appropriate preparation for Dental Hygiene, Medical Laboratory Technology, and certain other allied health professions, but it does not satisfy the requirements of the Nursing curriculum. The major theme of the course is the integrative pathways and regulatory processes that maintain the homeostasis of the body.
Note: BIO 166 does not satisfy the requirements of the Nursing curriculum and cannot be used as a substitute for either BIO 170 or BIO 171. It is approved in the Natural Sciences General Education Competency Area and can serve as a lower-level laboratory science elective within the Liberal Arts.
Prerequisite(s): High School biology with a lab or BIO 120 or BIO 123 or BIO 130; High School or College chemistry recommended.
(3,2) 4 credits
Fall, Spring, Summer

BIO 170 Human Anatomy and Physiology I
This is the first semester of a two-semester sequence in which human anatomy and physiology are studied using a body systems approach, with emphasis on the interrelationships between form and function at the gross and microscopic levels of organization. This sequence is appropriate preparation for nursing and other allied health professions. Topics included in Anatomy & Physiology I are: basic anatomical and directional terminology, preparation for nursing and other allied health professions. Topics included in Anatomy & Physiology II are: the endocrine system, the cardiovascular system, the lymphatic system and immunity, the respiratory system, the digestive system, metabolism, the urinary system, fluid/electrolyte and acid/base balance; and the reproductive systems.
Prerequisite(s): BIO 170
(3,3) 4 credits
Fall, Spring, Summer

BIO 171 Human Anatomy and Physiology II
This is the second semester of a two-semester sequence in which human anatomy and physiology are studied using a body systems approach, with emphasis on the interrelationships between form and function at the gross and microscopic levels of organization. This sequence is appropriate preparation for nursing and other allied health professions. Topics included in Anatomy & Physiology II are: the endocrine system, the cardiovascular system, the lymphatic system and immunity, the respiratory system, the digestive system, metabolism, the urinary system, fluid/electrolyte and acid/base balance; and the reproductive systems.
Prerequisite(s): BIO 170
(3,3) 4 credits
Fall, Spring, Summer

BIO 192 Biology I (Botany)
An introduction to the biology of plants and their ancestors. Topics include cell structure and function, cell chemistry, photosynthesis and cellular respiration. The tissues, roots, stems and leaves are studied covering such topics as conduction, absorption, translocation and reproduction. A phylogenetic comparison among plant groups and their ancestors is the underlying theme. (May be taken independently or as part of a two course sequence with B10 193.)
(3,2) 4 credits
Fall

BIO 193 Biology II (Zoology)
An introduction to the biology of animals and their ancestors. Topics include structure and function of cells, tissues, organs and organ systems in animals. Genetics, development, behavior, ecology, and the evolution of major phyla are covered. A comparative approach is taken in studying the invertebrates and vertebrates including man. (May be taken independently or as part of a two course sequence with BIO 192.)
(3,3) 4 credits
Contingent on demand

BIO 197 Human Biology
An introductory course that teaches biological principles by emphasizing the structural and functional aspects of the human body, especially as they relate to everyday existence. Includes discussion of important collateral issues such as the nature and course of disease, smoking and health, drug abuse, immunity and allergy, human genetics, birth control, over-population, and venereal disease.
(3,0) 3 credits
Fall, Spring

BIO 198 Entomology
The nature, structure, growth, and habits of insects and related forms are discussed. The beneficial and injurious effects of insects are covered. Recent breakthroughs and developments in the field of entomology are discussed. Skills are developed which enable the student to identify insect plant pests, diseases and injuries. Control measures and application equipment are discussed. Emphasis is placed on the various pest management options available to the homeowner and professionals in the field. IPM (integrated pest management) involves an understanding of pesticides, physical and mechanical controls, biological controls, cultural controls, and legal controls. Laws regulating the activities of pest control operators and the application of hazardous pesticides are discussed. A collection of insects and related forms is required.
(3,2) 4 credits
Spring

BIO 210 Introduction to Bioscience
Moving beyond the basic concepts of general biology, this course explores how biology is used in both academic and commercial settings within the fields of biotechnology, pharmaceutical and clinical sciences. Topics will include: applications of biotechnology in microbes, plants, and animals, the human genome project and its relation to medical biotechnology, DNA forensics, and pharmaceutical drug discovery, delivery, and FDA approval. The debate surrounding subjects such as cloning, stem cells, and genetically modified foods will also be discussed.
Prerequisite(s): BIO 130 with a grade of C or better
(3,0) 3 credits

BIO 212 Bioscience Laboratory Practices
This course is designed to enable students to develop understanding of and proficient technical ability in basic bioscience laboratory practices. There is an in-depth presentation of laboratory safety standards, utilization of material safety data sheets, and the theoretical basis for a full range of preparatory and analytical methods, and the opportunity to develop expertise in these methods with a variety of laboratory equipment. Students are required to maintain a laboratory notebook, analyze and display data in graphic form, and report results in a standard format.
Prerequisite(s): BIO 130 with a C or better
(1,2) 2 credits

BIO 220 Medical Microbiology
The role of microbes as causative agents of disease in human hosts; the morphological characterization of pathogenic species, classification of communicable diseases, and epidemic aspects. Host-parasite relationship, infection, and host resistance mechanisms; sero-diagnostic methods in medical practice. Chemotherapy, mode of action of antibiotics, sterilization, disinfection methods and contamination control.
Prerequisite(s): BIO 130 or BIO 131 or BIO 166 or BIO 170 or BIO 171
(3,3) 4 credits
Fall, Spring, Summer

BIO 223 Principles of Ecology
The course introduces the nature of ecosystems, community organization and dynamics, and population growth and regulation. The laboratory will be primarily field oriented. Prerequisite(s): 1 year of college biology or permission of instructor
(3,3) 4 credits
Contingent on demand

BIO 235 Marine Biology
The ecological principles of the marine environment will be examined. There will be an emphasis on the classification, identification and economic importance of both the animals (Protozoa-Chordata) and the algae (microscopic and macroscopic). The flora and fauna of the Long Island region will be stressed with field trips and collections being an integral part of the course.
Prerequisite(s): BIO 130 or BIO 131 or BIO 192 or approval of this department chair
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BIO 240 Bioethics
This course will cover ethical issues raised as a result of modern advances in biotechnology which directly affect the quality of human life. Bioethics comprises every possible aspect of health care: medical, moral, political, religious, legal and financial. It scrutinizes outdated laws and deals with the enormous growth in available medical services. It takes into account our views of ourselves as members of a humane society. 
Prerequisite(s): One semester of college biology with a grade of C or better
(3,0) 3 credits Fall, Spring

BIO 256 Environmental Sampling and Analysis
Proper field techniques for sampling the water, land, and air environments will be emphasized. Laboratory procedures will involve the analysis of both chemical and biological parameters, including wastewater analysis, using New York State approved methodology. Vegetative transecting and beach contouring will also be included. Data presentation and report writing will be emphasized. Field trips and study will be an integral and required part of this course. Discussion of environmental laws and impact statements will be included.
Prerequisite(s): One semester of college biology with a laboratory, and one semester of college chemistry with a laboratory
(2,3) 3 credits Contingent on demand

BIO 290 Entomology II
Methods of greenhouse pest and disease control, including identification of major families of pests, diagnosis of diseases, principles of cultural and chemical control, and a survey of pests and diseases associated with economically important greenhouse crops.
Prerequisite(s): BIO 198
(2,2) 3 credits Contingent on demand

BIO 294 Vertebrate Physiology - Theory
This course investigates the principles of physiology in vertebrates with emphasis on mechanisms of integration and homeostasis at the cellular, organ and system level. It explores the comparative, experimental and evolutionary aspects of all vertebrate classes and surveys the impact of recent advances in cellular and molecular biology on this branch of the biological sciences.
(3,0) 3 credits Contingent on demand

BIO 295 Vertebrate Physiology Laboratory
This laboratory course is an inquiry into the experimental methods and models for understanding vertebrate physiology. It will explore the comparative, experimental and evolutionary aspects of the mechanisms of integration and homeostasis among select vertebrate classes. Laboratory exercises incorporate computer software-based exercises with classic physiology experiments designed to illustrate both the basic concepts of physiology as well as the comparative nature of these events in a number of vertebrate species.
Corequisite: BIO 294
(0,3) 1 credit Contingent on demand

BIO 316 General Microbiology
Fundamental principles of microbiology and the role that microbes play in the natural environment. The morphological and biochemical characterization of bacterial species important as disease-causing agents and food-spoilage agents. Emphasis on the food and water-borne diseases and applied sanitary practices for their effective control. Antimicrobial methods including physical, chemical and antibiotic agents. Applied methods involving analytical procedures for air, water, soil, milk, dairy products and foods and the demonstration of the normal microflora found in these materials.
Prerequisite(s): BIO 210, BIO 212, BIO 343, BIO 344L all with a C or better
(3,3) 4 credits Spring

BIO 340 Biopharmaceutical Regulation
This course introduces the student to Current Good Laboratory Practice (cGLP), Current Good Clinical Practice (cGCP), and Current Good Manufacturing Practice (cGMP) as defined in the Code of Federal Regulations Title 21. These regulations apply to all aspects of testing, clinical trials, and manufacturing of biopharmaceutical products under the authority of the Food and Drug Administration. The course will examine the application of these regulations to the bioprocessing, pharmaceutical, neuromedical, cosmeceutical, and allied industries.
Prerequisite(s): BIO 210 with a grade of C or better
(3,0) 3 credits Contingent on demand

BIO 343 Principles of Genetics - Theory
An introductory course in genetics for students majoring in biology and the health-related areas. Topics to be discussed include cytogenetics, immunogenetics, molecular genetics, population genetics and quantitative genetics. Computer simulations and demonstrations will present genetic principles.
Prerequisite(s): BIO 130, BIO 131, BIO 210, BIO 212 all with a C or better or BIO 130 and MLT 227 with a C or better
Corequisite: BIO 344L
(3,0) 3 credits Fall, Spring

BIO 344 Principles of Genetics - Laboratory
Laboratory exercises include the use of living organisms to illustrate genetic principles and techniques.
Corequisite: BIO 343
(0,3) 1 credit Fall, Spring

BIO 345 Introduction to Bioinformatics
This course is intended to teach the basic tools used in bioinformatics in order to investigate biological questions. Existing computer programs and databases will be used for gene searches, sequence comparisons, and phylogenetic analysis.
Prerequisite(s): BIO 343 with a C or better and BIO 344L with a C or better and BCS 101 or BCS 102 with a C or better
(3,0) 3 credits

BIO 348 Cell Biology
This course investigates how cells develop, work, communicate and control their activities. Topics include basic biochemistry and metabolism, DNA structure and function, membrane/organelle function and transport, cell communication, the cytoskeleton and cell division. At the completion of this course the student should be able to engage in the broad themes of cell and molecular biology and to relate these concepts to other studies in biology and other disciplines.
Prerequisite(s): BIO 130 + BIO 131 + BIO 210 + BIO 212 all with a C or better or BIO 130 and MLT 227 with a C or better
Corequisite: BIO 349
(3,0) 3 credits Fall, Spring

BIO 349 Cell Biology Laboratory
This course introduces students to the theory and methodology of protocols routinely used in research laboratories investigating cell structure and function. Students have the opportunity to use both common and high tech instruments to perform weekly laboratory exercises. Experimental design, controls and data presentation and analysis are emphasized.
Prerequisite(s): BIO 130, BIO 131, BIO 210, BIO 212 all with a C or better or BIO 130 and MLT 227 with a C or better
Corequisite: BIO 348
(0,3) 1 credit

BIO 353 Essentials of Plant Pathology
The study of the development of plant diseases caused by Plants, Animals, Fungi, Protists, Bacteria, Viruses and Viroids. Major diseases of economically important plants are emphasized. The disease process and disease cycles for representative pathogens are covered in relation to plant disease control methods.
BIO 354 Essentials of Plant Pathology Laboratory
The laboratory is designed to enable the student to acquire skills in collection and examination methods used for the diagnosis of plant diseases produced by biotic and abiotic agents, using microbial isolation and culturing techniques where applicable. The student will learn to recognize and identify (directly or indirectly) biotic plant pathogens among the Plants, Animals, Fungi, Protists, Bacteria, Viruses and Viroids.
Prerequisite(s): BIO 192
(0,2) 1 credit

BIO 355 Ecological Topics: The Structure and Function of Nature
This course theory introduces students to basic ecological concepts as they relate to the biotic and abiotic environment. It stresses the diversity of life and the impact that man, other organisms and environment have on each other. Laboratory exercises and field work will investigate the effects organisms have on each other as well as the effects of environmental conditions on growth and development. Students will also characterize the nature of selected site(s) in terms of species diversity using plot sampling techniques. Seminar type discussions require individuals or small groups of students to explore environmental issues. Topics for these discussions will be submitted to the instructor for appropriateness and approval. Students will be required to research and prepare a paper as well as make a presentation to the class. The class will be given opportunity to question each speaker following that individual’s presentation.
Prerequisite(s): 1 year of college biology or permission of instructor
(3,3) 4 credits

BIO 380 Pre-Professional Experience I
Recommended students will engage in one of the following for at least 135 hours: 1) health care volunteer work that involves patient assistance in the health care environment; 2) shadowing of a health care professional (physician, physician assistant, physical therapist, occupational therapist, dentist, veterinarian, etc.). The final grade is assigned by the Internship Coordinator based on consultation with the supervisor/health professional and evaluation of reports, logs, and a final report prepared by the student. Students must submit a resume to the internship coordinator at least 3 months before registering for the course.
Prerequisite(s): BIO 130 and 131 or BIO 166 or BIO 170 and BIO 171 or BIO 220 or BIO 316 with a C or better, recommendation by two Biology faculty members, submission of a resume to the Internship Coordinator at least 3 months prior to registering for the course, approval of the Internship Coordinator; additional courses in Human Anatomy & Physiology and/or Medical Microbiology recommended for some sites. HIPAA training must be completed before starting the course. IRB training may be required at some sites.
(0,9) 3 credits

BIO 381 Pre-Professional Experience II
Recommended students will engage in one of the following for at least 135 hours: 1) health care volunteer work that involves patient assistance in the health care environment; 2) shadowing of a health care professional (physician, physician assistant, physical therapist, occupational therapist, dentist, veterinarian, etc.). The final grade is assigned by the Internship Coordinator based on consultation with the supervisor/health professional and evaluation of reports, logs, and a final report prepared by the student. Students must submit a resume to the internship Coordinator at least 3 months before registering for the course.
Prerequisite(s): BIO 380 with a B or better, recommendation by two Biology faculty members, submission of a resume to the Internship Coordinator at least 3 months prior to registering for the course, approval of the Internship Coordinator; additional courses in Human Anatomy & Physiology and/or Medical Microbiology recommended for some sites. HIPAA training must be completed before starting the course. IRB training may be required at some sites.
(0,9) 3 credits

BIO 385 Pre-Professional Experience II
This course will focus on specific human viruses, including papilloma, herpes, smallpox, polio, measles, HIV, influenza, SARS and hepatitis viruses. Lectures will cover viral structures, viral strategies of invasion, viral lifecycles, viral offense and host defense, prevention and control of viral diseases, approaches for studying viruses, and public health.
Prerequisite(s): BIO 220 or BIO 316 with a C or better and BIO 348 and BIO 349L with a C or better
(3,0) 3 credits

BIO 416 Industrial Microbiology
This course will examine bioprocess fermentation methods and system designs that make use of microbial cells. Special conditions required for such biological materials as insect cell culture and plant tissue culture will also be surveyed. Procedures relating to sanitation, process safety, raw material documentation and maintenance, growth monitoring, harvesting, processing, and packaging will be included. Quality assurance methodology and regulatory requirements are cited in each aspect of this operation.
Prerequisite(s): BIO 316 or CHM 153 all with a grade of C or better
(3,3) 4 credits

BIO 441 Introduction to Molecular Biology
A detailed introduction to molecular biology, the course covers the techniques common to all molecular biology such as nucleic acid separation and visualization, PCR blotting, and sequencing. In addition, the course focuses on topics such as transcriptional regulation, RNA processing, DNA replication, DNA repair, and DNA recombination. Each is presented from both the view of prokaryotes as well as eukaryotes. Scientific journal articles highlighting class topics will be used to supplement class lectures.
Prerequisite(s): BIO 343 with a C or better and BIO 344 with C or better and BIO 347 with a C or better
(3,4) 5 credits

BIO 444 Forensic Molecular Biology
This course explores advanced molecular biological techniques and concepts as they apply to the study of forensic investigation. The course will cover background information on body fluid identification, DNA structure and function, analytical DNA techniques, and review advancements in the field of DNA typing. The primary focus will be the molecular biological technique known as short tandem repeats (STR) testing. Other topics covered include case studies, sample handling, DNA databanking (CODIS), mass disaster identification, Y chromosomal analysis, paternity testing, and validation procedures. The laboratory component of this course will give the students hands-on experience in techniques and experiments that are currently being employed by forensic biology laboratories across the country.
Note: Students who have completed BIO 430 or CRJ 430 may not receive credit for this course.
Prerequisite(s): BIO 348 and BIO 349L and CRJ 201 all with a grade of C or better
(3,3) 4 credits

BIO 450 Pharmaceutical Production Methods
This course provides a study of pharmaceutical dosage forms with emphasis on their formulation, development and technologies of production. Attention is directed toward the dosage form design, formulation and in vitro performance testing of compressed tablets, hard gelatin capsules, and controlled-release tablets. There is also an examination of methods of production, technology and regulation of sterile solutions, suspensions and lyophilized products at the product development scale, with appropriate application of good manufacturing practices. There is an introduction to pharmaceutical biotechnology techniques involved in the biosynthesis, formulation and delivery of peptide and protein therapeutic agents. The concepts of gene therapy and vaccine design are also presented.
Prerequisite(s): BIO 340 with a grade of C or better, CHM 260 with a grade of C or better, or CHM 270 with a grade of C or better & CHM 271 with a grade of C or better
Fall, Spring

BIO 455 Human Virology
This course will focus on specific human viruses, including papilloma, herpes, smallpox, polio, measles, HIV, influenza, SARS and hepatitis viruses. Lectures will cover viral structures, viral strategies of invasion, viral lifecycles, viral offense and host defense, prevention and control of viral diseases, approaches for studying viruses, and public health.
Prerequisite(s): BIO 220 or BIO 316 with a C or better and BIO 348 and BIO 349L with a C or better
(3,0) 3 credits

BIO 465 Industrial Microbiology
This course will examine bioprocess fermentation methods and system designs that make use of microbial cells. Special conditions required for such biological materials as insect cell culture and plant tissue culture will also be surveyed. Procedures relating to sanitation, process safety, raw material documentation and maintenance, growth monitoring, harvesting, processing, and packaging will be included. Quality assurance methodology and regulatory requirements are cited in each aspect of this operation.
Prerequisite(s): BIO 316 or CHM 153 all with a grade of C or better
(3,3) 4 credits

BIO 444 Forensic Molecular Biology
This course explores advanced molecular biological techniques and concepts as they apply to the study of forensic investigation. The course will cover background information on body fluid identification, DNA structure and function, analytical DNA techniques, and review advancements in the field of DNA typing. The primary focus will be the molecular biological technique known as short tandem repeats (STR) testing. Other topics covered include case studies, sample handling, DNA databanking (CODIS), mass disaster identification, Y chromosomal analysis, paternity testing, and validation procedures. The laboratory component of this course will give the students hands-on experience in techniques and experiments that are currently being employed by forensic biology laboratories across the country.
Note: Students who have completed BIO 430 or CRJ 430 may not receive credit for this course.
Prerequisite(s): BIO 348 and BIO 349L and CRJ 201 all with a grade of C or better
(3,3) 4 credits

BIO 450 Pharmaceutical Production Methods
This course provides a study of pharmaceutical dosage forms with emphasis on their formulation, development and technologies of production. Attention is directed toward the dosage form design, formulation and in vitro performance testing of compressed tablets, hard gelatin capsules, and controlled-release tablets. There is also an examination of methods of production, technology and regulation of sterile solutions, suspensions and lyophilized products at the product development scale, with appropriate application of good manufacturing practices. There is an introduction to pharmaceutical biotechnology techniques involved in the biosynthesis, formulation and delivery of peptide and protein therapeutic agents. The concepts of gene therapy and vaccine design are also presented.
Prerequisite(s): BIO 340 with a grade of C or better, CHM 260 with a grade of C or better, or CHM 270 with a grade of C or better & CHM 271 with a grade of C or better
Fall, Spring
BIO 425 Research Seminar: Independent Study
Continental work under the direction of a faculty advisor: Research activity and tutorials for a semester or to gain professional experience. Note: Students seeking credit for health care shadowing/assisting and/or volunteer work should register for BIO 380 and/or BIO 381 instead. Prerequisite(s): First Internship: BIO 316, BIO 343/344L and BIO 347 with a C or better, submission of resume 3 months in advance; Biology faculty recommendation or invitation. Subsequent Internship(s): previous Internship with a B or better, Biology faculty recommendation or invitation (0,3-12) 1-4 credits

BIO 476-486 Bioscience Internship Series
Bioscience majors may be recommended for or invited into one or more assignments in the Bioscience Internship Series, with the course number selected according to the length of the internship and whether it is a first or subsequent internship. Bioscience Internships A1 & A2 (BIO 476 & 477) represent short preliminary projects for 45 hours earning 1 credit. Bioscience Internships B1 & B2 (BIO 478 & 479) represent intermediate projects for 90 hours earning 2 credits. Bioscience Internships I, II, III, and IV (BIO 480, 481, 482, & 483) represent substantial projects or work experiences for 135 hours earning 3 credits. Bioscience Internship V, VI, and VII (BIO 484, 485, & 486) represent longer and more extensive projects or work experiences for 180 hours earning 4 credits. On-campus internships consist of a mentored research experience in a departmental laboratory by invitation from the faculty member conducting the research, who assigns the grade. Off-campus internships consist of a research or work experience under the direction of a professional mentor or supervisor in an off-campus research, manufacturing, or testing facility; the grade is assigned by the Internship Coordinator based on consultation with the mentor or supervisor and an evaluation of reports submitted by the intern.

Note: Students seeking credit for health care shadowing/assisting and/or volunteer work should register for BIO 380 and/or BIO 381 instead.

Prerequisite(s): First Internship: BIO 316, BIO 343/344L and BIO 347 with a C or better, submission of resume 3 months in advance; Biology faculty recommendation or invitation. Subsequent Internship(s): previous Internship with a B or better, Biology faculty recommendation or invitation (0,3-12) 1-4 credits

BIO 476-486 Bioscience Internship Series
Bioscience majors may be recommended for or invited into one or more assignments in the Bioscience Internship Series, with the course number selected according to the length of the internship and whether it is a first or subsequent internship. Bioscience Internships A1 & A2 (BIO 476 & 477) represent short preliminary projects for 45 hours earning 1 credit. Bioscience Internships B1 & B2 (BIO 478 & 479) represent intermediate projects for 90 hours earning 2 credits. Bioscience Internships I, II, III, and IV (BIO 480, 481, 482, & 483) represent substantial projects or work experiences for 135 hours earning 3 credits. Bioscience Internship V, VI, and VII (BIO 484, 485, & 486) represent longer and more extensive projects or work experiences for 180 hours earning 4 credits. On-campus internships consist of a mentored research experience in a departmental laboratory by invitation from the faculty member conducting the research, who assigns the grade. Off-campus internships consist of a research or work experience under the direction of a professional mentor or supervisor in an off-campus research, manufacturing, or testing facility; the grade is assigned by the Internship Coordinator based on consultation with the mentor or supervisor and an evaluation of reports submitted by the intern.

Note: Students seeking credit for health care shadowing/assisting and/or volunteer work should register for BIO 380 and/or BIO 381 instead.

Prerequisite(s): First Internship: BIO 316, BIO 343/344L and BIO 347 with a C or better, submission of resume 3 months in advance; Biology faculty recommendation or invitation. Subsequent Internship(s): previous Internship with a B or better, Biology faculty recommendation or invitation (0,3-12) 1-4 credits

BIO 476-486 Bioscience Internship Series
Bioscience majors may be recommended for or invited into one or more assignments in the Bioscience Internship Series, with the course number selected according to the length of the internship and whether it is a first or subsequent internship. Bioscience Internships A1 & A2 (BIO 476 & 477) represent short preliminary projects for 45 hours earning 1 credit. Bioscience Internships B1 & B2 (BIO 478 & 479) represent intermediate projects for 90 hours earning 2 credits. Bioscience Internships I, II, III, and IV (BIO 480, 481, 482, & 483) represent substantial projects or work experiences for 135 hours earning 3 credits. Bioscience Internship V, VI, and VII (BIO 484, 485, & 486) represent longer and more extensive projects or work experiences for 180 hours earning 4 credits. On-campus internships consist of a mentored research experience in a departmental laboratory by invitation from the faculty member conducting the research, who assigns the grade. Off-campus internships consist of a research or work experience under the direction of a professional mentor or supervisor in an off-campus research, manufacturing, or testing facility; the grade is assigned by the Internship Coordinator based on consultation with the mentor or supervisor and an evaluation of reports submitted by the intern.

Note: Students seeking credit for health care shadowing/assisting and/or volunteer work should register for BIO 380 and/or BIO 381 instead.

Prerequisite(s): First Internship: BIO 316, BIO 343/344L and BIO 347 with a C or better, submission of resume 3 months in advance; Biology faculty recommendation or invitation. Subsequent Internship(s): previous Internship with a B or better, Biology faculty recommendation or invitation (0,3-12) 1-4 credits
BUS 109H Honors Management Theories and Practices
The honors Principles of Management course covers the curriculum at an accelerated pace, providing class time for additional topics relevant to productivity and technology issues to be covered. This course is geared to the more motivated student. Students will explore several issues in depth via speeches, writing assignments and case study analysis. In addition, class time will be allocated to utilization of project management microcomputer software.
Note: Students completing this course may not receive credit for BUS 109.
Prerequisite(s): Minimum grade of B+ in Business Organization and Management, or approval of this department chair (3,0) 3 credits

BUS 109 Management Theories and Practices
This introductory course covers management principles pertaining to human resources, individual behavior in organizations, employee motivation and performance, and business ethics. Topics also include managing and the manager’s job; planning and decision making; employee performance appraisal and feedback; leadership and influence processes; interpersonal relations and communication; and managing work groups and teams.
Note: Students completing this course may not receive credit for BUS 211 (3,0) 3 credits

BUS 111H Honors Introduction to Business
This course provides depth and enrichment for the more motivated student. In addition to studies undertaken in the standard introduction to Business course offering, students will explore the many facets of business in greater detail and at an accelerated pace. Emphasis will be placed on an interdisciplinary approach including written and oral communications skills. Students will additionally have e business simulation projects utilizing microcomputer software. Students successfully completing the course with a grade of 2.0 or better will have an Honors designation on their transcript for the course.
Prerequisite(s): High School average of 85 or better, or the permission of the School of Business Dean (3,0) 3 credits

BUS 111 Introduction to Business
This course introduces the student to the fundamentals of American Business and its contemporary environment. It provides an overview of organizational, national, and international trends and their impact on enterprises both large and small. The course develops an understanding of important business concepts, principles, and practices that explain how businesses are formed, how they operate to accomplish their goals, and why/how their success depends on effective management, production, marketing and finance/accounting.
(3,0) 3 credits

BUS 121 Business Mathematics
The fundamentals of applied mathematics in the field of accounting, finance, marketing, and selling. Topics include interest, bank discount, insurance, and annuities. The use of arithmetic as a managerial tool is stressed.
(3,0) 3 credits

BUS 131 Marketing Principles
This course provides the student with a sound knowledge of the basic elements of the marketing process. Major topics include the features of consumer and organizational markets, market segmentation, and target market strategies. Product planning and development, brands, packaging and other product features are covered. Price determination and the use of various pricing strategies are discussed. The factors in the selection of channels of distribution and the features of wholesaling and retailing are considered. Elements of the promotional process such as sales, advertising, and sales promotion are included. Ethical and legal issues in marketing, marketing of services, global marketing, and marketing on the Internet are also covered.
(3,0) 3 credits

BUS 131H Honors Marketing Principles
This course provides the student with a sound knowledge of the basic elements of the marketing process. Major topics include the features of consumer and organizational markets, market segmentation, and target market strategies. Product planning and development, brands, packaging and other product features are covered. Price determination and the use of various pricing strategies are discussed. The factors in the selection of channels of distribution and the features of wholesaling and retailing are considered. Elements of the promotional process such as sales, advertising, and sales promotion are included. Ethical and legal issues in marketing, marketing of services, global marketing, and marketing on the Internet are also covered.
(3,0) 3 credits

BUS 141 Contemporary Business Communications
An introduction to the role and importance of effective communications in business. Key topics include the familiarization and practice in preparing common types of internal and external business communications; contemporary issues in business communication relating to technology, ethics, and nondiscriminatory language; memo and report writing with proper mechanics, style, and appropriate tone/attitude; and business presentations.
Prerequisite(s): EGL 101 and BCS 102 (3,0) 3 credits

BUS 188 Advertising Practices and Applications
This course will combine basic advertising principles with practical media application. This course shall introduce students to the business of advertising in a contemporary global environment. The course will explore concepts of advertising, including elements of media selection and copywriting within the parameters of internal budgets, management and the application of actual advertising creation. In addition, students will create advertising, integrating the roles of the creative director and marketing manager.
Note: Students completing this course may not receive credit for VIS 188 (3,0) 3 credits

BUS 201H Honors Corporate Finance
The honors course provides depth and enrichment for the more motivated student by covering the text material at a more rapid pace than usual. Included will be class meetings in the computer laboratory. Emphasis will be on an interdisciplinary approach stressing writing skills, oral communications and analytical tasks. Students will complete several case studies utilizing microcomputer spreadsheet programs, culminating in a research paper assessing the financial worthiness of a public corporation of the student’s own choice. Guest lecturers from on-campus, as well as off-campus, will be invited.
Prerequisite(s): Minimum grade of B in Principles of Accounting I and II, or permission of student’s Accounting Instructor (3,0) 3 credits

BUS 201 Corporate Finance
The overall aim of this course is to help students develop an understanding and appreciation of Finance as a business discipline - an analytical approach in assessing the financial worthiness of a business entity is stressed. Topics covered include time value of money; financial statement analysis; valuation models; risks and rates of return; calculating beta coefficients; working capital management; capital budgeting; the cost of capital leverage and dividend policy; and financial forecasting.
Prerequisite(s): BUS 101, BUS 102 (3,0) 3 credits

BUS 202 Business Law I
An introduction to the nature and sources of law, the role of the legal system, the law of torts and crimes, the law of contracts, and real and personal property.
(3,0) 3 credits

BUS 209H Honors Business Mathematics
This course provides the student with a sound knowledge of the basic elements of the marketing process. Major topics include the features of consumer and organizational markets, market segmentation, and target market strategies. Product planning and development, brands, packaging and other product features are covered. Price determination and the use of various pricing strategies are discussed. The factors in the selection of channels of distribution and the features of wholesaling and retailing are considered. Elements of the promotional process such as sales, advertising, and sales promotion are included. Ethical and legal issues in marketing, marketing of services, global marketing, and marketing on the Internet are also covered.
BUS 211 Honors Principles of Management
The honors Principles of Management course covers the curriculum at an accelerated pace, providing class time for additional topics relevant to productivity and technology issues to be covered. This course is geared to the more motivated student. Students will explore several issues in depth via speeches, writing assignments and case study analysis. In addition, class time will be allocated to utilization of project management microcomputer software. Note: Students completing this course may not receive credit for BUS 109.
Prerequisite(s): Minimum grade of B+ in Business Organization and Management, or the permission of the Department of Business Chair (3,0) 3 credits

BUS 220 Financial Information Systems
This course will further the understanding of accounting theory and will provide the opportunity to achieve competency in the use of computerized applications. The course will introduce students to internal control theory within a computerized financial information system. Use of the Web for accessing relevant information will also be introduced.
Prerequisite(s): BUS101
Corequisite(s): BUS102 (3,0) credits

BUS 230 Environmental Law
This elective course addresses concerns pertaining to the business environment, instructing students as to the unified ecological approach to which affect management. The political approach to business environmental concerns in the context of constitutional, common law and administrative law theories and case and statutory analysis are examined, referencing basic natural science technology. Designed as a first law course it introduces the business, horticulture and industrial technology student to the legal process applying relevant components of environmental law studies. A nationally adopted text of a major law publisher and contemporary business periodical articles on assigned topics are to be used extensively. (3,0) 3 credits

BUS 232 Electronic Commerce
This cross-listed business management and business computer systems course covers electronic commerce (EC) foundations, retailing methodologies, and marketing research. Focus will be on the various forms, strategies, and implementations of EC including business-to-business (B2B), business to consumer (B2C), and consumer to consumer (C2C). Also covered will be social networking, electronic payment systems, and public policy issues including privacy and intellectual property matters as well as recent information technology advancements. Note: Students completing this course may not receive credit for BCS 232
Prerequisite(s): BUS 109 or Management course and BCS 101 or BCS 102 I (3,0) 3 credits

BUS 240 Business Statistics
This course covers statistical concepts and techniques as applied to business applications. Topics include: data classification; experimental design; descriptive statistics; measures of central tendency and dispersion; probability concepts; binomial, Poisson and normal distributions; central limit theorem and confidence intervals. Extensive use of Excel to assist in the computational and graphical aspects of the subject.
Prerequisite(s): MP2 or MTH015 (3,0) 3 credits

BUS 240H Honors Business Statistics
The honors course will encourage students to recognize the interrelationships of Statistics with other business courses including marketing and auditing. The course will explore descriptive statistics, probability, statistical inference, hypothesis testing and regression analysis.
Prerequisite(s): The student who wishes to enroll in this course must have successfully completed a minimum of 3 years of high school level mathematics or MTH 103, or MTH 129. (3,0) 3 credits

BUS 250 Consumer Behavior
This course recognizes the central role of consumers in determining the fate of a firm's marketing efforts. Topics covered include the understanding of consumer motivation, perception, and learning, as well as the recognition of social influences on consumer behavior such as reference groups, opinion leadership, culture, and subcultures. Emphasis will be on the consumer's decision making process so that students can make more informed choices in the marketplace. Topics also include the methods marketers use to influence consumer behavior and corresponding ethical and legal issues.
Prerequisite(s): BUS 131 or Department approval (3,0) 3 credits

BUS 251 Retailing
This course helps students develop an understanding of the relationship of retailing to the marketing process and describes the fundamentals of modern retailing. A study is made of modern retail institutions. (3,0) 3 credits

BUS 253 Industrial Marketing
This course focuses on the marketing of industrial goods and services to industrial markets. Industrial product planning, channels of distribution, promotional activities and pricing strategies are emphasized. Other topics such as understanding industrial buying and evaluating potential markets are also covered.
Prerequisite(s): BUS 131 (3,0) 3 credits

BUS 254 Salesmanship
This course emphasizes the creative selling techniques used by professional salespeople. It covers all the important elements of the personal selling process with special emphasis placed on determining prospects’ needs, translating features into benefits, overcoming objections and closing methods. Participants will demonstrate their ability to apply the techniques discussed by delivering sales presentations.
Prerequisite(s): BUS 131 or Department approval (3,0) 3 credits

BUS 255 Advertising Principles
This course uses practical concepts to examine the role of advertising in the marketing process. Topics covered include: ethical issues involved in advertising, various types of advertising used by marketers, services performed by ad agencies, the creative side of advertising including basic elements of copywriting and design, how to prepare an ad budget, and the elements of media selection. Also covered are the various types of advertising media including magazines, newspapers, outdoor, transit, yellow pages, and direct mail as well as the features of advertising on television, radio, and the Internet.
Prerequisite(s): BUS 131 or Department approval (3,0) 3 credits

BUS 256 Sales Management
The major problems of sales management in the distribution of products and services; the selection, recruitment, and training of sales personnel; measurement of the effectiveness of salespeople, supervision and compensation of salespeople; sales quotas and budgets.
Prerequisite(s): BUS 254 or Department approval (3,0) 3 credits

BUS 257 Advertising Principles
This course uses practical concepts to examine the role of advertising in the marketing process. Topics covered include: ethical issues involved in advertising, various types of advertising used by marketers, services performed by ad agencies, the creative side of advertising including basic elements of copywriting and design, how to prepare an ad budget, and the elements of media selection. Also covered are the various types of advertising media including magazines, newspapers, outdoor, transit, yellow pages, and direct mail as well as the features of advertising on television, radio, and the Internet.
Prerequisite(s): BUS 131 or Department approval (3,0) 3 credits

BUS 258 Production Management
Presents a survey which informs the student about the development of modern industry and scientific management and will enable him/her to grasp the operating principles. (3,0) 3 credits
BUS 259 Public Relations
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.
(3.0) 3 credits

BUS 266 Personnel/Human Resource Management
This course develops an understanding of the important functions and tasks performed by the modern human resource department such as staffing, training, employee safety and compensation. Emphasis throughout will be on the partnership between the human resource department and management to ensure a motivated work force.
Prerequisite(s): BUS 109 or Department approval
(3.0) 3 credits

BUS 267 Small Business Management
This course helps students develop an understanding of the relationship of small business management to the management process. It describes the fundamentals of small business management. A study is made of major problems and pitfalls faced by managers of small businesses.
(3.0) 3 credits

BUS 268 Industrial Purchasing
The principles and techniques of purchasing as they apply in actual practice today. The purchasing area will be treated as a specialized function in the business organization. Constructive aspects of purchasing with emphasis on long-term policies and profit-making opportunities.
(3.0) 3 credits

BUS 271 Intermediate Accounting I
An in-depth study of the principles related to financial accounting topics and a study of recent developments in financial accounting required by the Financial Accounting Standards Board. Topics include the following: development of accounting standards; nature of the conceptual framework, assumptions and principles; review of the accounting process; continued study of the Income Statement, Balance Sheet and Statement of Cash Flows; time value of money; cash and receivables, inventories; acquisition and disposal of property, plant and equipment; depreciation and depletion; intangible assets; long-term Investment in Equity Securities and other assets.
Prerequisite(s): BUS 101, BUS 102
(3.0) 3 credits

BUS 272 Intermediate Accounting II
A continuation of the study of the principles related to financial accounting. This study will include a presentation of the following topics: stockholders; equity; dilutive securities; revenue recognition; accounting for income taxes; accounting for pensions and for leases; accounting changes and error analysis, full disclosure in financial reporting; financial reporting and changing prices; liabilities-current and contingent; liabilities-long term.
Prerequisite(s): BUS 271
(3.0) 3 credits

BUS 273 Cost Accounting
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(s): BUS 101, BUS 102
(3.0) 3 credits

BUS 278 Business Project
This is an independent study course designed to offer a student experience in research and performing special projects in business and/or related area of interest. A faculty member shall act as a Project Advisor. The project selected will utilize skills and knowledge acquired in previous business management and related courses. The number of credits received will be determined by the complexity of the project and agreed upon prior to the student’s starting this course.
Prerequisite(s): Permission of the department chair
(1.0) 1 credit or (3.0) 3 credits

BUS 280 International Business
This course will cover the rapid growth of international business and proliferation of multinational firms. Topics include the nature of international business and the historical development of global markets and marketing.
(3.0) 3 credits

BUS 281 Investments
To familiarize students with financial literature and facilities that are available as guides to the proper selection of securities and other types of investments. The course is covered from the perspective of the individual investor. As such, a logical portfolio commensurate with the financial goals of the individual is stressed. Financial information available both in published as well as Internet access format are covered.
(3.0) 3 credits

BUS 300 Operations Management
The course provides a conceptual foundation for more advanced courses in various management specialization's including operations strategies; competitiveness; productivity; product and service design; capacity planning; process selection and facility layout; design of work systems; location planning and analysis; and introduction to quality management.
Note: Students who have previously completed IND 301 cannot receive credit for BUS 300.
Prerequisite(s): BUS 109
(3.0) 3 credits

BUS 303 Planning & Controlling Operations
This course is an introduction to the concepts and techniques of sales and operations planning; managing inventory; master scheduling; material requirements planning; process design; work layout; location planning and analysis; and introduction to quality management.
Note: Students cannot receive credit for both BUS 303 and IND 303.
Prerequisite(s): BUS 109
(3.0) 3 credits

BUS 304 Business Law II
An introduction to the law of sales and lease contracts, letters of credit, commercial paper and secured transactions under the UCC and creditors’ rights and remedies, including suretyship and guaranty, insurance, wills, trusts, elder law and consumer protection.
Prerequisite(s): BUS 202 or Department approval
(3.0) 3 credits

BUS 305 Entrepreneurship
This course covers the process of creating and growing a new business venture through the introduction and development of a business idea. Also covered are the nature and importance of entrepreneurs, international entrepreneurship opportunities, and the development of business and marketing plans. Methods for financing the new venture through the use of case studies and practical applications will be discussed and covered in assignments.
Prerequisite(s): Managerial course or Department approval
(3.0) 3 credits

BUS 306 Project & Contract Management
This course covers the processes encountered in choosing, planning, controlling, and negotiating of projects and contracts in technology based firms. Topics include project and contract: feasibility; risk analysis;
selection; portfolio optimization; cost estimation and controls; capital budgeting; performance relating to negotiation, adjustments, and benchmark standards; and awareness and appreciation for ethical practices.

**Note:** Students completing this course may not receive credit for IND 306

**Prerequisite(s):** BUS 109

(3, 0) 3 credits

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**BUS 310 Principles of Taxation**

This course covers fundamental principles of income taxation under the Internal Revenue Code, related Regulations and court cases. Tax treatment of the individual is stressed, with emphasis on filing status, income and business deductions, and realization and recognition of capital gains and losses. Corporate and partnership taxation are introduced. Students are taught to recognize tax issues and gain the skills necessary to solve those issues.

**Prerequisite(s):** BUS 102 or permission of department chair

(3,0) 3 credits

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**BUS 311 Organizational Behavior**

This upper-division course presents the concepts of organizational behavior and structure as well as topics relating to motivation content and process theories; group communication and dynamics; decision making; causes and resolutions of organizational conflicts; and factors pertaining to influence, power, and politics in organizations.

**Note:** Students completing this course may not receive credit for PSY 311

**Prerequisite(s):** BUS 109 or PSY 101 or PSY 130 or PSY 131 or permission of department chair

(3,0) 3 credits

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**BUS 312 Purchasing & Supply Chain Management**

This course covers the purchasing and movement of materials into, through, and out of a firm; fundamentals of domestic and international transportation systems; distribution center, warehouse, and plant location; and management of multinational organizations and supply networks.

**Note:** Students who previously took IND 311 cannot receive credit for this course.

**Prerequisite(s):** BUS 109

(3, 0) 3 credits

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**BUS 316 Customer Relations & Quality**

This course covers the basics of customer relations and quality in industry and includes discussion of quality management principles and standards as well as communication techniques such as questionnaires to measure and assure customer satisfaction. The American Customer Satisfaction Index, J. D. Power and Associates Reports; Malcolm Baldrige National Quality Award; International Organization for Standardization (ISO 9000) Standards; and Automotive Quality (QS-9000) Standards will be discussed in the context of customer services and managerial responsibilities.

**Note:** Students completing this course may not receive credit for IND 316

**Prerequisite(s):** BUS 300 or IND 301

(3,0) 3 credits

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**BUS 317 Enterprise Resource Planning**

Enterprise Resources Planning (ERP) is an organizational and information systems approach that integrates planning, customer relationship management, decision making, master scheduling, material requirements planning, marketing, finance, electronic commerce and human resources. The course will include lectures and extensive use of supporting ERP software.

**Note:** Students who have previously completed BUS/IND 313 cannot receive credit for BUS 317.

**Prerequisite(s):** BUS 109

(3,0) 3 credits

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**BUS 320 International Marketing and Global Markets**

This course will examine the method by which manufacturing products are introduced in international markets. Emphasis will be placed on the marketing of sophisticated industrial products and marketing engineering product lines. Topics will include foreign market surveys and market research, joint ventures and establishing an overseas marketing and sales operations. This course will involve actual student assignments in conjunction with the Small Business Development Center in determining the expansion of regionally produced manufacturing products into global markets.

**Prerequisite(s):** BUS 131

(3,0) 3 credits

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**BUS 321 International Law**

This course provides study in the basic concepts and processes of the international legal system. The interaction of state, federal and international law as well as the relationship of international law and the American legal system are explained. Particular attention is given to current problems faced by managers and to the dominant political, social economic, and technological forces influencing the evolution of international law.

**Prerequisite(s):** BUS 202

(3,0) 3 credits

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**BUS 322 International Management**

This course will examine the critical issues and practices of international management. Emphasis will be placed on the multicultural workforce and worldwide developments. Topics will include planning, political risk, organizing, decision-making, and controlling as pertaining to international management and operations. Students will study human resource/personnel issues concerning selection and repatriation, communication skills, and labor relations in a global context. Ethics and social responsibility as well as future trends of international management will be explored. The course will include student assignments and case studies examining the issues affecting small businesses expanding operations into foreign markets.

**Prerequisite(s):** BUS 109

(3,0) 3 credits

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**BUS 327 Risk Management & Insurance**

This course is designed to assist the student in the identification and analysis of the major types of financial risk management and insurance. The course will analyze the needs and problems faced by individuals and corporations regarding risk management exposure and how these exposures to risk are addressed through various forms of insurance. Case studies involving risk management, insurance, and relevant ethical factors will be covered.

**Prerequisite(s):** BUS 201 or Department approval

(3,0) 3 credits

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**BUS 330 Cost Management Systems**

This upper-level pertains to the key elements of cost management systems of manufacturing and service organizations. Topics covered include: using cost drivers and activity based costing; eliminating non-value-added activities; costing product (service) life cycles; and justifying capital expenditures for computer integrated manufacturing systems.

**Prerequisite(s):** Two semesters of accounting

(3,0) 3 credits

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**BUS 340 Advanced Business Statistics**

This course covers advanced statistical concepts and techniques as applied to decision making and business applications. Topics include: estimating population values, hypothesis testing for one and two populations, analysis of variance, linear regression and correlation analysis, multiple regression analysis and model building, statistical process control, analyzing and forecasting time-series data, and decision-making analysis.

**Prerequisite(s):** BUS 240, statistics course, or Department approval

(3,0) 3 credits
BUS 352 Employment Law
This course reviews the field of law governing employment. Topics covered include the following: Employment relationship and procedure, selection, testing, privacy, termination, and arbitration; employment discrimination regarding the Civil Rights Act, Affirmative Action, racial discrimination, sex discrimination, family leave and pregnancy discrimination, sexual orientation, religious discrimination, national origin discrimination, age discrimination, and disability discrimination. Also covered are employment regulations regarding unions and collective bargaining agreements, wage and hour regulations, occupational safety and health, workers’ compensation, and employee benefits.
Prerequisite(s): BUS 202
(3,0) 3 credits

BUS 366 International Human Resource Management
The importance of managing cultural diversity is a critical component to deriving successful outcomes for the workplace endeavor as well as the criteria for individual advancement in one’s career in the global arena. The rapidly expanding involvement of the United States in global business activities has created a critical need for international business talent in all areas of business, and in particular, successful management of cultural differences to advance the team and the entity. This course addresses the understanding of cultural differences in global business and the art of negotiation to gain a win/win.
Prerequisite(s): BUS 109
(3,0) 3 credits

BUS 379 to 382 Business Internship I
This upper division course is designed to give students an opportunity to gain in-depth work experience and skills under the tutelage of a business professional. The work done by the student is guided by objectives agreed to by the work supervisor, Internship Coordinator and the student. Students are required to submit a written proposal, progress reports in the form of a weekly work experience journal and a final report to be presented to the Internship Coordinator and work supervisor.
Note: No more than 15 credits may be earned in total from BUS 379 to BUS 382 and BUS 479 to BUS 482.
Prerequisite(s): Junior level standing, Department approval, GPA of 3.0 or better
(1,8-35) 3-12 credits

BUS 400 Quality Techniques
This course covers quality tools and techniques used in problem solving and decision making. Topics include: Pareto charts; cause-and-effects diagrams; check sheets; histograms; scatter diagrams; quality function deployment; statistical process control; continuous improvement; Goldratt’s theory of constraints; benchmarking; just-in-time manufacturing; and implementing total quality. A written assignment will be required that integrates quality topics with problem solving and decision making tools and techniques.
Note: Students completing this course may not receive credit for IND 400.
Prerequisite(s): BUS 240 or MTH 110
(3,0) 3 credits

BUS 401 Quality Management
This course covers quality philosophies and concepts. Topics include: quality and global competitiveness; human resources and technology; total quality approach; strategic management; quality management and ethics; partnering for competitiveness; quality culture; customer satisfaction and retention; employee empowerment; leadership and change; team building and teamwork; communication and interpersonal relations; education and training; overcoming politics and negativity toward quality in the workplace; relationship of ISO 9000 and Total Quality Management. A written assignment will be required that integrates quality philosophies and concepts with management and human resources issues.
Note: Students completing this course may not receive credit for IND 401.
Prerequisite(s): BUS 300 or IND 301
(3,0) 3 credits

BUS 404 Financial Markets & Institutions
This senior level course describes the various financial markets and the financial institutions that serve those markets. Specific topics include financial intermediaries, primary and secondary financial markets, treasury and agency securities markets, municipal securities markets, financial futures markets, and stock markets in the U.S. and worldwide. Also included are evolving technologies, especially e-Business and the Internet, and their effect on financial markets and institutions. The course contains oral and written case study analyses utilizing electronic database research techniques.
Prerequisite(s): BUS 201 or Department approval
(3,0) 3 credits

BUS 406 Business Organization Law
An introduction to the law of agency, partnerships, corporations, limited liability companies, securities, regulations, bankruptcy, employment and anti-trust laws.
Prerequisite(s): BUS 202 or Department approval
(3,0) 3 credits

BUS 409 Strategic Management
This course covers key strategic management topics including the “strengths, weaknesses, opportunities, and threats” (SWOT) analysis. Organizations require strategic management processes that encompass planning, formulation, decision-making (implementation), and evaluation of long-term policies. International issues, codes of ethics, and ethical behavioral considerations are prominent components in the strategic management process will also be discussed. Students will be required to present oral and written case studies in class.
Note: Students who have previously completed IND 409 cannot receive credit for BUS 409.
Prerequisite(s): BUS 300 or IND 301
(3,0) 3 credits

BUS 410 Senior Project
This is a 45-hour independent study course. Students must obtain permission from a Project Advisor before registering for this course. Although there is some flexibility, most senior projects will involve student participation on-site in a company. The topic for the senior project will utilize skills and knowledge acquired in previous Management Technology and related courses.
Note: Students completing this course may not receive credit for IND 410.
Prerequisite(s): BUS 409 or IND 409
(1,6) 3 credits

BUS 411 Financial Statement Analysis
This course covers the main reasons for and techniques used in financial statement analysis. This analysis uses the historical record of companies, as presented in financial statements, to answer questions regarding a firm’s credit worthiness and risk; current and projected financial performance; strengths and weaknesses in financial position; and strategy development for future operations. The course includes analysis tools and techniques such as common size financial statements, trend statements, and financial ratios. Also covered will be sources of financial information embodied in corporate annual reports such as the auditor’s report; footnotes and supplemental schedules; and SEC Forms 10-K and 10-Q.
Prerequisite(s): BUS 201 or Department approval
(3,0) 3 credits

BUS 412 Business, Government & Society
This course covers the interrelationships among business, government, and society. Included also are the ethical, economic, political, and social issues managers face regarding consumers, employees, suppliers, the environment, government laws and regulations, and stockholders. These interrelationships and issues are discussed and analyzed in a managerial context employing stakeholder, historical, and global perspectives.
Individual and group case study presentations both in oral and written formats are a major focus of the course.

**Prerequisite(s):** College-level Management course or Department approval (3,0) 3 credits

**BUS 413 Advanced Enterprise Resource Planning**

This advanced-level Enterprise Resource Planning (ERP) course includes high-level information technology coverage of Scheduling, Planning, MRP, Logistics, Warehousing, Procurement, Quality, Vendor Management, Cost Accounting, Forecasting, KPI, Supply Chain and Customer Resource Management. Also covered are concepts and software applications pertaining to product design, development, manufacturing (production), marketing, sales and field service. This course emphasizes proficiency in the skill sets typically required within industry practices.

**Prerequisite(s):** BUS 300 or BCS 300 and BUS/BCS 317 (3,0) 3 credits

**BUS 421 Advanced Topics in Corporate Finance**

This advanced corporate financial management course covers topics taken from the Institute of Management Accountants Certified in Financial Management program Part 2CFM examination. Topics covered include working capital policy and management; strategic issues in finance; portfolio and risk management; external financial environment; and employee benefit and pension plans.

**Prerequisite(s):** BUS 201 or Department approval (3,0) 3 credits

**BUS 431 Managerial & Internal Controls Within the Business Enterprise**

This senior level course has a strategic orientation and is intended for future managers with responsibilities in the areas of finance, operations, management, information technology, and financial and managerial accounting. The course objectives focus on the appropriate use of internal controls in effectively managing and controlling processes across the business enterprise. In addition, the importance of the both the internal and external audit functions are reviewed in conjunction with management’s fiduciary responsibilities to the stakeholders of the enterprise. Specific topics include the overall control environment, corporate culture, business ethics and management’s responsibilities for implementing, monitoring and reporting on the adequacy of internal operating controls.

**Prerequisite(s):** BUS 201 or Department approval (3,0) 3 credits

**BUS 450 American Business History**

The course focuses on major problems in American business history covering the period from the early colonial period (mid-1700’s) through the present time. Biographical profiles of American leaders in industry and finance are included. The course makes extensive use of online database resources. Current topics such as industrial pollution, “oil shocks,” deregulation, e-Commerce, terrorism, and globalization are covered. Students will participate in oral group presentations.

**Note:** This is a BUS-designated course and as such does not satisfy the General Education American History requirement.

**Prerequisite(s):** BUS 109 (3,0) 3 credits

**BUS 460 Leadership & Ethics**

This advanced-level business management course covers theories, case studies, and skill development applications relating to effective leadership and ethics. Emphasis will be on the interrelated role of laws, cultural norms, attitudes, moral development, situational circumstances, and technologies as determining effects on ethical leadership. Coursework includes leadership- and ethics-related research literature and databases.

**Prerequisite(s):** BUS 109 or Management course, EGL 101, Senior-level standing (3,0) 3 credits

**BUS 470 Advanced Accounting**

This course covers accounting for partnerships: formation, operation, dissolution, and liquidation. Also covered are analysis of business combinations, statutory mergers, consolidations, acquisition of subsidiaries, preparation of consolidated financial statements including the equity method and elimination entries. Additionally, the course includes an introduction to foreign currency translation and transaction, the SEC, and the Sarbanes-Oxley Act.

**Prerequisite(s):** BUS 272 or Department approval (3,0) 3 credits

**BUS 471 Auditing**

This course covers professional ethics and possible legal liability of the auditor. Emphasized are Generally Accepted Standards (GAAS) and other standards related to attestation engagements and skills needed to apply that knowledge in attestation engagements; the role of internal control; uses of sampling; effects of information technology; the reports rendered by auditors; and the methods for preparing communications to satisfy engagement objectives.

**Prerequisite(s):** BUS 272 or Department approval (3,0) 3 credits

**BUS 479 to 482 Business Internship II**

This senior-level course is designed to give students who have completed BUS 379, or BUS 380, or BUS 381, or BUS 382 an opportunity to continue to gain in-depth experience and skills under the tutelage of a business professional. The work done by the student is guided by objectives agreed to by the work supervisor, Internship Coordinator, and the student. Students are required to submit a written proposal, progress reports in the form of a weekly work experience journal and a final report to be presented to the Internship Coordinator and work supervisor.

**Note:** No more than 15 credits may be earned in total from BUS 379 to BUS 382 and BUS 479 to BUS 482.

**Prerequisite(s):** Senior level standing, Departmental approval, GPA of 3.0 or better, BUS 379, or BUS 380, or BUS 381, or BUS 382. (1,8-35) 3-12 credits

**CHINESE**

**CHI 151 Chinese I Elementary**

A beginning course in Chinese emphasizing the gradual development of the four language skills: listening, speaking, reading and writing, with stress on communicative competence and cultural awareness.

(3,0) 3 credits

**CHI 152 Chinese II Elementary**

A continuation of CHI 151, this course emphasizes the gradual development of the four language skills: listening, speaking, reading and writing, with stress on communicative competence and cultural awareness.

**Prerequisite(s):** CHI 151, or 2-3 years of high school Chinese (3,0) 3 credits

**CHEMISTRY**

**CHM 111 Chemistry and the Public Interest**

This advanced course in General Chemistry which presents the ideas and methods of chemical science in a qualitative and conceptual fashion. This course assumes no previous science background and will emphasize the fundamentals of measurement, atomic theory, bonding, solutions, acids and bases, salts, equations, chemical arithmetic and energy transfer. Illustrations and applications of concepts will be drawn from every day life.
This course is intended to fulfill the science requirement of non-science majors and is not open to science, health science or pre-health majors. 
**Prerequisite(s):** High School Sequential (Integrated) Math I (3,0) 3 credits

### CHM 112 Chemistry and the Public Interest Laboratory

A one-semester laboratory course for non-science majors designed to provide students with experience in the methods of chemistry. Students will investigate the properties of substances, perform chemical analysis and substance identification, synthesize a drug and a natural product, and test manufacturers' claims for consumer products.  
**Prerequisite(s):** High School Sequential (Integrated) Math I (0,2) 1 credit

### CHM 124 Principles of Chemistry

A one semester survey of general chemistry. Emphasis is placed on quantitative applications of chemical concepts. Topics include: measurement, matter and energy, atomic structure, periodic table, chemical bonding, nomenclature, chemical stoichiometry, chemical equations, gases, liquids and solids, solutions, acids and bases, equilibrium and kinetics. This course will fulfill the requirement of certain science, health science, or pre-health programs that have an introductory chemistry course as a prerequisite(s).  
**Prerequisite(s):** High School Sequential (Integrated) Math I (3,3) 4 credits

### CHM 140 Introduction to General, Organic and Biochemistry

A one semester course with laboratory designed primarily for Dental Hygiene students and Biomedical Engineering Technology students. Basic principles of general, organic and biochemistry are presented with emphasis on their applications to health science. Topics include measurement, states of matter, bonding theory, solutions, acids, buffers and pH, and the structure and function of carbohydrates, lipids, sterols, amino acids and proteins and a molecular approach to enzymatic action, digestion, metabolism and nutrition.  
**Prerequisite(s):** High School Sequential (Integrated) Math I and High School chemistry with Laboratory or CHM 124 (3,2) 4 credits

### CHM 152 General Chemistry Principles I

The first part of a two-semester sequence in General Chemistry Principles with laboratory. This course covers the qualitative and quantitative aspects of scientific measurement, the nature of matter, gases, liquids and solids, energy, atomic theory, properties of elements, chemical bonding, molecular structure and properties, stoichiometry, thermochemistry and solutions.  
**Prerequisite(s):** High School Sequential (Integrated) Math 2 required (3,3) 4 credits

### CHM 153 General Chemistry Principles II

A continuation of General Chemistry Principles I, which includes laboratory. Topics include: solutions and their colligative properties, acids and bases, chemical equilibrium, ionic equilibrium, pH, buffers, titration curves, oxidation and reduction balancing, electrochemistry, chemical kinetics, the covalent bond and the shape of molecules.  
**Prerequisite(s):** CHM 152 or equivalent (3,3) 4 credits

### CHM 260 Fundamentals of Organic Chemistry

A one-semester course in organic chemistry designed to provide background in the fundamentals of nomenclature, mechanisms, structures and syntheses of carbon based compounds. This course is for science and health science majors who desire a general rather than a detailed knowledge of the compounds of carbon. Topics to be covered include: structure and bonding, acid/base chemistry, isomerism, stereochemistry and structure determination. Functional groups to be covered include: hydrocarbons, alcohols, ethers, aldehydes and ketones, carboxylic acids, carboxylic acid derivatives and amines. Laboratory work will include common organic techniques and experiments supporting the principles covered in lecture.  
**Prerequisite(s):** CHM 124 or CHM 153 (3,3) 4 credits

### CHM 270 Organic Chemistry I

A study of the compounds of carbon involving a thorough integration of observation and theory and emphasizing the relationships between structures, properties, mechanisms and reactions. This course, intended for science and pre-professional majors, covers topics such as bonding and structure, alkanes, alkenes, alkynes, cycloaliphatic hydrocarbons, stereochemistry, dienes, benzene, electrophilic aromatic substitution, arenes, spectroscopy and structure determination and includes laboratory.  
**Prerequisite(s):** CHM 153 or equivalent (3,4) 5 credits

### CHM 271 Organic Chemistry II

A continuation of CHM 270. Topics covered include: alkyl and aryl halides, alcohols and phenols, ethers and epoxides, carboxylic acids, esters, anhydrides, aldehydes, ketones, amines, amino acids, carbohydrates, heterocycles and polymers.  
**Prerequisite(s):** CHM 270 or equivalent (3,4) 5 credits

### CHM 285 Physiological Chemistry

This course consists of the discussion of carbohydrates, protein and lipid metabolism, chemistry of liver, kidney and respiratory functions, role of enzymes, vitamins and hormones, monitoring of therapeutic drugs, and drug interactions and toxicities. The laboratory experience focuses on methodology and interpretation of diagnostic tests.  
**Prerequisite(s):** High School Sequential (Integrated) Math 1 and High School Chemistry with Laboratory or CHM 124, plus BIO 170/171 (3,2) 4 credits

### CHM 324 Introduction to the Chemistry of Materials

An introductory course designed to study the chemistry of materials. Topics include semiconductors, corrosion, intro-duction to organic chemistry, polymer chemistry, polymeric substances, ceramics, composite materials.  
**Prerequisite(s):** High School Sequential (Integrated) Math 2, one year of college Physics, plus CHM 152 or equivalent (3,3) 4 credits

### CHM 380 Biochemistry

A one semester course covering the fundamentals of biochemistry. Topics covered include: the structure and function of important biomolecules such as carbohydrates, lipids, amino acids, proteins and nucleic acids; enzyme kinetics and the use of cofactors and coenzymes; and metabolic pathways including glycolysis, TCA, electron-transport system, fatty-acid and amino acid pathways. Laboratory work includes current biochemical laboratory techniques such as chromatography and electrophoresis, application of specific topics described above, and analysis of data from laboratory experiments.  
**Prerequisite(s):** CHM 260 or CHM 271 (3,3) 4 credits

### COMPUTER SCIENCE

#### CMP 125 Discrete Structures I - Foundations of Computer Science

A course to develop skills in analytical thinking and problem solving: logic sets, induction, relations and functions. Representation of algorithms: problem analysis and understanding, pre and post-conditions, invariants and verification. Introduction to sorting and searching algorithms.
Recursion and recursive algorithms. Graphs and their application. (4,0) 4 credits

**CMP 130 Principles of Computing**

Students are introduced to problem solving, algorithmic design and program development using the C programming language. Concepts of data typing, structured programming, procedural abstraction and program testing are presented in the context of a high-level programming language. Through case studies and laboratory work, students will analyze problems, design, test and debug programs to solve these problems and document their work.  
**Prerequisite(s):** CMP 125  
(2,2) 3 credits

**CMP 202 Assembly Language**

Computer structure, machine and assembly language, instruction execution, addressing techniques, and digital representation of data. Assembly language programs will be written and run.  
(3,0) 3 credits

**CMP 206 Numerical Methods**

Programming for successive approximation, error analysis, numerical integration, interpolation, polynomials, simultaneous equations, inversion of matrices, eigenvalues, and difference equations.  
**Prerequisite(s):** MTH 252 and MTH 245 and a working knowledge of at least one scientific computer language such as FORTRAN, PLI, or PASCAL  
(3,0) 3 credits

**CMP 227 Data Structure**

The representation and implementation of complex data types and their applications to programming problems and program design. Topics include: arrays and structured variables, stacks and queues in both sequential and dynamic storage representations, trees and graphs, recursion, sorting and searching methods, hashing.  
**Prerequisite(s):** CMP 125  
(3,0) 3 credits

**CMP 255 Principles of Programming Languages**

This course is intended to provide students with criteria needed to evaluate languages and their constructs. Included will be the issues of syntax and semantics, data types, control structures, binding, etc. Discussion and examples of imperative, logic and functional programming languages will be given; the exact choice will be at the discretion of the instructor. Also discussed will be object-oriented programming, concurrent, parallel and vector processors.  
**Prerequisite(s):** CMP 227  
(3,0) 3 credits

**CON 101 Introduction to Technology & Applied Programming**

A survey of technological concepts, terminology and a brief review of mathematical concepts. This course introduces concepts of vector and its applications. It introduces hands-on programming and its applications, and reviews problem solving techniques with technological applications.  
(1,2) 2 credits

**CON 103 Surveying**

The development of skills in the use of the basic surveying instruments—tape, level, transit. Trigonometric and differential leveling and cross-sectioning. Azimuth, bearing and angle determination by repetition procedures. Angular closures. Stadia and stadia reduction of inclined sights, topographic mapping by transit stadia and plan table methods.  
**Prerequisite(s):** CON 101  
(2,3) 3 credits

**CON 106 Statics**

A basic course in Statics the main objective course is to provide basic understanding of the principles of statics. Topics such as resultant of a force, equilibrium of forces, moments, couples, analysis of simple trusses, centroids, center of gravity, moments of inertia and friction are covered in this course.  
**Note:** Students completing this course cannot also receive credit for MET 201.  
**Prerequisite(s):** MTH 129  
(2,2) 3 credits

**CON 111 Graphics I**

To develop student’s abilities in lettering, technical sketching, drafting and the use of drafting instruments. The fundamentals of orthographic projection and pictorial drawings develop the student’s abilities to visualize and describe objects and structures graphically.  
(1,2) 2 credits

**CON 121 Graphics II**

Introduction to Computer Aided Drafting (CAD) for architectural and construction drawing. Topics include: commands and drawing strategies for 2-D and 3-D CAD work; architectural plans, sections, elevations, and details; information management; assembly of drawings and scales; and descriptive geometry.  
**Prerequisite(s):** CON 111 and Computer Competency  
(1,2) 2 credits

**CON 161 Materials & Methods of Construction I**

An introduction to the engineering properties and the uses of construction materials including soils, concrete, masonry, steel and wood. Classroom testing demonstrations of several materials are included. Conventional construction systems are studied. Orientation to the construction industry, associated professions, and the varieties of employment available.  
(3,0) 3 credits

**CON 162 Materials & Methods of Construction II**

A continuation of CON 161 extended to include the study of architectural properties of selected materials, methods of construction, and building components. Class work includes technical problem solving using quantitative and graphic analysis of specific building construction systems.  
**Prerequisite(s):** CON 161  
(3,0) 3 credit

**CON 207 Elements of Strength of Materials**

Introduces the concepts of stress, strain, bending and shear stresses, torsion and deflection of beams including elasticity, shear and moment diagrams for beams, moment of inertia of unsymmetrical sections, and thermal and combined stresses. Discussed are centroids, center of gravity and moments of inertia. Columns are also covered. Several related laboratory experiments are performed.  
**Prerequisite(s):** CON 106 or MET 201  
(2,2) 3 credits

**CON 299 Construction/Architecture Internship**

A program of practical experience and independent study to supplement and enrich classroom learning. It is a fully faculty supervised structured industrial experience. Periodical written reports and end of the assignment employer report required.  
**Prerequisite(s):** 3rd Semester standing, and Dept. Chair approval  
(0,6) 3 credits

**CON 301 Construction Methods & Equipment**

This course covers Methods & equipment used in heavy, commercial and residential construction. It includes earthmoving excavating, loading and hauling, rock excavation, compressed air and water systems, paving, and some selected topics from building construction.
**CON 302 Soils, Foundations & Earth Structure**  
This course introduces soil mechanics, foundation and earth structure to the engineering technology students. It includes soil classification, soil properties, soil stresses, earth pressures, bearing capacity, slope stability. It also discusses principles of foundation analysis and design, retaining walls, etc. Laboratory experiments to test behavior of soils included.  
Prerequisite(s): CON 207 or equivalent  
(3,0) 3 credits  
Fall

**CON 303 Hydraulics**  
This course provides a broad understanding of the basic principles of engineering hydraulics and hydrology. The emphasis is on application of the theories. It involves basic principle of hydraulics, flow in closed conduits, flow in open channels, hydraulic structures, principles of hydrology, groundwater hydraulics, and related laboratory experiments. Computer application included.  
Prerequisite(s): CON 207 or equivalent, PHY136 and one semester of calculus  
(2,2) 3 credits  
Spring

**CON 350 Introduction to Construction Engineering**  
This course introduces construction engineering principles and methods and equipment used in heavy and commercial construction. It includes earthmoving excavating, loading and hauling, rock excavation, compressed air and water systems, tunneling, and some selected topics from building construction.  
Prerequisite(s): CON162, CON 207  
(3,0) 3 credits

**CON 356 Estimating Fundamentals for Residential and Commercial Construction**  
This course focuses on fundamentals of residential and commercial construction estimating. Topics covered range from site work, forms, concrete, metals and masonry to plumbing and electricity. Also covered are wood framing and steel framing. Fundamentals of computer assisted estimating are introduced.  
Prerequisite(s): CON 162  
(3,0) 3 credits  
Spring

**CON 361 Governmental Building & Environmental Codes & Regulations**  
This course studies the concepts in the preparation of an environmental impact statement. It also reviews state and local building and land use controls. Attention will be given to governmental regulations required to obtain building permits for particular construction projects.  
Prerequisite(s): CON 162  
(3,0) 3 credits

**CON 362 History of Western Architecture**  
A study of the development of building design from the Ancient Egyptians and Greeks through the major historical periods to the present. Emphasis is on the evolution of the forms derived from indigenous technologies of the periods surveyed.  
Note: Students completing this course may not receive credit for ARC 362.  
Prerequisite(s): Department approval  
(3,0) 3 credits  
Fall

**CON 365 Highway Design & Construction**  
Design criteria for roadways including arterial signalization speed considerations, visual constraints and reaction criteria. Superelevation and spiral curve criteria. Construction quantification, haul considerations and mass curve analysis. Traffic considerations, destination surveys and road saturation criteria. Intersection analysis, striping, signage and lighting. Barriers, types and design considerations. Appurtenant structure construction such as drains, curbing, curb cuts and ramps. Pavement stability.  
Prerequisite(s): CON 303  
(3,0) 3 credits

**CON 366 Flood Protective Design**  
This course introduces Floodplain Management and National Flood Insurance program. It addresses the requirements for new construction in riverine and coastal flood prone areas. It also introduces various retrofitting alternatives and design of Flood Protective Structure. It uses extensively standards and manuals developed by the Federal Emergency Management Agency.  
Prerequisite(s): CON 162  
(3,0) 3 credits

**CON 399 Applied Research Topics**  
A program of applied research and independent study on topics a faculty member is currently working on. This course is meant to enrich the learning experience by introducing the student to methods and analysis in applied research. This is a fully faculty directed and supervised research experience. Applied research work will be presented in an appropriate forum.  
Prerequisite(s): Associate degree in Construction Technology or third year standing in a Construction Technology program  
(1,6) 3 credits  
Fall, Spring

**CON 401W Construction Project Management & Scheduling**  
This course gives an in-depth introduction and orientation to construction project management. This includes professional construction management in practice and methods in professional construction management. Some of the areas this course will cover are: Bidding and Award, Application of Controls, Scheduling, Planning and Control of Operations and Resources, Procurement Quality Assurance, Safety and Health in Construction, Industrial Relations. Computer Applications included.  
Prerequisite(s): CON 162 or equivalent  
(3,0) 3 credits  
Fall

**CON 402 Civil Engineering Materials**  
This course covers a study of the materials used for Civil Engineering construction purposes. The materials to be studied are concrete, steel, asphalt and wood. The physical parameters which contribute to material performance are studied. Appropriate laboratory tests are included. Documents from the American Concrete Institute and the American Society of Testing material will be used.  
Prerequisite(s): CON 162 or equivalent  
(2,2) 3 credits  
Fall

**CON 403 Structures I (Analysis & Concrete)**  
This course introduces fundamentals of structural analysis for beams, trusses, frames, etc. It includes statically determinate as well as indeterminate structures. This course also introduces fundamentals of reinforced concrete design including strength design for beams, columns, footings, and two way slabs. Computer application included.  
Prerequisite(s): CON 207 or equivalent  
(3,0) 3 credits  
Fall

**CON 404 Structures II (Steel & Wood)**  
This course introduces fundamentals of structural steel design. This includes design of tension members, compression members, beams, columns, and various connections. This course also teaches the basic principles of wood design, which includes formwork design and frame construction. Computer application is included.  
Prerequisite(s): CON 403  
(3,0) 3 credits  
Spring
CON 405 Advanced Estimating
This course attempts to give the students a broader perspective based on the various roles an estimator may play that requires preparation or interpretation of cost data. It provides an understanding of the importance of accurate estimating in controlling project cost and in determining project budgets. It includes references and examples that cover the wide range of project types. It also covers present computer technology in the field of estimating.
Prerequisite(s): CON 256 or equivalent experience.
(3,0) 3 credits  
Spring

CON 406 Advanced Project Planning and Scheduling
Topics include introduction to advanced project planning concepts and terminology, development of schedule activities and preparing and maintaining computerize schedules. Introduction to BIM.
Prerequisite(s): CON 401W
(3,0) 3 credits

CON 407 Building Commissioning
This course provides various aspects of Building Commissioning process that includes verifying all the subsystems of a building such as HVAC, plumbing, electrical, fire/life safety, building envelopes, lighting etc. Students will develop an understanding of the relationships between new construction and LEED Building Commissioning credits. Laboratory tests on start up and optimization of energy uses of HVAC, Electrical and Plumbing components are included.
(2,2) 3 credits

CON 496 Capstone Project
This is a capstone course. It utilizes skills and knowledge acquired in various courses in the curriculum and general education courses to produce a realistic life project. In this course students follow a faculty driven structured process to integrate various components of a project. This course introduces very little new materials, rather it helps the student to synthesize skills and knowledge learned in other courses to apply in real-life situations.
Prerequisite(s): Department Approval, Upper Division status & substantial completion of the program
(2,2) 3 credits  
Spring

CRIMINAL JUSTICE

CRJ 100 Introduction to Criminal Justice
Philosophical and historical background of policing throughout the free world; special emphasis is placed on the heritage of British and American policing, the governmental role of law enforcement in society; administration of American justice at all levels of government. The role of technology in law enforcement and crime prevention; history, modes and impact.
(3,0) 3 credits  
Fall, Spring, Summer

CRJ 101 Law Enforcement and Community Relations
Emphasis will be placed on the numerous and complex factors involved in the areas of human relations as they affect law enforcement. An examination of prejudices, myths, and discrimination, how to control them, and their impact in law enforcement.
(3,0) 3 credits  
Fall, Spring, Summer

CRJ 102 Juvenile Delinquency
An introduction and an orientation to the causes and treatment of juvenile delinquency; and examination of the methods of handling juvenile offenders, including interviewing techniques, screening, and referrals to social agencies.
(3,0) 3 credits  
Fall, Spring, Summer

CRJ 105 Corrections in America
This course will discuss the history of US correctional systems as a series of penal reforms. It will also explore the theoretical principles and critiques that direct and influence correctional policies and practices, past and present. In addition, it will investigate the populations and operations of various correctional institutions and programs: inmates and officers, jails, prisons, and community forms of correction. It will further assess the problems and challenges of current correctional practices: again populations, mental illness, and HIV/AIDS. Moreover, it will consider the future of corrections in the context of what has been called “a culture of control.”
(3,0) 3 credits

CRJ 115 Computer Forensics
This course is an orientation to and a study of computer forensic methods. The course will include an analysis of computer hardware that is utilized in forensic investigations such as motherboards, BIOS settings, hard and floppy disk drives and controllers, SCSI controllers and drives and implementations, RAID controllers, boot sequences, and related components. Also, this course will introduce the student to methods used in analyzing data storage devices and will include an examination of the physical structures, surfaces, and formats of hard disks and other media.
(3,0) 3 credits

CRJ 200W Criminal Investigation
Introduction to criminal investigation, technical methods used at the crime scene; development of clues, identification of suspects, criminal investigation procedures including the theory of an investigation, conduct at crime scenes; collection and preservation of physical evidence, analysis of the elements that constitute all crimes. Includes use of profile analysis and modus operandi databases in criminal investigation.
(3,0) 3 credits  
Fall, Spring

CRJ 201 Criminalistics
The role of the crime laboratory in the law enforcement organization, scope of a criminalistic operation; organizational orientation of the Criminalistics laboratory. Reconstruction of the crime scene through computer animation methods.
(3,0) 3 credits  
Spring, Summer

CRJ 203 Criminology
This course introduces anthropological, biological and economical, ecological, philosophical, psychological, psychiatric and sociological theories of criminal behavior as well as research evidence on the basic patterns of crime and crime trends. Computer based data analysis of index crimes selected from the Uniform Crime Reports compiled by the Federal Bureau of Investigation and National Crime Victimization Survey.
(3,0) 3 credits  
Fall, Summer

CRJ 204 Criminal Law
Elements and proof of frequent concern in law enforcement, with reference to principal rules of criminal liability. Importance of criminal law at the enforcement levels is considered from crime prevention to courtroom appearance. Particular emphasis will be placed on the New York State Penal Law. Case analysis method is employed to study case precedents.
(3,0) 3 credits  
Fall, Summer

CRJ 205 Criminal Procedure Law
Rules of evidence of particular importance at the operational level in law enforcement with emphasis on criminal procedure in areas such as arrest, force, and search and seizure. Particular emphasis will be placed on the New York State Criminal Procedure Law. The use of case tracking tools, within prosecution and court units and systems; the use of case outcome analytical techniques to determine trends in practice and effectiveness.
(3,0) 3 credits  
Spring, Summer
CRJ 211 Law Enforcement Administration
Principles of organization and management in law enforcement and public safety. Analysis of the major problems in police organization and administration. Developing, maintaining and using complex and multiple information systems for crime trends as well as internal organizational operations; use of management control systems and associated computer information analysis and simulation tools for police patrol planning and evaluation. Examination of the role of technology in the police crime prevention function.
(3,0) 3 credits

CRJ 217 Computer Forensics II
Computer Forensics III is a continuation of CRJ 115. This course covers topics such as disk geometry and organization. Master boot sector record and volume record creation and organization, file signatures for data type identification, cyclic redundancy checksum for data integrity validation, and RSA’s MD5 hash values for file authentication. Other subjects introduced include the UNIX “grep” search utility, search string techniques and file signature matching, and recovery of files that are intentionally deleted, hidden, or renamed. The course examines advanced computer-based evidentiary and “discovery” data methodologies, and includes a study of evidence identification, documentation, and chain of custody procedures.
Prerequisite(s): CRJ 117
(3,0) 3 credits

CRJ 218 Computer Forensics III
This course examines federal, state, and local computer fraud statutes to provide the student with a legal foundation to approach computer investigations. The course includes lecture elements that provide the student with the skills necessary to conduct successful computer-related investigations, and includes an examination of the processes involved in preparing an affidavit for a search warrant.
Prerequisite(s): CRJ 217
(3,0) 3 credits

CRJ 230 Biometrics and Identity Theft
This course will introduce the history of biometrics, physiological/or anatomical biometrics (fingerprint, iris, face, hand geometry, DNA, ear, vascular, etc), biometric sensor technology and anti-spoofing and soft biometrics. Students will learn how each biometric works and how and why different biometrics should be chosen for different applications, such as online banking, surveillance and transportation security. It also covers the security and privacy issue of biometrics. The course will provide students with an understanding of the nature and scope of Identity Theft and Computer-Related Fraud.
Prerequisite(s): CRJ 115
(3,0) 3 credits

CRJ 300 Forensic Psychology
This course introduces the student to the study of forensic psychology, a discipline that applies psychology to the law and the criminal justice system. Topics to be covered include: the psychologist’s role in the criminal courts, ethical dilemmas of psychologists working in the criminal justice system, psychological perspectives on the nature of criminality and the investigation of crime, criminal profiling, the effects of psychological empirical research on the outcome of criminal trials, and the psychology of the police, witnesses, offenders, and victims. Other new research topics in the field, such as the use of brain fingerprinting technology to determine criminal culpability, will also be explored.
Note: Students completing this course can not receive credit for PSY 300
Prerequisite(s): PSY 101 or CRJ 100
(3,0) 3 credits

CRJ 302 Managing Security Systems
The course introduces students to loss control theory with an analysis of tred models to develop comprehensive protection plans for organizations. This course offers a study of security program types; the concepts of Value-added contributions and cost containment; total quality management and the Baldrige process; benchmarking; security management methods; third party relationships in Security; types of outsourcing relationships; and Security Standards.
(3,0) 3 credits

CRJ 308 Forensic Technology
This course will introduce the student to photographic and video equipment and methods that are used for crime scene documentation and police surveillance operations, including forensic imaging analysis. The course will include a study of camera design and operation, lens selection and functions, role of light and illumination technologies, digital image editing software, and a review of the chain of custody procedures in recording and archiving images for courtroom presentations.
Prerequisite(s): CRJ 201
(3,0) 3 credits

CRJ 307 Criminal Justice Database Operations
This course introduces students to the meaning and structure of criminal justice data, the design of and security for criminal, legal and classified databases, the management of competing information security and confidentiality concerns, and the rights to access criminal justice records on the part of the public, corporate interests and media. The course examines criminal justice data collection throughout the legal life cycle (complaint, arrest, prosecution, court, corrections, probation and parole); understanding all through the prism of authenticity, value, timeliness, accountability, integration and preservation.
Prerequisite(s): CRJ 115
(3,0) 3 credits

CRJ 308 Forensic Technology
This course will introduce the student to photographic and video equipment and methods that are used for crime scene documentation and police surveillance operations, including forensic imaging analysis. The course will include a study of camera design and operation, lens selection and functions, role of light and illumination technologies, digital image editing software, and a review of the chain of custody procedures in recording and archiving images for courtroom presentations.
Prerequisite(s): CRJ 201
(3,0) 3 credits

CRJ 310 Computer Security I
This course focuses on security threats to an organization’s data network such as hackers, intruders, industrial espionage and sabotage, fraud and theft. The components of computer security architecture are studied as well as the principles of security networking protocols, encryption, fault tolerance techniques, and file system protection. Additional topics covered include the protection of computer hardware and software.
Prerequisite(s): CRJ 115
(3,0) 3 credits

CRJ 311 Computer Security II
This course is a continuation of CRJ 310, and includes an analysis of the security features of computer operating systems. The course will review the OSI model and describe how systems communicate with one another. Also included in the course is a detailed study of authentication technologies and how they are used to secure an organization’s assets and electronic transactions.
Prerequisite(s): CRJ 310
(3,0) 3 credits

CRJ 312 Computer Security III
The course examines computer software threats which include the birth, life and termination of computer viruses, their modes of operation, detection techniques, virus signatures and virus removal methods as well as other “virus like” threats which are delivered by e-mail and internet/intranet packets.
Prerequisite(s): CRJ 311
CRJ 314 Security Law and Policy
The course introduces students to the study of security law and security policies. Topics include crimes and offenses encountered by security personnel, application of criminal, civil and administrative law in the security field, employment liability, workplace violence and legal issues in security services. The course will also discuss the security policy formulation process. Students will learn how to develop security policy by incorporating federal regulatory requirements and business demands. Other topics examined are the National Information Infrastructure Protection Act, the Communications Decency Act and the Communications Privacy Act.
Prerequisite(s): CRJ 100
(3,0) 3 credits

CRJ 321 Access Control
A study of firewall technologies, including packet filtering, proxying, network address translation, and virtual private networks. An analysis of firewall architectures such as screening routers, screened hosts, hosts, screened subnets, perimeter networks, and internal firewalls. An examination of security threats on the internet, including service attacks, eavesdropping, worm programs, and the like. A study of access control hardware devices such as voice signatures, fingerprints, facial geometry, hand geometry, and retinal scanners-iris patterns for servers, workstations, and mobile computers.
Prerequisite(s): CRJ 115
(3,0,1) 3 credits

CRJ 322 Intrusion Detection
A study of the architecture, monitoring strategies, and analysis engines of intrusion detection. An examination of host based information sources. An analysis of information transformation processes for intrusion detection such as misuse and anomaly detection. A study of technical issues in intrusion detection such as scalability, interoperability, sensor control, reliability, integration, and user interfaces. An examination of legal matters in intrusion detection such as the rules of evidence with regard to system logs, and monitoring activities with regard to the right of privacy.
Prerequisite(s): CRJ 115
(3,0,1) 3 credits

CRJ 404 Cyber Law & Electronic Espionage
Prerequisite(s): CRJ 322
(3,0) 3 credits

CRJ 406 Crime Analysis and Mapping
Students will learn how to analyze and apply sampled data distributions to crime patterns. Digital tools will allow students to identify trends and patterns in order to determine police service allocations based on collected data. The science and foundation principles of geographical information systems design and operation will also be covered as specific applications for mapping techniques.
Prerequisite(s): CRJ 307
(3,2) 4 credits

CRJ 407 Crime Prevention Systems
The course will introduce the student to the theory and practice of crime prevention and examine topics such as the relationship of the built environment to crime, designing out crime, threat assessment, target hardening, and the like. The course will also focus on residential and commercial crime prevention systems. In addition, an analysis of false alarms from the perspective of the environment, end-user errors and equipment malfunctions will be conducted. The course concludes with a review of police studies that have examined the nature and extent of the false alarm problem as well as the laws that regulate the use of crime prevention systems by public and private agencies.
Prerequisite(s): CRJ 406
(3,2) 4 credits

CRJ 410 Senior Project
Independent study of a Security Systems or related area of interest to both the student and a faculty member who shall act as project Advisor. The project selected will utilize competencies acquired in previous Security Systems and related courses.
Prerequisite(s): Department approval
(1,6) 3 credits

CRJ 420 Physical Security I
A study of the theory and practice of managing the movement of people in organizational settings. This course examines the operating principles and applications of access control readers, card encoding technologies, locking assemblies, and system functions such as fail-safe, fail-secure, access levels, time zones, limited and unlimited access privileges, and the like. Also, the course focuses on the role of alarm systems in an organization's overall protection plan, from the control of violence in the workplace to preventing theft of company property. Sensor technologies as well as controls and signaling systems are analyzed and evaluated with applications in the following areas: perimeter, interior, occupant, and object protection.
Prerequisite(s): CRJ 302
(4,0,1) 4 credits

CRJ 421 Physical Security II
A continuation of CRJ 420. Advanced topics include a study of camera and lens types, monitors, video signaling systems, scanners, pan and tilt positioning devices, video motion detectors, camera housings and enclosures, switchers, multiplexers, time-lapse VCRs, digital video recorders, and their interactive role in the design of CCTV systems. Analysis of illumination technologies, including fluorescent, high and low pressure sodium, metal halide, ultraviolet, and infrared light sources. Other topics include the application philosophy as well as the hardware and software components of video surveillance computers, and the analysis of video field and frame compositions with reference to identification issues in criminal cases. An inquiry into the legal and ethical dimensions of surveillance, including Fourth Amendment guidelines, Plain View Doctrine cases, the Expectation of Privacy court cases and directives, and the Exclusionary Rule.
Prerequisite(s): CRJ 420
(3,0,1) 3 credits

CRJ 430 Forensic DNA Analysis
This course will introduce the student to modern molecular biological techniques that are used in a crime laboratory. The student will be taught the theory of forensic DNA testing as well as gain practical forensic field experience. The course will cover background information on body fluid identification, DNA structure and function, analytical DNA techniques, and review advancements in the field of DNA typing. The primary focus will be the molecular biological technique known as short tandem repeats (STR) testing. Other topics covered include sample handling, DNA databanking, results reporting, criminal cases, and case preparation and courtroom presentation.
Note: Students completing this course may not receive credit for BIO 430.
Prerequisite(s): CRJ 201
(2,3) 3 credits
DEN 015 Skills Refresher
This course is designed to assist students in maintaining their clinical skills following a break in their clinical sequence. Demonstration of clinical competency prior to re-entering the clinical sequence is necessary to ensure proper patient treatment.
(pass/fail) 2 ncu (non-credit units)

DEN 102 Dental Materials and Expanded Functions
The study of dental materials and devices. Laboratory manipulation of materials commonly used in the dental office. Expanded functions legally allowed in New York State shall be taught to clinical or where indicated in course outline, to laboratory proficiency.
Prerequisite(s): DEN 105 (2,2) 3 credits

DEN 105 Dental and Oral Anatomy
The study of the anatomy of the oral, facial complex and the morphology of the dentitions. Emphasis is placed on technical dental terminology as well as occlusion.
Prerequisite(s): Admission to the Dental Hygiene program (2,3) 3 credits

DEN 106 Oral Radiology
This course acquaints the student with the nature of ionizing radiation; the history of x-rays, their production and properties. The theory and practice of exposing, processing, mounting and analyzing dental radiographs are covered as well as radiation dosage, radiation hazards, and protective devices for patient and operator. Emphasis is placed on the identification of anatomic landmarks and the differentiation of these from conditions which indicate abnormality or disease.
Prerequisite(s): DEN 105 (2,2) 3 credits

DEN 108 Oral Histology and Embryology
This course reviews basic histological tissues. Microscopic structure of the oral tissues are studied and include the hard palate, soft palate, tongue, lip, salivary glands and tonsils. Emphasis is on the development of the face, the oral cavity and, in specific, the tooth and its surrounding tissues.
Prerequisite(s): DEN 105 (2,0) 2 credits

DEN 110 Preventive Oral Health Concepts I
This course is an introduction to the study of Dental Hygiene. It includes an overview of the dental hygiene profession to include current and future roles of the Dental hygienist. Special emphasis is placed on the hygienist as periodontal co-therapist, the responsibility of the dental hygienist to the profession and the development and strengthening of values that pertain to the profession of dental hygiene. Other topics to be covered include: principles of instrument design and use; disease transmission control; etiology and role of dental biofilm and calculus; importance of medical histories; measuring and recording of vital signs; office emergencies and planning implications for the medically compromised patient.
Prerequisite(s): DEN 115, DEN 105 (2,0) 2 credits

DEN 115 Clinical Dental Hygiene I
This is a clinical course in the practical application of dental hygiene techniques with supplemental discussions related to the clinical practice of the dental hygienist. Emphasis is placed on proper patient and operator positioning; use of dental equipment; maintenance of an aseptic environment; intra and extra-oral exams, measuring and recording of vital signs, instrumentation principles and techniques, recognizing and removing hard and soft deposits. Polishing and sharpening of instruments along with techniques and theory are included.
Corequisite(s): DEN 105, DEN 110 (0,8) 3 credits

DEN 120 Preventive Oral Health Concepts II
This course is a continuation of the study of Dental Hygiene. This course includes a detailed study of such preventive dental hygiene techniques as fluorides, nutritional counseling, patient motivation and management, oral physiotherapy techniques. Also covered are discussions on dental hygiene care planning, dental biofilm, calculus, caries, dental products, desensitization, periodontal and restorative charting. A research paper on an aspect of preventive dentistry will be expected from each student.
Prerequisite(s): DEN 105, DEN 110, DEN 115 Corequisite(s): DEN 125 (2,0) 2 credits

DEN 125 Clinical Dental Hygiene II
A continuation of the practical applications of dental hygiene techniques with supplemental lectures and discussions related to the clinical practice of the dental hygienist.
Prerequisite(s): DEN 105, DEN 110, DEN 115 Corequisite(s): DEN 120 (0,8) 3 credits

DEN 126 Periodontology
A basic understanding of the principles and concepts associated with periodontology, including a detailed study of the periodontal tissues in both health and disease. Special emphasis is placed on the role of the dental hygienist as a periodontal co-therapist in the development of skills necessary to provide initial non-surgical and supportive periodontal therapy within the framework of a comprehensive dental hygiene care plan.
Prerequisite(s): DEN 105, DEN 110, DEN 115, BIO 220 (2,0) 2 credits

DEN 201 Pain Management
This course is designed to provide an in depth study of anesthesia and pain management as it is used in Dentistry. The mechanism of actions of anesthetic agents as well as other methods of pain control will be studied, demonstrated, and practiced.
Prerequisite(s): DEN 102, 106, 108, 120, 125, 126 (1,2) 2 credits

DEN 203 Principles of Nutrition for Oral Health Professionals
This course is designed to educate the student in basic nutrition principles in regard to carbohydrates, protein, fats, vitamins, and minerals as they relate to health and wellness, nutrition and disease, energy balance, eating disorders, nutrition labeling, and the oral manifestations of nutritional deficiency. Dietary analysis of a client’s diet and review of pertinent nutrition literature is essential to the dental hygiene process of care and, therefore, is an important component to the scope of this course’s requirements.
Prerequisite(s): CHM 140 (2,0) 2 credits

DEN 205 Oral Pathology
The study of the fundamentals of microscopic and gross pathology. Discussion of general pathologic processes with emphasis on pathology of the oral, dental, and periodontal tissues and their etiology and prevention.
Prerequisite(s): BIO 166, BIO 220, DEN 120, DEN 125 (3,0) 3 credits

DEN 207 Oral Radiology Laboratory II
Laboratory activities and experiences are designed to provide students with further practice in developing skills with intra-oral radiographic techniques. In addition, students will learn supplemental techniques that are not limited to, but include: occlusal, extra-oral, digital, panoramic,
and special patients. Interpretation of radiographs will be emphasized, with integration of the role that radiographs play in the dental hygiene diagnosis and treatment planning.

**Prerequisite(s):** DEN 106

(0,2) 1 credit

### DEN 212 Pharmacology

The study of drug actions in the body with emphasis on those drugs used in dentistry. Legal implications, regulatory agencies, and principles of prescription writing will be explored.

**Prerequisite(s):** CHM140, BIO 166, BIO 220, DEN 120, DEN 125

(2,0) 2 credits

### DEN 221 Community Oral Health I

This course is an introduction to the concepts and core principles of community oral health and provides the student with an orientation to the role of the dental hygienist as educator, resource person and consumer advocate in the field of dental public health. An introduction to epidemiology and research principles will promote a better understanding of scientific literature. In addition, the student will develop the skills necessary to assess various target populations and select educational strategies that will effectively provide culturally appropriate oral health education programs.

**Prerequisite(s):** DEN 110, DEN 115

(2,0) 2 credits

### DEN 222 Community Oral Health II

This course is a continuation of the study of Community Oral Health I. Public health concepts, theories and their application at the federal, state and local levels will be explored. In addition, students will develop the skills necessary to complete a community oral health needs assessment. Participation in public health education projects is required.

**Prerequisite(s):** DEN 221

(2,0) 2 credits

### DEN 230 Preventive Oral Health Concepts III

This course is a continuation of the development, assessment and evaluation of dental hygiene practice and knowledge through a variety of classroom techniques. Values’ clarification, new advancements/technology, and current preventive methods will be discussed. Preventive oral health techniques and treatment care in association with special needs patients will be emphasized. It is intended that the student will utilize this information to assist him or her clinically to develop a patient specific protocol and comprehensive treatment plan for the child, adolescent, adult, geriatric and medically compromised patient.

**Prerequisite(s):** DEN 120, DEN 125, BIO 220

Corequisite(s): DEN 235

(2,0) 2 credits

### DEN 235 Clinical Dental Hygiene III

A continuation of the development of and application of dental hygiene skills and knowledge through clinical practice in hospitals and clinics both on and off campus. Clinical participation with new innovations and current preventive techniques in the practice of dental hygiene and application of the expanded roles of the dental hygienist will be emphasized.

**Prerequisite(s):** DEN 120, DEN 125, BIO 220

Corequisite(s): DEN 230

(0,12) 4 credits

### DEN 240 Dental Practice Management, Ethics and Jurisprudence

Through a variety of classroom techniques, the development, assessment and evaluation of dental hygiene practice will be continued. Lectures and discussions will focus on current issues in dental hygiene including ethics, jurisprudence, dental law, practice management and alternative practice settings. Presentations will be held on resume writing and role playing for job interviewing.

**Prerequisite(s):** DEN 230, DEN 235, BIO 220

Corequisite(s): DEN 245

(2,0) 2 credits

### DEN 245 Clinical Dental Hygiene IV

A continuation of the development and application of dental hygiene skills and knowledge through clinical practice in hospitals and clinics both on and off campus. Clinical participation with new innovations and current preventive techniques in the practice of dental hygiene and application of the expanded roles of the dental hygienist will be emphasized as well as dental practice management concepts.

**Prerequisite(s):** DEN 201, DEN 230, DEN 235, BIO 220

Corequisite(s): DEN 240

(0,16) 5 credits

### DEN 301W Current Issues in Dental Hygiene

This course is designed to provide an overview of current issues with an exploration of non-traditional career paths for the oral healthcare professional. It will cover topics ranging from the changing role of the dental hygienist in alternative practice opportunities, including trends in population demographics and self-regulation/independent practice. Relevant aspects of the political and economic influences of managed care and its impact on the profession of dental hygiene are reviewed. Students will become familiar with ethical considerations inherent to the professional code of ethics and standards for dental hygiene.

**Prerequisite(s):** Associate Degree in Dental Hygiene

(2,0) 2 credits

### DEN 303 Practice Management for Quality Assurance

The course will involve students with concerns related to practice management. Emphasis will be placed on assuring quality care while focusing on the principles and concepts of a client-centered practice environment in our evolving health delivery system. Economics for the practice, office management, comprehensive care plans, and the use of new technology will be explored to support the practice goals.

**Prerequisite(s):** Associate Degree in Dental Hygiene

(2,2) 3 credits

### DEN 307 Community Oral Health Program Planning

This course will build upon the basics of community oral health, introducing the student to a broader view of community health, its history and development, the impact of government and economics on the delivery of health care. An in-depth view on the uses of epidemiology will enable the student to document health needs and evaluate programs. Through field assignments students will experience several existing community oral health programs. Students will formulate a sample community oral health program plan as a final project.

**Prerequisite(s):** Associate Degree in Dental Hygiene

(3,0) 3 credits

### DEN 310 Teaching Strategies for Health Care Educators

Principles and methods of teaching and instructional design used by the health care educator such settings as school, community, hospital and/or higher education. Topics include performance objectives; planning, analysis, and formative evaluation of oral health instruction; basic instructional strategies and delivery systems; academic course development; and current issues and trends in dental health and hygiene education.

**Prerequisite(s):** Associate Degree in Dental Hygiene

(3,0) 3 credits

### DEN 401W Health Science Research: Principles & Methods

A profession seeking to enhance its professional stature strives for the continual development of a scientific body of knowledge fundamental
to its practice. Dental hygiene research involves a systematic search for knowledge about issues of importance to the dental hygiene profession. This course is designed to develop skills in scientific research. Emphasis is placed on the research process which includes problem identification, hypothesis writing, research design, data collection, data analysis and data interpretation.

Prerequisite(s): Associate Degree in Dental Hygiene (3,0) 3 credits

**DEN 402 Gerontology**
Gerontology is the study of aging. This course is designed to promote an understanding of the social, psychological, and biological aspects of the aging process and the relationship to health. The course will examine current theories of aging, demographic profiles of the older adult population, and the increased incidence of oral health problems as we age. Close examination of the aging process will enable the student to gain insight into the fastest growing portion of our population and recognize the needs of the elderly and the concerns of the 77 million baby boomers coming of age.

Prerequisite(s): Associate Degree in Dental Hygiene (3,0) 3 credits

**DEN 406W Proposals and Grant Management for Health Programs**
This course will introduce the student to the fundamentals of proposal writing and researching grant funding sources. Students will demonstrate the preparation of supporting documentation of need, implementation, evaluation, and budgeting. The culminating project of the course will be assembling the segments of a proposal or grant application into a final document that is worthy of submission.

Prerequisite(s): Associate Degree in Dental Hygiene (3,0) 3 credits

**DEN 407 Dental Hygiene Practicum Seminar**
This course is designed as a pre-requisite to DEN 409 Dental Hygiene Practicum. Students will have the opportunity to research and explore areas of special interest for their field placement practicum experience.

Prerequisite(s): Associate Degree in Dental Hygiene, completion of at least 4 of the core DEN courses, or permission of the Department. (1,0) 1 credit

**DEN 409 Dental Hygiene Practicum**
This course provides a foundational experience and will involve students in a self-directed practicum that is multidimensional in its scope. The specialized areas of interest are expanded to include, but are not limited to, education, research, corporate/business, health care delivery systems, and specialized practice interests.

Prerequisite(s): Associate Degree in Dental Hygiene, DEN 401, DEN 402, DEN 407 or permission of the Department (3,0) 3 credits

**DEN 410 Dental Hygiene Study Abroad in Sweden**
Bachelor degree Dental Hygiene students are afforded the opportunity to expand their international perspective of the profession. The course explores the health care delivery system and practices of dental hygiene. Students will experience the role of the Dental Hygienist in various practice settings, develop a deeper understanding of the profession, participate in research investigations and explore areas of interest.

Prerequisite(s): Associate Degree in Dental Hygiene, Permission of Department (2,10) 4 credits

**ECONOMICS**

**ECO 156 Principles of Economics (Macroeconomics)**
A macroeconomic study of the household, business and government sectors of the American economy, supply-demand analysis, and an overview of national income accounting, business cycles, and the nature and effect of monetary and fiscal policies.

Fall, Spring

(3,0) 3 credits

**ECO 157 Principles of Economics (Microeconomic)**
Discusses the American economy in microeconomic terms, the operation of supply, demand, and elasticity, marginal utility and indifference curve analysis, the business firm in competition and monopoly, and the economic and political significance of shifting currents in the nation’s balance-of-payments and balance-of-trade transactions.

Fall, Spring

(3,0) 3 credits

**ECO 255 Money and Banking**
A description of American central banking, the structure and development of commercial banks and non-bank financial intermediaries, the nation’s money and capital markets, bank regulation and supervision, monetary theory and its policy implications, and the operation of the system of international payments.

Prerequisite(s): ECO 156 (3,0) 3 credits

**ECO 259 Contemporary Economic Problems and Issues**
Explores and analyzes the problems and issues of inflation, unemployment, the necessity of urban renewal, the growth of corporate conglomerates, the social and political ramifications in the world’s money markets, together with the reasons giving rise to these occurrences.

Prerequisite(s): ECO 156 (3,0) 3 credits

**ECO 260 Intermediate Microeconomics**
This course provides students with a critical examination and introduction to the analysis of markets, demand theory, production, theory of the firm, market structure, general equilibrium and welfare analysis, and introductory game theory. The course introduces students to introductory modeling and mathematical methods used in microeconomics to model and estimate demand relationships, production functions, market behavior, and risk and uncertainty.

Note: Students completing this course may not receive credit for ECO 262

Prerequisite(s): ECO 157, MTH 129 or MTH 117

(3,0) 3 credits

**ECO 262 Managerial Economics**
This course introduces students to the use of economic methods for managerial decision-making. The focus of the course is on the practical application of economic techniques to business problems including; the theory of the firm, demand estimation, production functions, cost estimation, market structure, pricing strategy, and game theory.

Prerequisite(s): ECO 157, MTH 129 or MTH 117, MTH 110

Note: Students completing this course may not receive credit for ECO 260

(3,0) 3 credits

**ECO 270 Intermediate Macroeconomics**
Topics to be covered: Study of aggregate economic analysis, with attention to the determination of the level of income, employment, and inflation (IS-LM); Fiscal and monetary stabilization policies, Critically examines both theories and the policies associated with them; the macroeconomic implications of fixed and flexible exchange rates in the
presence of international capital mobility; supply-sided economics.  
Prerequisite(s): ECO 156, MTH 129 or MTH 117  
(3.0) 3 credits

ECO 303 Arts and Entertainment Economics  
An analysis and in-depth study of the economics and economic impact of the arts and entertainment activities. Topics include arts demand and supply, live performing and cultural arts, profit and non-profit entertainment industries, music and film industry (recorded arts) arts venues, museums, and performing arts centers and economic models of nonprofit cultural organizations.  
Prerequisite(s): ECO 156 or ECO 157 or approval of this department chair  
(3.0) 3 credits

ECO 304 Sports Economics  
An analysis and in-depth study of the economics and economic impact of professional and amateur sports. Topics include team and league structure, labor relations, stadium financing, consumer demand for sports, and the role and impact of public and private subsidies. The student should be able to: identify and explain the economic principles and problems associated with sports team ownership, stadium economics, as well as the impact and effects of radio and television broadcast rights on sports economics.  
Prerequisite(s): ECO 156 or ECO 157  
(3.0) 3 credits

ECO 310 Health Economics and Policy  
The aim of this course is to introduce students to the application of economic thinking to the analysis of health policy and health systems. Specifically, we will survey the organization, financing and delivery of health services, the economic evaluation of alternative methods of providing health care, priority setting and resource allocation and the health behaviors of individuals.  
Prerequisite(s): ECO 156, ECO 157  
(3.0) 3 credits

ECO 312 Economics of Non-Profit Organizations, NGO’s, and Philanthropic Organizations  
Nonprofit organizations have grown in numbers, wealth, and importance throughout the world over the past fifty years. This course provides a transnational overview of the statutory, regulatory, and tax environments in which nonprofits operate; the strategies they use in adapting to changing sources of funding and relations to government; and the role of public expectations in influencing their behavior. Readings, discussions, and written assignments are intended to help students to think critically about the challenges managers and policymakers face with the continuing growth of the nonprofit organizations domestically and internationally.  
Prerequisite(s): ECO 156 and ECO 157  
(3.0) 3 credits

ECO 320 Internet and Network Economics  
A study of the economic structure and growth of the modern economy focusing on the effect and impact of emerging technologies on industry, employment, financial markets, and market structure.  
Prerequisite(s): ECO 156 or ECO 157 or approval of this department chair  
(3.0) 3 credits

ECO 321 Engineering Economics  
This course will provide students with a basic understanding of the economic aspects of engineering in terms of the evaluation of engineering proposals with respect to their worth and cost. Topics include: introduction to Engineering Economics; interest and interest formulas; equivalence and equivalence calculations; evaluation of replacement alternatives and operational activities; basic fundamentals of cost accounting.  
Prerequisite(s): Admission to a Tech program or approval of this department chair  
(3.0) 3 credits

ECO 330 Modern Economic Thought  
The purpose of this course is to study the most important economic theories of the recent past in order to gain a better understanding, not only of these earlier economic theories, but also of the nature of economic theory in general and of the strengths and weaknesses of modern micro and macroeconomics and policymaking. We will study the major schools of Modern Economic Thought – Neo-Classical, Austrian, Keynesian, Monetarist, etc. We will examine these theories to trace the long term thought on economic problems like value theory, money & inflation, free trade, macroeconomic stability, etc.  
Prerequisite(s): ECO 156 and ECO 157  
(3.0) 3 credits

ECO 340 International Trade  
This course provides a comprehensive exposition of the theory and principles of international trade, the importance of international trade in interdependent economics, and a knowledge of international trade institutions and how they relate to U.S. commercial policy. The material will employ an analytical as well as historical and institutional approach.  
Prerequisite(s): ECO 156 or 157  
(3.0) 3 credits

ECO 341 International Finance  
Discusses and provides a broad overview of the theoretical and practical knowledge of international finance, its relationships to financial markets, and the international monetary system as it relates to the U.S. economy. The course work will focus on balance of payments, foreign exchange markets and the international monetary system.  
Prerequisite(s): ECO 156 or ECO 157  
(3.0) 3 credits

ECO 342 Financial Economics  
This course introduces students to the basic mathematical model, techniques, and forms of analysis used in financial economic analysis. Topics covered include uncertainty and financial decision-making, mean-variance model of portfolio selection, Black-Scholes option pricing formula, utility functions, computational techniques and stochastic volatility.  
Prerequisite(s): ECO 156, ECO 157 and ECO 250  
(3.0) 3 credits

ECO 350 Economics of Global Disasters  
This course focuses on the inter-relationship between natural and manmade hazards and disasters and the economy. Disasters within the economic and sociology literature arise when an event impacts the physical, social and economic infrastructure beyond its normal absorptive capacity. Topics covered and examined include natural hazards and their effects on regional development, manmade disasters, methods of hazard analysis, impact estimation techniques, and disaster planning and mitigation, public policy and issues.  
Prerequisite(s): ECO 156 and ECO 157  
(3.0) 3 credits

ECO 358 Economics of Labor  
Economics of Labor explores how individuals enhance their economic well-being through their work behavior and examines the role of labor markets in explaining disparities of wealth. Topics include the static labor market and its internal structure, the composition of the labor force, the nature of a job search, the life cycle human capital model, determination and classification of wages and wage structures, the American labor movement and the role of labor unions.  
Prerequisite(s): ECO 156 or ECO 157  
(3.0) 3 credits
ECO 380 Econometrics
The course will focus on application of statistics and mathematics to problems of formulating and estimating models of economic behavior. Topics to be covered: Fundamentals of probability and statistics used in economics and applied science. Introduction to central limit theorem and Gauss Markov theorem; Univariate and Multivariate regression using Ordinary Least Square (OLS); Finite and large-sample properties of the classical regression models; Dummy variables and varying parameter models; specification analysis.
Prerequisite(s): MTH 110, MTH 117 or MTH 129, ECO 156 or ECO 157 (3,0) 3 credits

ECO 401 Industrial Organization
This course teaches how to bring industrial organization theory to data and vice-versa. We will cover strategic models of firm competition and selected trade policy issues. We will use an explicit game-theoretic approach and study simplified versions of theoretical models from Industrial Organization and International Trade. The theoretical material will be illustrated with case studies and examples. The focus will be on different topic including monopoly and competition, cartels and collusion, entry and market structure, price discrimination, information and competition, technological change and competition, and empirical analysis of auctions and organizations.
Prerequisite(s): ECO 260 or 262, ECO 255 or 270 (3,0) 3 credits

ECO 410 Public Finance/Public Sector Economics
This course introduces students to the issues, interactions and inter-relationships arising between the market and government policy-making. Topics covered include: tools of public finance, budget analysis, externalities, political economy cost-benefit analysis, taxation and policy, social insurance, income distribution and welfare.
Prerequisite(s): ECO 260 or 262, ECO 255 or 270 (3,0) 3 credits

ECO 412 Cost-Benefit Analysis
This course will focus on the principles and practices of applied economics and welfare analysis. The basic theory of cost-benefit analysis is presented and its relevance for social policy analysis is established. Applications of cost-benefit analysis are examined in the light of management decision making, theoretical grounding in finance, accounting, marketing, investment and planning. Its applications in health care industry, non-profit sector, entertainment sector, transportation sector and Information Technology sector are also examined.
Prerequisite(s): ECO 260 or 262, ECO 255 or 270 (3,0) 3 credits

ECO 415 Planning Theory and Analysis
The basic objective of this course is to introduce the key players and landscapes, in which economic development is practiced, to provide a basic theoretical foundation in economic development studies, to address economic development strategies and policy alternatives, and to explore financial options available for economic development. Students in this course will use Microsoft Excel spreadsheet software to apply basic planning methods to real planning and economic development issues and data sets. Class meetings will include both lectures and applied case problems in demography, land use, regional economic development and transportation.
Prerequisite(s): ECO 260 or 262, ECO 255 or 270 (3,0) 3 credits

ECO 420 Economics of Science and Technology
This course is an examination of technology based growth and development both in historical and current contexts. Topics include technology-based economic development, the role of human capital, technology transfer, intellectual property rights and patents, and network economics.
Prerequisite(s): ECO 260 or 262, ECO 255 or 270 (3,0) 3 credits

ECO 430 Urban and Regional Economics
This course provides an introduction to urban economics within a context of public policy and planning. The problems of rapid urban growth, urban sprawl, spatial mismatch of jobs and residential locations of low-income workers, traffic congestion, affordable housing, education, homelessness, crime, and poverty concentration are some of the byproducts of the dynamics of metropolitan markets for real estate, labor and transportation. We examine and evaluate critically the accounting and economic frameworks used to measure regional economic growth and review multipliers, backward and forward linkages, supply chains, and other measures. We discuss how these concepts can be used to assess employment and environmental impacts and infrastructure investments, accounting for measurement problems, such as the underground economy. We review price indices, employment and industrial location measures, and shift-share analyses. Economic growth and development is analyzed with the focus on the dynamics of strategic regional policy making.
Prerequisite(s): ECO 260 or 262, and ECO 255 or 270 (3,0) 3 credits

ECO 435 Environmental Economics & Policy
This course provides a survey of the fundamental concepts underlying economic approaches to environmental policy, illustrates applications of these concepts in the real world, and offers students the opportunity to apply their new knowledge toward understanding a current environmental problem. The course will encourage students to think critically, to speak and write simply and clearly, to own and use a body of facts and ideas that are widely known, to detect errors and acies, and to resolve intellectual problems.
Prerequisite(s): ECO 260 or 262 and ECO 255 or 270 (3,0) 3 credits

ECO 440 Topics in Applied Economics
A treatment of diverse topics chosen for their importance in current economics. The course will require extensive readings, analysis, and written work. Students should consult with the department prior to registering for this course.
Prerequisite(s): ECO 260 or 262 and ECO 255 or 270 (3,0) 3 credits

ECO 441 Economics of Gender
In this class economics theory and analysis will be used to address questions on gender differences in education, career choices, household decisions and earnings. Models of labor supply and demand, allocation of resources within household, human capital, earning equation and discrimination will be introduced and data will be examined to test these economic theories. Gender-related policy issues and applications will also be discussed.
Prerequisite(s): ECO 260 or 262 and ECO 255 or 270 (3,0) 3 credits

ECO 445 Forecasting
This course covers the methodology and applications of econometric forecasting and time series analysis. Topics include linear regression model, stationarity, modeling seasonality, ARIMA models, and volatility.
Prerequisite(s): ECO 260 or 262, ECO 255 or 270, and ECO 380 (3,0) 3 credits

ECO 480 Internship
Advanced third and fourth year Applied Economics students will be placed in a public or private sector setting in which the student will be able to gain work experience in applied economic analysis. A written report on the internship experience is required of the student at the conclusion of the internship. Students may not repeat this course for credit.
Prerequisite(s): ECO 250, ECO 260 or 262, ECO 255 or 270, ECO 380 (3,0) 3 credits

ECO 490W Economic Research and Reporting
This course introduces students to the methods and techniques of
economic analysis, research and report writing. Topics include methods of impact analysis, data and statistical analysis, interpretation of results, documentation, article preparation, and the report presentation.

Prerequisite(s): ECO 250, ECO 260 or 262, ECO 255 or 270, ECO 380
(3,0) 3 credits

ECO 491 Applied Economic Analysis / Senior Project
This course is a follow-up to the Economic Research and Reporting course. Its goal is to prepare students to conduct independent research.

In consultation with their advisor, students will develop a senior research project in an area of current economic interest. They will participate in seminars and present their research, culminating in a completed report and presentation on their research topic.

Prerequisite(s): ECO 490W
(3,0) 3 credits

ELECTRICAL ENGINEERING TECHNOLOGY

EET 104 DC/AC Circuits
An introductory course to the fundamentals and basic principles of DC and AC circuits. Topics covered include: the definition of current, voltage and passive circuit elements such as, resistors, capacitors, and inductors, through their I-V characteristic relationships. Ohm’s Law, Power, Kirchoff’s Current and Voltage Laws, Voltage and Current Divider Rules, and their basic applications in the analysis of series, parallel and series-parallel circuits. The fundamental Network Theorems, Superposition, Thévenin’s and Norton’s equivalent circuits and Maximum Power Transfer, AC signal waveforms and their Average and RMS value, alternating current, voltage and power resistors, capacitors and inductors in AC circuits, ideal transformers and the concept of resonance. Introduction to the operation and basic applications of first order passive, low and high pass, RC filters.

Prerequisite(s): MTH 116
(3,2) 4 credits

EET 105 Introduction to Digital Electronics
An introduction to the fundamental concepts of Digital Electronics. Topics covered: Number Systems, Boolean Algebra, Logic Gates, Combinational Circuits, Karnaugh Map Minimization Techniques, Adders, Signed Numbers, Multiplexers, Code-Converters, Decoders, Demultiplexers, Comparators and 7-segment displays. The laboratory component of the course reinforces the topics covered in the theory through relevant experiments performed by each student on logic trainers. Students will become familiar with commonly adopted techniques of measurement using an oscilloscope.

Prerequisite(s) or Corequisite: EET 104 or EET 111
(1,3) 4 credits

EET 110 Computer Applications
An introduction to computer programming with applications. Examples and assignments are drawn from problems in Electrical Engineering Technology. The course uses Windows based PC’s, the “C/C++” programming language (visual C++), and the IEEE-488 Standard interfacing to programmable instrumentation.

Prerequisite(s): EET 111
(2,3) 3 credits

EET 111 Electric Circuits I
A basic course in direct current circuit theory. Concepts of charge, current and voltage; Ohm’s Law, Kirchoff’s Laws; analysis of series, parallel, and combination circuits; mesh and nodal analysis; Superposition, Thévenin’s & Norton’s theorems; maximum power transfer theorem; electric fields and capacitance; magnetic fields and inductance; analysis of R-C and R-L switching networks. The laboratory is coordinated with, and supports, the theory course.

Corequisite(s): MTH 129
(3,1,2) 4 credits

EET 113 Electric Circuits II
This is the second of a two-course sequence designed to provide the background needed to analyze electric networks. Topics covered in this course include sinusoidal waveforms and non-sinusoidal waveforms; the phasor representation of sinusoidal signals; the use of complex numbers to analyze R-C, R-L, and R-L-C networks under sinusoidal steady-state conditions; series and parallel resonance; average power calculations; impulse and steady state filters, frequency response (dB magnitude and phase) and its relations to the step response of simple R-C, R-L and R-L-C networks; transformer principles and types of transformers; three phase balanced systems.

Prerequisite(s): EET 111, MTH 129
(3,1,2) 4 credits

EET 118 Semiconductor Devices and Circuits
Fundamentals of semiconductor diodes and bipolar junction transistors are discussed in this course. Topics covered include: Q point operating conditions of semiconductor diodes in various circuit configurations, full and half-wave rectification, capacitor input filters, zener diodes and basic linear DC power supply configurations. Q point operating conditions of BJT transistors in various bias configurations are analyzed as well as small signal single-stage and multi-stage amplifiers at mid-band frequencies in terms of voltage gain, current gain, power gain, input impedance, output impedance, AC load lines and signal node voltages.

Corequisite(s): EET 113
(3,3) 4 credits

EET 191 Electric Circuit Concepts and Components
An introductory lecture/demonstration course in the terminology, concepts, and components of electric circuits. The aim is to give students from other disciplines (e.g. Office Management, Nursing, etc.) sufficient knowledge and understanding to effectively communicate with technical specialists in this field.

Prerequisite(s): Sequential (Integrated) Math 1
(4,0) 4 credits

EET 200 Electronic Devices and Circuits
Principles and characteristics of semiconductor devices and linear integrated circuits are discussed. Devices studied include: semiconductor diodes, zener diodes, bipolar junction transistors, photodiodes and transistors, field-effect and metal oxide semiconductor transistors, thyristors and operational amplifiers in various DC power supply, small signal and power amplifier configurations as well as wave shaping circuits. Simulation software will be used throughout the course in both theory and laboratory exercises.

Prerequisite(s): EET 104
(4,2) 4 credits

EET 223 Digital Electronics
Analysis and design of combinational and sequential logic circuits. SSI and MSI circuits; flip-flops, counters, and shift registers; integrated circuit families; multiplexers; semiconductor memory devices; D/A and A/D converters. The associated laboratory reinforces the topics covered in the theory through relevant experiments performed by the student. A formal report is part of the laboratory requirement.

Prerequisite(s): EET 105, EET 117
(3,2) 4 credits

EET 224 Amplifiers
Signal parameters of Class A and Class B power amplifiers as well as operational amplifiers are studied in this course. Topics covered include, efficiency, dB, dbm, heat sinks, JFET and MOSFET transistors, operational amplifiers, and the frequency response of amplifier circuits. In addition, operational amplifier characteristics and models are used in the analysis of open loop and closed loop amplifiers. Adders, subtractors, active filters, comparators, differentiators, integrators, and the Schmitt trigger are also studied. Feedback concepts and the effect of feedback on gain, impedance and frequency response of amplifiers are studied as well as circuit stability, gain, and phase margins. Simulation software is used in the analysis of operating conditions and frequency response of
amplifiers. Formal Report writing is part of the Laboratory requirement.

Prerequisite(s): EET 118
Corequisite(s): EET 110, MTH 130
(3,3) 4 credits

EET 225 Communications Electronics
An introduction to communications signals and circuits. Topics include:
tuned amplifiers, simple audio and radio frequency oscillators,
interpretation and application of Fourier Series, mathematics of amplitude,
frequency, and phase modulation, single sideband suppressed carrier
techniques, basic transmitter circuitry, super-heterodyne receiver for
various communication modes. The course concludes with multiplexing
as applied to F-M Stereo and an introduction to digital communications
concepts on a time permitting basis. Formal Report writing is part of the
Laboratory requirement.

Prerequisite(s): EET 118
(3,3) 4 credits

EET 251 Microprocessors
Fundamental microprocessor and microcontroller concepts; architecture,
memory, memory interfacing, programming, signals, timing, delay
calculations, I/O interfacing and interrupts. The students will be required
to interface input and output devices to the embedded controller and
quantify the associated hardware/software tradeoffs. Laboratory work
requires programming in assembly language and in C/C++.

Prerequisite(s): EET 223
(2,3) 3 credits

EET 311 Network Analysis
A calculus based course that introduces the use of Laplace transforms in
the analysis of active and passive lumped parameter time-invariant linear
networks. Topics covered include Mesh and Nodal analysis using matrix
formulations; the network theorems; impedance and the modeling of
initial conditions; first and second order systems; transfer functions; poles
and zeros; impulse and step response; forced and natural response as
well as system stability and time domain response. The sinusoidal
steady state (AC) phasor transformation and its relation to the Laplace
transform and the frequency response of networks are also included.
The laboratory utilizes simulation software and MATLAB to demonstrate
time and frequency domain analysis and simulation of electric networks.

Corequisite(s): MTH 236
(3,2) 4 credits

EET 316 Digital Design
Introduction to digital design using FPGAs (Field Programmable Gate
Arrays). The FPGA circuits are designed using the schematic software
and the Boolean Algebra entry software ABEL. The target chips are Zilinx
FPGAs and the Xilinx software is used to “place and route” the design.
Designs are then tested using a special test board and Xchecker cable.
PAL (Programmable Array Logic) and GAL (Genetic Array Logic) designed
is also covered.

Prerequisite(s): EET 223
(3,3) 4 credits

EET 317 Industrial Electronics
Selected topics involving Different and Instrumentation amplifiers with
Transducer Bridge applications. Linear and Switching mode regulated
power supply operation with analysis and design techniques using
existing industrial IC’s Thyristor characteristics with SCR, DIAC and TRIAC
applications in power control circuits. Theory concepts are illustrated in
the Laboratory. Formal report writing is part of the laboratory requirement.

Prerequisite(s): EET 224
(3,2) 4 credits

EET 327 Automated Testing and Signal Processing
A course on the use of programmable instrumentation for automated
testing, and the use of computers to process data and signals.
Topics covered include the IEEE-488 interface and its application
in automated testing; the use of computers to process data; Fourier
Series, and Fourier transforms; signal spectra; the sampling theorem;
the discrete Fourier transform; the Fast Fourier Transform; applications.
The laboratory assignments are an integral part of the course and
require programming in C/C++ and MATLAB. Both formal and informal
laboratory reports are required.

Prerequisite(s): EET 311
(3,3) 4 credits

EET 414 Transmission Lines and Antennae
Introduction to transmission lines. Transient response for conditions
of matched and mismatched terminations. Definition of reflection and
transmission coefficients. Sinusoidal signals, standing wave ratio, and
use of the smith chart. Impedance matching, S parameters and power
measurement. Introduction to antennas. Radiation pattern and impedance
of simple dipole antenna. Electric field and power density. Definition of
Isotropic antenna as reference for gain calculation. Formal Report writing
is required for the course

Prerequisite(s): EET 225
(3,2) 4 credits

EET 420 Linear Systems and Controls
This course covers the principles and characteristics of continuous time
invariant linear systems and controls as well as the basic performance
parameters and analysis techniques of such systems. Topics covered
include: Review of Laplace Transforms and their applications in
analyzing the performance of systems in terms of their impulse and step
response; block diagram models, signal flow graphs, and state variable
representation of systems; second order active filters and the performance
characteristics of second order systems in terms of overshoot, speed
and settling time. Feedback Control System characteristics, the Routh-
Hurwitz stability criteria, and the application of Root Locus and Frequency
Response techniques in the analysis of control systems are also covered.
The laboratory utilizes MATLAB to demonstrate and enhance the theory
principles covered in the lecture portion of the course.

Prerequisite(s): EET 110, EET 251
(3,2) 4 credits

EET 426 Digital Communications
An introduction to digital communications systems. Topics covered
include the sampling theorem, spectral aliasing, digitizing of analog
signals, quantization effects, companding and signal multiplexing. Use
is made of basic probability theory to understand how digital signals
are corrupted by noise. The course continues with an overview of data
signals such as FSK, MPSK, and QAM. Analysis of Bit and Block error
rates are discussed as a function of the Signal to Noise ratio in light of
Shannon’s Theorem. Error Control Coding methods such as Hamming
codes are introduced. The course concludes with a discussion of the
basics of Fiber Optics.

Prerequisite(s): EET 225
(3,0) 3 credits

EET 428 Advanced Microprocessors
This course covers various hardware applications of a special purpose
microprocessor systems and peripheral devices such as floating point
processors and interrupt controllers. Practical approaches of interfacing
the microprocessor with different systems are explored. Laboratory
assignments make use of assembly level as well as a high level programming language.
Prerequisite(s): EET 418
(3,3) 4 credits

**EET 440 Networking and Data Communications**
This course covers the basic concepts of networking and computer connectivity. Several network topologies and related media access techniques are explored. The rudiments of Data Communications and Open System Interconnection (OSI) are discussed in detail. Students will learn the components of a client server networks using the Novell’s NetWare/IntraNetWare. Certain protocols such as TCP/IP and SPX/IPX are also discussed. Laboratory experiments are designed to give students a hands on experience in Network administration, configuration and resource management. Completion of this course includes a final project related to the design of a local area network, complete with Layers I and II, as well as the Directory Tree Structure based on the netware. An oral presentation by each student of his/her project is required.
Prerequisite(s): Knowledge of digital electronics; familiarity with a real time operating system; ability to program in a high level language.
(3,3) 4 credits

**EET 441 Advanced Networking**
This course is a continuation of EET440, Networking and Data Communications. The principles of Architecture Layering, Multiplexing and Encapsulation are discussed. TCP/IP, IPX, PPP, ISDN and Frame Relay Protocols are covered. Network equipment such as repeaters, bridges, router hubs, and switches are studied in detail. Equipment examples are drawn from key vendors such as CISCO, 3COM and Cabletron. The laboratory portion of the course will concentrate on experiments and projects designed using CISCO Systems networking equipment, such as 2500 and 2600 series routers, 1900 and 2900 catalyst switches. The students will also learn how to design networks using VLANS on the above mentioned equipment.
Prerequisite(s): EET 440
(3,3) 4 credits

**EET 450 Design Concepts**
General design considerations and concepts with particular emphasis in “worst case” design and “optimum” design. Case studies will be provided through examples of different areas of Electrical Engineering Technology. Product development procedures and processes will be presented along with testing and cost considerations. By the end of this course students must select their senior design project for EET 452W and must submit an appropriate proposal.
Prerequisite(s): Completion of junior level EET courses or Department permission.
(2,0) 2 credits

**EET 452W Design Project**
The student’s overall technical knowledge is applied to this “capstone” design project under the supervision of a faculty. A complete oral and written presentation is required of each student explaining the design process and specifications, cost considerations, testing and/or computer simulation results when appropriate.
Prerequisite(s): EET 450
(1,2) 2 credits

**EET 490–499 Selected Topics in Electrical Engineering Technology**
Selected topics of current interest in Computer and/or Electrical Engineering Technology (see Department mailings for detailed description of each particular offering).
Prerequisite(s): Contingent upon selected topic
1 to 3 credits

**ENGLISH**

**EGL 097 Basic Writing Skills**
A developmental course concerned with the improvement of written communication skills. Students review grammar and mechanics, syntax, vocabulary, paragraph and essay organization, and reading skills. Students are required to pass an exit exam, and a pass/repeat grade is awarded for the course. This course is not applicable toward an Associate degree.
(3,0) 3 ncu (non-credit units)

**EGL 101 Composition: Rhetoric**
A course in expository writing with emphasis on the use of acceptable patterns of English and the application of rhetorical principles and research. Students will gain experience in the writing process, including revision. A research paper is required with assignments in library research, note taking, outlining, and incorporating sources into a final draft.
Prerequisite(s): Placement Examination
(3,0) 3 credits

**EGL 101R Composition Rhetoric with Lab**
A course in expository writing emphasizing the writing process, including critical thinking, brainstorming, organizing through rhetorical patterns, and revision. Students will write and revise several short essays. They will learn research techniques, both traditional and Internet based, and note taking and outlining, in order to produce a final research paper that incorporates sources responsibly, summarizing, paraphrasing, and quoting them as needed. This version of 101, enhanced with a 50 minute lab period for extra writing and vocabulary work, is designed for those students whose placement tests indicate that they can benefit from extra practice and instruction. The course carries four credits toward the degree rather than three. Each student will make an oral presentation based on his/her research and/or essays.
Prerequisite(s): Placement examination
(4,0) 4 credits

**EGL 102 Composition: Literature**
An introduction to plays, poetry, short stories, novels, and essays. Papers are written on forms, techniques, and themes of literature.
Prerequisite(s): EGL 101
(3,0) 3 credits

**EGL 105 Honors Freshman Composition**
An interdisciplinary approach to reading and writing in such fields as philosophy, history, ethics, and science, emphasizing their interrelationships. Students explore issues in depth via term papers, presentations by guest speakers, and visits to museums, corporations, libraries, and theaters.
Prerequisite(s): Permission of English/Humanities department chair
(3,0) 3 credits

**EGL 200 Shakespeare**
A survey of representative comedies, tragedies, romances, and histories showing Shakespeare’s dramatic variety. Acting styles are emphasized with the use of recordings, tapes and, when possible, live performances.
Prerequisite(s): EGL 102
(3,0) 3 credits

**EGL 201 English Literature: Old English through the 18th Century**
A historical survey of English literature from the beginnings to neoclassicism. Consideration is given to Anglo-Saxon and medieval writers, Chaucer, Elizabethan and Jacobean writers, Shakespeare, Milton, and the writers of the Age of Reason. English history, religion, and philosophy are studied as they relate to literature.
Prerequisite(s): EGL 102
(3,0) 3 credits
EGL 202 English Literature: 19th Century to the Present
A historical survey of the Romantics, including Blake, Wordsworth, Coleridge, Byron, Shelley, and Keats; the Victorians, including Tennyson, Browning, and Arnold; and twentieth century writers, including Yeats, Joyce, and Eliot. Emphasis is placed on the development and continuity of literary traditions. 
Prerequisite(s): EGL 102  
(3,0) 3 credits  
Spring, Summer

EGL 203 American Literature: Beginnings to 1865
An examination of major historical and new canonical American authors; genres, and periods of the seventeenth, eighteenth, and part of the nineteenth centuries up to the Civil War. An analysis of the works of writers of the New Republic, the Revolutionary and Federalist periods of the eighteenth century, as well as the emerging national literatures of indigenous and colonizing groups; the ages of Transcendentalism, American Gothic, early Realism as well as the works of Native American, Feminist, African-American, Abolitionist, Frontier and Civil War writers will be considered.  
Prerequisite(s): EGL 102  
(3,0) 3 credits  
Fall, Summer

EGL 204 American Literature: 1865 to the Present
An examination of major historical and new canonical American authors, genres and periods of the era from the Civil War through the twentieth century. An analysis of such trends as Realism, Naturalism, immigrant literature, the regional and local color movements, as well as the rise of bibliographical genres, and the influence of psychology and technology on literature will be made. Modernism, the renaissance in American poetry, the Harlem Renaissance, and the literature of social critique will also be examined.  
Prerequisite(s): EGL 102  
(3,0) 3 credits  
Spring, Summer

EGL 206 World Literature: Early Classics
An introduction to Western and non-Western literature from earliest times through the seventeenth century. Included are works from ancient Greece and Rome, Medieval and Renaissance Europe, the Middle East, Africa, China, and India.  
Prerequisite(s): EGL 102  
(3,0) 3 credit  
Spring

EGL 207 World Literature: The Moderns
An introduction to Western and non-Western literature from the eighteenth century through the twentieth century. Included are works from the Enlightenment, the Romantic and Realist Movements, and the twentieth century from the Continent and the Third World.  
Prerequisite(s): EGL 102  
(3,0) 3 credits  
Spring

EGL 209 Technical Communication
A course stressing the structure of written and oral expository communication of a practical, technical, or scientific nature intended for a specific audience. Students are required to produce written and oral reports, proposals, resumes, and professional correspondence. A 1500-word research report is required.  
Prerequisite(s): EGL 102  
(3,0) 3 credits  
Fall, Spring

EGL 210 Introduction to Dramatic Literature
A survey of Western drama stressing close reading of plays from ancient Greece, Elizabethan and Restoration England, nineteenth-century Scandinavia and Russia, and twentieth-century Britain and America. The changing concepts of comedy and tragedy are discussed.  
Prerequisite(s): EGL 102  
(3,0) 3 credits  
Fall, Spring, Summer

EGL 212 Introduction to Fiction
A survey of American, British, and continental prose fiction. An understanding of the critical theory of such works is stressed.  
Prerequisite(s): EGL 102  
(3,0) 3 credits  
Fall, Spring, Summer

EGL 214 Introduction to Poetry
A survey of English language poetry. Selected works of both traditional and contemporary poets are analyzed and discussed.  
Prerequisite(s): EGL 102  
(3,0) 3 credits  
Fall, Spring, Summer

EGL 216 Creative Writing
An introduction to a wide spectrum of written formats, especially those employed by writers of fiction and poetry. Students read in these genres and submit a short written piece, in either genre, for each class. In addition, students complete a major project in their chosen area.  
Prerequisite(s): EGL 102  
(3,0) 3 credits  
Spring, Summer

EGL 222 Women in Literature
An exploration of the position of women in various cultures as interpreted by major world writers. Focus is on the female protagonist’s attainment of goals in marriage, family, and work.  
Note: Students completing this course may not receive credit for WST 222.  
Prerequisite(s): EGL 102  
(3,0) 3 credits

EGL 225 Images of Women in Drama
A study of images of women in Western drama from ancient times to the present. This course will consider the development of drama as a popular art form reflecting gender issues of its time.  
Prerequisite(s): EGL 102  
(3,0) 3 credits

EGL 226 Journalism
An introduction to practical journalism in which students write news and feature stories, editorials, and reviews, and examine techniques of newspaper design and photography. Classes include readings and discussions in the theory of mass communications. Students will develop their journalistic skills through hands-on experience with desktop publishing.  
Note: Students completing this course may not receive credit for PCM 226.  
Prerequisite(s): EGL 102  
(3,0) 3 credits  
Fall, Spring

EGL 228 Classics and Mythology in Popular Culture
This course presents a cross-cultural and cross-disciplinary examination of the meaning and value of such myths as those of the creation, the flood, and the hero and their depiction in literature, art, film and music from the ancient past to the present. Students will acquire an understanding of the uses of mythical themes and archetypes both in ancient art and literature as well as in modern art, literature and film. Course work includes assigned readings, film screenings, informal journals, a formal paper, and exams.  
Prerequisite(s): EGL 102  
(3,0) 3 credits  
Fall, Spring

EGL 230 The Literature of the Bible
A study of the origins, themes, and history of Biblical literature based on the new international version of the Bible. Later literature and other arts influenced by the Bible are included.  
Prerequisite(s): EGL 102  
(3,0) 3 credits

EGL 232 Immigrant Literature: Voices Of Multicultural America
A study of selected fiction, poetry autobiography, and memoirs of American immigrants of the 20th and 21st centuries. The thematic focus of this course is the way in which writers from different cultures shape the stories of their lives, particularly as they encounter the realities of the American experience and test the truth of their American dreams. Lecture and discussion of individual writers will address the different genres and styles used by these immigrant writers as well as thematic parallels and differences between writers from different cultural backgrounds. Readings may vary each semester but will reflect the cultural diversity of American immigrant writing, including writing by Caribbean writers, Asian-Americans, Latino Americanos, Jewish, Italian, Irish, and other Eastern European immigrants.

Prerequisite(s): EGL 102
(3,0) 3 credits

EGL 240 Themes in Science Fiction in Film and Literature

This class is an exploration of how writers of science fiction have used science and technology to examine moral questions, social issues, and the boundaries of technology. Reading of selected authors will focus on the ways creative writers have explored various aspects of the genre, including scientific experimentation, alternate time/space continuum, weaponry, psychic phenomena, cyberspace, bionics, alien life and the future. The class will also view cinematic adaptations of the selected works to examine whether/how the change of medium affects the emphasis and impact of the work and how visualization and special effects affect the audience’s perception.

Prerequisite(s): EGL 102
(3,0) 3 credits

EGL 242 Film and Literature

Students will read selected short fiction and novels by English, American, and other writers, and view the films that have been made from them by prominent directors. The course will develop students’ understanding and appreciation of both literature and film. Students will examine how great writers elicit the complex response they do from their readers, and then explore the ways that film provides an interpretation of literature. Analysis and discussion will center on how the visual medium shapes literature as various directors adapt texts for the screen. The ability to interpret the texts and films appreciatively and critically will be assessed through a series of class projects and examinations.

Prerequisite(s): EGL 102
(3,0) 3 credits

EGL 244 Classics of Supernatural Film and Literature

This course engages students in the principle forms of artistic expression integral to classic works of supernatural literature and their cinematic adaptations. Students will acquire an understanding of the creative process inherent in these works, an understanding of the literary and cinematic conventions of the genre and will also develop a critical vocabulary that will allow them to discuss and to evaluate these works and other in depth. Cinematic adaptations of these works in particular follow the evolution of the cinema itself, and thus students in this course will also gain a critical understanding of its aesthetic and technological development. This course will also focus on film composition, including the shots, angles, iconography and editing typical of this genre. Course work includes assigned readings, informal and formal papers requiring primary and secondary research, critical analysis of required screenings, and exams. Students will be required to attend campus and off-campus, theatrical screenings as they are scheduled.

Prerequisite(s): EGL 102
(3,0) 3 credits

EGL 246 Themes In Literature

This course will enable students to explore a major literary theme. The theme may vary in different semesters or in different section of the course during a single semester. Themes may include nature writing, literature of the Holocaust, literature of the American West, and Long Island in fiction, among others.

Prerequisite(s): EGL 102
(3,0) 3 credits

EGL 266 Fantasy in Literature and Film

Fantasy in Literature and Film examines not only the oldest literary genre but one that continues to fascinate readers old and young and to inspire some of the most innovative (and technically sophisticated) films. Works of fantasy overlap other genres: myth, fairy tales, epic sagas, tales of the grotesque, juvenilia, adventure stories, and some science fiction. However, fantasy is the study of what can never actually be real, that is, what we dream about or can only imagine. Readings include traditional works of fantasy from the earliest recorded texts as well as beloved children’s and young adult “classics” of this genre. Film adaptations as well as original films in this genre will also be analyzed and critiqued.

Prerequisite: EGL 102
(3,0) 3 credits

EGL 269 The Romantic Arts: Art, Dance, Literature & Music

This course examines the art, dance, literature, and music of the Romantic period of each of the disciplines. Students will acquire an understanding of the aesthetic concerns of each of these art forms in the period in which they were created and develop a critical vocabulary that will allow them to better understand, evaluate, and discuss the works in depth. Course work includes readings, field trips to art exhibits and performances, and extensive use of audio-visual materials. The course will require both informal and formal papers that utilize primary and secondary research materials. By examining multiple art forms, students will develop greater aesthetic and critical understanding of the art forms of the Romantic period included in the course study.

Prerequisite(s): EGL 102
(3,0) 3 credits

EGL 301 Advanced Grammar And Vocabulary

Students will master a study of descriptive and prescriptive English grammar as well as become familiar with linguistics, semiology, and comparative grammar. Students will expand their vocabulary by learning to use a broad range of words and by understanding their etymological roots, their appropriateness to situations use, and their function in smooth, concise syntax. Mastery of both grammar and vocabulary is essential to professional-level reading, writing, speaking, listening, and editing.

Note: Student taking this course cannot receive credit for PCM 301.

Prerequisite(s): EGL 102
(3,0) 3 credits

EGL 302 Nineteenth Century English Novel

Select novels by major British authors of the nineteenth century, such as Austen, the Brontes, Mary Shelley, Dickens, Thackeray, George Eliot, Trollope, Hardy and Conrad are read. Attention is given to the social, economic, political and intellectual backdrop in forming the content of the novels. Secondary sources are required.

Prerequisite(s): EGL 102
(3,0) 3 credits

EGL 306 From Farm to Factory: The Transformation of America 1820-1920

A detailed study of the technological, economic, social, political, ideological and cultural transition of American from a rural, agrarian republic to a complex, industrialized, urban nation in the period from 1820-1920. This interdisciplinary course uses primary and secondary material to examine the effect of technology and urbanization on American life. A multi-cultural and cross-gender perspective will provide focus.

Note: Students completing this course may not receive credit for HIS 306 or IOP 306.

Prerequisite(s): EGL 101 and 3 credits in Social Science
(3,0) 3 credits
EGL 307 Special Topics in Literature
This course enables student to explore intensively a major author, literary theme, period or genre. The subject for a particular semester will be announced prior to registration. Topics may include love, lust and marriage; persuasion and propaganda; and World War I writers, among others. Short papers involving secondary sources will be required.
Prerequisite(s): EGL 102
(3,0) 3 credits

EGL 308 The City In Literature, Art, Film And Theatre
This course examines depictions and interpretations of the city through literature, film, theatre, photography, painting, sculpture and architecture. Initially, the focus will be on New York City, although in subsequent semesters, it may extend to other major world cities such as London, Paris, Rome, or Athens. Students will gain an understanding of the aesthetic values of the different art forms as well as develop the critical vocabulary to help them evaluate the various literary and artistic works. Course work includes assigned readings, field trips to museums in New York City, and extensive use of audio-visual material. Both informal writing (response journals) and more formal papers, including a research paper utilizing primary research (photographs, maps, interviews with artists, slides, etc.) and secondary critical and/or historical studies will be required.
Prerequisite(s): EGL 102
(3,0) 3 credits

EGL 309 Voices of Black America in Poetry, Prose and Song
A study of the oral and literary tradition of African Americans in poetry, prose and song. This course provides both an historical examination of the written and oral tradition of African Americans in its own right and as a lens through which American culture can be viewed. The course will explore the developing aesthetic concerns of this tradition in different historical periods as, for example, the question of dialect before, during and after the Harlem Renaissance and the later Black Arts movement up through contemporary rap. Students will also consider how many texts by African Americans combine literary and musical forms, particularly spirituals, blues, jazz, hip hop and rap. Critical readings and research project required.
Note: Students who have completed EGL 224 may not receive credit for this course.
Prerequisite(s): EGL 102
(3,0) 3 credits

EGL 310 Technical Writing
A detailed study of the fundamentals of writing technical reports and other technical communications. Topics emphasized include the elements of a technical report, the interpretation of statistics and data, and the composition of letters, memos, and informal reports containing technical information. Assignments and student exercises are drawn from the student's technical area.
Prerequisite(s): EGL 102
(3,0) 3 credits  Fall, Spring, Summer

EGL 311 Introduction to Writing for Electronic Media
Introduction to Writing for Electronic Media will give students an overview of the issues concerning electronic media, including legal and ethical concerns. Students will also learn the history of the media, including the Internet and World Wide Web. Students will learn how to write for electronic media in hands-on training in the school's computer labs using industry-standard programs.
Note: Students completing this course may not receive credit for PCM 311.
Prerequisite(s): EGL 102, BCS 102
(3,0) 3 credits  Fall, Spring

EGL 312 Major Authors in American Literature
An in-depth examination of the major trends in American Literature as reflected specifically through the works of individual authors. The instructor will select the two or three authors to be studied each semester. Secondary sources, a major research project, and an annotated bibliography of criticism of a particular work will be required.
Prerequisite(s): EGL 102 or equivalent
(3,0) 3 credits  Fall

EGL 314 Major Authors in World Literature
An in-depth examination of major trends in world literature as reflected through the works of individual authors. One to three authors are studied each semester. Requirements include a substantial research project involving critical research.
Prerequisite(s): EGL 102
(3,0) 3 credits

EGL 316 Women in Modern American Literature
In this course students will examine major American texts by women writers from the beginning of first wave feminism in 1848 to the present. While most of the works studied will be fiction, some non-fiction, drama, poetry, and memoirs are included. Themes addressed in this course include: women's relation to work, religion, nature, marriage and family, their struggle for voting rights, and equal treatment under the law as immigrants to America from different cultures. The focus of the course is the ways in which literary works both reflect and help to shape the history and culture of America. This includes examination of how particular genres, styles of writing, and literary techniques are utilized by the writers covered in this selective survey of American women writers.
Prerequisite(s): EGL 102
(3,0) 3 credits

EGL 317 Studies In Shakespeare
An analysis of Shakespearean plays, along with their sources, the early modern period in England, and traditional and contemporary critical commentary. Four or five plays will be studied each semester. Requirements will include examinations and analyses of plays.
Prerequisite(s): EGL 102
(3,0) 3 credits

EGL 318 Advanced Creative Writing
An intensive workshop experience in which students are taught to recognize and appreciate excellence in the poetry and fiction of significant contemporary writers, and to produce polished works in these genres. Students will be required to keep a formal writer's journal and to participate in formal readings of their works, as well as provide pertinent critical evaluations of the writing of others.
Prerequisite(s): EGL 216
(3,0) 3 credits

EGL 319 Modern Drama
This course provides an in-depth examination of representative plays of Modern Drama (late nineteenth century through the twentieth century), focusing on such literary movements as realism, expressionism, relativism, epic theater, theater of the absurd, and focusing on historical and cultural context of the different literary movements and the representative plays. Requirements include a research project involving traditional and contemporary criticism.
Prerequisite(s): EGL 102
(3,0) 3 credits  Spring

EGL 322 Leadership in Fact, Fiction and Film
This course examines various fiction and non-fiction materials from a business perspective. Students will explore leadership, ethics/values, motivation, interpersonal skills, power/authority, communication, gender roles, empowerment, change, etc., as these concepts are demonstrated in these various works. Students will analyze the problems in the materials and apply them to modern-day corporate work situations, reflecting upon how these works are practical and functional to successful management tasks, responsibilities, and leadership.
Prerequisite(s): EGL 102
(3,0) 3 credits
ENV 210 Energy Policy and Standards
This course gives an introduction to energy policy at various levels like the local governments, state and federal governments. The role of the Public Service Commission, inter and intra state energy markets, and environmental laws as policy tools for energy generation and distribution are also topics of discussion. The influence of NGOs in shaping the energy policy is discussed. Topics like renewable portfolio standard, feed-in-tariff, distributed generation and its challenges, etc. are included. Case studies involving local utilities will be discussed.
Prerequisite(s): ENV 101
(3,0) 3 credits

ENV 301 Energy in Electronics and Computer Systems
This course is intended to find ways of building future electronic information processing systems with major improvements in energy efficiency. In particular, new electronic and computer devices extending from low-power nano-electronic devices, through circuit design, chip-scale architecture, short-range interconnects, long-range interconnect, networks software, storage systems, servers, green data centers and supercomputers are considered.
Prerequisite(s): ENV 210 and Junior-level standing
(3,0) 3 credits

ENV 305 Renewable Energy Systems I
This course gives an overview of various renewable energy technologies like solar, wind, geothermal, hydro, bio fuels, fuel cells etc. The growth and potential of these technologies along with challenges faced by each of the technologies are discussed. Comparisons are made with conventional energy systems using fossil fuels.
Prerequisite(s): ENV 210
(3,0) 3 credits

ENV 310 Renewable Energy Systems II
This course is a follow up course to Renewable Energy Systems I. This course undertakes detailed study of some of renewable energy technologies like solar and wind energy systems. Design installation and maintenance aspects of renewable energy systems is covered. Cost benefit analysis of energy systems is included.
Prerequisite(s): ENV 305, MTH 130
(3,0) 3 credits

ENV 450 Capstone Project/Research
This course is a project course for Sustainable Energy and Environment Minor program students in which the student works in a self study mode under the supervision of a faculty member in the implementation of an approved design project proposal. At the end of the course, students are required to provide a written report and make an oral presentation that addresses areas such as the design process implemented, product specifications, cost analysis, testing and/or computer simulation procedures used in the verification of results obtained, as well as ethical and product liability issues addressed.
Prerequisite(s): approval of advisor for the SEE minor
(3,0) 3 credits

ENGLISH AS A SECOND LANGUAGE
ESL 091 Beginning English as a Second Language
A beginning course for non-native speakers of English emphasizing basic listening, speaking, reading and writing skills.
(3,0) 3 ncu (non-credit units)

ESL 092 Intermediate English as a Second Language
A continuation of ESL 091. A course for the student who has attained a degrees of fluency in speaking English but needs additional training in reading and writing skills.
Prerequisite(s): ESL 091 or equivalent
(3,0) 3 ncu (non-credit units)
ESL 093 Advanced English as a Second Language
A continuation of ESL 092. An advanced course for the non-native speaker of English who has already mastered basic skills. This course is designed to bring the student to the level of proficiency of a credit granting English composition course. Prerequisite(s): ESL 092 or Placement Test (3,0) 3 ncu (non-credit units)

FARMINGDALE FIRST PROGRAM

FFP 101 The Freshman Experience
This course will enhance successful adaptation to college life. Topics relate to the academic, social, economic, health, and interactional factors that influence collegiate success. Enrollment is limited to matriculated Farmingdale First Program FRESHMEN ONLY. Note: Students taking this course cannot receive credit for FRX 101 (1,0) 1 credit

FFP 103 Career Planning for Freshmen
This course is designed to assist freshmen that are undecided about choosing a future career or major. The course emphasizes self-assessment, critical thinking, problem solving, decision-making, educational and vocational planning, orientation to college, and reality testing. A successful adaptation to college is an overall goal of the course. Note: Students taking this course cannot receive credit for FRX 103 (2,0) 2 credits

FRENCH

FRE 101 French I (Elementary)
A beginning course in French emphasizing the gradual development of the four language skills: listening, speaking, reading and writing, with stress on communicative competence and cultural awareness. (3,0) 3 credits Fall

FRE 102 French II (Elementary)
A continuation of French 101 for students who have had 2 or 3 years of high school French. This course emphasizes the gradual development of the four language skills: listening, speaking, reading, and writing with stress on communicative competence and cultural awareness. Prerequisite(s): FRE 101 or 2 or 3 years of high school French (3,0) 3 credits Spring

FRE 203 French III (Intermediate)
A continuation of FRE 102 for students who have had 3 or 4 years of high school French. This intermediate course further emphasizes the development of the four language skills: listening, speaking, reading, and writing with stress on communicative competence and cultural awareness. A literary and cultural reader will be introduced. Prerequisite(s): FRE 102 or 3 or 4 years of high school French (3,0) 3 credits Fall

FRE 204 French IV (Intermediate)
For those students who have taken FRE 103 or four or more years of high school French. This course emphasizes structural review, intensified practice in oral expression with increased emphasis on reading and writing skills. Continued attention will be given to contemporary French culture. Selections from French authors will be read. Prerequisite(s): FRE 203 or approval of this department chair (3,0) 3 credits Spring

FRE 301 French V (Advanced)
An advanced conversation/composition course with intensive practice in oral and written French. Prepared discussions and writing assignments on selected cultural, historical and literary topics. Prerequisite(s): FRE 204 or approval of this department chair (3,0) 3 credits Fall

FRE 302 French VI (Advanced)
A continuation of FRE 301 with intensive practice in oral and written French. Prepared discussions and writing assignments on selected cultural, historical and literary topics. Prerequisite(s): FRE 204 or approval of this department chair (3,0) 3 credits Spring

UNDECLARED MAJOR

FRX 101 The Freshman Experience
This course will enhance successful adaptation to college life. Topics relate to the academic, social, economic, health, and interactional factors that influence collegiate success. Enrollment is limited to matriculated FRESHMEN ONLY. While this course is open to all students, priority is given to Undeclared Majors only. (1,0) 1 credit

FRX 103 Career Planning for Freshmen
This course is designed to assist freshmen that are undecided about choosing a future career or major. The course emphasizes self-assessment, critical thinking, problem solving, decision-making, educational and vocational planning, orientation to college, and reality testing. A successful adaptation to college is an overall goal of the course. (2,0) 2 credits

GERMAN

GER 111 German I (Elementary)
A beginning course in German emphasizing the gradual development of the four language skills: listening, speaking, reading and writing with stress on communicative competence and cultural awareness. Prerequisite(s): None (3,0) 3 credits Fall

GER 112 German II (Elementary)
A continuation of German 111 for students who have had 2 or 3 years of high school German. This course emphasizes the gradual development of the four language skills: listening, speaking, reading, and writing with stress on communicative competence and cultural awareness. Prerequisite(s): GER 111 or 2 or 3 years of high school German (3,0) 3 credits Spring

GER 213 German III (Intermediate)
A continuation of GER 112 for students who have had 3 or 4 years of high school German. This intermediate course further emphasizes the development of the four language skills: listening, speaking, reading, and writing with stress on communicative competence and cultural awareness. A literary and cultural reader will be introduced. Prerequisite(s): GER 112 or 3 or 4 years of high school German (3,0) 3 credits Fall

GER 214 German IV (Intermediate)
For those students who have taken GER 113 or four or more years of high school German. This course emphasizes structural review, intensified practice in oral expression with increased emphasis on reading and writing skills. Continued attention will be given to contemporary German culture. Selections from German authors will be read. Prerequisite(s): GER 213 or approval of this department chair (3,0) 3 credits Spring

GER 301 German V (Advanced)
A course in German which introduces the student who has completed the four basic skills (speaking, listening, reading and writing) to the German language of every day business. The course gives an insight into united Germany's place in the world market. The topics are general enough to be of interest to most intermediate and advanced students, but at the same time offer preparation for the business minded student.
HISTORY

HIS 114 Western Civilization I
A brief survey of ancient and medieval civilizations, followed by extensive treatment of the ascendancy of early modern Western civilization, together with its social, economic, and political revolutions, from 1500 through the Napoleonic era.

Note: Students completing HIS 114 and HIS 115 may not receive credit for HIS 125.
(3,0) 3 credits

HIS 115 Western Civilization II
Traces the spread of Western civilization, from the Congress of Vienna to the modern world, by examining the impact of the forces of romanticism, nationalism, industrialism, and intellectual creativity.

Note: Students completing HIS 114 and HIS 115 may not receive credit for HIS 126.
(3,0) 3 credits

HIS 117 World Civilization I
A survey of major non-Western civilizations and their interaction with one another, as well as with the European West from antiquity up through the Early Modern Period. The course will explore ancient polytheistic traditions, the foundations of major world religions (Hinduism, Buddhism and Islam) and the rise of the Christian faith as a global faith. It will also address non-Western social, political and economic systems in East Asia, South Asia, the Muslim World, Sub-Saharan Africa and pre-Columbian America.

Note: Students completing HIS 117 and HIS 118 may not receive credit for HIS 126.
(3,0) 3 credits

HIS 118 World Civilization II
A survey of the developing world and its interaction with the West since 1700. The course will explore the chaotic effects of the non-Western world's interaction with European imperial powers, the United States, and the Soviet Union, focusing on social, economic, cultural, and political change in East Asia, South Asia, the Middle East, Sub-Saharan Africa and Latin America. The major themes of the course will center on imperialism, nationalism, modernization, the World Wars and the cold war.

Note: Students completing HIS 117 and HIS 118 may not receive credit for HIS 126.
(3,0) 3 credits

HIS 121 U.S. History to Reconstruction
A discussion of the development of the United States, from its English background through Reconstruction, showing how a new civilization arose out of revolution, independence, new governmental institutions, and equalitarianism, and illustrating the results of the westward movement, and the causes and consequences of the Civil War.

Note: Students completing HIS 121 and HIS 122 may not receive credit for HIS 125.
(3,0) 3 credits

HIS 122 U.S. History Since Reconstruction
A historical evaluation of American society, assessing Reconstruction, immigration, the nature of Imperialism, Progressivism, World War I and II, the Cold War, and contemporary American life.

Note: Students completing HIS 121 and HIS 122 may not receive credit for HIS 125.
(3,0) 3 credits

HIS 125 The American Experience
This course introduces students to the broad, absorbing narrative of American history by examining the major political, social, cultural and economic themes of our nation's past, from the pre-Columbian era through our own time. It seeks to integrate social and cultural history into a political story that defines our national identity and heritage through the struggle for social equality, the quest for liberty and the complexity of economic of economic change. This course presents the drama of American history not only against the backdrop of major global developments and trends but as part of them.

Note: Students completing HIS 125 may not receive credit for both HIS 121 and HIS 122.
(3,0) 3 credits

HIS 126 The West and the World
The West and the World is a one semester global history course designed for students needing to complete a core requirement in Western Civilization and other World Civilizations. The course introduces students to a broad discussion of the development of Western Civilization and culture within a global context, examining how other, non-Western cultures influenced and shaped the development of the West. Through primary source readings, lectures and discussion, students will study the major world events that helped shape western institutions and influenced the western experience from pre-modern times to the present.

Note: Students completing HIS 126 may not receive credit for both HIS 114 and HIS 115 or both HIS 117 and HIS 118.
(3,0) 3 credits

HIS 200 Introduction to Historical Methods
The purpose of this course is to provide an introduction to historical methods, including how to research historical events, evaluate sources, properly use citations, produce bibliographies, and write about history. The course also focuses on the teaching of history, including effective pedagogical methodologies, the debate over “political correctness,” the use of primary sources, employing technology and visual media in the classroom, and how to address issues such as plagiarism. The course may also include an optional historiography component (at the discretion of the instructor), which will focus on a particular historical period and/or geographic region, with the aim of exposing students to breadth and width of historical approaches.

Prerequisite(s): Any 100-level History course, EGL 102
(3,0) 3 credits

HIS 211 The World and Its Peoples
Grounded in history, this course is an exploration of the rich diversity of

MECHANICAL ENGINEERING TECHNOLOGY - COMPUTING GRAPHICS

GPH 103 Technical Drafting
A traditional manual drafting course including ortho-graphic projection, dimensioning, auxiliary projection and pictorial representation. Emphasis will be placed on drafting techniques including lettering, line quality, accuracy and appearance.
(0,3) 1 credit

GPH 104 Introduction to Computer Graphics
Students will learn how to run Computer Aided Drafting (CAD) software on PCs to produce mechanical drawings. They will be taught commands and concepts, and develop the skills required. Some of the topics covered include: setup, drawing, erasing, saving, printing, lines, geometric construction, object snap, text, editing and basic dimensioning.
(0,2) 1 credit

Note: Students completing HIS 125 may not receive credit for both HIS 121 and HIS 122.
(3,0) 3 credits

GER 302 German VI (Advanced)
A continuation of German V.
Prerequisite(s): GER 214 or approval of this department chair
(3,0) 3 credits
HIS 220 Ethnic and Immigration History
An analysis of immigration in American life, employing studies of demography, colonial settlement, and mass migrations, and describing the ordeal of adjustment, nativism, immigration policy, cultural pluralism, and the shifting ethnic pattern.
(3,0) 3 credits

HIS 231 Europe and Its Peoples
Grounded in history, this course is an exploration of the rich diversity of cultures and societies of contemporary Europe, as well as an introduction to Continent’s geography and how its unique physical attributes shaped world history. Critical reading of recent ethnography will be used to examine themes such as ethnicity and migration, rural life and the development of leisure culture, and attitudes towards work as we survey the major world regions (Southern Asia, the Pacific Rim, Sub-Saharan Africa, North Africa and the Middle East, the Americas, Europe, and Oceania). Furthermore, we will examine the interaction between humans and their physical environment, interrogate the role of language on national identity among peoples, and trace the evolution of world religions.
(3,0) 3 credits

HIS 233 Comparative Religions and Cultures
A survey of religions of the East and the region of the Mediterranean, with discussion of their impact on the lives of individuals, and on cultures and other societies through the interrelationship of value systems.
(3,0) 3 credits

HIS 235 Europe, the World
An intercontinental examination of the European continent, both before and after the formation of the EU, looking at the historical and cultural pressures and forces that shaped European identity and the manner in which these pressures differ from non-European cultures. Students will study the impact of European history on the world and the world on European history. This course will also study the development of political culture on the Continent and historical and contemporary projects to create a united Europe, from the Pax Romana to the European Union.
(3,0) 3 credits

HIS 302 Civil War and Reconstruction
This course examines the primary themes of the Civil War and Reconstruction era through secondary and primary texts within a discussion format. Students are introduced to the origins of the sectional conflict during the antebellum period, the relevance of slavery to the conflict, the formation of southern nationalism and secession, the social, political and economic dimensions of the war effort, emancipation, Reconstruction and Redemption, and the legacy of the war. Prerequisite(s): HIS 121 or HIS 125 or approval of this department chair (3 credits)

HIS 305 Culture and Technology: The Industrial Revolution in England, 1750-1880
A multi disciplinary examination of the ways in which technology affected everyday life during the Industrial Revolution in England. Covering the years 1750 to 1880, it examines the changes taking place in technology during the period; how these changes ultimately affected the workplace, the home, and the community and how novelists of the period felt about these changes. Faculty team teach this course.
Note: Students completing this course may not receive credit for HUM 305, SOC 305, or IDP 305.
Prerequisite(s): EGL 102, one social science course, and HIS 114, HIS 115 or HIS 126
(3,0) 3 credits
HIS 306 From Farm to Factory: The Transformation of America 1820-1920
A detailed study of the technological, economic, social, political, ideological and cultural transition of America from a rural, agrarian republic to a complex, industrialized, urban nation in the period from 1820-1920. This interdisciplinary course uses primary and secondary material to examine the effect of technology and urbanization on American life. A multi-cultural and cross-gender perspective will provide focus.
Prerequisite(s): Any 100 level History course (3,0) 3 credits

HIS 307 Iron And Blood – Technology and Politics in Germany 1815 – Present.
Examines the technological, political and cultural development of modern Germany since the industrial revolution. Special emphasis will be placed on the interaction of technological developments and their impact on politics and culture since 1815 to the present.
Prerequisite(s): 3 credits in history or approval of this department chair (3,0) 3 credits

HIS 310 Revolution and Reform: Technology and Society in Russia, 1917 – Present
This course examines the connection between industrialization and politics in Soviet and post-Soviet Russia. Topics of discussion include the development of Russian communism, collectivization, the Cold War, and post-Soviet politics and culture.
Prerequisite(s): 3 credits in history or approval of this department chair (3,0) 3 credits

HIS 317 Irish History
The study of Irish history with a view toward understanding the development of the Irish nation focused upon matters political, legal, religious, and military in nature.
Prerequisite(s): Any 100 level (or above) history course (3,0) 3 credits

HIS 319 – Special Topics in History
A treatment of diverse topics, chosen by the department, for their current historical import. The course will require extensive reading and writing and depending on the topic, travel. Students should check with the department before registering for this course.
Prerequisite(s): Any 100 level (or above) history course (3,0) 3 credits

HIS 320 Prometheus Unbound: Science, Technology and Society in Europe 1700 – Present
This course examines European History from the period of the Industrial Revolution to present. Special focus will be placed on how scientific and technological developments impacted politics and culture in Europe and the west since the eighteenth century. The histories of individual European nations will be discussed, as well as the major Revolutions and world wars.
Prerequisite(s): Any 100 level (or above) history course (3,0) 3 credits

HIS 321 America and the World
This course examines the changing role of the United States in global affairs and its consequences for American society from 1860 to the present. During this period, the US went from an isolated nation to a world power. This class explores such topics as late 19th century imperialism, American involvement in World War I and II, isolationism and global depression, national security policy and strategy during the Cold War and post-Cold War eras, nuclear proliferation, the War on Terrorism and the balance of power in the 21st century. In addition, this course focuses on world historical themes such as industrialization, population growth, suburbanization and urbanization, the exploitation of natural resources, and in the process, interrogates within a national and international context the idea of American exceptionalism, the origins and impact of US hegemony and the use of national histories and ideologies.
Prerequisite(s): Any 100 level History or Politics course (3,0) 3 credits

HIS 322 American History Through Film
This history course explores the relationship between historical interpretation and representation through feature films and historical writing. Students analyze key themes, myths, and issues in the American experience by analyzing and contrasting cinematic constructions with written historical texts. The themes studied in this course include the frontier West and rugged individualism, the immigrant experience, the American Dream and assimilation, cultural conflict and conquest, war and democratic freedom, technological progress and morality, youth and rebellion, power and personality, race and equality, and social change, class and intolerance.
Prerequisite(s): HIS 121 or 122 or 125 or approval of this department chair (3,0) 3 credits

HIS 323 Contemporary America
Depicts America’s responses to the Cold War, violence, and military aggression, the emergence of Third World countries, the economic and political impact of rising expectations, the problems of the city and the suburbs, and the quest for social justice.
Prerequisite(s): 3 credits of History or approval of this department chair (3,0) 3 credits

HIS 324 Roots of Black Americans
This course examines the primary themes and topics in African-American History from 1600 to the present. It will analyze the roles of African-Americans in America’s past by emphasizing the connections between social, political and economic patterns, trends, and developments, and as such, will integrate and situate African-American History into the larger exploration of the history of the nation. The course will focus on the forced migration of Africans during the middle passage, the development of racial slavery, the origins and evolution of racism, the emergence of plantation society, the implications of the American Revolution for slavery and equality, the formation of the abolitionist movement and the proslavery defense, antebellum slave culture and consciousness, the Civil War and emancipation, reconstruction the legalization of segregation, institutional resistance and African-American community, the new deal and political realignment, the civil rights movement and its fragmentation.
Prerequisite(s): 3 credits in History or approval of this department chair (3,0) 3 credits

HIS 325 America and the Vietnam War
An examination of American involvement in the Vietnam conflict from its origins in the Cold War to its legacies today. It will adopt a multi-disciplinary approach and use a variety of mediums, integrating history, literature, and film and utilizing lectures, guest speakers, and discussions. Particular attention will be given to cultural origins and effects of the War.
Prerequisite(s): 3 credits in History or approval of this department chair (3,0) 3 credits

HIS 331 History of New York State
A historical overview of the state from its Native American, Dutch, and British colonial origins until today. The course will focus on the history and evolution as part of the United States, its founding ideas and institutions, and how it emerged as the Empire State we know today. In particular, the course will examine the following themes: political parties, ideology, and conflict; race, ethnicity and immigration; the economy, labor and entrepreneurship; war and society.
Prerequisite(s): HIS 121 or HIS 122 or HIS 125 (3,0) 3 credits
HIS 332 American Military History  
American Military History is a multidimensional survey of the evolution of American military organization, traditions and methods from the colonial era to the onset of asymmetrical warfare in the Middle East. The course will present and analyze the key military events, leaders and strategists, including their influence on, and influence by, political considerations, global interest, public opinion as well as technological and economic factors.  
Prerequisite(s): HIS 121 or HIS 122 or HIS 125 or equivalent  
(3,0) 3 credits

HIS 333 The 1960's in America  
This course examines the people, events and issues of the era through a thematic approach within a larger chronological framework and focuses on domestic social, cultural and political developments. Because the 1960's contained so many seemingly disparate topics and issues, the course will emphasize the connections between and across a broad variety of subjects and disciplines. Topics include the seeds of change during the 1950's; the triumph and breakdown of postwar liberalism; insurgent political and social movements, including the civil rights movement, feminism, antiwar protest, and the New Left; the counterculture; the sexual revolution; drug culture; technology; music; and the legacy of the Sixties.  
Prerequisite(s): any 100 level History course  
(3,0) 3 credits

HIS 334 The History of New York City  
This course examines the origins of New York City as a small Dutch settlement known as New Amsterdam through its incarnation as a mercantile British colony, its growth as a commerical and later industrial metropolis, its emergence as center of capital and modernity, and its ascendance along with its decline and subsequent resurgence as a center of global capitalism during the 20th and 21st centuries. The course focuses on the social history of New York City, though it explores cultural, political, technological and economic developments and issues that defined its evolution. As such, the course topics include the influences of ethnicity and race on the city, the definitions, contestations and uses of social spaces, the social lives and roles of upper, middle and lower classes, the lore and intrigue of the larger than life personalities and infamous incidents in shaping the City’s history and the legendary conflicts over urban planning, use and design.  
Prerequisite(s): Any 100 level History or Politics course  
(3,0) 3 credits

HIS 335 Gender and Technology in Historical Perspective  
The purpose of this course is to provide an overview of the connections between gender roles and technology from comparative and historical perspectives. Studying the past in this way sheds light on key global issues today. How does technology shape feminine and masculine identities in the developed world? What happens to preconceived notions of gender relations and gender identities when the developed world and developing world come into contact? This course focuses on the interaction between technology and gender in the age of globalization and is intended to be interdisciplinary and may begin with a dash of sociology or anthropology, dissecting gender roles in our world today. It will also examine the historical connections between gender roles and technology specifically in the United States. At the discretion of the instructor, topics to investigate may include the function of gender and technology in European exploration, European imperialism and U.S. expansion.  
Prerequisite(s): 100-level HIS course  
(3,0) 3 credits

HIS 341 Terrorism and the Modern World  
This course traces the global impact of terror and terrorism since the first use of the term in 1795. Much of the course focuses on the use of political violence by non-state actors and revolutionary organizations operating both at a domestic and international level. Students will compare and contrast the various “waves” of terror which have gripped the globe since the late 1800’s and analyze the similarities and differences between groups such as the IRA, the Ku Klux Klan, and al Qaeda. The course will also explore state-based terror, specifically the use of fear, surveillance, and the secret police by various regimes in the 19th and 20th centuries. The role of media as an enabler of terrorism and terrorists will also be an important theme throughout the semester.  
Prerequisite(s): Any 100-level History course, EGL 102  
(3,0) 3 credits

HIS 342 The History of Television  
Despite the recent emergence of new communication technologies, television arguably remains the most powerful and important form of communication today - a medium that influences and shapes our views of ourselves and our outlooks on the world. Television helps to bind us together through shared cultural distortions of our social experiences and relations and yet divides us over its short- and long-term effects, both national and global. This course explores American culture during the post-World War II period through an analysis of the history of television from its origins in radio to its future in digital media. It examines television's role in both reflecting and constituting American society through a variety of analytical approaches. The course topics include the structure, economics and dynamics of the television industry, the role of television within American democracy, the variety of television genres, television as a site of gender and racial identity formation, television's role in everyday life and the medium's technological and social impacts.  
Prerequisite(s): Any 100-level History or Politics course  
(3,0) 3 credits

HIS 351 The Ottoman Empire and Modern Turkey  
The purpose of this course is to provide a comprehensive survey of key aspects of the history of the Ottoman Empire and modern Turkey. In the first section of the class, the course will explore the history of Turkic nomads, Byzantium, the Muslim Levant, and the formation of the empire. In subsequent modules, the focus will be on Ottoman political and commercial development, the conquest of the Balkans, the Sublime Porte's interaction with world powers, imperial overreach, and faith and identity in the multinational Ottoman state. The last part of the course will explore the radical changes wrought by the rise of the Young Turks and effects of the Great War (including the Armenian Massacres), moving on to discussion of Kemalism and contemporary Turkey.  
Prerequisite(s): One Western Civilization course or equivalent, EGL 102  
(3,0) 3 credits

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ORNAMENTAL HORTICULTURE

HOR 101 Soil Science  
The study of soil formation and its physical and chemical properties in relation to plant nutrition and growth. Discussion of lime, fertilizers, manures and peats with respect to nursery and container production of horticultural plants as well as landscape and garden soils.  
(2,2) 3 credits

HOR 103 Herbaceous Plants I  
Lecture and field study of the nomenclature, identification, ornamental attributes, cultural requirements, and horticultural uses of annuals, display plants treated as annuals, and flowering bulbous plants used in gardens.  
(2,2) 3 credits

HOR 104 Horticulture II  
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, plant growth, and control.  
(2,2) 3 credits

HOR 105 Landscape Gardening  
Field and classroom in garden appreciation and principles of art for creative design. Substantial field application in garden improvement, operations, and maintenance. By permission of department chair only.  
(1,6) 3 credits
HOR 110 Horticulture I
Instruction, orientation, and field experience in the various phases of horticulture. Each week the explanation and demonstration of a new subject precedes the assignment to duties. A rounded experience is the objective. Tools, techniques, and standards of workmanship are taught. (2,3) 3 credits

HOR 115 Home Landscaping and Maintenance
A survey course designed for the homeowner who is interested in landscaping his home and learning how to maintain the plant material used. Topics covered include basic design principles, foundation plantings, and the use of flowers in the design; as well as the planting, pruning, fertilizing, and care of the plant material used in the design. (2,0) 2 credits

HOR 116 Residential Horticulture and Landscape Design
A survey course designed as an elective for non-horticulture majors who are interested in landscaping their homes and learning how to maintain the plant materials used. Topics covered include basic design principles, foundation plantings and the use of flowers in the design; as well as the planting, pruning and care of the plant material used in the design. (2,2) 3 credits

HOR 119 Insects and Diseases of Lawns and Gardens
The nature of insect and disease organisms will be studied. Pest control regulations, insecticides, fungicides, herbicides and equipment are discussed, including identification of common insects and disease of lawns, garden flowers, trees, and shrubs; also weeds and their control. Fruit and vegetable pests are covered when there is student interest. (3,0) 3 credits

HOR 120 Commercial Floral Design I
Intended for persons who would like to obtain instruction in commercial floral design. Areas to be covered are corsage work, traditional floral arrangements, basic funeral designs, dried arrangements, fruit baskets, and holiday designs. Instruction is by actual participation, demonstration and lectures. (1,4) 3 credits

HOR 121 Commercial Floral Design II
A continuation of Commercial Floral Design I with emphasis on party arrangements, holiday designs, funeral arrangements and basic wedding designs. Prerequisite(s): HOR 120 (1,4) 3 credits

HOR 127 Horticultural Seminar
An overview of the industry, and major areas of development; it will provide an opportunity for students to hear from representatives of the industry and be provided with the basis for an assessment of future career opportunities and the opportunity to evaluate their individual needs for continuing education. (1,0) 1 credit

HOR 131 Landscape Drafting I
A study of drafting techniques in Landscape Design to develop abilities in lettering, landscape drafting and layout using drafting instruments. (2,2) 3 credits

HOR 132 Horticulture Practice I
Application of classroom theory to practical situations in the field. Students are assigned to areas in the greenhouse, gardens, nursery, and plant collections to learn and practice the art and skills of gardening. Students are given supervision in the field by faculty and staff from the Horticulture Department. (1,0) 1 credit

HOR 133 Landscape Drafting II
To continue the development of graphic skills from Landscape Drafting I and to develop the student’s abilities to visualize space by learning perspective design, orthographic projection and elevation/section design. Prerequisite(s): HOR 131 (2,2) 3 credits

HOR 157 Introductory Floriculture
This course provides an introduction to floriculture and includes basic floral design, preparation, and care and identification of indoor flowering and foliage plants. (2,2) 3 credits

HOR 170 Landscape Graphics
This course is designed to introduce students to essential drafting techniques and design fundamentals. The student develops graphic skills in landscape drafting and layout by utilizing drafting instruments to produce landscape plans. Students visualize space by learning plan view, perspective design, orthographic projection and elevation/section design. Emphasis is placed upon representation, definition, and expression of landscape concepts. Through lectures, workshops, and in-class exercises, students explore techniques in both black-and-white and color media. The goal is to learn how to develop drawing skills so that clients can more clearly understand proposed garden designs. Each student is required to produce and present a final set of drawings suitable for presentation to a client or inclusion in a portfolio. (1,4) 3 credits

HOR 171 Landscape Techniques
This course has two distinct components. During the first half of the course, students are introduced to the studio techniques of landscape design. In the second half of the course students are taught the field skills required to install, maintain, and improve gardens and landscapes. This is a required course, taught in the semester, intended for first year students in General Horticulture and Landscape Development. Prerequisite(s): HOR 170 or HOR 131 (1,4) 3 credits

HOR 201 Arboriculture I
Theory and practice of care of shade and ornamental trees. Techniques of climbing, pruning, bracing, cabling fertilization, bark repair, and cavity repair. Demonstration, techniques, pruning practices, and tree climbing skills associated with theory topics. Prerequisite(s): BIO 192 (2,3) 3 credits

HOR 203 Greenhouse Management I
A study of greenhouse structures used for commercial production of cut flower and pot plants crops. Various construction and maintenance techniques will be discussed, as well as greenhouse ventilation and cooling equipment. Practical application of greenhouse equipment will be discussed and applied to the production of crops. (2,2) 3 credits

HOR 204 Herbaceous Plants II
Lecture and field study of the nomenclature, identification, ornamental attributes, cultural requirements, and horticultural uses of hardy perennial plants used in gardens including ferns, ornamental grasses, wild flowers, and herbs. Naturalistic woodland and rock gardens are introduced as well as the principles to design perennial borders. (2,2) 3 credits
HOR 205 Advanced Floral Design
This course will include instruction in contemporary and European arrangements, artistic party pieces, hi-style silk arrangements and all phases of wedding floral designs. The campus flower shop provides required supplies at cost.  
Prerequisite(s): HOR 120, HOR 121  
(1,4) 3 credits

HOR 207 Landscape Plans I
The theory and principles of landscape design applied to selected landscape problems. Preliminary sketches and final presentations of plans, elevations, and perspective form are required.  
Prerequisite(s): HOR 131, HOR 133  
(1,4) 3 credits

HOR 208 Nursery Production
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. Emphasis will be placed on the commercial propagation of woody plants by sexual and asexual means.  
(3,3) 4 credits

HOR 209 Planting Plans I
Emphasis in this course will be placed on the different types of plans which the landscape designer must know how to read and draw. Site analysis planting designs and grading plans will be covered in detail as they pertain to residential site work. Visual examples are utilized with previously drawn plans and slides of developed plans.  
(1,6) 3 credits

HOR 210 Horticulture Materials and the Environment
This course is intended to focus on various horticultural materials and practices that have an impact on the public and the environment. Discussion and classification of horticultural materials such as fertilizers, growth regulators, pesticides, etc., as well as their regulatory and safety measures will be explored throughout the course. Finally, alternative management practices which reduce the use of horticultural materials and cultural methods will be examined. The current computer software available in the library on various related topics will also be utilized during the semester.  
(3,0) 3 credits

HOR 211 Woody Plants I
The Woody Plants courses give a picture primarily of the woody plants grown in nurseries for landscape purposes, and secondly of those found in arboreums, woodlands, and fields of Northeastern United States. Emphasis is on identification, propagation, cultural requirements, and ecological relationships. Several of the evergreens, broad and narrow leaf, as well as some of the deciduous trees and shrubs will be covered in this first study.  
(2,2) 3 credits

HOR 212 Woody Plants II
A continuation of Woody Plants I covering additional evergreens, broad and narrowleaf, as well as deciduous plants – trees, shrubs, vines and ground covers.  
(2,2) 3 credits

HOR 213 Arboriculture II
Advanced theory, practice and field studies of the arboriculture industry, including care and pruning of fruit plants, diagnosis of tree ills, shade tree evaluation, and power equipment. Business practices and organization including management, record keeping, estimating, customer relations, ethics and standards. Prefaced by an overview of the arborist industry.  
(2,3) 3 credits

HOR 214 Horticultural and Turfgrass Equipment
A study of the types of powered equipment used by the industry. Small engines and power sources are studied. Emphasis is placed on selection maintenance and operation of this equipment.  
(2,2) 3 credits

HOR 218 Indoor Plants
A study of various plants that are suitable for indoor culture. Emphasis will be placed on identification, propagation, cultural requirements, ecological and aesthetic values.  
(2,2) 3 credits

HOR 219 Landscape Construction
Designing and building of steps, walks, fences and other landscape features and structures. Basic skills in landscape surveying will also be emphasized.  
(2,3) 3 credits

HOR 220 Landscape Plans II
The theory and principles of landscape design is applied to selected landscape problems. Projects are made up of preliminary sketches and final presentations in plan, elevation and perspective form. Students prepare contract documents: plans, specifications and estimates in relationship to comprehensive landscape planning.  
Prerequisite(s): HOR 207  
(2,6) 4 credits

HOR 227 Computer Landscape Graphic Design
The integrated graphics environment of the Personal Computer combined with contemporary printing technology permits creation of sophisticated landscape graphics. Intended for the landscape design professional who needs an alternative method to present landscape plans or planting plans. This course covers the Personal Computer hardware and software available to the landscape designer in order to maximize them to obtain professional results.  
Prerequisite(s): HOR 131, HOR 133  
(1,4) 3 credits

HOR 228 Current Horticultural Topics
Topics of current horticultural interest will be selected by the Horticulture Department and covered in depth. The topics to be covered will be announced in the course bulletin each semester the course is offered.  
(3,0) 3 credits

HOR 235 Tropical Plant Study and Socio-culture of Cost Rica
By exploring one of the most beautiful and bio-diverse ecosystems of the world students will enrich their course study by having the unique opportunity to combine their understanding of tropical plants, gain the knowledge of their importance, and their role in sustaining the surrounding ecology. In addition, by being immersed in another culture and being engaged in cross-cultural comparisons, students will gain a better understanding of the connection between the physical environment and social environment.  
Prerequisite(s): Advisement by and permission of department chair  
(2,2) 3 credits

HOR 236 Drainage and Irrigation
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.  
Prerequisite(s): Department approval  
(2,2) 3 credits
HOR 238 Turfgrass Culture
A study of fine turfgrasses: soil, propagation, maintenance, growth requirements, and identification characteristics. Numerous materials, equipment, operations, usages, programs, and work procedures for proper and efficient management of specialized turfgrass areas, including golf courses and institutional and residential properties are studied.
Prerequisite(s): HOR 101
(2,2) 3 credits

HOR 240 Horticultural Merchandising
Techniques of horticultural merchandising. Emphasis is on business site feasibility, selection and requirements; advertising and sales techniques; purchasing, pricing and profit determination. Guest speakers and field trips to commercial sites are used to advantage.
(3,0) 3 credits

HOR 241 Integrated Pest Management (IPM) for Landscape Pests
Discussion of alternative pest control programs with emphasis on their safety and environmental quality. Such programs will include: mechanical or physical removal of the pest, biological control such as introduction of beneficial organisms (both micro and macro organisms), and chemical control. The chemical control will be discussed in conjunction with other methods mentioned above and usually as a last resort.
(3,0) 3 credits

HOR 248 Woody Plant Diagnostic Techniques
This course will cover the correct techniques and procedures required for the proper identification of woody plant problems. The student will be required to draw upon the cumulative educational experiences of the first three semesters in identifying insect disease, site and physiological problems affecting woody plants. The use of keys and integrated control measures will be stressed.
Prerequisite(s): HOR 101, HOR 201, HOR 211
(2,2) 3 credits

HOR 250 Plant Propagation
Fundamental techniques, theory and principles in the production of horticultural plants by seed, cutting, layering & grafting.
(2,2) 3 credits

HOR 252 Ecology
The study of relationships of organisms to their environment and to each other. Emphasis is on plant relationships. Field trips will be taken to observe the various ecological plant communities.
(2,3) 3 credits

HOR 255 Interior Landscaping
The course will concentrate on the design, installation and maintenance of interior plantings in both commercial and residential settings. Topics covered include the principles of design, preparation of plans, interior horticultural practices, and cost estimating.
Prerequisite(s): HOR 218 or Department approval
(2,2) 3 credits

HOR 265 Horticulture Project
This is an independent study course designed to offer a student experience in research and its application in the horticulture industry. Under the direction of a faculty member, students will select a topic of interest within their area of specialization. The number of credits received will be determined by the complexity of the program and agreed upon between the student and the department chair prior to the student registering for the course.
Note: May be taken only with permission of the department chair
(1,0) 1 credit or (3,0) 3 credits

HOR 266 Horticulture Special Project
This is a one-credit independent study course designed to offer the student the opportunity to pursue an activity in the field of horticulture. This activity will be directed by a faculty member. The topic for study will be agreed upon by the faculty member, the student, and the department chair prior to the student registering for the course.
Note: May be taken only with permission of the department chair
(1,0) 1 credit

HOR 271 Landscape Engineering Technology
This course will study landscape structures and landscape features with an emphasis on engineering principles and hands on applications. Topics will include: concrete construction, brick, bluestone and modular patios, wall construction, retaining wall engineering, pavings, walks, and drives, fence and gate construction, decorative pools, fountains, drainage structures, landscape lighting, pergolas, arbors, gazebos. Labs will consist of engineering layout and construction of patios, decks, fences, etc.
Prerequisite(s): HOR 171
(2,3) 3 credits

HOR 280 Landscape Design
Emphasis in this course will be placed on theory and principles of design related to residential landscape design. Landscape design problems will be presented in plan, elevation and perspective form.
Prerequisite(s): HOR 133, HOR or HOR 212
(1,4) 3 credits

HOR 301 Perennial Plant Management
This course is a practical field study about the horticultural management of herbaceous perennial plants grown within perennial garden settings. As the growing season progresses, students will experience the growth cycle changes that occur to hardy, herbaceous, perennial plants. Students will learn the maintenance requirements that plant growth dictates and advancing senescence necessitates.
Prerequisite(s): HOR 204
(1,4) 3 credits

HOR 311 Woody Plants III: Advanced Topics
This course supplements topics addressed in the core woody plant curriculum and expands in new directions. Contemporary topics will be discussed such as native vs. non-native plants, invasive plants and alternatives, xeriscaping and sustainable plant selection. It is hoped that students will hone their ability to select appropriate woody plant material for challenging landscape situations and become aware of contemporary issues in horticulture. Guest speakers, outdoor laboratory exercises and field trips will be organized to complement classroom instructions.
Prerequisite(s): HOR 211, HOR 212
(2,2) 3 credits

HOR 320 Public Garden Management
Students will be introduced to the range of operations that occur within botanic gardens, arboreta, and other public garden institutions. Students will develop the skills they require to become effective managers of these living plant collections. They will also form communication channels with public garden professions. Course requirements include a research project tailored to the student’s career objectives. Following this course it is recommended students pursue a public garden internship.
Prerequisite(s): HOR 104 or HOR 110
(2,2) 3 credits

HOR 330 Weed Science and Management
Discussion of the origin and history of weed science and weed control. Life cycle, growth and development, weed interference and competition with plants will also be explored. The course will also emphasize physical, cultural, biological and chemical control of weeds. The herbicides along with their selectivity, performance and methods of application will also be discussed.
HOR 340 The Sustainable Garden
Healthy sustainable landscapes provide benefits to human functioning, health and well being. But just what is a “healthy landscape?” What are the major tenets of “Sustainability?” What does it mean to “Go Green?” In the Sustainable Garden course we will define, investigate and promote sustainable garden design, land development and management practices. We will investigate how to transform sites with and without buildings utilizing integrated sustainable principles. The course will provide students with tools to address increasingly urgent global concerns such as climate change, loss of biodiversity, and resource depletion. It will have value for those who design, construct, operate and maintain landscapes.
Prerequisite(s): HORN 170 or department chair approval (2,2) 3 credits

HOR 350 History of Garden Design and Landscape Architecture
Through an historic survey this course will examine how natural environments have interacted with socio-cultural traditions to influence the design of European, Asian, and North American gardens, landscapes, and urban spaces. Pioneers in the development of landscape gardens will be profiled.
Prerequisite(s): 9 credits HORN, HIS 126 or HIS 117 or HIS 118 or permission of Chair (3,0) 3 credits

HOR 360 Landscape Surveying Skills
This elective course is intended for Landscape Development and General Horticulture students who wish to develop skills in the use of basic surveying instruments such as tape, level and transit. These skills are used to record existing location of structures and ground form. Students will learn to use these methods for installation of new structures and alteration of landform. conventional methods for recording notes and standard methods in mathematical procedures will be covered.
Prerequisite(s): HORN 171 (2,3) 3 credits

HOR 370 Landscape Professional Practices
This is a course about the student’s future as a horticulturist, landscape designer, contractor, a business professional and a citizen. Students will learn the skills required to start and manage a professional practice in his/her chosen field. The basics of business structure, insurance, contracts, and business investment will be addressed. Students will produce a cohesive business plan that incorporates defining their marketplace, theories on aging, the physiology of aging, psycho-social aspects of aging, life decision making, sexuality and spirituality in aging, and social policies affecting the elderly in America today. Essential concepts related to the senior citizen will be examined from multiple viewpoints, including that of the client, the family, the health care provider and the health care system.
Prerequisite(s): HORN 207 (3,0) 3 credits

HOR 371 Landscape CAD I
This course is an introduction to computer aided design/drafting. This course includes all the functions of AutoCad plus specific tools and solutions for professionals in the land development industry. This course will focus solely on two-dimensional aspects of AutoCad. Each student will acquire CAD experience from using the program at his or her own workstation. We will perform exercises to develop skills from file set-up to creating 2D drawings to plotting. Our goal in the class is to become comfortable, efficient and competent computer drafters. Each student is required to produce a landscape site plan.
Prerequisite(s): HORN 207 (1,4) 3 credits

HOR 372 Site Engineering I
Landscape construction projects involve modification of the earth's surface. This course teaches how to design, read and engineer landform. Students will be given an introduction to grading and surveying the landscape contours. They will develop a knowledge of grading around buildings and roads as well as grading for drainage.
Prerequisite(s): HORN 170 (2,3) 3 credits

HOR 410 Plant Production Technology
This course is intended to study the commercial greenhouse and nursery production of cut flowers, flowering potted plants, and nursery stock. The physiological and flowering responses of plants to light, temperature, nutrients, and gases will be addressed. Plant identification, propagation, production, scheduling, finishing, and marketing for the economic production of greenhouse and nursery crops will be studied.
Prerequisite(s): HORN 250 or department chair approval (3,2) 4 credits

HOR 471 Landscape CAD II
This course is an advanced course in computer aided design/drafting. This course will focus on providing additional time developing skills introduced in Landscape CAD 1, and introduce advanced three-dimensional aspects of AutoCad. Each student will acquire CAD experience from using the program at his or her own workstation. Each student is required to produce a comprehensive set of landscape construction plans.
Prerequisite(s): HORN 371 (1,4) 3 credits

HOR 472 Site Engineering II
Landscape plans require engineered drainage design, engineered irrigation design and lighting design. The course covers advanced grading design processes, storm water management principles and techniques using the hydrologic cycle, and designing advanced lighting systems to create beautiful night landscapes. Irrigation design will cover various types of irrigation for the landscape.
Prerequisite(s): HORN 372 (2,3) 3 credits

HEALTH STUDIES

HST 101 Current Issues in Health
This introductory, multi-disciplinary course will provide a broad background of information on current issues in health care. The course is designed to facilitate and enhance the professional growth of future health care providers. Topics will include common and emerging health problems, an examination of the health care delivery system, effective wellness behaviors and common ethical issues occurring in health care today.
(3,0) 3 credits
Fall, Spring

HST 103 Current Topics in Gerontology
This three credit elective course will provide an overview on a number of topics related to aging in today’s society. Topics will include current theories on aging, the physiology of aging, psycho-social aspects of aging, health and illness, legal and ethical issues, quality of life issues, end of life decision making, sexuality and spirituality in aging, and social policies affecting the elderly in America today. Essential concepts related to the senior citizen will be examined from multiple viewpoints, including that of the client, the family, the health care provider and the health care system.
(3,0) 3 credits

HST 301 Health Care Organization
This is a survey course introducing the student to the concepts of health care organization. Health care will be studied from a historical, political, economic, and consumer perspective. Focus will include exploring the commonly used models of health care delivery and organization in the United States and selected other countries.
Prerequisite(s): HST 101 or approval of this department chair (3,0) 3 credits
Spring
HST 303 Medical Terminology
This course will introduce the student to the language of healthcare through the use of roots, suffixes and prefixes that are used to build medical terms. An overview of human anatomy and related disease processes will be used as a basis for studying the terminology. The student will achieve the ability to interpret medical terms as well as relate those terms in the appropriate context of healthcare practice. Prerequisite(s): HST 101 or approval of this department chair (3.0) 3 credits

HST 305 Ethics and Legal Issues in Health Care
This course will introduce students to the complex issues of Ethics and the Legal Aspects of Health Care. The development of self-awareness will support the students understanding of the common ethical dilemma’s faced by health care workers. Students will be introduced to the basic problem solving skills used when facing an ethical dilemma. Concepts of Autonomy, Justice, Fidelity, Beneficence and Non-Maleficence will be discussed. The student will explore the difference between Legal obligations and Moral obligations and the concepts of Law as it affects the Health Care System. Case studies will be used as a means of exploring the issues. Prerequisite(s): HST 101 or approval of this department chair (3.0) 3 credits

HUM 200 Introduction to Women’s Studies
An interdisciplinary approach (SOC, HUM, HIS) that will draw on literature, history, sociology as well as science and technology, the course will introduce students to issues in gender that cross traditional disciplines. Cultural assumptions about gender will be examined, and students will be encouraged to consider new ways of looking at knowledge in light of new understanding about the ways in which gender constructs beliefs and influences life’s realities. Note: Students completing this course may not receive credit for SOC 200 or WST 200. Prerequisite(s): EGL 102 or a introductory social science course (3.0) 3 credits

HUM 305 Culture and Technology: The Industrial Revolution in England, 1750-1880
A multi-disciplinary examination of the ways in which technology affected everyday life during the Industrial Revolution in England. Covering the years 1750 to 1880, it examines the changes taking place in technology during the period; how these changes ultimately affected the workplace, the home, and the community and how novelists of the period felt about these changes. Faculty team teach this course. Note: Students completing this course may not receive credit for HIS 305, HUM 305, SOC 305. Prerequisite(s): EGL 102, one social science course and HIS 114 or 115 or 126 (3.0) 3 credits

HUM 306 From Farm to Factory: The Transformation of America 1820-1920
A detailed study of the technological, economic, social, political, ideological and cultural transition of American from a rural, agrarian republic to a complex, industrialized, urban nation in the period from 1820-1920. This interdisciplinary course uses primary and secondary material to examine the effect of technology and urbanization on American life. A multi-cultural and cross-gender perspective will provide focus. Note: Students completing this course may not receive credit for HIS 306 or EGL 306. Prerequisite(s): EGL 101 and 3 credits in Social Science (3.0) 3 credits

INDUSTRIAL TECHNOLOGY
IND 303 Planning & Controlling Operations
This course is an introduction to the concepts and techniques of sales and operations planning; managing inventory; master scheduling; material requirements planning; production activity control; supply chain information systems; process mapping; JIT/Lean production; and Kanban systems. Case studies covering these topics will be included. Note: Students cannot receive credit for both BUS 303 and IND 303. Prerequisite(s): BUS 109 (3.0) 3 credits

IND 306 Project & Contract Management
This course covers the processes encountered in choosing, planning, controlling, and negotiating of projects and contracts in technologically based firms. Topics include project and contract: feasibility; risk analysis; selection; portfolio optimization; cost estimation and controls; capital budgeting; performance relating to negotiation, adjustments, and benchmark standards; and awareness and appreciation for ethical practices. Note: Students completing this course may not receive credit for BUS 306. Prerequisite(s): BUS 109 (3.0) 3 credit

IND 308 Occupational Safety
This course introduces the fundamentals of occupational safety
and examines potential accidents, which may occur in the modern work environment that employs complex materials, processes and technologies. We will review the history and safety legislation of the regulatory agency OSHA. Acquiring and analyzing hazard information, organizing and setting up occupational safety programs, accident causes, their control and accident record keeping will be addressed.

(3,0) 3 credits  Fall, Spring, Summer

IND 309 Security and Fire Protection Systems
Assessing a facility’s need for an recommending as well as managing the design, procurement, installation, and operation of access intrusion detection, closed circuit television (CCTV), security lighting, fire alarms, and fire suppression systems; establishing policies, procedures, and practices for systems operations and maintenance, monitoring and evaluating systems performances; researching and assessing technical developments in the security and fire protection fields.

(3,0) 3 credits  Spring

IND 310 Industrial Hygiene
This course introduces students to the fundamentals of industrial hygiene as well as to a recognition of health hazards in the facility environment. This course includes analysis of solvents, particulates, industrial dermatoses, industrial noise, ionizing radiation, nonionizing radiation, temperature extremes, biological hazards, and indoor air quality issues. A study of methods with which to evaluate exposures to hazardous substances; a detailed analysis of control programs; and an examination of environmental protection acts and amendments are also included.

(3,0) 3 credits  Fall, Spring, Summer

IND 315 Facilities Planning
This course is designed to introduce a comprehensive overview of the concepts and techniques to generate facility plans. The course includes the determination of the requirements for people, equipment, space, and material in the facility along with the evaluation, selection, preparation, presentation, implementation and maintenance of the facility plans. An overview of the components of a building structure, its envelope and related items are also discussed.

(3,0) 3 credits  Fall

IND 316 Customer Relations & Quality
This course covers the basics of customer relations and quality in industry and includes discussion of quality management principles and standards as well as communication techniques such as questionnaires to measure and assure customer satisfaction. The American Customer Satisfaction Index, J. D. Power and Associates Reports; Malcolm Baldridge National Quality Award; International Organization for Standardization (ISO 9000) Standards; and Automotive Quality (QS-9000) Standards will be discussed in the context of customer services and managerial responsibilities.

Note: Students completing this course may not receive credit for BUS 316.
Prerequisite(s): BUS 300
(3,0) 3 credits  Spring

IND 317 Automotive Financing and Leasing
This course is designed to familiarize the students with the basic economic problems and principals that exist when a vehicle or other equipment is purchased or leased. Problems are centered around the cost of capital, capital budgeting and investment analysis. Also discussed are repayment schedules including amortized loans, refinancing and variable rate loans.

(3,0) 3 credits

IND 320 Fleet Management
This course is designed to provide students with a practical discussion and examination of the fleet management function, as well as how it relates to an organization. The course will include discussions on business plans, fleet utilization and replacement, human resources, parts management, safety requirements and data services. This course will consist of presentations, case studies and a review of management literature.
Prerequisite(s): Junior status in the program or approval of this department chair
(3,0) 3 credits

IND 400 Quality Techniques
This course covers quality tools and techniques used in problem solving and decision making. Topics include: Pareto charts; cause-and-effects diagrams; check sheets; histograms; scatter diagrams; quality function deployment; statistical process control; continuous improvement; Goldratt’s theory of constraints; benchmarking; just-in-time manufacturing; and implementing total quality. A written assignment will be required that integrates quality topics with problem solving and decision making tools and techniques.
Note: Students completing this course may not receive credit for BUS 400.
Prerequisite(s): BUS 240 or MTH 110
(3,0) 3 credits

IND 401 Quality Management
This course covers quality philosophies and concepts. Topics include: quality and global competitiveness; human resources and technology; total quality approach; strategic management; quality management and ethics; partnering for competitiveness; quality culture; customer satisfaction and retention; employee empowerment; leadership and change; team building and teamwork; communication and interpersonal relations; education and training; overcoming politics and negativity toward quality in the workplace; relationship of ISO 9000 and Total Quality. The American Society for Quality (ASQ) Certified Quality Manager body of knowledge will be referenced. A written assignment will be required that integrates quality philosophies and concepts with management and human resources issues.
Note: Students completing this course may not receive credit for BUS 401.
Prerequisite(s): BUS 300
(3,0) 3 credits

IND 402 Facility Maintenance Management
The objective of this course is to present a comprehensive overview of the management, administration and control of a facilities maintenance department, including an overview of business and financial issues work order systems; prioritizing, planning and scheduling of maintenance, construction, custodial and groundskeeping work; evaluating and control techniques; in-house vs contracting work; the contract cycle and components.
Prerequisite(s): BUS 300
(3,0) 3 credits  Fall

IND 405 Heating, Ventilating, & Air Conditioning Systems
The objective of this course is to present a comprehensive treatment of Heating, Ventilating and Air Conditioning Systems. This course covers boilers, air handling units, refrigeration systems, chemical treatment, distribution systems, terminal equipment, fans, pumps, compressed air, solar systems, maintenance and indoor air quality for commercial, industrial and institutional buildings.
Prerequisite(s): MET 210, MET 212, MET 230
(3,0) 3 credits  Spring

IND 406 Energy Management
The objective of this course is to present a comprehensive treatment of various forms of energy on the market today and their relative costs. This course covers utility rate structures, power reduction, wheeling and rebates. It will also review various energy alternatives such as purchased steam, cogeneration and solar systems. It will cover life cycle costing and energy conservation programs. In addition such items as the intelligent building, load management and miscellaneous means to increase efficiency will be covered. In addition energy conservation will be covered with respect to its affect on indoor air quality and other environmental issues.
Prerequisite(s): MET 210, MET 212, MET 230
(3,0) 3 credits  Spring
IND 408 Automotive Business Management
This is a theory course developed to give the student an understanding of employment practices and opportunities in the automotive industry. Topics include: management principals and structures, tasks and duties of a service manager including interview techniques, performance evaluations, and financial operations of a service facility. The course will provide the student with an understanding of owner communications, shop capacity management, leadership effectiveness, organizational behavior, and promotional strategies. This course will include related problem-solving activities, and a final project.
Prerequisite(s): Junior status, BUS 109, BUS 300
(3,0) 3 credits

IND 410 Senior Project
This is a 45-hour independent study course. Students must obtain permission from a Project Advisor before registering for this course. Although there is some flexibility, most senior projects will involve student participation on-site in a company. The topic for the senior project will utilize skills and knowledge acquired in previous Business Management and related courses.
Note: Students completing this course may not receive credit for BUS 410.
Prerequisite(s): BUS 409 or IND 409
(1,6) 3 credits

ITALIAN

ITA 121 Italian I (Elementary)
A beginning course in Italian emphasizing the gradual development of the four language skills: listening, speaking, reading and writing with stress on communicative competence and cultural awareness.
(3,0) 3 credits

ITA 122 Italian II (Elementary)
A continuation of Italian 121 for students who have had 2 or 3 years of high school Italian. This course emphasizes the gradual development of the four language skills: listening, speaking, reading, and writing with stress on communicative competence and cultural awareness.
Prerequisite(s): ITA 121 or 2 years of high school Italian
(3,0) 3 credits

ITA 125 Italian for Business
This course will provide the development of oral proficiency used in daily communication within the business world, preparing the students both in technical vocabulary and situational usage. An introduction to specialized vocabulary in business and economics, as well as practice in writing business correspondence, will be included. Readings in management, marketing, advertising, etc. will be covered.
Prerequisite(s): ITA 121 or 2 or 3 years of high school Italian
(3,0) 3 credits

ITA 223 Italian III (Intermediate)
A continuation of ITA 122 for students who have had 3 or 4 years of high school Italian. This intermediate course further emphasizes the development of the four language skills: listening, speaking, reading, and writing with stress on communicative competence and cultural awareness. A literary and cultural reader will be introduced.
Prerequisite(s): ITA 122 or approval of this department chair
(3,0) 3 credits
Fall

ITA 224 Italian IV (Intermediate)
For those students who have taken ITA 123 or four or more years of high school Italian. This course emphasizes structural review, intensified practice in oral expression with increased emphasis on reading and writing skills. Continued attention will be given to contemporary Italian culture. Selections from Italian authors will be read.
Prerequisite(s): ITA 223 or approval of this department chair
(3,0) 3 credits
Spring

ITA 301 Italian V (Advanced)
An advanced conversation/composition course with intensive practice in oral and written Italian. Prepared discussions and writing assignments on selected cultural, historical and literary topics.
Prerequisite(s): ITA 224 or approval of this department chair
(3,0) 3 credits
Fall

ITA 302 Italian VI (Advanced)
A continuation of ITA 301 with intensive practice in oral and written Italian. Prepared discussions and writing assignments on selected cultural, historical and literary topics.
Prerequisite(s): ITA 224 or approval of this department chair
(3,0) 3 credits
Spring

PRACTICAL NURSING

LPN 101 Fundamentals of Nursing
This course introduces students to concepts of nursing care that are common to all patients, i.e. communication, cultural sensitivity, asepsis, nutrition and medication administration. Emphasis is placed on the role of the practical nurse as a member of the healthcare team. Students are given the opportunity to develop nursing skills and apply knowledge through guided learning experiences in the College Laboratory and in the care of selected patients in various healthcare facilities. Nursing Process is introduced as a tool for planning nursing care and developing critical thinking.
Corequisite: BIO 170, LPN 101
(1) 1 credit

LPN 102 Nursing Care of Patients Across the Lifespan
This course introduces students to more advanced concepts of nursing care common to the child bearing family, children, middle and older adults, as well as individuals with behavioral disorders. Professional responsibility and accountability are emphasized. This course includes concurrent learning experiences in acute care and community healthcare settings to enhance student learning.
Prerequisite(s): LPN 101, LPN 100
(4,2,9) 8 credits

LPN 103 Nursing Care of Patients in Alternate Settings
This course builds on concepts and nursing skills presented in the previous PN courses, and focuses on providing nursing care in long-term and community settings to individuals who have common health problems.
Prerequisite(s): LPN 102
(4,2,9) 8 credits

MECHANICAL ENGINEERING TECHNOLOGY

MET 109 Computer Programming and Applications
This is an introductory course in a computer programming language. Programs are specifically written to be used in the areas of statics, strength of materials, machine design, heat transfer, and fluid mechanics.
(1,2) 2 credits
Fall, Spring
MET 117 Manufacturing Process
The main purpose of this course is to introduce the student to the principles and operation of mechanical equipment such as lathes, drill press, milling machines and measuring requirements and measuring instruments. Several manufacturing processes such as welding, powder metalurgy, sheet metal forming extrusion, etc. are also covered. Individual laboratory projects will be assigned to each student to reinforce the topics covered in the theory. (1,3) 2 credits

MET 127 Advanced Manufacturing Process
This course is a continuation of MET117. Topics emphasize the theory and operation of manual and numerically controlled milling machines and machining centers. Additional topics covered are the gear shaper, indexing head, point-to-point drilling and milling, and three axis measurement. Laboratory projects will be assigned to reinforce the topics covered in theory. Prerequisite(s): MET 117 (1,3) 2 credits

MET 201 Statics
This is a basic course in statics. The main objective of this course is to provide the student with an understanding of the principles of statics. Topics such as resultant of a force, equilibrium of forces, moments, couples, analysis of simple trusses, centroids, center of gravity, moments of inertia and friction are covered in this course. Note: Students completing this course cannot receive credit for CON 106. Prerequisite(s): MTH 130 and PHY 135 (2,2) 3 credits

MET 205W Material Science
This is a theory and laboratory course designed to give students a basic understanding of crystal structures, effects of cold work and annealing on metal structures and properties, phase diagrams, heat treatment of steel, corrosion of materials, failure analysis of ferrous and non-ferrous alloys, ceramics, plastics and composite materials. Laboratory experiments are associated with the topics covered in the theory. Students will write technical reports throughout the semester as well as final presentations to help them communicate effectively in specific writing related to their fields. (2,2) 3 credits

MET 206 Strength of Materials
This is a basic course in Strength of Materials. The main objective of this course is to introduce the concepts of stress, strain, torsion, bending and shear stresses. It also covers shear moment diagrams, deformations and modes of failure, Mohr’s Circle; also included are topics in thermal and corn bined stresses. Laboratory demonstration of experiments and testing equipment are emphasized. Prerequisite(s): MET 201 or CON 106 (2,2) 3 credits

MET 207 Tool Design
This course emphasizes the design of production tools, including drill jigs, milling and boring fixtures, and sheet metal piercing and blanking press blocks. Drawings will be on the computer. Prerequisite(s): MET 127, MET 211 (2,2) 3 credits

MET 210 Applied Thermodynamics
This course lays the groundwork for the student’s future studies in the area of thermal design, encompassing the fields of power, heating, air conditioning and refrigeration. Topics covered include basics such as the first and second laws of thermodynamics, equations of state for gases and vapors, and psychometrics. Building on this foundation, thermodynamic processes and cycles will be introduced, including the Carnot, and Vapor Compression refrigeration cycles. Thermal equipment such as boilers, turbines, evaporators, condensers, compressors and heat exchangers will be analyzed. Prerequisite(s): MET 109, PHY 136, MTH130 (3,0) 3 credits

MET 211 Advanced Computer Graphics
This is a laboratory course which introduces advanced topics in computer graphics. Students will learn 3D solid modeling based on parametric constraints, dimensioning and features such as Extrude, Revolve, Sweep, Loft, Hole, Fillet and Shell. The course also teaches students how to create assemblies, presentations and 2D engineering drawings. Laboratory exercises will be assigned to the students for hands-on experience with the related topics. Prerequisite(s): GPH 103, GPH 104 (0,2) 1 credit

MET 212 Applied Fluid Mechanics
The objective of this course is to present the basic principles of fluid mechanics and the application of those principles to practical, applied problems. Primary emphasis is on the topics of fluid statistics, flow of fluids in piping systems, flow measurement, and forces developed by fluids in motion. The course is directed to anyone in a technical field where the ability to apply the principles of fluid mechanics is desirable. Prerequisite(s): MTH 130 Corequisite(s): PHY 136 (3,0) 3 credits

MET 230 Electrical Principles
This hands-on and theory course introduces electrical principles to Mechanical and Manufacturing Engineering Technology and Facility Management Technology students. Emphasis will be on power systems that utilize alternating current. Course topics include resistive and R-L-C series and parallel circuits, instrumentation, single and three phase circuits that contain motors, transformers, starters and low voltage controls, and an overview of electronic applications to mechanical systems. Electrical logic (ladder) diagrams will be stressed throughout the semester. Laboratory assignments will reinforce the topics covered by theory through relevant experiments performed by the student and will include the writing of laboratory reports. Prerequisite(s): MTH 130, PHY 136 (3,0) 3 credits

MET 251 Numerical Control
In this course, the fundamental skills and knowledge of the NCL Numerical Control Programming Language are developed. Students will be required to write and run NCL programs on the Department’s PC’s. Students will also process programs capable of controlling machine tools. Prerequisite(s): GPH103, GPH104, MET252 & MTH129 (3,0) 3 credits

MET 252 Quality Control (Metrology)
Students will be introduced to the three main aspects of industrial quality control: dimensional inspection, calibration, and statistical quality control. The theory and practice of metrological devices such as plug gauges, gauge blocks, optical comparator and the tool-maker’s microscope will be covered. State-of-the-art digimatic equipment, height gauge, and super micrometer will be taught as well as other inspection techniques. The use of the computer assisted coordinate measuring machine (CMM) will also be emphasized. Prerequisite(s): MET 211, MET 127 (2,2) 3 credits

MET 300 Computer Aided Design
This course will introduce the technology students to the important subject of engineering design and finite element analysis. The course material builds on the student’s previous experience in computer graphics and strength of materials and introduces them to the modern concepts
of concurrent engineering and design for manufacturability. The students will learn how to import their graphic drawings from the Computer Aided Design (CAD) to the Computer Aided Engineering (CAE) software and apply the loads and appropriate boundary condition. Linear stress and deformation analysis of mechanical systems is an essential part of this course, which will provide the students with a powerful design tool.

**Prerequisite(s):** MET 127

**(1,2) 2 credits**

**MET 304 Computer Integrated Manufacturing**

In this course the concepts of Computer Integrated Manufacturing (CIM) as applied to the areas of Computer Aided Design (CAD), Design Office Automation, Computer Aided Engineering (CAE), Management Materials Tracking with Bar Code Technology and Network Communication will be studied. Students will gain hands-on experience using the college’s computer system and software. Laboratory projects will cover real world concepts.

**Prerequisite(s):** MET 211

**(2,2) 3 credits**

**Fall**

**MET 305 Tooling for Composites**

This is a theory and laboratory course covering an introduction to advanced composites and design of production tools. Some included topics are: vacuum fixtures, lay up tooling, composite tooling, and press tooling. Drawings will be done on the computer graphics.

**Prerequisite(s):** MET 207

**(2,2) 3 credits**

**Spring**

**MET 307 Electromechanical Control Systems**

The objective of this course is to present a comprehensive, concise and modern treatment of the fundamental principles of feedback and linear control system theory & practice. The theory part of the course considers the conceptual framework and terminology of feedback and control systems, methods of determining the stability of linear systems, transfer functions, block diagrams and signal flow graphs. Laboratory exercises demonstrate the fundamental behavior of pneumatic, electro pneumatic, hydraulic systems. Special topics include the use of microprocessors in control system technology.

**Prerequisite(s):** MET 230

**(2,2) 3 credits**

**Fall**

**MET 308 Machine and Product Design**

This course covers the mechanical design of the machine elements including gears, couplings, shafts and fasteners by applying the basic principles of statistics and strengths of materials. It also includes the kinematics of gear trains, stress analysis of various machine elements and design for different modes of failure.

**Prerequisite(s):** MET 206

**(2,2) 3 credits**

**Fall**

**MET 351 Computer Aided Manufacturing (CAM)**

This course provides the student with experience in computer graphics NC programming techniques. Students will generate 2-D and 3-D parts on CAD software and analyze the toolpaths required for various types of machining operations. Programs will be processed to produced EIA-NC code which will then be loaded into a CNC machine to manufacture a part. Students will also create 2-D and 3-D files on CAD software and learn how to export the CAD files to CAM software.

**Prerequisite(s):** MET 127

**(3,0) 3 credits**

**Spring**

**MET 405 Dynamics**

The motions of a particle and its associated forces and accelerations will be analyzed. The analytic techniques will include conservation of energy, impulse, momentum and work methods. D’Alembert’s Principle, rotational dynamics, and critical shaft speeds will be studied. Students will develop computer software for selected topics.

**Prerequisite(s):** MET 201, PHY 136, MET 109 and completion of Department mathematics requirements

**(3,0) 3 credits**

**Fall**

**MET 406 Electronic Packaging Applications**

This is a theory and laboratory course covering an introduction to electronic packaging application with the layout drawings of analog and digital schematics. Also included in the course is application of thermal, radio frequency, electromagnetic, shock and vibration effects. Students’ designs will be drawn on the College’s computer graphics equipment.

**Prerequisite(s):** MET 207

**(2,2) 3 credits**

**Fall**

**MET 409 Statistical Quality Control**

Students are introduced to techniques for determining the quality of mass manufactured products by means of statistical analysis. State-of-the-art computers and software will be used to generate and analyze process control charts and histograms, plus continuous variables, and attribute control charts. Tests for special causes and capability analysis of a process will be addressed. Prediction of the probable percentage defective in a monitored process as well as the producer’s and customer’s risk will be emphasized. Students will learn to define the Acceptance Quality Level (AQL) and the military sampling plans (MIL Standard).

**Prerequisite(s):** MET 109, MET 252 and a statistics elective

**(2,2) 3 credits**

**Fall**

**MET 410 Senior Project**

An independent investigation of a technical problem of interest to both the student and a faculty member who shall act as Project Advisor. The project selected will utilize skills and knowledge acquired in earlier MET studies. Required for graduation from the Bachelor of Technology program in Manufacturing Engineering Technology

**Prerequisite(s):** approval of this department chair

**(3,0) 3 credits**

**Fall, Spring**

**MET 411 Applied Heat Transfer**

This course will provide students with a basic understanding of problems of heat transfer. The fundamental laws of conduction, convection, and radiation are studied using analytical and graphical methods. Graphical and empirical solutions and applications to industrial problems will also be covered plus special topics in heat exchangers, heat pipes, and industrial furnaces.

**Prerequisite(s):** MET 212 and completion of Department mathematics requirements

**(3,0) 3 credits**

**Spring**

**MET 415 Robotics**

Students will be introduced to robotics from both a theoretical and practical aspect. Different types of robots and their applications in industry will be covered. Additional topics include motion transmission and control of robot mechanisms, robot programming, the use of robots in an integrated manufacturing cell, and practical uses of the robot vision system. Hands-on experience on actual working robots and the application of the theory will be provided in the laboratory.

**Prerequisite(s):** MET 307

**(2,3) 3 credits**

**Spring**

**MET 417 Modern Manufacturing Systems**

This course is designed to enrich the students practical knowledge with ‘hands on’ experience of full scale modern manufacturing systems and actual industrial machining centers. This course is composed of theory and laboratory parts; the laboratory part of the course will be held in the Institute for Research and Technology Transfer (IRTT) of the college which offers the state of the art manufacturing systems and techniques. The students
will work in teams to design 3-D mechanical parts for manufacturability and practice the concepts of concurrent engineering and teamwork. 
Prerequisite(s): MET 351  
(2,2) 3 credits  
Fall

MODERN LANGUAGES 
All MLG courses are taught in English

MLG 100 Introduction to Language
A study of language from several points of view including the following: structure of sounds, words, sentences (phonology, morphology, syntax); variation in time (historical linguistics); variation in space (socio linguistics). Applications may include first and second language acquisition, language disorders and natural language processing in artificial intelligence.  
(3,0) 3 credits  
Spring

MLG 300 International Cinema
Selected international films will be viewed, analyzed, and discussed in terms of their historical, social, political, and economic context as well as for their aesthetic value. Readings, lectures, and class discussions are organized to teach coherency in reading filmic works.  
Prerequisite(s): EGL 102 or higher  
(3,0) 3 credits  
Fall, Spring, Summer

MLG 301 Italian Cinema (In English)
Representative Italian films, from the post-war and Neorealism to the present, will be viewed, analyzed and discussed. Films are selected to provide a broad historical and social perspective as seen through the artistic vision of individual directors. The course will be conducted in English and all films have English subtitles.  
Prerequisite(s): EGL 102 or the equivalent and one Social Science elective  
(3,0) 3 credits  
Fall, Spring

MLG 302 Spanish and Latin American Cinema
Representative Spanish and Latin American movies that cover periods from romanticism to contemporary times will be analyzed, viewed and discussed. Films will be chosen to discuss social, philosophical, political and identity problems as well as its interpretation according to the artistic vision and directors achievements and goals. Theory and history of film genres of Spain and Latin America cinema will be studied. The course will be conducted in English and all movies have English subtitles.  
Note: Students taking this course cannot receive credit for SPA 305  
Prerequisite(s): EGL 102 or higher  
(3,0) 3 credits

MLG 303 French Cinema (In English)
Representative French films from the lyrical traditional cinema to the New Wave of the sixties and to the new humanism of the present, will be viewed, analyzed and discussed. Films are selected to provide a broad historical, ideological and social perspective as seen through the eyes of individual directors. The course will be conducted in English and all films have English subtitles.  
Prerequisite(s): EGL 102 or higher  
(3,0) 3 credits  
Fall

MLG 304 French Culture and Civilization
An examination of contemporary France and its political, economic and social development. French cultural life and institutions in France will be considered. This course will also analyze the history, arts and the socio-political institutions of the francophone world.  
Prerequisite(s): EGL 102 or higher  
(3,0) 3 credits  
Spring

MLG 305 Hispanic & Latin American Culture and Civilization
Provides a general perspective on the formation of the Latin American Culture through the centuries, with special emphasis on Spanish America.  
(3,0) 3 credits  
Fall, Spring

MLG 306 Italian Culture and Civilization
An examination of contemporary Italy and its political, economic and social development. Italian cultural life and institutions in Italy will also be considered.  
Prerequisite(s): EGL 102 or higher  
(3,0) 3 credits  
Fall, Spring

MLG 307 French and Francophone Fiction and Film
This course will explore the relationship between literary works and their film adaptations in France and all over the French-speaking world. Selections will be read from novels, short stories, and poems, and major literary movements will be discussed. Students will analyze how literary images and themes are translated onto the big screen. Topics include the French heritage novel, the North African Arab/French experience, the West African and Caribbean Negritude Movements, and French-Canadian literature and film. All readings and films in English translation.  
Prerequisite(s): EGL 102 or higher  
(3,0) 3 credits

MLG 308 Arabic Culture and Civilization
This course examines Arabic culture and civilization through an analysis of historical, educational, social and climatic factors. The course will focus on issues arising out of intra-cultural and inter-cultural communication with today's economic and socio-political currents focusing on American and Arab relations.  
Prerequisite(s): EGL 102 or higher  
(3,0) 3 credits

MLG 309 Arabic Cinema
This course will examine a diverse body of motion pictures produced in the Arab world. Through films, critical readings, and in class discussion, students will acquire and develop an understanding of Arabic culture and a great appreciation for the art history of Arab Cinema from across the 22 Arab nations.  
Prerequisite(s): EGL 102 or higher  
(3,0) 3 credits

MLG 310 Latin American Women Writers
This course focuses on the works of major Latin-American women writers from the 17th to the 20th Century. We will analyze poems, short stories and novels and how women have been portrayed on literature. The theoretical approach to this class will be based on Contemporary feminist critics. We will study the works of the first 17th Century Mexican feminist writer, the Nun, Sor Juana Ines De La Cruz, as well as the works of Elena Poniatowska, Julia Alvarez and Laura Ezquivel among others.  
Note: Students completing this course may not receive credit for WST 310  
Note: Students taking this course cannot receive credit for SPA 310  
Prerequisite(s): EGL 102 or higher  
(3,0) 3 credits

MLG 311 Italian Americans: Perspectives of a People
This course is an introduction to the experiences of a people that created a unique and distinctive ethnic culture. The course begins with fundamental Italian heritage and examines the role of immigration and assimilation in a new world as Italian culture combined with the American experience to form the Italian-American culture. Italian-American studies offer students an opportunity to survey development in history, literature, media, art, and sociology. It also provides students with an in-depth
MLG 312 Contemporary Latin American Short Stories
An introduction to different literary movements reflected in Latin American Short Stories in translation during the 20th Century. The emphasis will be on the lyrical basis of the realistic, surrealistic and supernatural elements in the stories of Latin American Writers. Modern women writers’ esthetics and poetic sensitivity as well as humor and sarcasm will be included in both the observation of individual psychology and tales of the absurd. Summarizing, and using Anderson Imbert’s three basic definitions, the focus of this course will be: a) reality (realism); b) the supernatural (literature of the fantastic); c) the strange (magic realism).

Note: Students taking this course cannot receive credit for SPA 312
Prerequisite(s): EGL 102 or higher
(3,0) 3 credits

MLG 314 Hispanic Fiction to Film
Fiction like film is a narrative storytelling art form. In this class students will study the adaptation of written, fictional works and their correspondent films. Students will also study the narrative devices, techniques and formal properties used to tell a story that are particular to film but not found in literature, such as camera angle, camera distance, editing, cross-cutting, montage, framing, and camera movement. This course will take a critical approach to examining the narrative language utilized by fiction and film with the objective of developing a more critical eye for interpreting both mediums.

Prerequisite(s): EGL 102
(3,0) 3 credits

MLG 315 Art, Culture & Civilization of Spain
Study of Spain, a multicultural and multilingual nation, not as a homogeneous entity, but rather as a heterogeneous tapestry of various cultures and languages. The corpus of cultural texts studied will be derived from the realms of literature, film, architecture, music and the visual arts. They will be analyzed within their socio-historical context, as well as their aesthetic value.

Note: Students taking this course cannot receive credit for SPA 315
Prerequisite(s): EGL 102 or higher
(3,0) 3 credits

MLG 316 French Fables and Folktales
This course will examine the literary tradition of the fable, the folktale, the fairy tale, the myth, and the legend in France throughout the centuries. Starting with the period of King Clovis I in the late 400s A.D. and ending with 20th century folklore, we will delve into the nature of these short stories, asking a variety of questions. Who is the intended audience? Are there different versions of the same tale, and why? What are the differences between oral tradition and written tradition? How are these French stories represented in other nations’ literature, art and film? Finally, we will briefly chart the rich tradition of Cajun and Creole folklore of present-day South Louisiana, as well as that of French Canada and Haiti.

Prerequisite(s): EGL 102 or higher
(3,0) 3 credits

MLG 320 Latino Writers in the United States
The development of Latino literature and culture in the United States, with emphasis on the 20th century. Major writers of Mexico, Cuba, the Dominican Republic, Puerto Rico, and other Latinos will be analyzed in relation to each group’s particular experience and its relation to main stream society. Particular attention given to how gender, race, ethnicity and class interaction affects the formation of the diverse cultural experience of the U.S. Latino population. This course will be taught in English.

Note: Students taking this course cannot receive credit for SPA 320
Prerequisite(s): EGL 102 or higher
(3,0) 3 credits

MLG 321 Arab and Middle Eastern Literature
The literary tradition of the Middle East and North Africa. The role of the Sufi mystics, the contemporary Arab novelists, and the role of Islam will be discussed.

Note: Students taking this course cannot receive credit for SPA 321
Prerequisite(s): EGL 102 or higher
(3,0) 3 credits

MLG 325 Special Topics in Laboratory Science I
Special topics in Laboratory Science is designed to allow a student to obtain skills and knowledge in certain specialized areas of the laboratory. The course is designed primarily as an off-campus internship or laboratory mini-research project. The student may select a rotation in Histology, Cytology, Computers, Point of Care Testing, Toxicology, Special Chemistry, Special Microbiology, Immunology or any laboratory rotation/project that is of interest to the student and is approved by the Department. Specific offerings in Special Topics in Laboratory Science I (MLT2-) and Special Topics in Laboratory Science II (MLT2-) will be

MEDICAL LABORATORY TECHNOLOGY

MLT 105 Medical Laboratory Techniques
This course introduces students to the professional and technical responsibilities of the Medical Laboratory Technician (MLT). Professional topics include hospital and laboratory organization, legal and ethical issues, certification and licensure, and communication. Preliminary topics in the major technical areas of laboratory science (Microbiology, Hematology, Immunohematology, Immunology/Serology, and Chemistry) are explored. The course also includes instruction and practice in medical terminology and phlebotomy techniques.

Prerequisite(s): MLT 105, BIO 130/166, CHM 152/153 or approval of this department chair
(1,2) 2 credits

MLT 223 Hematology
A study of hematopoiesis and the formed elements of blood, under normal and abnormal conditions. The theory and practice of the blood count as a diagnostic tool is presented. The processes of hemostasis and thrombosis are studied and tested in the laboratory. Automated instruments are used for evaluation of blood specimens. Finger puncture and venipuncture are utilized to obtain specimens for study by manual and automated procedures. The significance of quality control is emphasized and normal and abnormal findings are related to a quality control program.

Prerequisite(s): MLT 105, BIO 130, CHM 152 or approval of this department chair
Corequisite(s): BIO 166, CHM 153 or approval of this department chair
(3,3) 4 credits
announced by the Department and will vary semester to semester. The credits assigned may vary from one to four.

Prerequisite(s): Two MLT courses and approval of this department chair (0.3-1.2) 1-4 credits

MLT 236 Histological Techniques
This course will introduce the student to the basic histological techniques involved in the processing of histology specimens in the pathology laboratory. The techniques involved in fixation, processing/embedding, microtomy, and staining of laboratory specimens will be introduced. The course is designed as an online theory section accompanied by an internship at an affiliated pathology laboratory.

Prerequisite(s): MLT 105, MLT 223 or approval of this department chair (1.6) 3 credits

MLT 243 Clinical Chemistry
This course covers the analysis of blood, urine and spinal fluid with emphasis on the theory and performance of a broad spectrum of clinical procedures. The major topics covered in both the laboratory and lecture include electrolytes, acid base equilibrium, glucose, urea, uric acid, creatinine, serum proteins, bilirubin, and enzymes. The reasons for increased or decreased levels of these blood components will be discussed. Major diseases such as diabetes, gout, uremia, jaundice, and others are discussed in relationship to the laboratory findings. Chemical analyses are performed using manual techniques such as spectrophotometry, electrophoresis, enzyme assay, and semi-automated benchtop analyzers.

Prerequisite(s): BIO 166, CHM 152/153, MTH 110 or approval of this department chair (3.3) 4 credits

MLT 244 Clinical Practice
Routine urinalysis and special tests are performed and discussed in terms of normal and abnormal renal physiology. Laboratory testing of body fluids is also discussed, including cerebrospinal, synovial, pleural, and seminal fluid. Topics in special clinical chemistry including endocrinology, therapeutic drug monitoring and toxicology, and concepts in automation are included as part of the course. The laboratory is configured as a simulated clinical laboratory during the second half of the semester to familiarize the students with the work flow of a typical laboratory setting. Quality assurance and quality control, communication skills, and the technical training of laboratory personnel are stressed during the simulated laboratory.

Prerequisite(s): MLT 223 and MLT 243 or approval of this department chair (2.3) 3 credits

MLT 257 Clinical Microbiology I
This course discusses the medically important yeasts and fungi, and the medically important protozoa and metazoa. In addition, the major groups of bacteria that are emphasized include the Mycobacteria, Rickettsia, Chlamydia, Legionella, and Gardnerella. Clinically important human viruses are also covered. The laboratory emphasis is on the identification of the protozoa, metazoa, yeast and fungi. The acid fast stain and spuutm concentration for mycobacteria are performed. In addition, the laboratory covers cultures, antibiotic testing and some standard microbiology techniques.

Prerequisite(s): MLT 105 or approval of this department chair (2.3) 3 credits

MLT 258 Clinical Microbiology II
The principles of general microbiology including cell structure and function, antibiotic action, and microbial growth are discussed. The role of the clinically important bacteria in infectious disease will be explored. The lecture emphasizes the Staphylococci, Streptococci, Neisseria, Enterobacteriaceae, Pseudomonas (nonfermenters), Anaerobes, Hemophilus, Brucella, Bordetella, Franciscella, Pasteurella, Corynebacterium, Listeria, Erysipelothrix, Bacillus, and miscellaneous bacteria such as the Spirochetes and Spirals. The course emphasizes the identification of microorganisms through biochemical and serological procedures.

The major groups covered in the laboratory include the Staphylococci, Enterobacteriaceae, Pseudomonas, Anaerobes, Hemophilus. Each student will receive multiple unknown bacteria to identify.

Prerequisite(s): MLT 257 or approval of this department chair (3.3) 4 credits

MLT 281 Practicum in Immunohematology
Students practice clinical skills in Immunohematology (Blood Bank) at local affiliated clinical laboratories under the guidance of clinical laboratory personnel. They are evaluated by the person in charge of their internship for both technical proficiency and professional behavioral characteristics.

Prerequisite(s): MLT 228 (0.3) 1 credit

MLT 282 Practicum in Clinical Chemistry and Serology
Students practice clinical skills in Clinical Chemistry and Serology at local affiliated clinical laboratories under the guidance of clinical laboratory personnel. They are evaluated by the person in charge of their internship for both technical proficiency and professional behavioral characteristics.

Prerequisite(s): MLT 227, MLT 243, MTL 244 (0.3) 1 credit

MLT 283 Practicum in Hematology and Urinalysis
Students practice clinical skills in Hematology and Urinalysis at local affiliated clinical laboratories under the guidance of clinical laboratory personnel. They are evaluated by the person in charge of their internship for both technical proficiency and professional behavioral characteristics.

Prerequisite(s): MLT 223, MTL 244 (0.3) 1 credit

MLT 284 Practicum in Clinical Microbiology
Students practice clinical skills in Clinical Microbiology at local affiliated clinical laboratories under the guidance of clinical laboratory personnel. They are evaluated by the person in charge of their internship for both technical proficiency and professional behavioral characteristics.

Prerequisite(s): MLT 257, MTL 258 (0.3) 1 credit

MLT 325W Laboratory Management and Informatics
This course presents the principles and practices of quality management in the clinical laboratory, including laboratory administration, supervision, financial and human resource management, safety, and problem solving. The regulatory agencies responsible for monitoring laboratory practices will be discussed, including the Joint Commission on Accreditation of Healthcare Organizations (JCAHO), the College of American Pathologists (CAP), and the Clinical and Laboratory Standards Institute (CLSI). Topics covered will include quality assurance and quality control, implementation of new test methods, equipment evaluation and selection proficiency testing, laboratory inspection procedures, selection, validation and utilization of laboratory information services specific to clinical and research laboratories. Each student will be required to submit a research paper on a topic related to clinical laboratory management and informatics.

Prerequisite(s): MTH 110, BCS 102 (3.0) 3 credits

MLT 421 Molecular Pathology
This course will provide the student with an overview of the applications of DNA analysis in the diagnostic clinical laboratory. Specific examples of the use of molecular techniques will be included in the areas of oncology, hematology, infectious disease, histocompatibility, coagulation, and identification. Specimen collection and handling will be discussed as well as the specific methodology used for each application. New applications will be introduced to the course as they are developed and implemented in clinical laboratory settings.

Prerequisite(s): BIO 441 (3.0) 3 credits
MLT 423 Advanced Hematology
This course presents advanced hematology principles and techniques in preparation for practice in the clinical laboratory setting. A case study approach to laboratory experiences that facilitate the identification of abnormal cellular elements, including the pathophysiology of hematological disorders, will be emphasized. In the laboratory, students will apply quality practices and use both manual and automated technologies to correlate specimen results with hematological disorders. Prerequisite(s): MLT 223 (2,2) 3 credits

MLT 425 Laboratory Research and Education
This course presents the principles and practices of applied research design, education, and training practices for clinical laboratory technologists. Quantitative and qualitative research designs, sampling methodologies, data collection and analysis in the research process will be discussed. Topics related to education include the domains and levels of learning, writing behavioral objectives, learning outcomes, and clinical training strategies. Case studies and problem based learning will be used throughout the course to reinforce the learning of concepts. Strategies for effective communication in the clinical laboratory workplace will also be discussed. Each student will be required to design an applied research study on a topic related to clinical laboratory science. Prerequisite(s): MLT 325W (3,0) 3 credits

MLT 428 Advanced Immunohematology
This course presents advanced immunohematology principles and techniques in preparation for practice in the clinical blood bank laboratory. Case study analysis will be used to formulate approaches to solving complex serologic problems. Topics to be addressed include blood group systems, antibody identification techniques, blood donor collection practices, compatibility and investigation of transfusion reactions. Blood bank quality management, ethical and legal issues and alternative technologies in blood banking will be discussed. Prerequisite(s): MLT 228 (2,2) 3 credits

MLT 443 Clinical Pathophysiology
The theoretical concepts introduced in the Clinical Chemistry, Immunology/Serology, and Clinical Practice courses will be expanded through a problem solving approach. Case studies will be used to correlate test results with patient diagnoses, leading to an understanding of the interrelationship between the various areas of laboratory testing and the assessment of the patient in health and disease. The use of clinical correlation as a quality assurance tool to detect patient testing errors will be included. New concepts introduced will include enzyme kinetics, therapeutic drug monitoring and toxicology, vitamins, porphyrins, endocrinology, and genetic disorders. Prerequisite(s): MLT 227, MLT 242, MLT 243 (3,0) 3 credits

MLT 458 Advanced Clinical Microbiology
This course will use a problem solving approach to build upon the theoretical concepts introduced in Clinical Microbiology I and II. Case studies will be used to correlate laboratory and clinical information related to infectious diseases. Bacteria, parasites, fungi, and viruses that are less commonly encountered in the clinical laboratory will be discussed, along with the specialized techniques for their identification. Emerging pathogens and diagnostic techniques will be introduced. Prerequisite(s): MLT 257, MLT 258 (3,0) 3 credits

MLT 481 Advanced Practicum in Immunohematology
Students practice advanced clinical skills in Immunohematology (Blood Bank) at local affiliated clinical laboratories under the guidance of clinical laboratory personnel. They are evaluated by the person in charge of their internship for both technical proficiency and professional behavioral characteristics. Prerequisite(s): MLT 428 (3,0) 3 credits

MLT 482 Advanced Practicum in Clinical Microbiology & Hematology
Students practice advanced clinical skills in Clinical Microbiology at local affiliated clinical laboratories under the guidance of clinical laboratory personnel. They are evaluated by the person in charge of their internship for both technical proficiency and professional behavioral characteristics. Prerequisite(s): MLT 423, MLT 443 1 credit

MLT 483 Practicum in Molecular Pathology
Students practice clinical skills in Molecular Pathology at local affiliated clinical laboratories under the guidance of clinical laboratory personnel. They are evaluated by the person in charge of their internship for both technical proficiency and professional behavioral characteristics. Prerequisite(s): MLT 421 1 credit

MLT 484 Advanced Practicum in Clinical Microbiology
Students practice advanced clinical skills in Clinical Microbiology at local affiliated clinical laboratories under the guidance of clinical laboratory personnel. They are evaluated by the person in charge of their internship for both technical proficiency and professional behavioral characteristics. Prerequisite(s): MLT 458 1 credit

MTH 015 Elements of Algebra*
This course fulfills the elementary algebra requirement for entrance into many programs at the College. Topics include numeric and algebraic operations, solutions of linear equations and inequalities, graphs and equations of lines, systems of linear equations, polynomial operations, factoring, and solution of quadratic equations. (4,0) 4 cr (non-credit units) Fall, Spring, Summer
*For MTH 015, the only grades available are A, B+, B, C+, C, F

MTH 022 Elementary Discrete Mathematical Models
MTH 102 is an introduction to Discrete Mathematical Models that utilize topics including Matrix Algebra, Linear Programming, the Simplex Method, the Method of Least Squares, Markov Chains, Game Theory, and Exponential Growth. Models include the Leontief Input-Output Model, the Transportation Problem, Finance, Investment Strategies, Management Decisions, and Campaign Strategies. The course makes use of computer software such as the spreadsheet software EXCEL and the TI-86 graphing calculator or equivalent. A graphing calculator is required. Prerequisite(s): MP2 or MTH 015 (3,0) 3 credits Fall, Spring, Summer

MTH 103 Sets, Probability & Logic
This course uses set theory to develop the basic concepts of finite probability. The student is introduced to the tree methods and counting methods of devising sample spaces. The probability of mutually exclusive events, dependent and independent events is treated. Some applications to probability distributions of discrete variables are included. Finally, the basic topics in symbolic logic are covered. Prerequisite(s): MP2 or MTH 015 (3,0) 3 credits Fall, Spring
MTH 107 Introduction to Mathematical Ideas
A survey of contemporary topics in mathematics designed to develop an appreciation of the power and significance of mathematics and its uses in modeling the world around us. Topics may include the mathematics of social choice, growth and symmetry, mathematical systems, Euclidean and non-Euclidean geometries, management science.
Prerequisite(s): MP2 or MTH 015 (3,0) 3 credits
Fall, Spring, Summer

MTH 110 Statistics
Basic concepts of probability and statistical inference. Included are the binomial, normal, and chi-square distributions. Practical applications are examined. Computer assignments using Minitab form an integral part of the course.
Prerequisite(s): MP2 or MTH 015 (3,0) 3 credits
Fall, Spring, Summer

MTH 116 College Algebra and Trigonometry
This course is designed to prepare students for precalculus as well as for quantitative courses in the natural and social sciences. In this course students are introduced to the fundamental concept of functions and their representations in contextual, numerical, graphical and algebraic forms. Linear, quadratic, power, polynomial, and exponential functions are investigated in all four representations. Properties of logarithms are introduced to aid in the solution of exponential equations. The geometry and trigonometry of right triangles are presented and the trigonometric functions of general angles of rotation are introduced.
Prerequisite(s): MP2 or MTH 015 (4,0) 4 credits
Fall, Spring

MTH 117 Precalculus Modeling for the Life and Social Sciences
MTH 117 is a precalculus course for students who are not majoring in the technologies. This course uses functions such as linear, exponential, logarithmic, power, polynomial, and trigonometric functions to model real world problems. The important characteristics and properties of these functions are investigated. The emphasis is on applications and problem solving. A graphing calculator is required.
Note: Students completing this course may not receive credit for MTH 129.
Prerequisite(s): MP3 or MTH 116 (4,0) 4 credits

MTH 129 Pre-Calculus with Applications
This is a pre-calculus course with applications from various disciplines including technology, science, and business. Topics include families of functions, mechanics of functions, exponential and logarithmic functions, trigonometric functions and complex numbers. The emphasis is on applications and problem solving. A graphing calculator is required.
Note: Students completing this course may not receive credit for MTH 117.
Prerequisite(s): MP3 or MTH 116 (4,0) 4 credits
Fall, Spring, Summer

MTH 130 Calculus I with Applications
This is a calculus course for those not majoring in Mathematics, Engineering Science or Computer Science. Topics include the derivative, differentiation of algebraic, trigonometric, exponential and logarithmic functions, applications of the derivative and the definite integral. Applications are taken from technology, science, and business. Problem solving is stressed. A graphing calculator is required.
Note: Students completing this course may not receive credit for MTH 131.
Prerequisite(s): MP4 or MTH 117 or MTH 129 (4,0) 4 credits
Fall, Spring, Summer

MTH 131 Applied Calculus for the Life and Social Sciences I
This is a calculus course for those not majoring in mathematics, computer science, or engineering technologies. Topics include the derivative, differentiation of algebraic, exponential, logarithmic, and trigonometric functions, applications of the derivative, and modeling with differential equations. Applications are taken from life and social sciences. Problem solving is stressed. A graphing calculator is required.
Note: Students completing this course may not receive credit for MTH 130.
Prerequisite(s): MP4 or MTH 117 or MTH 129 (4,0) 4 credits

MTH 132 Applied Calculus for the Life and Social Sciences II
A continuation of Applied Calculus for the Life and Social Sciences I. Topics include the antiderivative, the definite integral, applications of the definite integral, more on modeling with differential equations, and multivariable calculus. Applications are taken from life and social sciences. Problem solving is stressed. A graphing calculator is required.
Note: Students completing this course may not receive credit for MTH 150, 151, or 236.
Prerequisite(s): C or better in MTH 131 (4,0) 4 credits

MTH 150 Calculus I
Differential functions of one variable. Introduction to integration. Application of differentiation and integration. A graphing calculator is required.
Prerequisite(s): MP4 or MTH 129 (4,0) 4 credits
Fall, Spring

MTH 151 Calculus II
A continuation of the calculus of one variable. Differentiation and integration of the transcendental functions. Integration techniques, polar coordinates. Infinite series.
Prerequisite(s): MTH 150 or MTH 130 (4,0) 4 credits
Fall, Spring, Summer

MTH 236 Calculus II with Applications
A continuation of Calculus I with Applications. Topics include techniques of integration, applications of the definite integral, multivariable calculus, and an introduction to Differential Equations. Applications are taken from technology, science and business. Problem solving is emphasized. A graphing calculator is required.
Prerequisite(s): MTH 150 or MTH 130 (3,0) 3 credits
Fall, Spring, Summer

MTH 245 Linear Algebra
A study of the basic properties of vectors and vector spaces; linear transformations and matrices; matrix representations of transformations; characteristic values and characteristic vectors of linear transformations; similarity of matrices, selected applications.
Prerequisite(s): MTH 151 or MTH 236 (3,0) 3 credits
Fall, Spring, Summer

MTH 246 Introduction to Financial Mathematics
This is a course designed to introduce concepts in financial markets; present and future value calculations of money related to loans, annuities and bonds. It also introduces simple but basic no-arbitrage derivations of the prices of the most financial contracts that are traded either on exchanges or over the counter (stocks, options and forward contracts) in a single and multi-period asset pricing setting. Students will analyze the valuation and hedging of European and American options and general contingent claims in the framework of the classical binomial model of the stock price.
Prerequisite(s): MTH 151 or MTH 236 (3,0) 3 credits

MTH 250 Introduction to Graph Theory and Combinatorics
An introduction to graph theory and combinatorial analysis. The emphasis is on problem solving and applications with some attention to theorems and proofs. Topics include Graph Models, Isomorphism, Planar Graphs,
Circuits and Graph coloring, Trees, Minimal Spanning Trees, Arrangements and Selections, Generating Function and Inclusion/Exclusion.

Note: Students completing this course may not receive credit for CMP250
Prerequisite(s): MTH150
Corequisite: MTH 245
(3,0) 3 credits

MTH 252 Calculus III
This is the third course of the calculus sequence. It generalizes single variable calculus to multivariable calculus. Functions of several variables are described numerically, graphically and algebraically. Topics to be covered: partial differentiation, multiple integration, vectors and vector fields, line integrals.
Prerequisite(s): MTH 151
(4,0) 4 credits
Fall

MTH 253 Differential Equations
This is an introductory course in ordinary Differential Equations designed to develop an understanding of the qualitative behavior of solutions and its relation to the process being modeled. Use of appropriate computer packages forms an integral part of the course. Topics to be covered: first order differential equations and systems, linear systems, applications including electrical circuits and vibrations, introduction to Laplace Transform.
Prerequisite(s): MTH 252
(4,0) 4 credits
Fall, Spring

MTH 290 Methods of Proof in Advanced Mathematics
MTH 290 is intended to be a bridge course from lower-division mathematics courses to upper-division mathematics courses. Topics include Logic and Proofs, Set Theory, Relations, Functions (Onto, One-to-One, Sequences as Functions), Cardinality, Introduction to Algebraic Structures, and Introduction to Concepts of Analysis. The focus will be on writing clear and precise proofs.
Prerequisite(s): MTH 150, MTH 151 or the equivalent
(3,0) 3 credits
Spring, Summer

MTH 315W History of Mathematics
An investigation of the development of mathematics from ancient times to the present. Students will study topics which include ancient mathematics (in particular, the Pythagorean Theorem and quadratic equations), Greek mathematics (Aristotle, Euclid, Archimedes, Apollonius, Ptolemy and Diophantus), medieval mathematics (China, India, Islam, Europe, America and Africa), early modern mathematics (logarithms, analytic geometry, probability and the beginnings of calculus), and modern mathematics (analysis, probability, number theory, abstract algebra linear algebra, non-Euclidean geometries, set theory, and topology). Each topic will be examined in the context of the time in which it was first used as well as how, when, and why it was further developed. A vital component of the course will be a study of the mathematicians who provided us with these tools which are an integral part of mathematical applications in today's world.
Prerequisite(s): MTH 151
(3,0) 3 credits
Fall

MTH 320 Geometric Structures
An axiomatic view of Euclidean and non-Euclidean geometry. The standard models of the various geometries will be constructed. Careful emphasis on proof construction and understanding. Applications of Euclidean and Hyperbolic geometries will be given.
Prerequisite(s): MTH 151 or MTH 236
(3,0) 3 credits

MTH 322 Advanced Mathematical Analysis
Topics to be covered: infinite series, First and Second Order Differential Equations and Applications, LaPlace Transforms, Taylor series, Homogeneous and Forced Response, applications; Matrices, simple
Linear Equations involving Matrices, Solution of Systems of Linear Equations by Gauss-Elimination method.
Prerequisite(s): MTH 236 or equivalent
(3,0) 3 credits
Spring

MTH 325 Mathematical Modeling in the Biological Sciences
The course will focus on mathematical models in biology, including topics such as the growth of populations, the interactions between different populations, the spread of epidemics, the Hardy-Weinberg law in genetics, and drug levels in the bloodstream. The emphasis will be on determining the mathematical component of a phenomenon, creating an appropriate mathematical model, using the model to answer questions about the situation, and interpreting the effectiveness of the model. Technology will be used as an exploratory tool.
Prerequisite(s): MTH 151 or MTH 236 or equivalent; one semester of biology
(4,0) 4 credits

MTH 326 Mathematical Modeling in Applied Sciences
This course will investigate various mathematical models in the applied sciences taken from real life phenomena. Basic notions of abstraction and how to work on real problems at different levels will be introduced in the course. The Models are explored using analytical, computational and graphical tools, as appropriate. Models cover but are not limited to examples from Finance, Economics, Ecology, the Environment, Engineering, Biology and Behavioral Sciences.
Prerequisite(s): MTH 236 or MTH 151
(3,0) 3 credits

MTH 330 Applied Abstract Algebra
Essential structures of modern algebra: sets, relations, groups, homomorphisms, and rings will be studied with a view toward their applicability. Applications may include error correcting codes, computational complexity, and counting problems.
Prerequisite(s): MTH 151, MTH 245, MTH 290
(3,0) 3 credits

MTH 331 Introduction to Topology
This course introduces the basic concepts and some fundamental results of Point Set Topology. Some of the topics covered are: Open sets and the notion of continuity on the real line, Euclidean spaces, metric spaces, and on general topological spaces; connectedness and compactness; countability and separation; the Tychonoff theorem.
Prerequisite(s): MTH 252, MTH 290
(3,0) 3 credits

MTH 346 Continuous-Time Finance
This course introduces Brownian motion, Stochastic Calculus, Ito's integral and Ito's formula which are used to derive Black-Scholes formula in a continuous-time model rather than a limit of discrete-time models covered in MTH 246. Pricing derivatives on financial securities using Black-Scholes formula will be covered.
Prerequisite(s): MTH 246
(3,0) 3 credits

MTH354 Principles of Real Analysis
Students will be introduced to the foundations of real analysis through a rigorous development of the real number system. This will be followed by a study of limits, continuity, and differentiability of real functions. The Riemann integral and the Fundamental theorem of Calculus will be developed rigorously. Sequences and series of real functions will also be discussed.
Prerequisite(s): MTH 252, MTH 290
(3,0) 3 credits
Spring

MTH 355 Principles of Complex Analysis
This course will concentrate on the algebraic and analytic properties of complex numbers and functions of a single complex variable. The
concepts of limits, continuity, and differentiability will be extended to the complex domain. Riemann integrals and Cauchy’s Integral Theorem will be presented. The expansion of analytic functions in Taylor and Laurent series will be derived and the residue theory will be introduced.

Prerequisite(s): MTH 252, MTH 290
(3,0) 3 credits

**MTH 356 Integrated Topics in Math/Physics**
This is a new integrated math-physics course with applications to topics in physics and the engineering technologies. It is meant to be interdisciplinary in nature and directed toward students in the Bachelor of Technology and Applied Math Programs. Topics to be covered include: Vector Algebra, Vector Calculus, Scalar and Vector Field Theory, Fourier Series, Fourier Integral, Fourier Transforms and Laplace Transforms. The focus will be on application and integration of math methods to physics and engineering technologies.

Note: Students completing this course may not receive credit for PHY 356
Prerequisite(s): MTH 236 or MTH 252 and PHY 136 or PHY 144
(3,0) 3 credits

**MTH 360 Applied Probability and Statistics**
A calculus-based course which studies applications of probability and statistical inference. Use of appropriate computer packages forms an integral part of the course. Topics are chosen from statistical parameters, continuous and discrete random variables, probability distributions, correlation and regression analysis, design of experiments and ANOVA.

Prerequisite(s): One year of calculus
Fall, Spring
(3,0) 3 credits

**MTH 365 Vector Calculus**
This course begins with a detailed development of vector algebra in two- and three- dimensions. Also covered will be differentiation and integration of scalar and vector valued functions of vectors. Vector fields will be discussed with particular attention to line and surface integrals. Important vector theorems such as Green’s, Stokes’ and the divergence theorem and their important applications will be presented. A discussion of the Fourier series and the Fourier integral will complete the course.

Prerequisite(s): MTH 245, MTH 252
Fall, Spring
(3,0) 3 credits

**MTH 385 Applied Partial Differential Equations**
This course is an introduction to partial differential equations. Topics to be covered include introduction to heat, wave, and Laplace equations, Fourier series, detailed analysis of numerical methods, science applications. The usage of an appropriate computer package is an integral part of the course.

Prerequisite(s): MTH 253
(3,0) 3 credits

**MTH 390 Methods in Operations Research**
This course is intended to focus on understanding, formulating, and solving deterministic models in operations research. Maximum and Minimum Linear Programming problems will be studied graphically and theoretically. The Simplex Method, Sensitivity Analysis and Duality will be covered and an indepth analysis of the reasoning on which these topics are based will be given. Instruction in computer software techniques will be presented to solve Linear Programming problems, using the simplex method and sensitivity analysis. Transportation Problems, Integer Programming, or Markov Chains will be covered. In order to enhance quantitative reasoning, the course emphasizes the formulation of mathematical models commonly used by operation research analysts, as well as the theoretical and computer software solutions to these models.

Prerequisite(s): BUS 240 or MTH 103 or MTH 110 or MTH 102 or MTH 360 or equivalent
Fall, Spring
(3,0) 3 credits

**MTH 400 Problem Solving Seminar**
This is a seminar course where students will work on a vari-ety of non-routine problems chosen by the instructor and pre-sent their solutions (or partial solutions). Students will also work on a major research project under the guidance of the instructor and will report their results. Cooperative work will be encouraged and much of the work will be of an “open ended” nature. Communication skills will be stressed.

Prerequisite(s): By permission of the department, MTH252, MTH245, MTH250 or MTH 253
(3,0) 3 credits

**MTH 405 Seminar in Applied Mathematics**
This is a capstone course for Applied Mathematics students. Students will work on a major project taken from business, industry, or government agency. Students will have to present their results both orally and in writing. The completed report must meet a standard that is acceptable to the business community. Students may work in teams or individually. They will report on their progress as part of the seminar. This course may be taken twice for academic credit.

Prerequisite(s): MTH 354
(3,0) 3 credits

**MTH 422 Numerical Methods**
This is an introductory elective course for Applied Mathematics students. Topics include solutions of nonlinear equations, interpolation and approximation of functions, numerical differentiation and integration, iterative techniques in Linear Algebra and others. Solutions of problems using computers will be an integral part of this course.

Prerequisite(s): MTH 151, MTH 245
(2,1) 3 credits

**MTH 445 Linear Algebra II**
This course is a continuation of MTH 245. Topics include further study of eigenvalues and eigenvectors, inner product spaces, least squares problems, symmetric matrices, diagonalization, quadratic forms and the singular value decomposition. Applications to Markov chains, constrained optimization, differential equations, statistics and image processing, among others, will be shown.

Prerequisite(s): MTH 245
(3,0) 3 credits

**MTH 460 Applied Probability and Statistics II**
A continuation of MTH 360. Topics chosen from hypothesis testing; sampling distributions; analysis of variance and covariance; nonparametric techniques; probability distributions; multivariate techniques.

Prerequisite(s): MTH 360
(3,0) 3 credits

**MTH 490 Topics in Applied Mathematics**
Lectures in applied mathematics that introduce topics not covered in the Applied Mathematics curriculum or may expand upon the content of existing courses. These topics vary from year to year, and the specific description of the content of each course will be publicized in advance by the department. Examples of such topics are computational linear algebra, applied optimization, dynamical modeling, financial mathematics, etc.

Prerequisite(s): MTH 245, MTH 252
(3,0) 3 credits

**MUS 108 Survey of Western Music**
This course will introduce students to music from Ancient Greek times to the present. The course will also allow students to appreciate music in relation to the other arts, to other cultures, and to historical events.

(3,0) 3 credits
NURSING

NUR 094 PN to RN Transition Course
This course is designed to validate prior learning, and update/enhance the student's knowledge. This course facilitates transition from the role of Practical Nurse to that of a student preparing for the role of Registered Nurse. Nursing process is used as the framework for critical thinking and problem solving. Students holding and/or eligible to hold a current registration in a United States Jurisdiction may take this non-credit course. The amount of work required is equivalent to a course bearing 3 credits. For progression into the Registered Nurse program, the student must hold a current LPN registration in a US Jurisdiction and meet the specific requirements of the institution and/or program to which s/he is applying. 
Prerequisite(s): Eligibility for licensure as a licensed practical nurse in a United States Jurisdiction. 
(0,3) non-credit units Summer

NUR 095 Clinical Skills Update
A mandatory 30 hour non-credit unit course for nursing students who have interrupted their nursing study. Instruction will be provided in the lab and clinical area. 
(0,1) (non-credit units) Intersession, Summer

NUR 100 Health Assessment
This course will enable students to acquire skill in obtaining a health history and in performing physical examinations. Emphasis will be on identification of normal physical characteristics, common variations, and beginning skills in detecting deviations from normal. This class is also offered via the Internet. 
Prerequisite(s): BIO 170, or permission of department 
Corequisite(s): NUR 108, NUR 114 
(1,3) 2 credits Fall, Summer

NUR 108 Concepts & Practice of Nursing I
This course introduces the student to universal requisites, scientific principles, and nursing skills necessary to meet the needs common to all patients within a multicultural society. Orem's Self-Care Deficit Theory is used as a framework. Additionally, Maslow's Basic Human Needs, Erikson's Psychosocial Stages of Development, principles of communication, and the development of the role of the nurse are stressed throughout the course. Opportunities for application of these nursing principles and nursing skills are provided in the College Laboratories and in various health care and community settings. 
Prerequisite(s): BIO 170, BIO 171 or permission of department 
Corequisite(s): NUR 100 
(2,2,9) 6 credits Fall

NUR 109 Concepts & Practice of Nursing II
This course introduces students to the care of individuals throughout the life span, using Orem's Self-Care Deficit Nursing Theory as a framework. The course emphasizes developmental requisites common to the child bearing family, children, middle and older adults. Students will gain skill in using the nursing process and become increasingly independent in the provision of care. 
Prerequisite(s): NUR 108 
(3,9) 6 credits Spring

NUR 110 Foundations of Nursing I
In Foundations of Nursing I students begin their professional socialization into the discipline of nursing. Foundations of Nursing I introduces basic underpinnings of nursing practice. It provides an overview of nursing as a discipline and addresses such topics as historical roots, the domains of nursing, and the care/cure paradigm, and social and educational perspectives of nursing. 
(1,0) 1 Credit Fall

NUR 111 Foundations of Nursing II
In Foundations of Nursing II students will continue to build on ideas introduced in Foundations of Nursing I in order to establish their identity with the nursing profession. The profession of nursing will be explored from a variety of viewpoints. Concepts of professionalism, roles, and attributes needed to practice nursing competently will be explored. A personal philosophy of nursing and nursing practice will be developed. 
Prerequisite(s): NUR 110 
(1,0) 1 credit Spring

NUR 112 PN to RN Bridge
This one credit bridge course will introduce the practical nurse to the Nursing program at Farmingdale State College. It will provide the entering student with an overview of the nursing process, critical thinking and care planning. Additionally, it will provide vital information on mathematical calculations needed for nursing and patient care. This one credit bridge course should provide for a seamless transition into our RN program. 
Corequisite(s): NUR 094 
(1,0) 1 credit Summer

NUR 114 Clinical and Theoretical Foundations of Baccalaureate Nursing Practice
This course introduces the baccalaureate nursing student to the universal requisites, scientific principles, and nursing skills necessary to meet the needs of all individuals within a multicultural society. This course provides the foundation for professional nursing practice. Emphasis is placed on wellness, physiological, psychological, social, cultural, and spiritual factors which contribute to the well-being of the individual. Multiple theories including Orem, Watson, Maslow, and Erickson are introduced throughout the course as a framework for presentation of the essential components of generalist baccalaureate nursing practice. The concepts of nursing process and clinical decision making are explored. Communication is emphasized as an essential aspect of the professional role with the professional nurse always being aware of patient’s rights and the issues of privacy. 
Prerequisite(s): BIO 170, BIO 171 
Corequisite(s): NUR 100 
(2,2,12) 7 credits

NUR 211 Clinical Pharmacology for Nursing
This course presents an introduction to basic Pharmacology and its application to patient care and patient education. Fundamental principles of drug actions, untoward reactions, clinical applications of specific drugs in each classification and the role of the nurse in achieving the desired outcomes of therapy are discussed. 
Prerequisite(s): BIO 170/171 
Open to students who have completed the prerequisite(s) or to graduate nurses. 
(3,0) 3 credits Fall, Spring, Summer

NUR 212 Concepts & Practice of Nursing III
This course begins the focused study of persons who are experiencing deficits in health-related self-care needs. The emphasis is assessment of and therapeutic interventions for acute and chronic health problems. Included is the impact of health deviation on universal basic needs and developmental needs of patients/clients. Students are provided opportunities to care for patients with moderate to severe limitations in ability for self-care via guided learning experiences in general hospitals and community agencies. 
Prerequisite(s): NUR 109 
(4,9) 7 credits Fall

NUR 214 Concepts & Practice of Nursing IV
This course continues the focused study of persons who are experiencing deficits in health-related self-care needs. The emphasis is assessment of and therapeutic interventions for acute and chronic health problems. Included is the impact of health deviation on universal basic needs and developmental needs of patients/clients. Students are provided opportunities to care for patients with moderate to severe limitations in ability for self-care via guided learning experiences in general hospitals and community agencies. 
Prerequisite(s): NUR 212 
(4,9) 7 credits Spring
NUR 215W Developing Nurse’s Ways of Knowing
This course focuses on nurse’s ways of knowing, particularly theoretical ways of knowing, the development of nursing intuition and the development of fundamental computer skills as it related to the practice of nursing. Opportunities to expand ways of knowing will be provided through course content. Critical thinking skills in nursing as a foundation for sound clinical decision-making skills will be the highlighted in this course.
Prerequisite(s): NUR 111
(3,0) 3 credits
Spring, Fall

NUR 216 The Art of Nursing
This course will introduce the student to the concept of Nursing as an Art. Modern definitions of Nursing define it as a science and an art that focuses on quality of life as defined by persons and families. It is a discipline focused on assisting individuals, families and communities in attaining, re-attaining and maintaining optimum health and functioning. The course will explore current theories on caring and nursing as an art. The Art of Nursing and the Science of Nursing will be compared and contrasted. The specific attributes of each will be identified with an attempt at illuminating the potential strengths and limitations of each. A comparison of Florence Nightingale’s Theory of Nursing and Orem’s Self Care Deficit Theory will be included.
Prerequisite(s): NUR 111
(2,0) 2 credits
Spring, Fall

NUR 217 Care of Individuals Experiencing Acute Health Challenges
Advances in science and technology have dramatically increased life expectancy. Although a great emphasis has been placed on health promotion and maintenance, individuals are still faced with the possibility of sudden and acute health challenges. These challenges may at times even become life threatening. This course will focus on the experiences of those individuals faced with acute health challenges and how these challenges affect them and their families’ daily lives. The course will examine essential concepts and issues related to acute health challenges from different viewpoints; including that of the client, the family, community groups, the health care provider and the health care system. Common recurrences acute health challenges will be presented within the context of quality of life, fear, powerlessness, uncertainty, hope, care-giving and spirituality. Opportunities in clinical practice will be provided in a variety of environments including acute care, critical care, and community based agencies.
Prerequisite(s): NUR 114
(3,0,9) 6 credits
Spring

NUR 225 Transition into Nursing Practice
This course offers an opportunity for additional clinical experiences for the student in the final semester of the nursing curriculum. For 90 hours, the student will practice side by side with a Registered nurse in one of our affiliated agencies. A clinical instructor will be available for guidance and consultation. The goals of the course are to provide the soon-to-graduate student with increased opportunities to gain confidence in his/her skills, to increase socialization into the profession, and to improve his/her ability to function as a nurse in the workplace.
Prerequisite(s): NUR 212
Corequisite(s): NUR 214
(0,6) 2 credits
Spring, Summer

NUR 232 Nursing Seminar
This seminar explores the major concerns and issues involved in current nursing practice. Relevant aspects of nursing history are reviewed. Topics discussed include: the distribution of nursing and other services required to meet society’s changing health needs, legal responsibilities and ethical considerations inherent in nursing care, and an exploration of the health care delivery system. Recommended to be taken with NUR 212 and NUR 214.
(2,0) 2 credits
Fall, Spring, Summer

NUR 240 Nursing Beyond Borders
This three credit elective course will provide an overview of topics related to global health in today’s world. Topics will include essential concepts relating to providing compassionate care to clients from different cultures, health care access from a global perspective, prevention of disease and maintenance of health.
Prerequisite(s): A 100 level health profession clinical course
(3,0) 3 credits

NUR 301 Care of Individuals in the Community
This course focuses on the role of the nurse in the community. Topics will include health-illness prevention, epidemiology, environmental health issues, cultural influences and levels of prevention. Community-based needs of specific client populations will also be examined. Clinical activities will be included in a variety of settings. This course is for RN Completion Students.
Prerequisite(s): NUR 306
(2,0,6) 4 credits
Fall, Spring

NUR 302 Pathophysiology
In this course, the student will review the normal body structure and function and study the physiologic deviations that contribute to disease or that occur as a result of disease. This course examines the compensatory physiological processes that are the body’s response to those deviations or alterations. A focus on specific body systems and how physiological changes produce the signs and symptoms of common health problems throughout the lifespan will be covered.
Prerequisite(s): NUR 114
(3,0) 3 credits
Fall

NUR 305 Health Promotion and Patient Education
This course combines the critical review of health promotion strategies and the framework for designing successful patient teaching tools. Students will be introduced to the major concepts of health promotion and the issues that impact upon health and wellness. In order to better understand the global impact of health upon our society, students will research various agencies that support health promotion and review their health care agendas. The second component of the course will be an introduction to the role of the nurse as an educator and the identification of barriers to learning will be explored. Methods to develop effective evidenced based teaching plans will also be covered.
Prerequisite(s): NUR 114
(3,0) 3 credits
Fall, Spring, Summer

NUR 306 Care of Individuals Experiencing Chronic Health Challenges
Advances in science and technology have dramatically increased life expectancy and the number of clients living with chronic disease. This course will focus on the experiences of those individuals living with chronic health challenges and how these challenges affect their daily lives. The course will examine essential concepts and issues related to chronic health challenges from different viewpoints; including that of the client, the family, community groups, the health care provider and the health care system. Common recurrences chronic health challenges will be presented within the context of quality of life, uncertainty, hope, care-giving, and spirituality. Opportunities in clinical practice will be provided in a variety of environments including acute care, long term and community based agencies.
Prerequisite(s): NUR 307
(3,0,9) 6 credits
Spring

NUR 307 Nursing Care of Children and the Childbearing Family
This course builds on the concepts of previous courses with emphasis on the application of the nursing process and the development of critical thinking skills in focusing on health during the childbearing years, antepartum, intrapartum, postpartum and the health of infants and children through adolescence. Students will explore the concepts of...
health promotion, disease prevention, evidence-based health practice, and alterations in health related to patients and families. Emphasis is on common health issues related to maternal-newborn and pediatric specific content. Nursing management and planning will include concepts from culturally diverse settings.

**Prerequisite(s):** NUR 217

**PCM 226 Journalism**

An introduction to practical journalism in which students write news and feature stories, editorials, and reviews, and examine techniques of newspaper design and photography. Classes include readings and discussions in the theory of mass communications. Student will develop their journalistic skills through hands-on experience with desktop publishing.

**Note:** Students completing this course may not receive credit for EGL 226.

**Prerequisite(s):** EGL 102

**PCM 301 Advanced Grammar And Vocabulary**

Students will master a study of descriptive and prescriptive English grammar as well as become familiar with linguistics, semiotics, and comparative grammar. Students will expand their vocabulary by learning to use a broad range of words and by understanding their etymological roots, their appropriateness to situations use, and their function in smooth, concise syntax. Mastery of both grammar and vocabulary is essential to professional-level reading, writing, speaking, listening, and editing.

**Note:** Student taking this course cannot receive credit for EGL 301.

**Prerequisite(s):** EGL 102

**PCM 305 Media in Communications**

Students will apply the Microsoft Office skills which they have acquired to the creation of a number of real world professional communication documents and presentations. Students in the Professional Communications program must use Office applications effectively, carefully considering the purpose, function, audience, and venue of individual projects. This upper division course provides a range of assignments that reflect real world writing and speaking projects.

**Prerequisite(s):** EGL 101, BCS 102 or approval from this department chair

**PCM 311 Introduction to Writing for Electronic Media**

Introduction to Writing for Electronic Media will give students an overview of the issues concerning electronic media, including legal and ethical concerns. Students will also learn the history of the media, including the Internet and World Wide Web. Students will learn how to write for electronic media in hands-on training in the school's computer labs using industry-standard programs.

**Note:** Students completing this course may not receive credit for EGL 311.

**Prerequisite(s):** EGL 101, EGL 102, BCS 102

**PCM 313W Communications Theory**

This course is designed to provide an overview of the complete process of professional communication from clarification of the problem to the presentation to the final product. The elements of communications theory are covered, as well as the criteria by which to judge the adequacies of existing theories and the techniques for developing new ones. Students will have the opportunity to work with actual communications issues within industry and present their findings in a written, oral or visual format.

**Prerequisite(s):** EGL 101, EGL 102 and/or permission of department chair

**PCM 315 Research Techniques**

In this course students are introduced to information science, bibliographic practices, and research methods appropriate to finding, evaluating, and incorporating into documents both online and hard copy data and graphics. Students complete several research projects.

**Prerequisite(s):** Upper division standing or permission of department chair

**PCM 320 Communications in Business I**

In this course students learn to compose business documents including correspondence, directives, proposals, persuasive and informative memos, and researched, analytical reports. The course emphasizes electronic research as well as professional prose style, oral presentation, and page formatting.

**Prerequisite(s):** Upper division standing or permission of department chair
PCM 324 Report Writing and Technical Communications
A practicum in which students produce a variety of business-oriented and technical documents. This course provides students with a survey of current practices and techniques appropriate to writing for forums, especially for technical journals, newspapers, and magazines. It is also designed to make students proficient at writing professional articles and reports such as new product information sheets, technical correspondence, periodic reports, summaries, process and technical descriptions, instructions and analysis, and to allow students to incorporate graphs, tables and other illustrative matter with textual content.
Prerequisite(s): Upper division standing or permission of department chair (3,0) 3 credits

PCM 325 Writing in Health and Disease
Students will develop skill in articulating oral and written health information for multiple audiences. The course emphasizes how to interpret medical studies, how to think critically about ethical issues in the health sciences and how to assess communication problems between medical professionals and the communities they serve. Nutritional guidelines and food politics also are explored in depth. Using appropriate research methods, students will practice several expository forms common in health professions, such as patient instructions and articles. Students also will write a personal essay and public service announcement.
Prerequisite(s): EGL 102 (2,1) 3 credits

PCM 326 Sport Writing
In this course students will learn skills in the identification of legitimate angles for sport stories, how to report sport events, develop sport feature stories, and write sport opinion pieces, both for print publication and the web. Students will submit written articles, be required to write on deadline and develop skills interviewing. Students will deconstruct published stories and acquire an understanding of the process of assembling a well-researched and expertly-crafted sport story.
Note: Students completing this course may not receive credit for SMT 326.
Prerequisite(s): EGL 102 (3,0) 3 credits

PCM 328 Advanced Writing & Editing
In this course, students develop clean, concise, and precise prose style and master the use of professional symbols and techniques of editing in both hard copy and electronic formats. Students develop these skills in their own writing projects, those of fellow students, and those of other amateur and professional writers. This course includes the study of research, citation, and bibliographic formats for print and electronic sources.
Prerequisite(s): Upper division standing or permission of department chair (3,0) 3 credits

PCM 330 Journalism II
In this course, students will learn the many skills necessary in the publication of the newspaper. They will accept submitted articles, complete editing and fact checking, use the necessary software to produce the pages, write headlines, create formats, include photographs and other illustrations, design and organize the entire paper, learn about the costs involved in the printing, and distribute the paper. Students may apply these skills to the publication of the college student newspaper, The Rambler.
Prerequisite(s): EGL/PCM 226 or PCM 320 or PCM 324 (3,0) 3 credits

PCM331 Advanced Oral Communications
Preparation and delivery or oral presentations and reports with an emphasis on industrial, technical and business topics. Students will gain familiarity with several different theoretical systems of conceptualizing communications. Practice in making team presentations and the incorporation of graphics will also be part of this course. Special emphasis will be placed on analysis of communications in the technical and business environment which includes the component of voice and diction. Computer assisted oral presentation using software such as Microsoft Power Point may be included.
Note: Students taking this course cannot receive credit for SPE 331. Prerequisite(s): EGL 102 (3,0) 3 credits

PCM 340 Special Topics in Professional Communications
In this course students will learn the skills necessary to write in a particular genre or type required in a particular career setting. Students will study current practices and contemporary models and will compose several thoroughly researched documents in this genre for discussion, review, and revision. An accompanying text may provide both general and detailed guidelines. A lengthy final composition will be required at the end of the semester.
Prerequisite(s): EGL 102 (3,0) 3 credits

PCM 420 Advanced Professional Communications
Students learn advanced techniques in composing reports, technical papers, oral presentations, business communications, and press releases. Students evaluate classical and contemporary theories of rhetoric and apply them to their own writing as well as the writing of others.
Prerequisite(s): PCM 324 or EGL 310 (3,0) 3 credits

PCM 425 Documentation Procedures
Students learn to write instructions and explain processes in professional documents. They review style, editing, desktop publishing skills, and the overarching importance of attention to audience, purpose, and task.
Prerequisite(s): PCM 328, VIS 242 or permission of department chair (3,0) 3 credits

PCM 426 Culture and Communication
The goal of this course is to introduce students to the various ways culture and communication are interrelated. Specifically, the course is designed to help students become more effective communicators in the multi-cultural world in which they live and work. To achieve this goal, students will study various theories about the relationship between culture and communication and apply these theories to solving real world problems that they may confront in communicating with people from other cultures.
Prerequisite(s): EGL 102, One Sociology course, and 200 Level PCM Course or EGL 216, or Permission of the Chair (3,0) 3 credits

PCM 428 Grant Writing
This course is an intensive study designed to provide a complete overview of the grant writing process. Students will learn to research funding sources, write proposals, and negotiate with funding agencies. Required assignments include searching for funding agencies, using various courses, and working in groups to complete a sample grant proposal. Students will locate funding sources and complete a grant proposal.
Prerequisite(s): EGL 101, EGL 102 (3,0) 3 credits

PCM 450 Internship in Professional Communications
This course is an internship in a business, civic, educational, government, or not-for-profit organization. Students participate by using their communication skills in real world situations.
Prerequisite(s): Upper division standing or permission of department chair (1,6) 3 credits

PCM 460 Internship in Professional Communications II
In this course, students who have completed one required internship may enroll in this second internship at an off-campus business or other
organization. They will complete 90 hours of work on site, confer with their on-site supervisor and campus academic supervisor at regular intervals, and submit a portfolio to their supervising professor describing and illustrating the work responsibilities they completed in their on site location. 

**PHI 205 Ethics**
An examination of ethical theories including relativism, determinism, and the concept of duty, and the application of these theories to contemporary problems. The place of ethics in relation to other branches of philosophy and the role of religion in shaping ethical theory are also discussed. 

Prerequisite(s): EGL 102
(3,0) 3 credits

**PHI 207 Business Ethics**
An examination of ethical issues that arise in business and how these issues can be resolved. Various principles of ethical theory are analyzed and applied to particular business situations. 

Prerequisite(s): EGL 102
(3,0) 3 credits

**PHI 211 Logic**
Logic is an introductory course in reasoning offered by the English/ Humanities Dept. Topics to be considered include: Logic and its essential role in the expression of ideas; the definition of logic: kinds of logic, e.g., informal, formal, symbolic. The role of logic in relation to the other fields of philosophy, and to the fields of the social and natural sciences. Other topics: Valid categorical syllogisms, syntactic and semantic concepts of proof, reasoning with classes, Venn diagrams, reasoning with propositions, propositional logic, paradox analysis and heuristics- how to think of new ideas and how to solve problems. 

Prerequisite(s): EGL 101
(3,0) 3 credits

**PHI 220 Special Topics in Philosophy**
This course allows students to explore intensively a major philosophical period, author or theme. The subject for each semester will be determined prior to registration. Possible topics include: Bioethics; Philosophy of Religion; Philosophy of Africa. Short papers involving secondary research will be required. 

Prerequisite(s): EGL102
(3,0) 3 credits

**PHI 307 Philosophy of Science and Technology**
A philosophical overview of developments in science and technology, showing their impact on general culture. Some highlights include the early separation of religion and philosophy, the role of mathematics in culture, the beginnings of modern science in the works of Galileo, Descartes, Leibniz and Newton, and contemporary revolutions in science and technology. 

Prerequisite(s): One semester of science, EGL 102
(3,0) 3 credits

**PHYSICAL SCIENCE**
The Physical Science courses, PHY 110 through PHY 123, are descriptive in nature. Most have no prerequisite(s) and may be taken in any sequence to satisfy requirements for science electives. Adding a PHY 125 or PHY 126 Physical Science laboratory to any of these courses will satisfy requirements for a one or two semester laboratory science elective.

**PHY 110 Physical Science - Physical Geology**
A survey course in physical geology, examining the various minearls and rock types and the physical processes occurring on and below the surface of the earth. 

(3,0) 3 credits

**PHY 111 Physical Science - Historical Geology**
A study in the origin and evolution of the earth through geological time and the methods used by geologist in determining the geological history of the earth. 

(3,0) 3 credits
PHY 112 Physical Science Survey
A broad descriptive course in Physical Science. Topics to be covered will be from the areas of Philosophy of Science, Astronomy, Physics, Meteorology, Chemistry, Technology, and the Environment. (3,0) 3 credits

PHY 113 Physical Science - Physics
A descriptive course that presents the ideas of Classical and Modern Physics qualitatively and conceptually. The emphasis will be on the relevance of Physics to the students’ own experience. Topics covered will be Mechanics, Properties of Matter, Heat, Sound, Electricity and Magnetism, Light, Quantum Theory and Nuclear Physics. This course requires some knowledge of high school level mathematics. (3,0) 3 credits

PHY 114 Physical Science - The Environment
A descriptive course dealing with environmental problems caused by population, pollution, transportation, energy requirements, radioactivity, radioactive wastes, thermal emission, noise and heat. (3,0) 3 credits

PHY 115 Physical Science - Energy
An introductory course in the scientific, technological and social aspects of Energy. The course is intended to develop an understanding of the physical basis of Energy and an appreciation of the role of Energy in the contemporary world. Basic concepts and principles are studied. Conservation Laws, Fuels, and Energy Conversion Systems are discussed. Resources, Consumption Patterns, and Alternative Economies are analyzed. (3,0) 3 credits

PHY 116 Physical Science - Meteorology
A descriptive course in elementary meteorology that will introduce the student to weather analysis and forecasting. Topics covered will be Temperature, Pressure, Wind Radiation, Clouds, Precipitation, Synoptic weather charts, Air Masses, Low and High Pressure Areas, Frontal Systems, Thunderstorms, Weather Forecasting, and Local Weather. Weather charts will be analyzed and students will make their own weather forecasts. (3,0) 3 credits

PHY 117 Physical Science - Solar System Astronomy
An elementary astronomy course in which the student is introduced to the historical development of astronomy and to our present view of the solar system and its origins. Recent NASA missions to the planets are discussed, and periodic observations of the skies may be conducted. (3,0) 3 credits

PHY 118 Physical Science - Stellar Astronomy
An elementary astronomy course in which the stars and galaxies are treated in detail. Recently discovered phenomena, such as pulsars, quasars and black holes will be studied. Discussion will also center on cosmology, the NASA missions, colonization of space, and other topical subjects in astronomy. Periodic evening observations of the skies may be conducted. (3,0) 3 credits

PHY 119 Physical Science - Technology
A descriptive course emphasizing the major events in Technological History, the Rise of Scientific Technology, Delivery Systems, Systems Science, and the impact of Technology of Man and Society. The course is intended to assist the student in the formulation of a personal set of criteria in order to understand and respond to technological changes in modern society. (3,0) 3 credits

PHY 120 Physical Science - Extraterrestrial Phenomena
The possible existence of extraterrestrial life is examined by investigating those areas of the physical sciences and related disciplines which may shed more light on this elusive problem. Arguments are drawn from astronomy, astrophysics, electromagnetic theory, probability theory, relativity atomic physics, nuclear physics and particle physics. Historical and archaeological views are also discussed. The discussion of extraterrestrial life is utilized as a framework from which many mysteries of the universe are unraveled for the student. (3,0) 3 credits

PHY 121 Descriptive Classical Physics
This is a course covering the fundamental concepts of classical physics. This course is intended for non-science students, including students in the Arts Option of the Liberal Arts and Sciences program, as well as students in the School of Business. Topics will include waves, light, relativity, quantum physics, the nucleus and elementary particles. A knowledge of elementary algebra is required. (3,0) 3 credits

PHY 122 Descriptive Modern Physics
This is a course covering the fundamental concepts of modern physics. This course is intended for non-science students, including students in the Arts Option of the Liberal Arts and Sciences program, as well as students in the School of Business. Topics will include waves, light, relativity, quantum physics, the nucleus and elementary particles. A knowledge of elementary algebra is required. (3,0) 3 credits

PHY 123 The Theory of Everything – The Unification of Physical Law
The four fundamental forces in nature, gravity, electromagnetism, and the strong and weak nuclear forces, appear to be very distinct phenomena. Early attempts to unify them into a single theory of the universe were met with failure, and even such great physicists as Albert Einstein were often derided for such futile efforts. With the advent of recent strides in string theory, supersymmetry, M-theory, and hyperspace, most physicists believe that man is within reach of such fundamental knowledge. It is the purpose of this course to place this same understanding of unification within the student’s grasp. Without resorting to any complex calculations, the course will survey Newton’s classical mechanics, Maxwell’s theory of electricity and magnetism, Einstein’s relativity theories, quantum mechanics, particle physics, and the new particle physics of strings. The student will contemplate the possibility of a universe which may be fully explained by a single physical theory. (3,0) 3 credits

PHY 125 Physical Science Laboratory I
A Physical Science Laboratory to accompany any of the Physical Science Theory courses listed above. Experiments will be in the area of Physics, Astronomy, Meteorology, the Environment and Technology. (0,2) 1 credit

PHY 126 Physical Science Laboratory II
A continuation of PHY 125. Prerequisite(s): PHY 125 (0,2) 1 credit

PHY 128 The Physics of Computers and Computation
The physical principles which govern the design and use of computing equipment are discussed. Discussion will include the historical development of computation equipment from the Babbage calculator through integrated semiconductor logic and laser optical memories. Other topics will demonstrate the use of computation in scientific applications and will include Boolean logic, binary arithmetic, programming languages and an introduction to programming. Prerequisite(s): PHY 113 or approval of this department chair (3,0) 3 credits

PHY 129L Computers in the Physical Sciences
A course designed to familiarize the student with computer operation in the physical science laboratory. (0,2) 1 credit
PHYSICS

PHY 135 College Physics I
An integrated theory/laboratory general college physics course without calculus. Topics will include fundamental concepts of units, vectors, equilibrium, velocity and acceleration in linear and rotational motion, force, energy, momentum, fluids at rest and in motion, and oscillatory motion. Laboratory problems, experiments and report writing associated with the topics studied in the theory are performed.
Prerequisite(s): MTH 129 completed or concurrent
(3,3) 4 credits

PHY 136 College Physics II
A continuation of PHY 135. Topics will include heat, electricity, magnetism, light and optics.
Prerequisite(s): PHY 135
(3,3) 4 credits

PHY 143 General Physics I (Calculus)
A fundamental, calculus based, physics course with laboratory offered primarily for students in Science curricula. Topics discussed include Mechanics, Wave Motion, Kinetic Theory, and Thermodynamics.
Corequisites: MTH 130 or MTH 150
(4,2) 4 credits

PHY 144 General Physics II (Calculus)
A continuation of PHY 143. Topics discussed include Electricity, Magnetism and Optics.
Prerequisite(s): PHY 143
(4,2) 4 credits

PHY 151 University Physics I
A fundamental calculus based, physics course in three semesters offered primarily for students in the Engineering Science curriculum. Topics discussed in the first semester include mechanics of particles and rigid bodies, work energy momentum, conservation laws, and fluids.
Prerequisite(s): MTH 150 completed or concurrent and High School Physics
(3,2) 4 credits

PHY 152 University Physics II
A continuation of PHY 151. Topics will include 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.
Prerequisite(s): PHY 151, MTH 151 completed or concurrent
(2,2) 3 credits

PHY 161 University Physics Laboratory I
Laboratory experiments associated with PHY 151 and part of PHY 152.
Prerequisite(s): PHY 151, PHY 152 completed or concurrent
(0,3) 1 credit

PHY 253 University Physics III
A continuation of PHY 152. Topics will include temperature and expansion, heat and heat measurements, transfer of heat, thermal properties of matter thermodynamics, molecular properties of matter, wave motion, vibration bodies, acoustical phenomena, light reflection and retraction, lenses and optical instruments, interference and diffraction, polarization.
Prerequisite(s): PHY 152
(2,2) 3 credits

PHY 254 Modern Physics
An introduction to the basic ideas of modern physics such as Einstein's theories of relativity, early ideas of atomic structure including the Bohr and Rutherford models, photoelectric effect, de Broglie waves, wave mechanics, Schroedinger's Equation, Heisenberg's Uncertainty Principle, Hydrogen Atom, electron spin, Pauli's Exclusion Principle, quantum oscillator, classical and quantum statistics, solid state physics, nuclear physics and elementary particles.
Prerequisite(s): PHY 253 or PHY 144
(4,0) 4 credits

PHY 262 University Physics Laboratory II
Laboratory experiments associated with PHY 152 and PHY 253.
Prerequisite(s): PHY 161, PHY 253 completed or concurrent
(0,3) 1 credit

PHY 310 Analytical Mechanics
Prerequisite(s): PHY 144 and MTH 253
(3,0) 3 credits

PHY 323 Electromagnetic Theory
This course is an introduction to electromagnetic theory. Topics covered are Vector Analysis: Coulomb's Law; Gauss's Law; the Del Operator; the Divergence and Gradient; the Potential; Potential Gradient; Conductors, Dielectrics and Capacitors; the Magnetic Field; the Biot-Savart Law; Ampere's Law; the Curl of E and H; Faraday's Law; Maxwell's Equations.
Prerequisite(s): PHY 136, MTH 236
(3,0) 3 credits

PHY 333 Modern Physics with Algebra
An introduction to topics in modern physics for upper-division technology students. Topics included are Einstein's Special Theory of Relativity, Atomic Physics, Applied Nuclear Physics, and Solid State Physics.
Prerequisite(s): PHY 136
(3,0) 3 credits

PHY 356 Integrated Topics in Math and Physics
This is a new integrated math-physics course with applications to topics in physics and the engineering technologies. It is meant to be interdisciplinary in nature and directed toward students in the Bachelor of Technology and Applied Math Programs. Topics to be covered include: Vector Algebra, Vector Calculus, Scalar and Vector Field Theory, Fourier Series, Fourier Integral, Fourier Transforms and Laplace Transforms. The focus will be on application and integration of math methods to physics and engineering technologies.
Note: Students completing this course may not receive credit for MTH 356.
Prerequisite(s): MTH 236 or MTH 252 and PHY 136 or PHY 144
(3,0) 3 credits

PHY 420 Optics
This course is an introduction to the study of light on the intermediate level. It is an elective course for students in their fourth year of the Electrical Technology program. It begins with a review of the mathematics of wave motion. Starting from Maxwell's equations, the electromagnetic theory of light is discussed. Topics covered will be the propagation of light, the laws of reflection and retraction, the superposition of waves, interference and diffraction of light, the quantum nature of light, and the concept of the laser.
Prerequisite(s): PHY 323
(3,0) 3 credits
POL 105 Introduction to Politics
This course will introduce students to the study of politics and to the discipline known as Political Science. Focusing on fundamental concepts of power and authority, the course will examine topics central to each of the main subfields of Political Science: American Politics, Comparative Politics, International Relations, and Political Philosophy. It will also explore some contemporary issues and debates that captivate U.S. politics.
(3,0) 3 credits

POL 110 Introduction to Legal Studies
This is a survey course designed to give the student a basic introduction to law beginning with the various schools of legal philosophical though, criminal and civil law and procedure, and basic contract law. The course provides the students with an understanding and overview of how the American legal system functions including introducing students to the principles of law, the administration of the legal system, legal terminology, and the inter-relationship between politics, governmental structures, legal professionals and the functioning of the legal system.
(3,0) 3 credits

POL 250 American National Government
Explains the operation of executive, legislative, and judicial functions in the American system of national government, and illustrates the meaning of federalism, the essentiality of civil liberties, and the role of political parties and other interest groups in a democracy.
Prerequisite(s): One American history course or a 100-level Politics course
(3,0) 3 credits

POL 251 State and Local Government
An examination of the structures and purposes of state, county, and municipal political institutions, emphasizing the importance of citizen participation in community affairs and the election process, in enhancing the effectiveness of state legislatures and judicial systems, county and municipal government, and the protection of civil rights through law enforcement.
Prerequisite(s): One American history course or a 100-level Politics course
(3,0) 3 credits

POL 262 Global Politics
An introduction to global politics which explores regional issues in Europe, Asia, Africa, the Middle East, the Americas, etc., as well as genuinely transnational concerns such as pandemics, international terrorism, environmental degradation, etc.
Prerequisite(s): HIS 126 or a 100-level Politics course
(3,0) 3 credits

POL 263 American Foreign Relations
A focus on American foreign relations in the post-World War II era, describing the transition from isolationism to the adoption of mutual security agreements, and political and constitutional sanctions—which sustain the nation's overseas commitments.
(3,0) 3 credits

POL 265 Comparative Politics
This course examines a broad range of governmental systems utilizing the comparative method of analysis. In addition to analysis of selected political systems in the developed world (e.g. Great Britain, the United States, and the Russian Federation) students will also explore the governmental structures of at least one country in the developing world (India, Brazil, the People's Republic of China, etc.). Students will also compare plural democracies, monarchies, dictatorships and neo-authoritarian forms of government, emphasizing policy-making and contemporary problems facing the state in era of globalization, such as the purported victory of neo-liberalism, the threat of terrorism and the importance of satellite television and the Internet in shaping politics.
(3,0) 3 credits

POL 273 Italian Politics & Society: Theory & Practice
This course will introduce students to the study of politics and to the discipline known as Political Science. Focusing on fundamental concepts of power and authority, the course will examine topics central to each of the main subfields of Political Science: American Politics, Comparative Politics, International Relations, and Political Philosophy. It will also explore some contemporary issues and debates that captivate U.S. politics.
(3,0) 3 credits

POL 277 Politics of the Muslim World
This course provides an introduction to the global politics of Islam, including regional issues in the Arab world, Central Asia, and South Asia, as well as the impact of Islamic politics on parts of the globe where Muslims represent a significant minority (Europe, Russia, China, and sub-Saharan Africa).
(3,0) 3 credits

POL 310 Introduction to Political Theory
This course will introduce students to the major themes and classic works of Western political philosophy. Focusing on a central theme (e.g., political obligation, human rights, equality), students will examine how that issue is addressed by some classic political philosophers such as Plato, Hobbes, Locke, Rousseau, Marx. Students will also assess and debate contemporary U.S. theory and practice with regard to the issue at hand.
Prerequisite(s): One 100-200 level social science or history course (Psychology, Economics, History, Sociology, Anthropology, Political Science)
(3,0) 3 credits

POL 320 Internet Politics
This course examines the impact of recent communication technologies on the social system, democracy and government, social movements and interactions, markets and commerce, globalization and governance, and the relations between culture and the state. The course focuses on the intersections among politics, society and commerce through a comparative perspective and asks students to evaluate the central controversial policy dilemmas and problems that have emerged and persisted over the Internet.
Prerequisite(s): Any 100-level History or Politics course
(3,0) 3 credits

POL 391 Mass Media and Politics
This course provides a comprehensive survey of mass media’s role in politics and the impact of the political environment on the press. It investigates the major media platforms (print, radio, television, and the Internet) and how each shape political culture. While the scope of the course is global, much attention is paid to the American media landscape. Other regions to be covered include the former Soviet Union, the Arab World, East Asia, and Europe. Special topics to be explored include: news management, transnational media empires, the CNN Effect, infotainment, “fake news,” the mass mediation of terrorism, and the connection between media and democracy
Prerequisite(s): Any 100 (or higher) level history course or political science course
(3,0) 3 credits

POL 395 Special Topics in Politics
This course offers instruction in special content areas not included in other Politics courses. All courses will include a component focusing on the interplay between technology, globalization and politics, either in the U.S. or at the international level. This course will require extensive reading and research, focused on the selected topic. Students should consult the department before registering for any Special Topics course.
POL 399 New York State Legislative Internship
For students participating in the full-time New York State Assembly and Senate Legislative Session Internship programs. Students work as staff members in their assigned State Legislator/Senator's office for a minimum of 30 hours a week. During the internship, students participate in seminars, mock legislative sessions, and weekly research and written assignments. A written report on the internship experience is required of the student at the conclusion of the internship. Internships are open only to qualified junior and seniors with an overall grade point average of 3.0 or higher through a competitive selection process.
Note: Students must consult with the Campus Liaison Office to determine credit value to be assigned.
Prerequisite(s): Junior/Senior level Status, and Admission to NYS Assembly/Senate Internship Program
3-15 credits

PSYCHOLOGY

PSY 101 Introduction to Psychology
This course is designed to present basic psychological concepts and to introduce students to the scientific study of behavior. Core topics include methods of psychological research, the biological basis of behavior, principles of learning, personality, and psychopathology. Other selected topics to be covered would include the following: motivation and emotion, life-span development, social psychology, health psychology, sensation and perception, memory and cognition, intelligence, human sexuality, statistics and altered states of consciousness.
Note: Students completing this course may not receive credit for PSY 130 or PSY 131.
(3,0) credits

PSY 130 Introduction to Psychology (PLMP)
(Perception, Learning, Motivation, Physiology)
This course is designed to present basic psychological concepts and to introduce students to the scientific study of behavior. Topics covered include methods of psychological research, biological basis of behavior, altered states of awareness, principles of learning, memory/forgetting, sensation/perception, language/thought, and motivation/emotion/stress. Psychological theories, uses of Psychology (individual and general), and careers in Psychology will be discussed.
Note: PSY 131 may either precede or follow PSY 130.
(3,0) credits

PSY 131 Introduction to Psychology
(Personality, Abnormal, Therapy, Social)
This course is designed to present basic concepts in the scientific study of interpersonal behavior. Topics covered include methods of Psychological research, Psychology as a profession, human development, intelligence, theories of personality, mental health/abnormality/stress, Psychological assessment of emotional/behavioral disorders, Psychotherapy, and social Psychology. Psychological theories, uses of Psychology (individual and general), and careers in Psychology will be discussed.
Note: PSY 131 may either precede or follow PSY 130.
(3,0) credits

PSY 230 Gender Psychology
This course will examine sex role stereotypes and their effects, research on Psychological sex differences, theories of male and female development, sex roles and social institutions - how perceptions of males and females are influenced by schools, religion, and the media; and male and female approaches to sexuality, marriage, and parenthood. Readings and class discussions will be used to help students achieve a greater understanding of the female and the male experience.
Note: Students completing this course may not receive credit for WST 230.

PSY 231 Group Dynamics
This course blends theory and application of the principles of group interaction and development. This is not a lecture course. Through actively participating in class exercises, students will have an opportunity to develop their sense of self in relation to others and to develop skill in effective group functioning. The general content of the course involves group formation, communication, leadership, decision-making, problem solving, goal setting, power and influence, conflict and conflict resolution, cohesion norms, and stages of group development.
Prerequisite(s): PSY 101 or PSY 130 or PSY 131 or permission of Department chair
(3,0) credits

PSY 232 Child Development
In this course the student will explore human development from preconception through the end of childhood. Course material will include historical and modern concepts of attitudes toward children, theories and models of child development, research methods in the study of children, genetics, prenatal development and influence, pregnancy, and birth. Within each age range the emphasis will be on factors influencing the physical, cognitive, social, and emotional development of the child. Developmental disorders, both physical and psychological, will also be explored.
Prerequisite(s): PSY 101 or PSY 130 or PSY 131 or permission of Department chair
(3,0) credits

PSY 233 Adolescent Development
This course focuses on adolescent behavior. The emphasis is on growth and change- physiological, psychological /interpersonal and sociocultural. Issues of particular concern to adolescents will be presented and discussed. Some selected topics are: peer pressure, the sexual issue, the availability of drugs, establishing a separate identity, dating and relationships and finally the transition to adulthood.
Prerequisite(s): PSY 101 or PSY 130 or PSY 131 or permission of Department chair
(3,0) credits

PSY 234 Social Psychology
This course introduces the student to the study of how people influence each other. Topics to be covered include: liking and loving, aggression and violence, obedience and compliance, helping in emergencies, attitudes, prejudice and gender bias. In addition, social perception and group behavior will be examined.
Prerequisite(s): PSY 101 or PSY 130 or PSY 131 or permission of Department chair
(3,0) credits

PSY 235 Abnormal Psychology
In this course the student will learn about concepts, theories, and issues in Psychopathology (the study of mental illness and behavioral disorders). Topics will include historical background, mental health professionals, legal issues, abnormality/abnormality, etiology/assessment/diagnosis/ therapy, anxiety/stress/depression, personality disorders, sexual deviance, schizophrenia, neurological dysfunction, substance abuse, and Psychophysiological disorders. The application of Psychology to personal problem solving will also be explored.
Prerequisite(s): PSY 101 or PSY 130 or PSY 131 or permission of Department chair
(3,0) credits

PSY 237 Theories of Personality
The course will examine the concept of personality from four theoretical perspectives: Psychodynamic, trait, learning, and humanistic.
Representative theories of each perspective are discussed in terms of basic conceptualizations, methods of assessment, development, research and clinical applications. 
Prerequisite(s): PSY 101 or PSY 130 or PSY 131 or permission of Department chair
(3,0) 3 credits

PSY 238 The Psychology of Human Sexuality
This course presents a scientific foundation for the understanding of the Psychological, physiological, social and behavioral aspects of human sexuality. In addition to studying historical changes in sexual practices and attitudes, the course will review and evaluate current research, issues and concerns about sexuality in order to provide contemporary and relevant curriculum material. Topics include Psychosexual development, gender roles, sexual orientation, sexual anatomy, alternate methods of reproduction, pregnancy/birth, contraception, sexually transmitted diseases, sex education, sexism, love and attraction, sexual abuse, sexual dysfunctions, sex therapy, paraphilia, and sexuality through the life cycle. 
Prerequisite(s): PSY 101 or PSY 130 or PSY 131 or permission of Department chair
(3,0) 3 credits

Fall, Spring

PSY 240 Health Psychology
Health Psychology is the study of psychological factors that affect health and illness. This course will apply a scientific and research perspective to the study of health promoting and health damaging behaviors. Using a biopsychosocial approach, behavioral patterns that result in cardiovascular disease, cancer, alcoholism, sexually transmitted diseases and other conditions will be explored. Course content will focus on stress and the immune system, stress management techniques, the health care system, risk taking, culture-bound syndromes, diversity issues, social support and the role of the patient. 
Prerequisite(s): PSY 101 or PSY 130 or PSY 131 or permission from department chair
(3,0) 3 credits

PSY 242 Educational Psychology
This course will present current scientific theory and research related to formal learning environments. Individual differences in cognitive, social, and emotional development, and the implications for the teaching/learning process will be explored. These general areas will be addressed through more specific topics including growth and development, learning theories, moral development, motivation, and classroom management. In addition, issues related to teaching in a diverse society will be addressed. 
Prerequisite(s): PSY 101 or PSY 130 or PSY 131 or permission from department chair
(3,0) 3 credits

PSY 248 Statistics for Psychology
This course will introduce students to the basic descriptive and inferential statistics used in the behavioral and social sciences. Topics will include the organization of data, measures of central tendency and variability, correlation and regression, hypothesis testing, and various parametric and nonparametric tests of significance including t-tests, ANOVA, and chi-square analysis. Students will learn the interconnections between theory, research methods, and statistical techniques in order to use statistics to analyze experimental data and reach objective conclusions regarding research questions in the social sciences. The course will also provide an introduction to using statistical software for data summarization, presentation, and analysis. 
Prerequisite(s): PSY 101 or PSY 130 or PSY 131, MTH 110 or approval from this department chair
(3,0) 3 credits

PSY 252 Adult Development
This course will deal primarily with the Psychological correlates of development and transitions during adulthood. Specifically, the course will focus on such topics as what it means to be an adult, the meaning of marriage, the meaning of work, being a parent, divorce, the empty nest syndrome, mid-life crisis, retirement, and facing death. Biological and social factors will be taken into consideration, as will Psychological theories and individual responses to stages and passages throughout adulthood. 
Prerequisite(s): PSY 101 or PSY 130 or PSY 131 or permission of Department chair
(3,0) 3 credits

PSY 253 Life Span Development
This course provides a comprehensive overview of normal human development throughout the life span. It will apply a scientific and research perspective to understanding both age-related change and consistency. The course will examine physical, cognitive, social and emotional development at every stage of life, with an emphasis on continuity and discontinuity of development as we progress from one stage of life to the next. Additionally, students will learn about those theories and research methods which are most pertinent to the study of lifespan development. 
Prerequisite(s): PSY 101 or PSY 130 or PSY 131 or permission of department chair
(3,0) 3 credits

PSY 255 Special Topics in Psychology - Honors
This course will enable students to explore a specific subfield or topic of interest in Psychology, in a challenging atmosphere, with emphasis on student participation and written assignments. The subject for a particular semester will be announced prior to registration. Possible topics include but are not limited to: consumer behavior, health Psychology, Psychology and the Law, sports Psychology, and parapsychology. 
Prerequisite(s): PSY 101 or PSY 130 or PSY 131 or permission of Department chair
(3,0) 3 credits

PSY 257 Teaching of Psychology
This course is designed to expose students to current thinking about teaching and learning and the underlying content in the field of Psychology. In addition it aims to promote understanding of Psychology as a profession as it relates to a career in academia. This is accomplished by offering students a unique opportunity to attend a professional conference on the Teaching of Psychology. During the conference students will have the unique opportunity to listen to, and participate in presentations on some of the newest ideas in the teaching of Psychology. In many cases the presentations they hear will be the first time the ideas have been presented in public. Students will be able to observe and interact on both a formal and informal level with a group of professional Psychologists. This course is designed especially for students who have expressed an interest in continuing in the field of Psychology and/or teaching. However, it can be a valuable experience for virtually all students, regardless of their career plans. 
Prerequisite(s): PSY 101 or PSY 130 or PSY 131 or permission of Department chair
(3,0) 3 credits

PSY 260 Research Methods
This course will present the scientific method within the context of applied psychology. Research techniques and methods will be examined for the formulation of hypotheses, development of testable objectives, experimental design, subject selection, data collection, data analysis and interpretation, and report preparation. This course will focus on laboratory-based methods and simple statistical procedures for the analysis of data. Students will apply the concepts and methods in laboratory exercises. 
Prerequisite(s): PSY 248 or approval from this department chair
(4,0) 4 credits

PSY 272 Cognitive Psychology
This course covers the psychological study of human information processing in terms of structure, process, and application. The representation of knowledge in memory is addressed as is the cognitive processes used for information acquisition, information retrieval, and forgetting. The cognitive processes of attention, pattern recognition, language, comprehension, and thinking will be reviewed in terms of their
application to cognitive activities such as decision-making, reasoning, problem solving, and creativity. The application of cognitive theory to artificial intelligence is also discussed.

**Prerequisite(s):** PSY 101 or PSY 130 or PSY 131 or permission of department chair

**(3,0) 3 credits**

**PSY 300 Forensic Psychology**

This course introduces the student to the study of forensic psychology, a discipline that applies psychology to the law and the criminal justice system. Topics to be covered include: the psychologist’s role in the criminal courts, ethical dilemmas of psychologists working in the criminal justice system, psychological perspectives on the nature of criminality and the investigation of crime, criminal profiling, the effects of psychological empirical research on the outcome of criminal trials, and the psychology of the police, witnesses, offenders, and victims. Other new research topics in the field, such as the use of brain fingerprinting technology to determine criminal culpability, will also be explored.

*Note:* Students completing this course may not receive credit for CRJ 300

**Prerequisite(s):** PSY 101 or CRJ 100

**(3,0) 3 credits**

**PSY 301 Learning**

This course examines the principles and theories of learning including the methodology and evaluation of research pertaining to learning processes. Topics will include a broad range of learning paradigms, from relative simple processes such as classical conditioning and operant conditioning, to more cognitively complex processes such as concept formation and schema development. The research describing information acquisition, retention, transfer, and forgetting will be reviewed. In addition, the influence of the conditions, such as motivational factors, will be examined.

**Prerequisite(s):** PSY 101 or PSY 130 or PSY 131 or permission of department chair

**(3,0) 3 credits**

**PSY 304 Multicultural Psychology**

Reflecting the 21st century global theme of acculturation, this course will focus on the ways in which the study and practice of psychology intersect with race, culture, and diversity. Topics include racial/ethnic/religious group differences, cultural norms, gender and sexual orientation issues, family structure and identity development. Primary focus will be given to the way that race and culture contribute to disparities in access to mental health treatment as well as differences in beliefs about mental illness and its treatment. Consistent with an applied psychology approach, the student will develop an understanding of how diversity issues affect the workplace, i.e., discrimination in hiring/practices, affirmative action laws, multicultural competence, and sensitivity training.

**Prerequisite(s):** PSY 101 or PSY 130 or PSY 131 or permission of department chair

**(3,0) 3 credits**

**PSY 311 Organizational Behavior**

This upper-division course presents the concepts of organizational behavior and structure as well as topics relating to motivation content and process theories; group communications and dynamics; decision making; causes and resolutions of organizational conflicts; and factors pertaining to influence, power, and politics in organizations.

*Note:* Students completing this course may not receive credit for BUS 311.

**Prerequisite(s):** BUS 109 or PSY 101 or PSY 130 or PSY 131 or permission of this department chair

**(3,0) 3 credits**

**PSY 320 Sensation and Perception**

This course will survey the experimental psychology of sensory and perceptual process and behavior. Theories and processes relating the transformation of physical energies (such as light and sound) to psychological experiences (such as seeing object and hearing noises) will be discussed. While the research examined will primarily focus on the visual and auditory systems, the other sensory systems will be discussed as well. The emphasis will be on the contribution of behavioral science to understanding subjective experience of physical and social phenomena.

**Prerequisite(s):** PSY 101 or PSY 130 or PSY 131 or permission of this department chair

**(3,0) 3 credits**

**PSY 324 Psychological Measurement and Assessment**

An analysis of the theory and practice of psychological measurement and assessment including the implications of psychological measurement in society and institutions such as schools, the workplace, clinical populations and other groups with special needs. Topics will include overview and history of the field, foundations of psychological testing and psychometrics, the assessment of ability, the assessment of personality, the assessment of interest and vocational choice, and ethical/social/cultural issues of psychological assessment.

**Prerequisite(s):** PSY 101 or PSY 130 or PSY 131 or permission of this department chair

**(3,0) 3 credits**

**PSY 328 Introduction to Human Factors**

This course will provide an introduction to the field of human factors psychology. Human factors psychology is the application of the body of scientific facts about human characteristics to the design, operation, and organization of human-machine systems. Human-machine systems can range from simple consumer products to complex arrangements of hardware, software, and personnel, such as in aviation systems. Human factors knowledge, methods and techniques will be surveyed with an emphasis on ensuring that the systems, equipment, personnel tasks, and work environment are compatible with the human sensory, perceptual, cognitive, and physical attributes of the personnel who function within the human-machine system.

**Prerequisite(s):** PSY 101 or PSY 130 or PSY 131 or permission of this department chair

**(3,0) 3 credits**

**PSY 330 Organizational Training and Development**

An upper level offering, this course will provide a greater understanding of the theory, research, techniques, and current and future issues in the field of organizational training and development through an experimental learning approach. Topics shall include training systems, needs analysis, organization intervention, program evaluation, adult learning theory, cognitive issues, conditions for learning transfer, instructional techniques and current social and organizational issues in training.

**Prerequisite(s):** PSY 101 or PSY 130 or PSY 131 or permission of this department chair (PSY 331 Industrial/Organizational Psychology recommended.)

**(3,0) 3 credits**

**PSY 331 Industrial/Organizational Psychology**

Students will explore how the science and practice of psychology is applied in the world of work and organizations. Among the topics that will be examined are the history and research methodology of industrial/organizational psychology, job analysis, employee selection, performance evaluation, training, work motivation, job satisfaction, leadership, group dynamics, and organizational development. The course will highlight emerging trends in the modern workforce and examine how these changes will impact research and practice in today’s organizations. Students will examine the factors influencing cross-cultural diversity and globalization, the theoretical and practical implications of these workforce trends, and how current organizational theories and practices apply to cultures outside of the United States. Implications for the full range of topics discussed in the course will be examined including how cultural diversity and globalization affect employee selection procedures, group dynamics, preferences for leadership, training needs, work motivation, and organizational development.

**Prerequisite(s):** PSY 101 or PSY 130 or PSY 131 or permission of this department chair

**(3,0) 3 credits**
PSY 340 Behavior Analysis/Modification
An analysis of the general principles, theories and application of conditioning and learning in humans. The application of the theories of behavioral analysis to human problems will be explored. Behavioral interventions using the principles of classical conditioning, operant conditioning and modeling will be presented. Particular emphasis will be placed on behavioral analysis and intervention in settings such as mental health institutions, education, business organizations and families.
Prerequisite(s): PSY 101 or PSY 130 or PSY 131, PSY 301 or permission of this department chair
(3,0) 3 credits

PSY 345 Human Factors: Systems Analysis and Design
This course will address the systems engineering approach to system design and the role of the human factors professional in that process. The human methods and techniques that are applied to the development of system requirements, allocation of functions to human and machine subsystems, the analysis of human task and work requirements, analysis of staffing requirements, the design control centers to support the human tasks, and methods of system evaluation, verification, and validation will be examined. This course will require students to apply these concepts and methods discussed to a given actual design project as part of a design team.
Prerequisite(s): PSY 101 or PSY 130 or PSY 131 or permission of this department chair
(4,0) 4 credits

PSY 405 Ergonomics and Biomechanics
This course will examine the scientific knowledge related to human ergonomics, anthropometry, and biomechanics. The measurement of human work, physiological characteristics, and movement will be presented. The application of such knowledge to the design of devices, systems, and environments for use by people will be discussed. The contribution of ergonomics and biomechanics to the improvement of safety, productivity, and quality of work will be presented.
Prerequisite(s): PSY 328 and two general education biology courses with permission of department chair
(3,0) 3 credits

PSY 410 Individual and Group Counseling
This course will explore what counseling is, who is a counselor, and what is known about changing behavior in both individual and group settings. Historical concepts of counseling will be examined as well as the scientific foundations of counseling. Research findings related to counseling techniques will be presented and analyzed. The course will focus on a variety of counseling approaches, the therapeutic relationship, legal and ethical issues, and the realities of therapeutic practice. Cultural influences on behavior will be emphasized as a way of understanding and helping clients from diverse backgrounds.
Prerequisite(s): PSY 235 or permission of department chair
(3,0) 3 credits

PSY 414 Applied Personnel Psychology
This upper level offering is designed to provide students with the tools for understanding the underlying theory, research and techniques of personnel psychology. It will provide the background for understanding the practical application of the concepts and techniques studied. This will be accomplished through a combination of lectures, group projects involving application of the principles of personnel psychology, group presentations of the projects and classroom exercises.
Prerequisite(s): PSY 101 or PSY 130 or PSY 131 or permission of Department chair (PSY 331 Industrial/Organizational Psychology recommended.)
(3,0) 3 credits

PSY 440 Human Factors Psychology / Internship / Senior Project I
This course will provide seniors in the Human Factors Concentration with the opportunity to apply human factors knowledge and methods in an actual work environment. A variety of options will be available for completion of this course: internship, research assistantship, or independent project. In an internship, the student will work in a local business, laboratory, or service organization. As a research assistant, the student will work with a faculty member as an assistant in their ongoing research or consulting. Alternatively, students may develop an independent project under the supervision of a faculty member. The selection of which option is best will be made by the student and his/her advisor based on which best meets the student’s educational and career goals. Regardless of the option selected, each student will attend seminars and complete a research or design project.
Prerequisite(s): Senior status in Human Factors Psychology Concentration
(1,2) 3 credits

PSY 441 Human Factors Psychology Internship / Senior Project II
This second internship/Senior Project course will provide seniors in the Human Factors Concentration with the opportunity to apply human factors knowledge and methods in an actual work environment. A variety of options will be available for completion of this course: internship, research assistantship, or independent project. In an internship, the student will work in a local business, laboratory, or service organization. As a research assistant, the student will work with a faculty member as an assistant in their ongoing research or consulting. Alternatively, students may develop an independent project under the supervision of a faculty member. The selection of which option is best will be made by the student and his/her advisor based on which best meets the student’s educational and career goals. Regardless of the option selected, each student will attend seminars and complete a research or design project.
Prerequisite(s): PSY 440
(1,2) 3 credits

PSY 442 Applied Psychology / Internship / Senior Project I
This course will provide seniors in the Industrial/Organizational Psychology Concentration with the opportunity to apply industrial/organizational psychology knowledge and methods in an actual work environment. A variety of options will be available for completion of this course: internship, research assistantship or independent project. In an internship, the student will work in a local organization. As a research assistant, the student will work with a faculty member as an assistant in the faculty member’s ongoing research and/or consultation with organizations. Alternatively, the student may develop an independent project under the supervision of a faculty member. The selection of which option is best will be made by the student and his/her advisor based on which best meets the student’s educational and career goals. Regardless of the option selected, each student will attend seminars and complete a research or application project.
Prerequisite(s): Senior status in Applied Psychology Bachelor’s Program, PSY 248
Corequisite(s): PSY 248 (if not taken prerequisite)
(1,6) 3 credits

PSY 443 Applied Psychology / Internship / Senior Project II
This second internship/Senior Project course will provide seniors in the Industrial/Organizational Psychology Concentration with the opportunity to apply industrial/organizational psychology knowledge and methods in an actual work environment. A variety of options will be available for completion of this course: internship, research assistantship or independent project. In an internship, the student will work in a local organization. As a research assistant, the student will work with a faculty member as an assistant in the faculty member’s ongoing research and/or consultation with organizations. Alternatively, the student may develop
an independent project under the supervision of a faculty member. The selection of which option is best will be made by the student and his/her advisor based on which option best meets the student's educational and career goals. Regardless of the option selected, each student will attend seminars and complete a research or application project.  
Prerequisite(s): EET 442, PSY 260  
Corequisite(s): PSY 260 (if not taken as prerequisite)  
(1,6) 3 credits

SOFTWARE TECHNOLOGY

SET 220 Internetworking  
The course will provide an in-depth understanding of internet and its applications. Lab projects will provide hands-on experience in network configuration, installation and utilization. The topical outline includes the following: internet mechanism, communication on the internet, application of internet, use of search engines, online communication, internet security, hardware for network communication, and control computer networks.  
Prerequisite(s): EET 104  
(2,2) 3 credits

SET 230 Wireless Technology and Applications  
The course will focus on developing the skills needed to design, build and utilize wireless networks. The topics will include function of a wireless system, basic technologies for wireless, wireless applications, wireless internet, hardware and standards for wireless networks, and building and maintaining a wireless system.  
Prerequisite(s): EET 104  
(3,0) 3 credits

SET 310 Software Applications for ERP Solutions  
As the first of a sequence of courses, this course will provide an in-depth study of software applications in a variety of industries. Overview of engineering and business processes, concepts in enterprise resource planning and integration, and software applications for such functions as manufacturing, product life cycle management, and supply chain management will form the key topics. The focus of the course is the application, configuration of industry standard software and how to customize it for a variety of applications.  
Prerequisite(s): BCS 260  
(3,0) 3 credits

SET 320 Software Applications in Supply Chain Management  
The objective of the course will be to develop skills and competencies to plan and implement supply chain management concepts. The primary focus will be to define, configure and apply supply chain management software. Topical areas covered will include vendor/customer roles, enterprise systems, production planning and control, capacity planning, materials requirements planning, purchasing, inventory control, shop floor control, sales and distribution, and warehouse operations and management. Industry standard software such as SAP will be used for configuration, customization and application for Supply Chain Management.  
Prerequisite(s): SET 310  
(3,0) 3 credits

SET 400 Network Planning and Implementation  
This course will focus on developing the skills needed to plan and implement networking systems. As a higher level course, it will prepare the students to design, build and implement a network system. The course assumes that the student will have basic understanding of network concepts. As a practical engineering project management course, it will include the analysis of network requirements, network architecture, security of network systems, selection of network technologies, engineering cost estimation, and project implementation. Laboratory projects will focus on real world experience in network planning and implementation.  
Prerequisite(s): EET 440 or BCS 208  
(2,2) 3 credits

SET 402 Software Applications in Statistical Analysis and Manufacturing Management  
The objective of this course is to develop competencies in the application of software for gathering and analysis of information, and preparation of scientific, technological, and management reports in such functions as engineering, manufacturing, banking, pharmaceutical and regulatory controls. Standard application software such as SAS will be used for analysis and reporting.  
Prerequisite(s): MTH 110, SET 310  
(3,0) 3 credits

SET 405 Software Applications in Manufacturing and Service Functions  
The objective of the course will be to develop skills and competencies to apply software for such service functions as quality management, sales and distribution, and logistics. The course will also deal with the role of the functions in accounting and finance, and human resource management in an enterprise. The primary focus will be to define, configure and apply software for service functions in manufacturing and service industries. Industry standard software such as SAP will be used for application, customization and configuration.  
Prerequisite(s): SET 310  
(3,0) 3 credits

SET 410 Senior Project  
This is a capstone course which will require the student to utilize the skills and competencies gained in the program to develop and implement real world projects. With guidance from the instructor, students may address specific problems in a company or industry and develop solutions involving software applications. Using the skills and competencies gained in software applications, the student will be able to determine research methodologies, selection of a project, setting limitations for a project, defining the problem, conducting an industry study, establishing process flow for the problem in question, configuring the software system for use in the specific application, testing the validity of the configured system, going alive with the new system, turning over the control of the system, and providing maintenance and service support.  
Prerequisite(s): Senior Status and Department approval  
(3,0) 3 credits

SPORT MANAGEMENT

SMT 202 Computer Concepts for Business/Sport Management  
In this course, students will learn the fundamentals of computer applications for business including sport management. This course will cover file management and have hands on experience at the beginning through advanced level using microcomputer spreadsheet and database applications. Students will use a spreadsheet program to enter formulas, create charts, execute functions and macros, create, sort and query lists; create pivot tables, create templates, and work with multiple worksheets and workbooks. Students will use a database program to create data table structures, query, reports, and forms, create switchboards, pivot tables, and pivot charts. Please note: This course may not be used to satisfy the requirements of the B.S. in Computer Programming and Information degree.  
Note: Students completing this course cannot receive credit for BCS 202.  
Prerequisite(s): BCS 102 with a grade of C or better  
(3,0) 3 credits

SMT 210 Introduction to Sport Management  
An investigation into the scope of the sport industry, a growing major business enterprise in the United States and in much of the world. Functions of management, skills and attributes required of a sport
manager, and roles of a manager are examined and researched. Attention focuses on how the managerial process relates to sport organizations and their products. Students become acquainted with career opportunities in the sport management field.

**Prerequisite(s):** BUS 109  
**(3,0) 3 credits**

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**SMT 220 Media and Sport**

This course combines an analysis of the sport media industry with practical sport media management skills. The course equips students to understand the nature and scope of the sport media nexus, as well as develop the skills to manage the media promotion and coverage of sport organizations.

**Prerequisite(s):** BUS 109  
**(3,0) 3 credits**

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**SMT 304 Sport Finance**

The course grounds students in the real world of financial management in sport, showing them how to apply financial concepts and appreciate the importance of finance in sound sport management and operations.

**Prerequisite(s):** BUS 102, SMT 210  
**(3,0) 3 credits**

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**SMT 320 Sport Administration**

The course focuses on the organization, administration, and management of physical education and sport. Attention will be directed towards intercollegiate and interscholastic athletics, professional sport organizations and various recreational programs. Emphasis will be placed on organization and leadership theories and program development. The management and supervision as well as the budgeting and purchasing process in the management of athletic facilities will be discussed. Issues of law, risk management and ethics as they pertain to athletics will be explored.

**Prerequisite(s):** BUS 109  
**(3,0) 3 credits**

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**SMT 325 Sport Marketing**

An investigation into the decisions necessary to plan, develop, implement, and control integrated sport marketing programs. Attention will be directed towards each major element of the marketing industry – advertising, promotion, public relations and sponsorships. The emphasis will be on the marketing of professional and collegiate athletes. Included will be the use of marketing for teams, leagues and special events. The course will also focus on negotiations, contracts and the role of the media.

**Prerequisite(s):** BUS 131  
**(3,0) 3 credits**

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**SMT 326 Sport Writing**

In this course students will learn skills in the identification of legitimate angles for sport stories, how to report sport events, develop sport feature stories, and write sport opinion pieces, both for print publication and the web. Students will submit written articles, be required to write on deadline and develop skills interviewing. Students will deconstruct published stories and acquire an understanding of the process of assembling a well-researched and expertly-crafted sport story.

**Note:** Students completing this course may not receive credit for PCM 326.  
**Prerequisite(s):** EGL 102  
**(3,0) 3 credits**

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**SMT 330 Nutrition and Sport**

This course will investigate the current knowledge of the nutritional needs of today’s athlete, including special requirements for certain organic and inorganic foods. Topics include energy, nutritional and fluid needs during stress periods. Students will discover the role of nutrition and exercise in reducing the risk of chronic disease. Furthermore, the role of a balanced diet in the prevention of activity based injuries and weight control will be explored. Other topics of special interest and current research will be discussed.

**Prerequisite(s):** BIO 123  
**(3,0) 3 credits**

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**SMT 335 Special Topics in Sport**

The course will be offered occasionally and can be taken more than once as titles change. The course will present a special course for students as a Sport Management elective course. It will pertain to a general sport topic or a current event occurring in the sport industries.

**Prerequisite(s):** SMT 210  
**(3,0) 3 credits**

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**SMT 340 Sport Facility Management**

This course focuses on athletic facilities and the complex management involved. Topics include the development, operation, and financing as well as the management and supervision of athletic facilities. Attention will be directed towards public and private arenas, colleges and universities, and health clubs and stadiums. Other topics of special interest and current research will be discussed.

**Prerequisite(s):** BUS 109  
**(3,0) 3 credits**

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**SMT 400W Sport Management Research Methods**

The course provides a comprehensive treatment of sport management research methods. Specific topics include: principles and types of research methods, ethical issues, research question and design, data collection and analysis, dissemination of findings, case study analysis and statistical research methods. Students will be required to analyze sport management research literature and apply techniques learned in the course toward individualized research. Written case study analysis and research papers will be required.

**Prerequisite(s):** SMT 210, Senior status  
**(3,0) 3 credits**

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**SMT 409 Strategic Sport Management**

A capstone course for seniors, which will include a research project on a chosen topic relating to sport. The class will focus on personal and career goals, internship experiences and characteristics in the profession.

**Prerequisite(s):** SMT 210, Senior status  
**(3,0) 3 credits**

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**SMT 410 Sport Law**

A study of legal issues affecting all aspects of sport services, including college, professional and recreational activities. Future professionals within the realm of physical activity and sport need to be aware of the law and the many implications it brings to their chosen fields. This class is designed to provide an introduction to various aspects of the law and its influence on sport and physical activity.

**Prerequisite(s):** BUS 202  
**(3,0) 3 credits**

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**SMT 440 to 443 Sport Management Internship I**

Supervised work experience in corporate settings, amateur and professional sport agencies, colleges and universities and community sport organizations. Students assume leadership roles in various job-related activities and perform administrative tasks in support of activities under an experienced agency supervisor and faculty sponsor.

**Note:** No more than 15 credits may be earned from SMT 440 to SMT 443.  
**Prerequisite(s):** SMT 210, Junior level or higher standing, Department approval, with an overall GPA of 2.5 or better.  
**(1,8-35) 3-12 credits**

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**SMT 445 to 448 Sport Management Internship II**

Supervised work experience in corporate settings, amateur and professional sport agencies, colleges and universities, and community sport organizations. Students assume leadership roles in various job-related activities and perform administrative tasks in support of activities...
under an experienced agency supervisor and faculty sponsor. Note: Students may earn a maximum of 15 credits from SMT 440 to SMT 443 and SMT 445 to SMT 448. Prerequisite(s): SMT 440 to SMT 443, Junior level or higher standing, Department approval, with an overall GPA of 2.5 or better. (1.8-35) 3-12 credits

SOCIOLOGY

SOC 122 Introduction to Sociology
An introductory course designed to help the student develop insights into human social interaction in terms of the group, across groups and the impact the group has on individuals. We study sociological concepts and theories and apply them to key aspects of our lives and society (such as culture, family, education, work, media, stratification, and social change). (3,0) 3 credits

SOC 200 Introduction to Women's Studies
An interdisciplinary approach that will draw on literature, history, sociology as well as science and technology, the course will introduce students to issues in gender that cross traditional disciplines. Cultural assumptions about gender will be examined, and students will be encouraged to consider new ways of looking at knowledge in light of new understanding about the ways in which gender constructs beliefs and influences life's realities. Note: Students completing this course may not receive credit for HUM 200 or WST 200. Prerequisite(s): EGL 102 or introductory social science course (3,0) 3 credits

SOC 201 Sociology of Education
This course analyzes the structure, function, values and problems of the American educational system today. It focuses on school systems, from elementary to higher education, and the debates about their roles as transmitters of knowledge and culture, as bureaucratic organizations, and as agents of socialization, social reproduction, change and mobility. (3,0) 3 credits

SOC 202 Bayou and Cajun Culture
This field study course will provide an in-depth study of Bayou and Cajun culture. Course will involve travel to New Orleans for an intense study of the culture. The field study component will be combined with on-campus lectures and activities, assigned readings, and outside research on the Bayou and Cajun culture. Prerequisite(s): Introduction to Sociology, or Introduction to Anthropology, or permission of department chair (3,0) 3 credits

SOC 205 The Sociology of Leisure, Recreation and Tourism
An examination of the significance, causes and consequences of leisure, recreation and tourism as features of human societies, involving the contact and interaction between cultures or subcultures, and contributing to global, social and cultural changes. A variety of anthropological and sociological theoretical perspectives will be presented. Prerequisite(s): Any college-level social science course (3,0) 3 credits

SOC 206 Culture of the Bahamas
This field study course will provide an in-depth study of the Bahamian culture. Course will involve travel to two different islands in the Bahamas for an intense study of the culture. The field study component will be combined with on-campus lectures and activities, assigned readings, and outside research on Bahamian culture. Prerequisite(s): One prior college course in Anthropology or Sociology or approval of this department chair (3,0) 3 credits

SOC 220 Sociology of Aging
This course analyzes the process of aging in a social context. Consideration is given to theories of aging, cross-cultural examination of aging, selected problems of aging and the elderly, and proposed solutions to these problems. (3,0) 3 credits

SOC 222 Critical Thinking About Society
This course invites students to apply three key parts of critical thinking to the study of social life; identifying and assessing assumptions; becoming aware of the degree to which values, thoughts, and actions are shaped by the social context they're rooted in; imagining and exploring alternatives to existing ways of thinking and living. Readings and discussions will enhance students' ability to understand the nature, problems, and possibilities of our and other societies. (3,0) 3 credits

SOC 223 Social Issues and Institutions
This course analyzes a complex set of social issues primarily within the United States such as crime, alcoholism, drug use, sexual behavior, environmental issues and poverty. We also focus on problems and changes within major social institutions like the family, education, religion, politics and the economy. (3,0) 3 credits

SOC 224 Urban Sociology
This course examines the development, diversity and changes taking place in cities and modern metropolitan areas. Important areas of exploration will be the study of urban growth and decay, urban renewal, suburbanization, and rivalry among localities. Research and theories will be used to examine urbanization, industrialization and the formation of human communities. (3,0) 3 credits

SOC 225 Sociology of the Family
This course examines the family in the United States as a core social institution. We consider theoretical, historical, and cross-cultural aspects of such topics as mate selection, the changing roles of men and women, parenting and child-rearing, divorce, aging, conflict and violence, family social status, inequity, work and family policy. (3,0) 3 credits

SOC 226 Contemporary Marriage
This course explores courtship and marriage in the United States today. The emphasis is on the couple and on intimate relationships. We examine theory and relevant research about such topics as dating, engagement, getting in love, cohabitation, marriage, communication in marriage, divorce and remarriage. (3,0) 3 credits

SOC 228 Society and Health
This course is a comparative and cross-cultural examination of the meaning and experience of health and illness and the ways in which social factors like age, gender, class and ethnicity affect health. We also examine the historical development and contemporary issues of mainstream and alternative health professions and occupations, and the current crisis in our health care system. (3,0) 3 credits

SOC 229 Minorities in American Society
This course uses theories of race and ethnic relations to explore the cultural and institutional challenges faced by minority groups such as American Indians, African Americans, Hispanic Americans, and Asian Americans in the US. We explore how dominance and subordination shapes minority group relations today. (3,0) 3 credits
SOC 231 The Promise and Challenge of Multiculturalism
This course explores the wide variety of cultures that currently exist in the United States. In addition to different racial and ethnic cultures, we will also be looking at class cultures, religious cultures, and gay/lesbian cultures. Significant time is devoted to examining the values, norms, and everyday life of different cultures as well as the ways that different cultures (and the people from those cultures) interact. Multicultural social policy issues are also considered as well as media representations of different cultures.
(3,0) 3 credits

SOC 235 Mass Media and Popular Culture
This course examines popular culture and mass media in America. Emphasis is on the current state of popular culture and mass media, although historical presentations may be included. Major sociological theories used to study and explain popular culture and mass media will be presented, along with relevant research findings.
Prerequisite(s): One course in social science
(3,0) 3 credits

SOC 237 From Rockabilly to Hip-Hop: The Sociology of Popular Music
This course will examine American popular music genres from rockabilly through hip-hop, from a sociological perspective. The course will include some exploration of American regional popular music forms, such as zydeco, Cajun, Tejano, and conjunto, as well as comparisons with music in other societies, through an exploration of the mutual interaction and influence of popular music and society. Specific topics to be examined include: the role of the music industry and recording companies, ideologies, globalization of American music, intertextuality, music consumption patterns and the influence of new technologies, moral panics, theories of popular music culture, social change, and the social, class, and gender implications of popular music. The goal for the student is a greater understanding of the links between sociology and popular music. A final project is required that will enable the student to demonstrate their sociological knowledge of a specific genre.
Prerequisite(s): Any course in sociology or anthropology
(3,0) 3 credits

SOC 238 Youth Culture
The course traces the growth of a distinctive youth culture in American life and imagination since World War II. Topics discussed include juvenile delinquency, adolescent self-destruction, teen sexuality, teen poverty, the American high school, and college life. Particular attention is also devoted to the ways that films, as well as other mass media forms such as popular music and television shows, represent the lives of American youth.
(3,0) 3 credits

SOC 240 Women, Men and Social Change
This course studies men’s and women’s changing roles, relationships, and participation in the labor force both cross-culturally and historically. We give special emphasis to those changes which occur as technology changes. A major part of the course concerns how and why today’s women and men arrived at their social, economic, political and legal statuses.
Note: Students completing this course may not receive credit for ANT 240 or WST 240.
(3,0) 3 credits

SOC 242 Sociology of Deviance, Crime, Sex and Drugs
This course examines deviance from a sociological perspective. The course explores definitions, theories, and research – both classic and contemporary – that explain and help us to understand the function of deviance in society. A term research project is required.
Prerequisite(s): SOC 122 or SOC 223 and one other course in sociology
(3,0) 3 credits

SOC 245 Technology, Society and Social Change
This course explores the ways in which science, technology, and society create social change. The focus is on the varying benefits, costs, and consequences of these changes across historical eras and cultures.
Prerequisite(s): One course in social science
(3,0) 3 credits

SOC 248 Sociology of Sport
This course will examine the sociological perspectives of sport industries in our society. We will focus on sports, American cultural values, politics and the impact of sports on our social structure. We will analyze the media with relation to sports and we will also evaluate the influence sports have on diverse populations. Finally, we will compare the role of sports in other countries to that of the United States.
Prerequisite(s): SOC 122 or any 100-level course in Anthropology
(3,0) 3 credits

SOC 260 Classical Sociological Theory
This course examines classical sociological theory, from its beginnings in the 19th century through its historical development into the 20th century. The theories of classical sociologists, such as Marx, Durkheim, Weber and others, from the 19th and 20th centuries provide a comprehensive introduction to the theoretical foundations of the discipline of sociology.
Prerequisite(s): SOC 122 or any other course in sociology
(3,0) 3 credits

SOC 262 Topics in Sociology
This course explores specialized topics of interest on a short (one-two semesters only) basis in sociology. Topics to be announced by the Department each semester.
Prerequisite(s): Introductory course in sociology or any social science course
(3,0) 3 credits

SOC 263 Immigration Past and Present
Immigration has been one of the most important forces in American society. This course will examine how successive waves of immigrants and newcomers – most arriving voluntarily, others as slaves or indentured workers – have created and recreated American society in their relations with people already here and with each other. The course will present immigration as a process and examine international migration patterns, changing law, demand for immigrant labor, social networks of family and friends, nativist sentiment, the relevant theoretical perspectives, and the experiences of specific groups. We focus on the different periods of immigration, particularly the great migrations of the late 19th and early 20th centuries, and the post 1965 wave of immigrants from the Caribbean, Asia, Mexico and Latin America.
Prerequisite(s): Any Social Science course
(3,0) 3 credits

SOC 266 Sociological Research Methods
In this course, an understanding of the different types of research methods used by sociologists (and other social scientists) to study the social world will be developed. The class begins with a discussion of the fundamental concepts of social science research and the ethical issues involved. Students will learn how to conduct basic qualitative and quantitative research – the ability to formulate research questions, methods of research design, strategies for collecting information and data, as well as the ability to analyze and present statistical data. Great emphasis is placed on students doing research projects in and outside of class.
Prerequisite(s): SOC 122
(3,0) 3 credits

SOC 303 Sociology of Work and Occupation
This course will focus on the various dimensions of work and the social experience of making a living in the United States and other societies - past, present and future. We consider the large-scale developments
related to a rapidly changing global economy, and the implications of these changes for individual workers. Topics discussed include the impact of technological innovations, changing occupational roles and subcultures, the development of the professions and professional ethics, gender roles and work roles, unemployment and underemployment, and the relationship between work and family. 

**Prerequisite(s):** One course in social science  
**(3,0)** 3 credits

**SOC 305 Culture and Technology: The Industrial Revolution in England, 1750-1880**

This course is a multidisciplinary examination of the ways in which technology affected everyday life during the Industrial Revolution in England. Covering the years 1750 to 1880, it examines the changes taking place in technology during the period; how these changes ultimately affected the workplace, the home, and the community; and how novelists of the period felt about these changes. Faculty team teach this course. 

**Note:** Students completing this course may not receive credit for HUM 305, HIS 305 or IDP 305.

**Prerequisite(s):** EGL 102, a social science course and HIS 114, HIS 115 or HIS 126  
**(3,0)** 3 credits

**SOC 307 Field Research in Sociology**

This is a course in qualitative research methodologies. Students will read, design, and complete a field research project using their work and/or internship experiences as data. Classic theories, case studies, and research methods will be presented, examined, and discussed in class. Smaller field research projects will be completed, as well as a term field project. Open to senior-level students enrolled in an approved internship course or working in their chosen careers. 

**Prerequisite(s):** SOC122, EGL101 and an additional social science course  
**(3,0)** 3 credits

**SOC 309 Sport in Society: A Sociological Analysis**

This course will provide students with an in-depth sociological analysis of sport in society. Students will read contemporary studies in sport in order to gain a better understanding of the social functions of sport in our world. This upper division course places an emphasis on research and students will conduct their own research project. 

**Prerequisite(s):** SOC 122 (or SOC 223) and an additional course designated Social Science (HIS,ECC,POL,SOC,ANT,PSY)  
**(3,0)** 3 credits

**SOC 310 Seminar in Sociology**

Each semester when the course is offered, a topic of interest will be selected that focuses on a specific feature of contemporary social life. Samples of possible topics include: Youth Culture in the United States, Social Institutions, Terrorism and the Culture of War, The Internet and the Social Community, Violence in the Family, etc. Students taking the course will be expected to complete an independent research project. 

**Prerequisite(s):** One course in Social Science  
**(3,0)** 3 credits

**SOC 350 Global Social Change**

This course examines global social change from a sociological perspective. The method of learning will be sociological which includes political science, European and American critical social thoughts, history, political economy and anthropology. We will explore definitions, theories and research. Two term research projects are required. 

**Prerequisite(s):** SOC 122  
**(3,0)** 3 credits

**SPANISH**

**SPA 141 Spanish I (Elementary)**

A beginning course in Spanish emphasizing the gradual development of the four language skills: listening, speaking, reading and writing with stress on communicative competence and cultural awareness. 

**(3,0)** 3 credits

**Interession, Fall, Spring, Summer**

**SPA 142 Spanish II (Elementary)**

A continuation of Spanish 141 for students who have had 2 or 3 years of high school Spanish. This course emphasizes the gradual development of the four language skills: listening, speaking, reading, and writing with stress on communicative competence and cultural awareness. 

**Prerequisite(s):** SPA 141 or 2 or 3 years of high school Spanish  
**(3,0)** 3 credits

**SPA 145 Spanish for Medical Personnel**

Conversational course for people who are working or are planning to work in the medical or allied medical field. The course includes structural review and realistic, practical dialogues dealing with the different situations that medical personnel encounter in the course of their work. A valuable course for those who intend to work in New York City or Long Island. 

**Prerequisite(s):** SPA 141 or 2 years of high school Spanish  
**(3,0)** 3 credits

**SPA 146 Intermediate Spanish for Medical Personnel II**

**Continuation of SPA 145**

**Prerequisite(s):** SPA 145 or 3 or more years of high school Spanish  
**(3,0)** 3 credits

**SPA 147 Spanish for Business I**

This is a beginning language course which covers basic linguistic structures of Spanish. The course differs from the traditional academic course only in its emphasis on developing vocabulary useful for careers in business, economics, or finance. Both oral and written communication skills will be developed. The course contains realistic dialogues focusing on business themes. Practical application of new structures is provided by vocabulary enrichment, role-playing situations, and other communicative activities. In addition, appropriate supplementary readings and practice in writing business letters, memos, and reports will be provided. 

**(3,0)** 3 credits

**SPA 148 Spanish for Business II**

**Continuation of SPA 147.**

**Prerequisite(s):** SPA 147 or 1 or 2 years of high school Spanish  
**(3,0)** 3 credits

**SPA 149 Conversational Spanish for Social Services I**

A course designed for people who are working or are planning a career in Social Services. Realistic, practical dialogues present different situations.
that Social Workers encounter in the course of their work. Classroom activities including dialogues, question and answer exercises, drills, role playing, help the student to understand and to communicate effectively with Spanish speaking clients.  

**Prerequisite(s):** SPA 142 or 3 or 4 years of high school Spanish  
**SPA 150** Conversational Spanish for Social Services II  
Continuation of SPA 149.  
**Prerequisite(s):** SPA 149 or 3 or 4 years of high school Spanish  
**SPA 151** Spanish for Health Care Personnel I  
This is a beginning language course which covers basic linguistic structures of Spanish. It emphasizes vocabulary needed for those working the fields of medicine and health care. Both oral and written communication skills will be developed. Practical application of new structures is provided by vocabulary enrichment, role-playing situations, and other communicative activities.  
**Prerequisite(s): None**  
**SPA 152** Spanish for Health Care Personnel II  
Continuation of Spanish for Health Care Personnel I  
**Prerequisite(s):** SPA 151 or high school Spanish  
**SPA 243** Spanish III (Intermediate)  
A continuation of SPA 142 for students who have had 3 or 4 years of high school Spanish. This intermediate course further emphasizes the development of the four language skills: listening, speaking, reading, and writing with stress on communicative competence and cultural awareness. A literary and cultural reader will be introduced.  
**Prerequisite(s):** SPA 142 or 3 or 4 years of high school Spanish  
**SPA 244** Spanish IV (Intermediate)  
For those students who have taken SPA 143 or four or more years of high school Spanish. This course emphasizes structural review, intensified practice in oral expression with increased emphasis on reading and writing skills. Continued attention will be given to contemporary Spanish culture. Selections from Spanish and Latin American authors will be read.  
**Prerequisite(s):** SPA 243 or 4 or more years of high school Spanish  
**SPA 247** Commercial Spanish I  
Twelve topics each focusing on a particular commercial field. An intermediate Spanish course to provide a systematic introduction to commercial Spanish and to supply a valuable learning aid to develop skills students need for future jobs.  
**Prerequisite(s):** SPA 142 or 3 or 4 years of high school Spanish  
**SPA 248** Commercial Spanish II  
A continuation of SPA 247.  
**Prerequisite(s):** SPA 247 or 3 or 4 years of high school Spanish  
**SPA 250** Spanish for Native Speakers  
This course is designed to strengthen the linguistic ability of students of Hispanic background, born or educated in the United States, who speak Spanish at home and lack a formal knowledge of the language. All four skills - comprehension, speaking, reading and writing are highlighted but emphasis is given to reading, writing and vocabulary. Cultural, social and literary insights of the Hispanic world.  
**Prerequisite(s):** Native or near native command of Spanish  
**SPA 251** Spanish Composition and Conversation  
This course is an upper intermediate level course for students who are already proficient speakers of Spanish and have formal knowledge to the language. The course emphasizes the mastery of writing, reading, and oral communication skills, with particular attention given to the issues of anglicism and interference of English, code switching, vocabulary building, orthography, and reading comprehension. Students will write compositions, make oral presentations and read materials of a cultural/literary nature, emphasizing the relationship between the culture of the United States and Hispanic culture.  
**Prerequisite(s):** SPA 244 or SPA 301  
**SPA 301** Spanish V (Advanced)  
An advanced conversation composition course with intensive practice in oral and written Spanish. Selected representative works of Spanish authors will be read. Because the course deals mainly with Spanish fiction, emphasis will be given to familiarizing the student with this narrative in order to explore the connection between language and style as well as the literary trends and the social and cultural contexts of the periods for comparison and contrast.  
**Prerequisite(s):** SPA 244 or 4 or more years of high school Spanish  
** SPA 302** Spanish VI (Advanced)  
An advanced conversation composition course with intensive practice in oral and written Spanish. Selected representative works of Spanish American fiction will be read. Because the course deals mainly with Spanish American fiction, emphasis will be given to familiarizing the student with this narrative in order to explore the connection between language and style as well as the literary trends and the social and cultural contexts of the periods for comparison and contrast.  
**Prerequisite(s):** SPA 244 or SPA 301 or 4 or more years of high school Spanish  
**SPA 303** Spanish and Latin American Cinema  
Representative Spanish and Latin American movies that cover periods from romanticism to contemporary times will be analyzed, viewed and discussed. Films will be chosen to discuss social, philosophical, political and identity problems as well as its interpretation according to the artistic vision and directors achievements and goals. Theory and history of film genres of Spain and Latin America cinema will be studied.  
**Note:** This course will be taught in Spanish only. Students taking this course cannot receive credit for MLG 302.  
**Prerequisite(s):** SPA 302 or permission from this department chair  
**SPA 305** Hispanic & Latin American Culture and Civilization  
Provides a general perspective on the formation of the Latin American Culture through the centuries, with special emphasis on Spanish America. In parallel form, historical and cultural evolution of the New World and the Iberian Peninsula will be studied, from their beginnings up to the present. Among other aspects, the course will give special attention to the rich multicultural heritage which has been maintained in Latin America through the centuries, as well as its achievements in Art and Literature.  
**Note:** This course will be taught in Spanish only. Students taking this course cannot receive credit for MLG 305.  
**Prerequisite(s):** SPA 302 or permission from this department chair  
**SPA 310** Latin American Women Writers  
This course focuses on the works of major Latin-American women writers from the 17th to the 20th Century. We will analyze poems, short stories and novels and how women have been portrayed on literature. The theoretical approach to this class will be based on Contemporary feminist critics. We will study the works of the first 17th Century Mexican feminist writer, the Nun, Sor Juana Ines De La Cruz, as well as the works
of Elena Poniatowska, Julia Alvarez and Laura Esquivel among others.
Note: This course will be taught in Spanish only. Students taking this course cannot receive credit for MLG 310.
Prerequisite(s): SPA 302 or permission from this department chair (3,0) 3 credits

SPA 312 Contemporary Latin American Short Stories
An introduction to different literary movements reflected in Latin American Short Stories in translation during the 20th Century. The emphasis will be the lyrical basis of the realistic, surrealistic and supernatural elements in the stories of Latin American Writers. Modern women writers’ esthetics and poetic sensitivity as well as humor and sarcasm will be included in both the observation of individual psychology and tales of the absurd. Summarizing, and using Anderson Imbert’s three basic definitions, the focus of this course will be: a) reality (realism); b) the supernatural (literature of the fantastic); c) the strange (magic realism).
Note: This course will be taught in Spanish only. Students taking this course cannot receive credit for MLG 312.
Prerequisite(s): SPA 302 or permission from this department chair (3,0) 3 credits

SPA 310 Art, Culture and Civilization of Spain
The study of Spain, a multicultural and multilingual nation, not as a homogeneous entity, but rather as a heterogeneous tapestry of various cultures and languages. The corpus of cultural texts studied will be derived from the realms of literature, film, architecture, music and the visual arts. They will be analyzed within their socio-historical context, as well as their aesthetic value.
Note: This course will be taught in Spanish only. Students taking this course cannot receive credit for MLG 315. Prerequisite(s): SPA 302 or permission from this department chair (3,0) 3 credits

SPA 320 Latino Writers in the United States
The development of Latino literature and culture in the United States, with emphasis on the 20th century. Major writers of Mexico, Cuba, the Dominican Republic, Puerto Rico, and other Latinos will be analyzed in relation to each group’s particular experience and its relation to mainstream society. Particular attention given to how gender, race, ethnicity and class interaction affects the formation of the diverse cultural experience of the U.S. Latino population.
Note: This course will be taught in Spanish only. Students taking this course cannot receive credit for MLG 320.
Prerequisite(s): SPA 302 or permission from this department chair (3,0) 3 credits

SPEECH

SPE 130 Public Speaking
This course is designed to prepare the student in the organization, development, and delivery of expository and persuasive speeches. Attention is paid to the students’ voice and diction and experiences provided in group discussion and problem solving.
(3,0) 3 credits Fall, Spring, Summer

SPE 131 Voice and Diction
A study of the physiological, psychological and social bases for voice and articulation. Emphasis is on the improvement of the student’s speech habits.
(3,0) 3 credits Fall, Spring

SPE 201 Oral Communications
An introduction to the area of Oral Communications in a variety of its forms and settings. Through active participation in class lectures, discussions, and exercises, students will have the opportunity to develop and utilize effective communication skills in the areas of listening, interpersonal communication, public speaking, diction, group discussion, and non-verbal communication.

Prerequisite(s): EGL 101 (3,0) 3 credits Fall, Spring

SPE 230 Effective Executive Speaking
A course designed to develop and refine the student’s overall profile as an effective communicator in private and public settings. Articulation, listening skills, problem solving abilities, organizational skills and feedback techniques are stressed in interpersonal, group, and public speaking experiences.
(3,0) 3 credits Fall, Spring

SPE 330 Technical Speech
A course designed to prepare the technical student in the organization and delivery of expository speeches, stressing methods of presenting technical information. Development and use of audio-visual materials are emphasized.
Prerequisite(s): EGL 102 (3,0) 3 credits Fall, Spring

SPE 331 Advanced Oral Communications
Preparation and delivery of oral presentations and reports with an emphasis on industrial, technical and business topics. Students will gain familiarity with several different theoretical systems of conceptualizing communications. Practice in making team presentations and the incorporation of graphics will also be part of this course. Special emphasis will be placed on analysis of communications in the technical and business environment which includes the component of voice and diction. Computer assisted oral presentation using software such as Microsoft Power Point may be included.
Note: Students taking this course cannot receive credit for PCM 331.
Prerequisite(s): EGL 102 (3,0) 3 credits

SPE 332 Intercultural Communication
This course is designed to develop an understanding of the concepts of communication and culture, to promote an appreciation of cultural diversity and the ways in which cultural differences affect intercultural communication, and to foster an awareness of the importance of intercultural competence. Obstacles to effective intercultural communication will be examined and techniques to overcome these obstacles will be explored and practiced.
(3,0) 3 credits

TELECOMMUNICATION TECHNOLOGY

TEL 215 Introduction to Telecommunication System
An introduction and survey of the Telecommunications industry’s fundamentals. This course will provide an introduction to Internet and Emerging Technologies as well as Fiber optics and Wireless networks. The basics of telephony, switching systems, multiplexing, analog and digital signaling principles, modulation principles, transmission equipment, and data communication networks are covered. Voice and data communications systems and protocols as well as private and public networks are studied.
Prerequisite(s): EET 105, EET 200, MTH 129 (3,0) 4 credits

TEL 305 Communication Circuits and Systems
Fundamental concepts in communications. Topics include: Tuned Amplifiers, RC and LC oscillators, Fourier Series and the spectral content of signals. Amplitude and Frequency modulation, and signal recovery circuits. Single-sideband communication systems. Digital Communications: encoding technique and transmission.
Prerequisite(s): TEL 215 (3,0) 3 credits

TEL 320 Wireless Communications
This course will concentrate on the Radio Frequency properties of wire-
TEL 325 Optical Communications & Systems
This course introduces the students to the principles of optical communications systems. Topics include: Optical fibers; attenuation and dispersion; optical sources such as light emitting diodes (LEDs) and laser diodes; optical amplifiers; passive components; photodetectors; PIN and avalanche photodiodes; optical receivers and sensitivity; optical system design issues including power budget, bandwidth, O-factor, and bit error ratio (BER); Wavelength Division Multiplexing (WDM); introduction to optical networks. Laboratory experiments and simulations reinforce the theoretical concepts and include the design and simulation of a point-to-point optical link.
Prerequisite(s): TEL 305, MTH 130 (3,3) 4 credits

TEL 420 Emerging Communication Technologies
This course will concentrate on current and emerging telecommunications technologies. Signaling protocols for call processing for both circuit-switched and packet-switched communication as well as advanced voice coding (e.g., G 729) for wireless and VoIP systems will be covered. The course will also cover other technologies such as ISDN, Frame Relay and Residential Broadband including DSL. SONET networks, ATSC video standards including IPTV, HDTV as well as some modern Satellite communications will be included.
Prerequisite(s): TEL 320, EET 440, TEL 325 (3,0) 3 credits

TEL 450 Telecommunications Senior Project Seminar
The Senior Project Seminar Course is the first course in a two course sequence that provides telecommunications technology students the opportunity to integrate critical thinking and technical knowledge learned throughout the program in the identification, design, development and evaluation of a telecommunications related project. Case studies are included to illustrate different design and product development strategies used in the solution of various telecommunications design problems. Students are required to submit a preliminary senior design project proposal by the conclusion of this course.
Prerequisite(s): Completion of Junior level Telecommunications Technology courses or Departmental approval. (2,0) 2 credits

TEL 452 Telecommunications Technology
The Senior Project Course is the capstone course for telecommunications technology students. It is the second course in the telecommunications senior project course sequence in which students work under the supervision of a faculty member in the implementation of an approved design project proposal. Students are required to provide a written report and make an oral presentation that addresses areas such as the design process implemented, product specifications, cost analysis, testing and/or computer simulation procedures used in the verification of results obtained as well as ethical and product liability issues addressed.
Prerequisite(s): TEL 450 (1,2) 2 credits

TEL 470 Telecommunications Policy and Standards
This course covers telecommunications policies and issues with special emphasis on domestic policy, regulation and law. Current issues, trends and standards will also be discussed. The course starts with a basic definition of telecommunications and why policies, regulation/deregulation and law are important to understand. It then moves to the history of US telecommunications development with emphasis on the regulatory environment and continues with discussions of current US regulatory policy at the state and federal levels. Current sweeping changes in the regulatory and legal arenas and the move to a new US and world model will be discussed. The importance of standards for domestic and international telecommunications will be studied along with a description of the standards definition process.
Prerequisites: Junior standing in the Telecommunications Technology Program (3,0) 3 credits

THEATER
THE 233 Introduction to the Theatre
A survey of the elements of theatrical art, including script, acting, scenery, lighting, costumes, and the roles of the various members of professional production: producer, director, actor, and audience. Representative plays, playwrights, and styles from ancient Athens to off-Broadway are examined.
Prerequisite(s): EGL 102 (3,0) 3 credits

TECHNOLOGY STUDIES
TST 400W Special Topics in Science and Technology
“Special Topics in Science and Technology” is a senior level seminar course for those students intending to graduate from the Technology Studies Program. This course is designed as a “capstone” course where students will explore the inter-connectedness of their defined fields of study. Students will participate in the seminar organized around a common theme in the sciences and technologies. Students in the seminar will be required to complete a substantial research project integrating knowledge from their course of study and their specific area of interest.
Prerequisite(s): Senior status in TST program, or approval of this department chair (3,0) 3 credits

TST 401 Internship in Technology Studies
This course is designed for Technology Studies majors who wish to complete a semester length or equivalent internship as part of their course of study. Students may choose an internship in a business, civic, educational, governmental, or not-for-profit organization, after consultation with and permission of the Chair. Enrollment in this course is restricted to students with senior status in the TST Program and only after internship has been approved by the Technology Studies Chair. Students enrolled in an internship will meet weekly with their advisor and will be required to submit a written report of the internship experience at the end of the semester.
Prerequisite(s): Senior status and approval of this department chair (1,6) 3 credits

VISUAL COMMUNICATIONS
The following courses (VIS 101 to VIS 106) will satisfy the General Education Arts requirement only.

VIS 101 Introduction to Drawing
Students will be introduced to basic observational freehand drawing techniques, including line, form, light and shade, and composition. Students will study examples of work from various artists and have an opportunity to apply this knowledge in the studio and in outdoor settings. (2,1) 3 credits

VIS 102 The Interrelationship of Art & Music
In an effort to foster in students a broad appreciation of the arts, this course will expose students to the fundamentals of art and music and will explore historic trends and compositional techniques common to both genres. The course will be presented in seminar format and will include lecture, class discussion, listening to music, viewing examples of art, and
analyzing representative examples of music and art.
(3,0) 3 credits

**VIS 103 Introduction to Watercolor**
Students will be introduced to basic watercolor techniques, including color, value, shape and composition. Students will study examples of work from various watercolor artists and have an opportunity to apply this knowledge in the studio and outdoor settings.
(3,0) 3 credits

**VIS 104 Introduction to Calligraphy**
An introduction to the history and technique of the calligraphic arts. Students will gain insight into the origins and development of hand-lettered communication throughout history. Topics will range from illuminated manuscripts to contemporary calligraphic artists. Students will apply this knowledge to their own calligraphy projects.
(3,0) 3 credits

**VIS 105 Introduction to Photography**
This course is an introduction to the history, art and technique of photography. By utilizing their own cameras and commercial processing, students will acquire the knowledge and skills necessary to produce well-composed and properly exposed creative photographs. The estimated student cost for materials, including film, processing and other supplies is approximately $200 (not including camera).
(3,0) 3 credits

**VIS 106 Introduction to Pastels**
Students will be introduced to a vast array of pastel techniques including linear strokes, side strokes, blending, feathering, cross hatching, scumbling, and pointillism. Drawing and compositional skills such as an understanding of value, color, and line will also be stressed. Students will study examples of work from various artists and apply this knowledge in the studio and in outdoor settings.
(3,0) 3 credits

The following courses (VIS 110 to VIS 487) will satisfy requirements in the Visual Communications program only, with the exception of VIS 240 and VIS 242.

**VIS 110 Drawing I**
The principles of drawing – freehand drawing, light and shade, and pictorial composition – applied to both natural and fabricated subjects. Course includes the introduction of various drawing tools and the development of techniques in black and white media.
(2,2) 3 credits

**VIS 112 Two-Dimensional Design**
Introduction to the fundamental principles of design. Exploration, in a variety of media and tools, of the theories of utilization of line, form, texture, color, and value in visual expression.
(2,2) 3 credits

**VIS 114 Principles of Color**
An introduction to the properties and characteristics of color, including hue, value, and chroma, color systems, process color, psychology of color and the application of color theory to graphic design and illustration.
(2,2) 3 credits

**VIS 115 3D Design**
3D design is the foundation for many of the specialized areas of graphic design, including package design, product design, environmental graphics, animation and 3D modeling. Thus, this course stresses the application and appreciation of the principles and elements that make for successful three-dimensional designs. Study will include: mass, volume, line, surface, plane, space, time and motion. In the design and construction of three-dimensional objects, students will explore a variety of materials and construction methods. Constructions will be made typically of wood, paper, bristol board, foam core, corrugated board, plaster and other three-dimensional materials. The course will also stress the efficient and safe use of tools and materials.
(2,2) 3 credits

**VIS 118 Creative Concepts Seminar**
Presented by instructors and guest lecturers in a seminar format that will integrate a series of topics and contemporary issues pertaining to creativity. The objective of this course is to further develop each artist's ability to conceptualize and creatively apply solutions to visual arts projects.
(1,0) 1 credit

**VIS 120 Drawing II**
This course builds upon and further investigates many of the issues introduced in Drawing I. The class will expand on the concepts of perspective and structural drawing. In addition to working in graphite and charcoal, students will also be introduced to a variety of new wet and dry drawing mediums including colored chalks, oil pastels, ink wash and watercolor. 
**Prerequisite(s): VIS 110**
(2,2) 3 credits

**VIS 122 Typography I**
This course is an introduction to typography and the study of letterforms. Students will be introduced to the history of typography, and will study major typographers and typefaces. Class discussions, projects, critiques and lectures will focus on typographic terminology and vocabulary. The fundamental knowledge of working with type as one of the most essential elements of design will be emphasized.
**Prerequisite(s): VIS 112**
(2,2) 3 credits

**VIS 124 Photography I**
An introduction to the principles of black & white photography. This course will include the use of the camera, film processing and photographic printing. Some of the basic technical aspects of photography will be covered, although the primary emphasis of this course is design and composition. Students must supply their own 35mm SLR camera, film and photographic paper.
**Prerequisite(s): VIS 110 and/or Department approval**
(2,2) 3 credits

**VIS 140 Introduction to Graphic Design**
An introduction to the fundamental concepts of design as applied to the communication of information. The primary objective of this course is to develop the students’ perceptual and technical skills. Class discussions and hands-on projects will stress the effective use of typography, images, and page layout principles to achieve a balance between the design and readability of documents.
(3,0) 3 credits

**VIS 150 Computing & Internet Essentials**
An introduction to computer operation on both the Macintosh and Windows computer platforms. This course is intended to give students an understanding of fundamental use of computers and cross-platform issues, especially as they pertain to the Internet. File management, scanning, fonts, communications, application software and web browsers will be some of the topics covered.
(2,2) 3 credits

**VIS 188 Advertising Practices and Applications**
This course will combine basic advertising principles with practical media application. This course shall introduce students to the business of advertising in a contemporary global environment. The course will explore concepts of advertising, including elements of media selection and copywriting within the parameters of internal budgets, management and the application of actual
advertising creation. In addition, students will create advertising, integrating the roles of the creative director and marketing manager.

Note: Students completing this course may not receive credit for BUS 188 (3,0) 3 credits

VIS 210 Digital Media
An introduction to the concepts and techniques of digital media that serves as an essential foundation for all subsequent courses in computer graphics. Students will gain an understanding of how this evolving technology applies to the visual communications industry. Class discussions and demonstrations will cover a broad-range of topics, including graphic design, typography, advertising, web design, digital imaging and illustration.
Prerequisite(s): VIS 122 (3,0) 3 credits

VIS 212 Type & Image II
An opportunity to explore advanced problems in advertising and editorial layout design. Emphasis is placed on developing professional rendering techniques in the indication of type and illustrative elements used in the design of rough and finished comprehensive layouts. The latest techniques for designing with typographic and graphic elements, and the discussion of production techniques will be covered.
Prerequisite(s)/Corequisite(s): VIS 122 (2,2) 3 credits

VIS 214 Figure Drawing I
Introduce to design and illustration students to the basic concepts of drawing the human figure from life. Two thirds of the semester will be devoted to drawing the nude model in the studio, while one third of the course will be devoted to drawing the clothed figure in the studio.
Prerequisite(s): VIS 120 (2,2) 3 credits

VIS 220 Desktop Publishing
The application of the principles of typographic design and graphic design in advertising and editorial layout using a computer. This course enhances the student’s existing artistic talents and further develops the layout and typographic design skills acquired through prerequisite(s) courses. Currently, this course utilizes QuarkXPress software running on the Macintosh hardware platform.
Prerequisite(s): VIS 210, VIS 222 (2,2) 3 credits

VIS 222 Graphic Design
This course focuses on the process of bringing words and images together to create the visual communication of thoughts, ideas, and information. The application of design concepts and principles of typography will be emphasized. Through the use of traditional media, students will continue to build a strong understanding of how to design and think two-dimensionally and three-dimensionally.
Prerequisite(s): VIS 114, VIS 122 (2,2) 3 credits

VIS 224 Visual / Verbal Concepts
A study of conceptual thinking, applied problem solving techniques and how they are used in advertising. Emphasis will be placed on copy ideas and the integration with visual imagery to create dramatic, evocative and non-traditional forms of communication often combining conscious and subconscious elements, and conscious and unconscious assumptions.
Prerequisite(s): VIS 212 (2,2) 3 credits

VIS 225 Photographic Imaging I
An introduction to the principles of photography with the primary emphasis on the technical issues of photography under studio and natural lighting conditions. Students will learn the concepts and techniques for proper lighting, exposure, focus, depth-of-field, and creative composition. This course will cover methodology for the creation of compelling and original photographic images, in particular for application to graphic design projects. Image management software, archival storage solutions, and presentation techniques will be explored. Students must supply their own digital camera (see department web page for current specific equipment requirements).
Prerequisite(s): VIS 112, VIS 210 (2,2) 3 credits

VIS 228 4D Design
4D (4-Dimensional) design will explore the process of designing user experiences that rely heavily on time, space and motion to communicate an idea. In this course students will examine the increasingly important role time-based media plays in the world of graphic design. Applications may include web design, video, animation, storyboards and sequential narratives. Students will concentrate on using storytelling techniques and experiential structures to provide a viewer with an immersive experience.
Prerequisite(s): VIS 210 (2,2) 3 credits

VIS 230 Digital Illustration
An exploration of digital illustration techniques. Students will apply techniques of traditional art media, color principles, graphic design and typography while using electronic media. In addition to exploring new imaging techniques, issues such as copyright considerations, software integration, and output options, will be explored.
Prerequisite(s): VIS 210, VIS 214, VIS 222 (2,2) 3 credits

VIS 240 Publication Design I
A survey of the concepts and applications of graphic design, typography and page layout as they pertain to publication design. This course is intended for students enrolled in the Professional Communications curriculum. Emphasis will be placed on effective communication, aesthetics, and conformity to corporate identity guidelines.
Prerequisite(s): BCS 102
This course is suited for students enrolled in the Professional Communications program. (3,0) 3 credits

VIS 242 Publication Design II
The continuing exploration of graphic design, typography and page layout as they pertain to publication design. This course is intended for students enrolled in the Professional Communications curriculum. Emphasis will be placed on effective communication, aesthetics, and conformity to corporate identity guidelines.
Prerequisite(s): VIS 240
This course is suited for students enrolled in the Professional Communications program. (3,0) 3 credits

VIS 250 Photography II
Advanced black and white photography exploring a variety of forms and aspects from photojournalism to experimental technique. Further development of technical skills will be included, and special emphasis will be placed on creative expression. Students must supply their own 35mm SLR camera, film and photographic paper.
Prerequisite(s): VIS 124 and/or Department approval (2,2) 3 credits

VIS 251 Storyboard Design
This builds upon two-dimensional and three-dimensional design concepts and works with the fourth dimension: time. Students learn to create storyboards, which essentially are the plans for images that change over a period of time. Specific applications include television commercials, video productions, animations, interactive and linear CD-ROMS.
Prerequisite(s): VIS 112, VIS 122 (1,3) 2 credits
VIS 252 Drawing & Painting Techniques
This course will offer an advanced study and exploration of drawing and painting techniques. Students will be expected to enter the course with a proficiency of drawing skills, having completed Drawing I, Drawing II, and Figure Drawing as prerequisite(s). Students will acquire a wide range of skills related to drawing and painting. Advanced techniques and media will enable students to attain a higher level of artistic self-expression.
Prerequisite(s): VIS 120
(2,2) 3 credits

VIS 253 Internship I
A select number of students who meet specific standards will be given the special opportunity to intern at industry-related companies and organizations. Students will adhere to strict guidelines completing their internship in a professional environment. Students will gain valuable knowledge and typically improve their technical skills.
Prerequisite(s): Completion of 60 credits with a GPA of 3.0 in the Visual Communications curriculum, and Department approval required
(1,6) 3 credits

VIS 254 Package Design
This course applies the principles of graphic design, typography and three-dimensional design to the specialized area of package design. Students may design labels, boxes, containers, and other types of consumer packaging materials, in addition to point-of-purchase displays. Factors influencing the designs will include manufacturing, printing, digital technology, consumer appeal and tampering and labeling regulations.
Prerequisite(s): VIS 112, VIS 122, VIS 210
(2,2) 3 credits

VIS 255 Printmaking
A basic course in hand-executed printmaking techniques, applicable to both fine art and commercial art. Techniques may include wood and linocuts, direct lithography, serigraphy, drypoint and etching. The creative process, as well as platemaking and printing will be stressed.
Prerequisite(s): VIS 120
(1,3) 2 credits

VIS 256 Foundations of Illustration
Foundations of Illustration is a course which teaches the multiple stages of the creative process of picture making. Study will explore research of conceptual ideas to effectively precede the execution of a successful illustration. The formal issues of color, light, structure, space and composition are emphasized. Developing an illustration will entail the conceptual thought process to the visual execution of the idea. Preliminary drawings, reference material and photographic sources are combined to assist the student in creating illustrated work.
Prerequisite(s): VIS 214 or Department approval
(2,2) 3 credits

VIS 257 Internship II
This special elective, available to individually selected students, offers an additional education/work combination that provides valuable professional experience within the art field. This is a unique opportunity to gain knowledge that may not otherwise be attainable within a traditional educational setting.
Prerequisite(s): VIS 253 and Department approval
(1,6) 3 credits

VIS 310 Digital Imaging I
An exploration of electronic illustration and digital imaging techniques. Students will apply techniques of traditional art media, color principles, graphic design and typography while using electronic media. In addition to exploring new imaging techniques, issues such as copyright considerations, software integration, and output options, will be explored.
Prerequisite(s): VIS 140 or VIS 210
(2,2) 3 credits

VIS 312 Art & Creative Direction
The goal of the course will be to explore the skills and responsibilities demanded for a position as Art Director or Creative Director as it pertains to working in advertising or editorial design. Students will explore different approaches to creative problem solving combining words and images resulting in strong conceptual work. Students will complete their designs to a finish geared toward a client presentation, and make critical decisions along the way on how the work would ultimately be produced.
Prerequisite(s): VIS 222
(2,2) 3 credits

VIS 322 Typography II
This course will offer students the opportunity to refine their skills in typographic design and application using digital technology. Class discussions, projects, and critiques will concentrate on the crucial role of typography and the relationship of type and images in contemporary graphic design. Students will learn advanced techniques and refine their typographic design skills.
Prerequisite(s): VIS122, VIS220, Pre/Co-Requisite: VIS230
(2,2) 3 credits

VIS 326 Pre-Press Production
This course covers the theory and application of the processes and techniques in preparing art for reproduction. Working with conventional and digital techniques, students will learn how to follow a production workflow including pre-press, on-press, and post-press processes. A thorough understanding of the production phase will enable designers to create more effective solutions during the initial design phase. Students will learn to consult with printers and service bureaus for project-specific technical assistance and price quotes.
Prerequisite(s): VIS 220, VIS 310
(3,0) 3 credits

VIS 328 Industry Topics Seminar
Presented by instructors and guest lecturers in a seminar format that will integrate a series of relevant topics and issues that students will encounter in their career. The objective of this course is to provide varied perspectives and insights to supplement the learning experiences the students have encountered throughout the curriculum.
(1,0) 1 credit

VIS 352 Graphic Design II
This course will involve sophisticated and intricate projects in digital format. Typographic finesse and the dynamic interaction of words and images will be strongly emphasized. The creative and technical challenges involved in creating multiple-page documents will also be covered. Budget considerations, feasibility, paper selection, and other production issues will be addressed as part of the overall design solution.
Prerequisite(s) VIS 220, VIS 222, VIS 230
(2,2) 3 credits

VIS 353 Editorial Design
Emphasis in this class will be on the creation of multiple page documents for the editorial design market. Students will explore numerous avenues for editorial design including, magazine, catalog, newspaper and book design, while gaining the advanced software skills needed for the creation of these documents.
Prerequisite(s): VIS 370
(2,2) 3 credits

VIS 354 Corporate Identity
This course will explore the visual components behind creating and establishing a corporate identity. Corporations require logos, signs and symbols as part of an elaborate identification system. Visual imagery related to the corporation projects a positive image and public perception of a corporation’s identity. This class will explore creative solutions that define and present –corporate identity– through visual imagery.
Prerequisite(s): VIS 222, VIS 230
VIS 355 Advanced Package Design
The design of consumer product packaging must meet the complex and sometimes conflicting needs of manufacturers, distributors, retailers and consumers. Building upon the fundamental package design concepts and problem-solving skills developed in prerequisite(s) coursework, students will learn advanced techniques for the creation of sophisticated package designs through the use of both traditional and digital layout, typography, graphics, photography, as well as two-dimensional and three-dimensional design techniques. 
Prerequisite(s): VIS 254
(2,2) 3 credits

VIS 370 Desktop Publishing II
The exploration of advanced technical and aesthetic applications of electronic publishing systems. Creative design solutions, coupled with advanced technical skills, will be stressed. The achievement of typographic finesse will be a priority in this course. Topic may include style sheets, master pages, and templates for managing complex documents. 
Prerequisite(s): VIS 220
(2,2) 3 credits

VIS 371 Animation
An exploration of animation techniques and applications from early development to current works and future trends. Students will study selected traditional and electronic animation sequences from the initial storyboard stage through the finished production. The emphasis of this course will be on computer animation with application to interactive presentation, CD-ROMs, and the Internet. 
Prerequisite(s): VIS 210, VIS 230
(2,2) 3 credits

VIS 372 Campaign Production
The planning, production, and presentation of a complete advertising campaign with the emphasis upon the creative aspects. Given an advertising problem and a hypothetical budget, groups within the class compete in producing a campaign; media selection, copy writing, layout. Each group will form a formal presentation to a panel of faculty and professionals. Includes professional portfolio preparation. 
Prerequisite(s): VIS 370
(2,2) 3 credits

VIS 373 Multi-Media
Students will learn to combine graphics, animated “gif” files, video and sound files to create linear and interactive presentations. Graphic design, typography, interface design, and information organization will be emphasized. 
Prerequisite(s): VIS 310
(2,2) 3 credits

VIS 380 Illustrative Style I
Students explore new styles and media. Reference and support material coursework will be acquired through research of reading materials pertaining to illustration techniques. In and out of class research will be applied through recreating the process and procedures utilized by illustration professionals to solve specific problems. 
Prerequisite(s): VIS 252, or VIS 256
(2,2) 3 credits

VIS 381 Figure Drawing II
A drawing class designed for the illustration track student it will expand on many of the concepts first introduced in the Figure Drawing I (VIS214) class. A variety of mediums will be incorporated including pencil, charcoal, conte, ink pastel, among others. 
Prerequisite(s): VIS 214
(2,2) 3 credits

VIS 382 Illustrative Style II
Continue to encourage experimentation in solving pictorial problems. By semester’s end, each student’s goal will be to visually communicate with a consistent medium and personal style to their work. 
Prerequisite(s): VIS 380
(2,2) 3 credits

VIS 383 Sculpting & Painting the Figure
This course builds on the prerequisite(s) VIS214 and VIS381. However, the mediums of paint and clay are introduced into this class to expose the student to a new medium approach to representing the human figure. Approximately one-quarter of the class is devoted to three dimensional representation of the figure through modeling the nude figure in clay. The remaining three-quarters of the class is devoted to the medium of painting the nude and clothed human figure. 
Prerequisite(s): VIS 214
(2,2) 3 credits

VIS 410 Digital Imaging II
The theoretical and practical exploration of the fundamentals of two-dimensional design, layout and typography as they pertain to web site design. Students will visit many different types and styles of web sites and learn to analyze them for creative design, organization of content, flow and navigation. By visiting and discussing sites that are well-designed as well as those that are poorly designed, students will themselves become better web site designers. 
Prerequisite(s): VIS 310
(2,2) 3 credits

VIS 412 Web Page Design
The theoretical and practical exploration of the fundamentals of two-dimensional design, layout and typography as they pertain to web site design. Students will visit many different types and styles of web sites and learn to analyze them for creative design, organization of content, flow and navigation. By visiting and discussing sites that are well-designed as well as those that are poorly designed, students will themselves become better web site designers. 
Prerequisite(s): VIS 310
(2,2) 3 credits

VIS 414 Interaction Design
Interaction Design is an advanced course that pushes students understanding of web page creation to include the methodologies, concepts and strategy of designing user experiences. Interaction Design will stress the planning, design, and production of effective user interface design, information design and information architecture based upon web standards and best practices. The course will also introduce the student to advanced web creation tools including the design for specific digital devices. Students will produce a variety of concepts - from rough pencil sketches to digital prototypes - in a rigorous environment. 
Prerequisite(s): VIS 412
(2,2) 3 credits

VIS 415 Senior Project I
To bring together into a visual and written format, the scope of study, and further concentration into an area of the students own choosing. This course focuses on the creative process. Students are encouraged to explore aspects of illustration and graphic design with special emphasis on historical stylistic approaches and their application in the communication arts today. 
Prerequisite(s): VIS 310
(2,2) 3 credits

VIS 420 Career & Freelance
An overview of the visual communication business and how their skills and creativity are balanced by the business objective of profit. This course is intended for students pursuing a career within an agency setting, design studio, production facility or corporate in-house situation. This course will also establish a basic understanding of the requirements needed to operate as a freelance artist.
Prerequisite(s): VIS 312  
(2,0) 2 credits

VIS 422 Advanced Web Page Design
The application of the principles of typography, layout and graphic design pages for the World Wide Web. Students will explore some of the myriad possibilities offered by this exciting medium. The technology that drives the Internet is constantly changing, so this will be a dynamic course adapted to the current applications, browsers, plug-ins, and information delivery technologies. This course will have both a survey and hands-on approach.  
Prerequisite(s): VIS 412  
(2,2) 3 credits

VIS 425W Senior Project
This course focuses on creating visual imagery related to the research and development of an original concept selected by the student. Students should consult with the instructor, and create a preliminary proposal, before the course begins. Each student will produce a series of professional quality works of art, which will be displayed in a senior exhibition.  
Prerequisite(s): VIS 370, VIS 372, VIS 474  
(2,2) 3 credits

VIS 427 Career & Portfolio
This course is intended for students pursuing a career within an agency setting, design studio, production facility or corporate in-house situation. It will provide the student with an overview of the visual communication industry. Assembling a professional portfolio, preparing a résumé and developing self-promotion marketing materials will be emphasized.  
Prerequisite(s): VIS 322, VIS 370, VIS 474  
(2,2) 3 credits

VIS 428 Illustration Portfolio I
In this course, students will use all the technical skills, conceptual abilities and general knowledge accumulated throughout their illustration education, to develop their illustration portfolios. Presentation, marketing and business issues facing today's illustrator will be discussed.  
Prerequisite(s): VIS 382  
(1,3) 2 credits

VIS 429 Narrative Illustration
Techniques for illustrating ideas, concepts or emotions. Elicit a personal, creative interpretation of words and ideas from literature, music, film, and editorial text. The goal will be to transform one form of art into another, from verbal to visual. Selection of the most appropriate medium and style to make text and art come together for a highly effective interpretation.  
Prerequisite(s): VIS 382  
(2,2) 3 credits

VIS 483 Illustration Portfolio II
A continuation of Illustration Portfolio I, enabling the students to further develop their illustration portfolios. Portfolio format options, self-promotion techniques and artists' representatives will be discussed.  
Prerequisite(s): VIS 484  
(1,3) 2 credits

VIS 484 Illustration Portfolio I
A class designed for Senior Illustration students. A series of specific advanced projects will be assigned in order for the Senior Illustration student to produce a portfolio of high quality works which display an acute awareness of contemporary trends.  
(2,2) 3 credits

WOMEN'S STUDIES

WST 200 Introduction to Women's Studies
An interdisciplinary approach (SOC, HUM, HIS) that will draw on literature, history, sociology as well as science and technology, the course will introduce students to issues in gender that cross traditional disciplines. Cultural assumptions about gender will be examined, and students will be encouraged to consider new ways of looking at knowledge in light of new understanding about the ways in which gender constructs beliefs and influences life's realities.  
Note: Students completing this course may not receive credit for HUM 200 or SOC 200.  
Prerequisite(s): EGL 102 or introductory social science course  
(3,0) 3 credits

WST 222 Women in Literature
An exploration of the position of women in various cultures as interpreted by major world writers. Focus is on the female protagonist's attainment of goals in marriage, family, and work.  
Note: Students completing this course may not receive credit for EGL 222.  
Prerequisite(s): EGL 102 or equivalent  
(3,0) 3 credits

WST 230 Gender Psychology
This course will examine sex role stereotypes and their effects, research on psychological sex differences, theories of male and female development, sex roles and social institutions - how perceptions of males and females are influenced by schools, religion, and the media; and male and female approaches to sexuality, marriage, and parenthood. Readings and class discussions will be used to help students achieve a greater understanding of the female and the male experience.  
Note: Students completing this course may not receive credit for PSY 230.  
Prerequisite(s): PSY 101  
(3,0) 3 credits

WST 240 Women, Men and Social Change
This course studies men's and women's changing roles, relationships, and participation in the labor force both cross-culturally and historically. We give special emphasis to those changes which occur as technology changes. A major part of the course concerns how and why today's women and men arrived at their social, economic, political and legal statuses.  
Note: students completing this course may not receive credit for ANT 240 or SOC 240.  
(3,0) 3 credits
WST 310 Latin American Women Writers
This course focuses on the works of major Latin-American women writers from the 17th to the 20th Century. We will analyze poems, short stories and novels and how women have been portrayed in literature. The theoretical approach to this class will be based on Contemporary feminist critics. We will study the works of the first 17th Century Mexican feminist writer, the Nun, Sor Juana Ines De La Cruz, as well as the works of Elena Poniatowska, Julia Alvarez and Laura Ezquivel among others. 
Note: Students completing this course may not receive credit for MLG 310. 
Prerequisite(s): EGL 102 or higher
(3,0) 3 credits
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MS, Polytechnic University  
JD, St. John’s University

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School of Health Sciences  
BS, MS Long Island University

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Aviation Education Center  
FAA A&P License

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AAS, BS, Farmingdale State College

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AAS, Farmingdale State College  
BS, Empire State College  
MS, New York Institute of Technology

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Criminal Justice  
BS, St. John’s University
Farmingdale State College
Chancellor’s Awards Recipients
Established in 1973

The Chancellor’s Awards for Excellence were established in 1973 to give recognition to outstanding educators throughout the State of New York. As of May 2011, Farmingdale State College faculty, staff, librarians and students have received the Chancellor’s Award 147 times.

Distinguished Teaching Professor:

Dr. Harold Highland ......................... Data Processing
Dr. I. Edward Alcama ....................... Biology
Dr. John A. Winn .......................... Mathematics
Dr. Miriam Deitsch ........................ Sociology
Dr. Ann R. Shapiro ......................... English
Dr. Sheldon P. Gordon ....................... Mathematics
Dr. Vicki K. Janik .......................... Professional Communications
Dr. John A. Fiorillo ........................ Electrical Engineering Technology

Distinguished Service Professor:

Casimir Rakowski .......................... Mechanical Engineering Technology
Dr. Charles Fishman ................. English
Cornelius P. McAdorey ................. English
Dr. Hazem Tawfiq ........................ Mechanical Engineering Technology
Dr. Amit Bandypadhyay ................. Construction Management / Architecture
Yelleshpur Dathatri ........................ Electrical Engineering Technology
Serdar Z. Elgun .......................... Mechanical Engineering Technology
Dr. Daniel S. Marrone .................... Business Management

Excellence in Teaching:

Casimir Rakowski .......................... Mechanical Technology
Dr. Austin Frishman ..................... Biology
Ronald Dougher .......................... Social Science
Dr. Abraham Blinderman ................ English
Stanley Mehman .......................... Chemistry
Dr. Harvey Barke ........................ Horticulture
Anne Senyk ............................ Sociology
Dr. Edwin F. Ore ......................... English
Dr. Philip Silverstein ..................... Dental Hygiene
Dr. Harold Highland .................... Data Processing
Dr. Stanley Lamberg ..................... Medical Laboratory Technology
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Dr. Frank Pellegrini ...................... Chemistry
Dr. Charles Fishman .................... English

James Friel ................................. English
Dr. Richard Telloni ....................... Agriculture
Dr. Frank Cavaioi ........................ History, Economics, Politics
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Dr. Stanley Feist ......................... Psychology
Dr. I. Edward Alcamo ........................ Biology
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Linda Calderone .......................... Business
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Dr. Philip Poynor ........................ Aerospace Technology
Dr. Laurie Rozakisis ........................ English/Humanities
Dr. John Fiorillo ........................ Electrical Engineering Technology
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Dr. Lois Mignone ........................ Modern Languages
Dr. Peter Nolan ........................... Physics
Gary Rupp ............................... Business & Computer Information Systems
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Dr. Alexander Short ..................... Business
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Dr. Gary Brown .......................... Biology
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Dr. Matilde Fava ........................ Modern Languages
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Joseph Betz .............................. Architecture/Construction Management
Dr. Vicki Janik ............................ English/Humanities
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Margaret Porciello ........................ Computer Systems
Dr. Charles N. Adair ..................... Biology
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Dr. Agnes Kalemars ........................ Mathematics
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Dr. Michael Goodstone .................. Psychology
Dr. Diane M. Smith ...................... English
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Carol Greenholz
Judi Bird

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(Est. in 2004)
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Dr. Kathleen Jacquette .................. English
Marjaneh Issapour ....................... Electrical Engineering Technology
Ruth Sapir ............................... Computer Systems
Dr. Lloyd Makarowitz ................. Physics

Excellence for Scholarship & Creative Activities
Dr. Daniel Marrone ....................... Business

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Ramon Rodriguez ....................... Student Affairs
Ann Diehl ................................... Continuing Education
Janet Snyder .............................. Admissions
Reginald T. Marshall .................... Learning Center
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Valerie Madeska ....................... Medical Laboratory Technology
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Diane E. Melamed ...................... Student Accounts
John W. Hendrickson .................. Construction/Architectural Management
Saundra Lory-Snyder ................. Undeclared Major

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Amy Kaplan ............................. Human Resources
Nina Von Deesten ...................... Modern Languages and History, Economics & Politics
Daniel Daugherty ...................... University Police

Chancellor’s Award for Student Excellence: (Est. in 1998)
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Michael Rodriguez ..................... Aviation Administration
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Jonathan Friedfertig ................. Management Technology
Shirley Mohan ......................... Computer Systems Technology
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Matthew Preston ...................... Professional Pilot
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Cecilia Ambros ...................... Visual Communications
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Patric Santiago ....................... Business Administration
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Michael Tobin ....................... Bioscience
Denise Botiglione .................. Management Technology
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Director, Educational Opportunity Center ...................................................... Brian Maher, BS
Dean of Students ............................................................................................... Anita M. Pallateri, AS
CAMPUSSES OF THE STATE UNIVERSITY OF NEW YORK

UNIVERSITY CENTERS

State University of New York at Albany
State University of New York at Binghamton
State University of New York at Buffalo
State University of New York at Stony Brook

UNIVERSITY COLLEGES

State University College at Brockport
State University College at Buffalo
State University College at Cortland
State University of New York /Empire State College
State University College at Fredonia
State University College at Geneseo
State University College at New Paltz
State University College at Old Westbury
State University College at Oneonta
State University College at Oswego
State University College at Plattsburgh
State University College at Potsdam
State University College at Purchase

THE HEALTH SCIENCES CENTERS

State University of New York Health Science Center at Brooklyn
State University of New York Health Science Center at Syracuse
(Health Sciences Center at SUNY at Buffalo)*
(Health Sciences Center at SUNY at Stony Brook)*

UNIVERSITY COLLEGES OF TECHNOLOGY

State University of New York College of Technology at Alfred
State University of New York College of Technology at Canton
State University of New York College of Agriculture and Technology at Cobleskill
State University of New York College of Technology at Delhi
State University of New York College of Technology at Farmingdale
State University of New York College of Agriculture and Technology at Morrisville

SPECIALIZED COLLEGES

State University of New York College of Environmental Science and Forestry at Syracuse
State University of New York Maritime, College at Fort Schuyler
State University of New York College of Optometry at New York City
State University of New York Institute of Technology at Utica/Rome**

STATUTORY COLLEGES****

New York State College of Agriculture and Life Sciences at Cornell University
New York State College of Ceramics at Alfred University
New York State College of Human Ecology at Cornell University
New York State School of Industrial and Labor Relations at Cornell University
New York State College of Veterinary Medicine at Cornell University

COMMUNITY COLLEGES

(Locally-sponsored, two-year colleges under the program of the State University)

Adirondack Community College at Glens Falls
Broome Community College at Binghamton
Cayuga County Community College at Auburn
Clinton Community College at Plattsburgh
Columbia-Greene Community College at Hudson
Corning Community College at Corning
Dutchess Community College at Poughkeepsie
Erie Community College at Williamsville, Buffalo and Orchard Park
Fashion Institute of Technology at New York City***
Finger Lakes Community College
Fulton-Montgomery Community College at Johnstown
Genesee Community College at Batavia
Herkimer County Community College at Herkimer
Hudson Valley Community College at Troy
Jamestown Community College at Jamestown
Jefferson Community College at Watertown
Mohawk Valley Community College at Utica
Monroe Community College at Rochester
Nassau Community College at Garden City
Niagara County Community College at Sanborn
North Country Community College at Saranac Lake
Onondaga Community College at Syracuse
Orange County Community College at Middletown
Rockland Community College at Suffern
Schenectady County Community College at Schenectady
Suffolk County Community College at Selden, Riverhead and Brentwood
Sullivan County Community College at Loch Sheldrake
Tompkins Cortland Community College at Dryden
Ulster County Community College at Stone Ridge
Westchester Community College at Valhalla

* The Health Sciences Centers at Buffalo and Stony Brook are operated under the administration of their respective University Centers.

**This is an upper-division institution authorized to offer baccalaureate and master’s degree programs.

*** While authorized to offer such baccalaureate and master’s degree programs as may be approved pursuant to the provisions of the Master Plan, in addition to the associate degree, the Fashion Institute of Technology is financed and administered in the manner provided for community colleges.

**** These operate as ‘contract colleges’ on the campuses of independent universities.
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