

PROGRAM LIST

Dental Hygiene

Associate in Applied Science Degree

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 program in dental hygiene is accredited by the Commission on Dental Accreditation and is granted the accreditation status of "Approval without Reporting Requirements." The program will be reviewed again at the next scheduled site visit in 2022. The Commission is a specialized accrediting body recognized by the United States Department of Education. The Commission on Dental Accreditation can be contacted at 312-440-4653 or at 211 East Chicago Avenue, Chicago, IL 60611-2678. The Commission's web address is: www.ada.org/coda. Graduates receive an Associate in Applied 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 Occupational and Safety Health Administration (OSHA)/Infection Control regulations regarding infectious diseases and bloodborne pathogens.

As a condition for acceptance into the dental hygiene program all applicants are required to submit evidence of satisfactory health. Evidence of immunization and adequate titers for measles, mumps, rubella and varicella must be provided. In addition, matriculated students will be required to take a yearly Mantoux test for tuberculosis. Students are strongly urged to submit evidence of immunization and titer for Hepatitis B. It is recommended that students who test negatively for Hepatitis B receive the appropriate vaccine. Students who decline this recommendation will be required to sign 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.

Individuals who have been found guilty, or pleaded guilty to a felony, may not be eligible for dental hygiene licensure. The State Certifying Board may grant a waiver based upon mitigating circumstances. Contact NYS Office of the Professions for further information at www.op.nysed.gov.

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

Dental Hygiene (AAS) Program Outcomes:

- 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.

Dental Hygiene

Special Opportunities

As a student in the Dental Hygiene Associate in Applied Science Degree 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.

Science, Technology, & Society

Science, Technology, & Society

Bachelor of Science Degree

The Science, Technology, & Society Bachelor of Science (BS) degree is a customizable interdisciplinary program that prepares students to confront complex issues and address emerging challenges which have arisen as a consequence of the interconnectedness of systems in the current era. Students in the Science, Technology, & Society program learn to apply methods of scientific thinking and integrative analysis to solve unstructured, real-world problems faced by individuals, organizations, industries, and societies in ways which cut across traditional boundaries of disciplinary thought.

Upon completing the degree, Science, Technology, & Society graduates will have obtained a broadly applicable set of high-value skills necessary to adapt and thrive in the ever changing workforce of the modern age. These skills are honed through upper-division courses in technical communication, data science, geographical information science, and organizational leadership. This STS skill-set is then applied in courses covering contemporary topics best addressed through a multi-perspective, interdisciplinary approach. Topics include the societal impact of technological change, environmental science, global affairs, and gender, race, and culture. The degree culminates in an applied learning capstone experience in which students can choose to enroll in a senior seminar or an internship relevant to their studies.

The Science, Technology, & Society curriculum is designed to develop within the students a problem solving skill-set defined by critical, integrative analysis. Such a skill-set will prepare students to engage head-on the challenges faced by future employers in the Long Island region and beyond. Further, the STS skill-set cultivates the intellectual agility required to succeed in the rapidly evolving professional landscape of the 21st century. By focusing on the interplay between science, technology, and social change, students graduate better equipped to anticipate emerging trends in the workforce and their impact on the future. The skills acquired in the Science, Technology, & Society program may be applied to a range of careers including those in the health professions, social welfare, science policy, and business.

Science, Technology, & Society (BS) Program Outcomes:

At the completion of any of the concentrations within the Science, Technology, & Society program:

- Graduates will be able to synthesize solutions to 21st century problems on the local and global scale through the utilization of scientific thinking and integrative analysis.
- Graduates will be able to critically assess issues relevant to the modern workforce and identify internal and external drivers of change.
- Graduates will demonstrate an ability to effectively communicate ideas of a technical nature and be able to appraise and anticipate their impact on society.
- Graduates will demonstrate an understanding of the methods by which data science and geographical information science can provide valuable insight when addressing modern problems.

Health Promotion and Wellness

Nutrition Science and Wellness

Bachelor of Science Degree

The Bachelor of Science degree in Health Promotion and Wellness through the School of Health Sciences is ideal for students who want an interdisciplinary approach to helping others achieve healthy lifestyles. Students will develop a strong foundation in administrative and technical skills to successfully implement health promotion and wellness programs. The pursuit of wellness in all dimensions of life - social, physical, emotional,

occupational, intellectual, environmental and spiritual - is emphasized throughout the curriculum.

Graduates from the BS in Health Promotion and Wellness will acquire leadership, management, and collaborative skills to apply a multidisciplinary approach to the health promotion planning process. Graduates can work in local, regional and national settings and are also prepared for graduate-level programs in numerous health-related areas.

Typical Employment Opportunities

- Public Health Educator
- Health Coach
- Corporate Wellness Coordinator
- Director of Fitness / Wellness
- Community Health Director
- Health Services Manager

Health Promotion and Wellness (BS) Program Outcomes:

- Graduates will use leadership, management, and collaborative skills to apply a multidisciplinary approach to the health promotion planning process through the incorporation of health enhancement interventions. (Professional/Leadership)
- Graduates will serve as a health promotion resource by effectively promoting or advocating for healthy lifestyles and the profession in oral and written form through any variety of sources. (Communication/Marketing)
- Graduates will apply knowledge and experience from course work in the arts, science, and humanities into the field of Health Promotion and Wellness. (Knowledge)
- Graduates will demonstrate proficiency at interpreting one-on-one and group health assessments to achieve improved quality of life for themselves and the people they educate. (Critical Thinking)

Management Certificate

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.

*Gainful Employment Mandatory Disclosure Statement

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 Student Nurse Civic Engagement Program.

Advanced Standing status is available.

(All applications submitted for the program by December 15 receive equal consideration.)

The baccalaureate degree in nursing programs at Farmingdale State College, SUNY is accredited by the Commission on Collegiate Nursing Education (CCNE). CCNE is located at 655 K Street NW, Suite 750, Washington DC 20001; phone 202-887-6791 and registered and accredited by the New York State Education Department Office of the Professions.

Typical Employment Opportunities

First level nursing positions in hospitals, home health agencies, long-term facilities, and primary and preventive care throughout the community.

Nursing (BS) Program Goals:

- Contribute to meeting current and future health care needs of diverse populations of the region by educating students to provide safe, evidence-based, and patient-centered professional nursing services that reflect ethical clinical judgment and interprofessional collaboration in varied settings.
- Provide a quality program in nursing education including, activities, and service programs that are supportive of the learning needs of diverse students so that they may accomplish their educational goals and encourage lifelong learning.
- Use health care technologies, information systems, and technological innovations to create stimulating environments that support and enrich learning and prepare graduates for changes in the health care environment.
- Provide an environment that supports academic and teaching excellence, scholarly activities, and opportunities for leadership and contributions to the nursing profession.
- Educate students to become self-aware, ethical, caring, collaborative, and clinically and culturally competent practitioners prepared to engage in nursing as caregivers and leaders.

Nursing (BS) Program Outcomes:

At the completion of the BS nursing program, graduates will:

- Synthesize knowledge from liberal arts and sciences, humanities and nursing to provide holistic and patient centered care that promotes empowerment and optimal well-being of individuals, families and communities.
- Practice professional nursing incorporating caring, respect, diversity, integrity, ethics, and the influences of human responses on illness, suffering and healing to assist individuals, families and communities to achieve maximal fulfillment.
- Demonstrate knowledge, critical thinking, and evidence-based clinical judgments to provide therapeutic nursing care interventions for patients throughout the lifespan, for families and communities with multiple and complex health stressors in a variety of settings.
- Use effective communication to collaborate with patients, colleagues, and members of the interprofessional health team to improve health care outcomes for patients, families and communities.
- Incorporate principles of safety, health information technology, organizational and health care systems theory, quality improvement, and political trends in the provision of high quality and safe patient care.
- Express an identity of self as a bachelor prepared nurse and exhibit professional values and behaviors as described by ethical, legal, and professional standards of practice.
- Apply leadership, advocacy, and management strategies in multiple settings to advocate for high quality, safe, accessible, and fiscally responsible healthcare.
- Participate in activities that contribute to advancement of the profession including developing autonomy, advocacy, activism, change, and responsible citizenship.
- Integrate evidence-based findings, research, and nursing theory in decision making in nursing practice.
- Engage in self-reflection and life-long learning to maintain competence as a member of the profession and to achieve personal goals for professional development.

Curriculum Patterns

- [BS Nursing Prelicensure BS 4 Year Program](#)
- [BS Advance Standing 3 Year BS Program](#)

Nursing RN to BS Completion - Online

Bachelor of Science Degree

The Nursing RN to BS Completion Program will prepare licensed registered nurses 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 acute and community settings. The curriculum offers a balance of courses in general education and nursing. Students are provided with the theoretical knowledge and clinical practice needed to administer care for individuals throughout the life cycle. Learning experiences take place in the online environment and 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.

Baccalaureate prepared nurses are equipped with the knowledge, skills, and attitudes to meet complex health care challenges. Building on initial

nursing preparation, the RN to BS Completion program will prepare graduates for a broader scope of practice, enhanced professional development, and better understanding social, economic, cultural, and political issues that affect health care delivery. Inclusion of leadership and public and community health concepts foster stronger clinical reasoning and analytic skills which promote career advancement.

The baccalaureate degree in nursing programs at Farmingdale State College, SUNY is accredited by the Commission on Collegiate Nursing Education (CCNE). CCNE is located at 655 K Street NW, Suite 750, Washington DC 20001; phone 202-887-6791 and registered and accredited by the New York State Education Department Office of the Professions.

Typical Employment Opportunities

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 RN to BS Completion Program Goals:

Contribute to meeting current and future health care needs of diverse populations of the region by educating students to provide safe, evidence-based, and patient-centered professional nursing services that reflect ethical clinical judgment and interprofessional collaboration in varied settings.

Provide a quality program in nursing education including, activities, and service programs that are supportive of the learning needs of diverse students so that they may accomplish their educational goals and encourage lifelong learning.

Use health care technologies, information systems, and technological innovations to create stimulating environments that support and enrich learning and prepare graduates for changes in the health care environment.

Provide an environment that supports academic and teaching excellence, scholarly activities, and opportunities for leadership and contributions to the nursing profession.

Educate students to become self-aware, ethical, caring, collaborative, and clinically and culturally competent practitioners prepared to engage in nursing as caregivers and leaders.

Nursing RN to BS Completion Program Outcomes:

At the completion of the RN to BS Completion Program, graduates will:

- Synthesize knowledge from liberal arts and sciences, humanities and nursing to provide holistic and patient centered care that promotes empowerment and optimal well-being of individuals, families and communities.
- Practice professional nursing incorporating caring, respect, diversity, integrity, ethics, and the influences of human responses on illness, suffering and healing to assist individuals, families and communities to achieve maximal fulfillment.
- Demonstrate knowledge, critical thinking, and evidence-based clinical judgments to provide therapeutic nursing care interventions for patients throughout the lifespan, for families and communities with multiple and complex health stressors in a variety of settings.
- Use effective communication to collaborate with patients, colleagues, and members of the interprofessional health team to improve health care outcomes for patients, families and communities.
- Incorporate principles of safety, health information technology, organizational and health care systems theory, quality improvement, and political trends in the provision of high quality and safe patient care.
- Express an identity of self as a bachelor prepared nurse and exhibit professional values and behaviors as described by ethical, legal, and professional standards of practice.
- Apply leadership, advocacy, and management strategies in multiple settings to advocate for high quality, safe, accessible, and fiscally responsible healthcare.
- Participate in activities that contribute to advancement of the profession including developing autonomy, advocacy, activism, change, and responsible citizenship.
- Integrate evidence-based findings, research, and nursing theory in decision making in nursing practice.
- Engage in self-reflection and life-long learning to maintain competence as a member of the profession and to achieve personal goals for professional development.

Curriculum Pattern

- [Online RN to BS Completion](#)

Applied Economics

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.

Typical Employment Opportunities:

Market Research Analysts
Quantitative Analysts for National, State, Local Governments
Financial Analysts for Banks and Other Financial Institutions
Budget Analysts
Insurance Agent
Data Analysts

Applied Economics (BS) Program Outcomes:

- Graduates will be able to understand basic economics principles, important economic issues, and major economic institutions.
- Graduates will be able to comprehend economic concepts and analytical techniques and apply them to a wide variety of economic issues and problems of the U.S. and world economies.
- Graduates will be trained to read and understand economic literature.
- Graduates will have the opportunity to compile and analyze complex economics data to address real-life economics issues.
- Graduates will be trained to write economics reports and present economic analysis in comprehensible terms.

Computer Information Systems Certificate

Computer Programming and Information Systems

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.

*Gainful Employment Mandatory Disclosure Statement

Dental Hygiene Bachelor of Science Degree

Dental Hygiene

The Bachelor of Science in 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. This optional BS program will offer students a broad foundation of knowledge that will prepare them for the emerging roles within oral healthcare. The optional BS program in Dental Hygiene is accredited by the Commission on Dental Accreditation and has been granted the accreditation status of "Approval without Reporting Requirements." Since the optional BS program is a new program at Farmingdale State College, the Commission on Dental Accreditation will review this program at the next accreditation site visit scheduled for 2022. The Commission is a specialized accrediting body recognized by the United States Department of Education. The Commission on Dental Accreditation can be contacted at 312-440-4653 or at 211 East Chicago Avenue, Chicago, IL 60611-2678. The Commission's web address is: www.ada.org/coda. Graduates receive a Bachelor of Science degree and are eligible to sit for the National Dental Hygiene Board Examination, as well as State and Regional Practical Board Examinations for dental hygienists.

As the dental hygiene profession continues to expand, career opportunities beyond clinical practice will require a higher level credential such as a bachelor's degree. Emphasis is placed on broadening the career paths for practicing hygienists. Foundation courses are in the areas of teaching, research and public health with an emphasis on service learning and inter-professional collaboration. Although the clinical role is most closely connected with dental hygiene, it is only one of six roles formally designated for the hygienist, which include educator, researcher, administrator, change agent, and consumer advocate. The Bachelor of Science Degree in Dental Hygiene is designed to provide comprehensive upper-level studies that will prepare dental hygienists to adapt to the emerging new roles in oral healthcare. All aspects of dental hygiene are incorporated into the theoretical framework and practical experiences of the curriculum. The program includes general education as well as specialized coursework 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. In addition students in the Bachelor curriculum will participate in a number of off campus clinical rotations in hospital settings.

The Dental Hygiene Care Center is in compliance with all Occupational and Safety Health Administration (OSHA)/Infection Control regulations regarding infectious diseases and bloodborne pathogens.

As a condition for acceptance into the dental hygiene program all applicants are required to submit evidence of satisfactory health. Evidence of immunization and adequate titers for measles, mumps, rubella and varicella must be provided. In addition, matriculated students will be required to take a yearly Mantoux test for tuberculosis. Students are strongly urged to submit evidence of immunization and titer for Hepatitis B. It is recommended that students who test negatively for Hepatitis B receive the appropriate vaccine. Students who decline this recommendation will be required to sign 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.

Individuals who have been found guilty, or pleaded guilty to a felony, may not be eligible for dental hygiene licensure. The State Certifying Board may grant a waiver based upon mitigating circumstances. Contact NYS Office of the Professions for further information at www.op.nysed.gov.

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

Dental Hygiene (BS) Program Outcomes:

- 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 understand the role of leadership, management, and technology as it applies to dental hygiene practice.
- Graduates will develop the skills necessary to analyze and apply scientific literature in the dental hygiene process of care.
- Graduates will demonstrate an understanding of the learning process, various teaching methodologies and evaluation techniques as they apply to the dental hygiene educator.
- Graduates will utilize professional judgment and critical thinking skills for recognition and management of ethical, legal and regulatory issues.
- Graduates will develop a sense of professionalism as health care providers including self-assessment and will seek educational advancement for continued growth and development following commencement.

Special Opportunities

As a student in the Dental Hygiene Bachelor of Science Degree 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.

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 ETAC/ ABET accreditation criteria. 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 ETAC/ABET accreditation.

Typical Employment Opportunities

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
Engineering Design/Manufacturing Graphics Technologist

Software Technology (BS) Program Outcomes:

- 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.

Business Analytics

Bachelor of Science Degree

The Bachelor of Science degree in Business Analytics is designed to prepare students for jobs that require data analysis skills, data visualization, and presentation skills that are essential to decision making in organizations.

The explosive growth of technologies and applications that collect data and generate information is changing the business landscape. Current and new technologies and social media provide abundant information (i.e., big data) to businesses and organizations. Consequently, today's challenge is to extract useful information from big data (data mining); to interpret that information (descriptive analytics), to predict the future (predictive analytics), and to make decisions that would help organizations to achieve their goals (prescriptive analytics).

The Business Analytics program will teach students the necessary skills to work with large data sets and perform data mining tasks to enable evidence-based decision making. Graduates from the BS in Business Analytics will have powerful analytical skills combined with a strong business background. Therefore, graduates from the program will succeed in the changing business environment and will have the foundation necessary to pursue advanced degrees in the field as well.

Typical Employment Opportunities

Management Analyst
Market Research Analyst
Sports Statistical Analyst
Finance Analyst
Computer Systems Analyst

Business Analytics (BS) Program Outcomes:

- Graduates will demonstrate strong core discipline knowledge in accounting, finance, legal environment of business, management, marketing, and operations management.
- Graduates will evaluate ethics and social responsibility issues.
- Graduates will analyze business situations and offer reasoned, actionable suggestions leading to problem resolution.
- Graduates will demonstrate effective written and verbal communication skills supported by current technology.
- Graduates will evaluate the impact of the political, cultural and legal context surrounding global business operations and their effect on local business operations.
- Graduates will summarize and interpret each step in the analytics process and apply appropriate analytics software and tools (data collection, data mining, descriptive analytics, predictive analytics, and prescriptive analytics).

Accounting Certificate

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.

*Gainful Employment Mandatory Disclosure Statement

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).

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

Facility Management Technology (BS) Program Outcomes:

- 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 Arbor, MI 48108, 734-677-0720 www.atmae.org

Technology Management

School of Engineering Technology

Master of Science Degree

The Master of Science Degree in Technology Management at Farmingdale State College (FSC) is intended to graduate qualified professionals capable of taking leadership roles in designing, developing, improving, and transforming the industrial systems that are the basis for much of the industry in the region.

This program will provide an exceptional and affordable opportunity for advanced study in the critical field of technology management to qualified graduates of baccalaureate programs in technology, engineering technology and related fields.

The multi-disciplinary program builds on the strengths of the faculty, laboratories, and equipment of three undergraduate departments in the School of Engineering Technology: Mechanical Engineering Technology, Electrical/Computer Engineering Technology, and Architecture and Construction Management. Drawing on these strengths and addressing the industrial needs in the region, the program has two tracks:

- Track I: Electrical and Mechanical
- Track II: Construction Management

Technology Management (MS) Program Outcomes:

- Graduates will have knowledge and competency in the field of technology management with an emphasis on engineering technologies.
- Graduates will have the knowledge and skills necessary to be imaginative, critical thinkers who are able to discover problems and questions, develop logical answers, and apply effective solutions in the practice of technology management.
- Graduates will have knowledge of ethical behavior in professional positions in all aspects of technology management.
- Graduates will have competency in the management and leadership of technology in global industry.
- Graduates will have an awareness of diversity in the various fields of technology.
- Graduates will have skill to evaluate technical management issues in the context of ethical, technological, structural, cultural, human and environmental factors.
- Graduates will have skill to develop and foster critical thinking, analysis, planning, and communication.
- Graduates will have knowledge and skills in the improvement of productivity, quality control, and competitiveness in all aspects of technology management through collaborative relationships with regional industries.

Business Management Minor

Business

Available to all baccalaureate majors except Business Management or Aviation Administration majors, the minor is intended for students who wish to attain a broad understanding of the foundation topics in this multifaceted field. The minor consists of 21 credits; BUS 101 – Accounting I, BUS 109 – Management Theories and Practices, and BUS131 – Marketing Principles are required, plus four Business courses (12 credits) at the 200 level or above.

Student Learning Outcomes:

- Students will gain fundamental knowledge of basic accounting, marketing, and management principles.
- Students will acquire an appreciation for the role of business in society.
- Students will develop competencies that will prepare them for further study in business or employment in a business environment.

About 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).

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 Registrar's Office. 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.

- 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.
- Only students in 4 year baccalaureate 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.
- Students must maintain a minimum cumulative GPA of at least 2.0 in their minor. Some minors may require a higher GPA.
- 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). **Academic minors may not apply to all curricula.**
- Students are permitted to double-count courses.
- Students are only permitted to take more than one minor with appropriate written approval of their department chair or curriculum Dean.

Civil Engineering Technology Architecture & Construction Management

The Civil Engineering Technology program (CIV), following the missions of both Farmingdale State College and the State University of New York, offers a comprehensive and stimulating program that fulfills the needs of students and regional employers. This program promotes student learning as well as the advancement of technology while contributing to the local economy.

Fulfilling Farmingdale State College's mission, the program produces graduates with high technical skills and knowledge are ready to enter the workforce in New York State.

ABET program accreditation can be sought after the first graduate is produced. This curriculum is housed in a school that currently offers six ABET accredited programs, demonstrating a commitment to the quality inherent within ABET standards. Once a civil ET graduate is produced, ABET review will be requested. A subsequent positive accreditation decision would be retroactive. For more information about ABET accreditation, please contact Dean Christe at christbl@farmingdale.edu

In New York State, graduates may site the First Engineering (FE) Exam upon graduation and the Professional Engineering (PE) exam after working six years under a professional engineer.

Student Learning Outcomes (based on ABET requirements):

Upon completion of the program students will demonstrate:

- an ability to select and apply the knowledge, techniques, skills, and modern tools of the discipline to broadly-defined engineering technology activities;
- an ability to select and apply a knowledge of mathematics, science, engineering, and technology to engineering technology problems that require the application of principles and applied procedures or methodologies;
- an ability to conduct standard tests and measurements; to conduct, analyze, and interpret experiments; and, to apply experimental results to improve processes;
- an ability to design systems, components, or processes for broadly-defined engineering technology problems appropriate to program educational objectives;

- an ability to function effectively as a member or leader on a technical team;
- an ability to identify, analyze, and solve broadly-defined engineering technology problems;
- an ability to apply written, oral, and graphical communication in both technical and non-technical environments; and, an ability to identify and use appropriate technical literature;
- an understanding of the need for and an ability to engage in self-directed continuing professional development;
- an understanding of and a commitment to address professional and ethical responsibilities including a respect for diversity;
- knowledge of the impact of engineering technology solutions in a societal and global context;
- a commitment to quality, timeliness, and continuous improvement.

Typical Employment Opportunities:

Civil Engineers
Architectural and Engineering Managers
Engineering Teachers, Postsecondary

Civil Engineering Technology (BS) Program Objectives:

- Graduates will have the technical and managerial skills necessary to enter careers in the planning, design, construction, operation or maintenance of the built environment and global infrastructure.
- Graduates will be prepared to analyze and design systems.
- Graduates will be prepared to specify project methods and materials prepared to perform cost estimates and analyses.
- Graduates will be prepared to manage technical activities in support of civil engineering projects.

Industrial Technology - Automotive Management Technology Bachelor of Science Degree

This bachelor's degree is designed for students who have completed an automotive technologies associate degree. Students may matriculate on a fulltime 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 Outcomes:

- 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

Dental Hygiene Completion - online

Bachelor of Science Degree

The Bachelor of Science degree program in Dental Hygiene is designed to meet the transfer and continuing education needs of Associate in Applied Science 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.

Please refer to the Safety and Technical Standards in the front section of the College catalog.

Typical Employment Opportunities

Clinical Research
Dental Hygiene Education
Dental Insurance Companies
Geriatric Facilities, Case Management
Patient Advocacy
Pharmaceutical Corporations, Sales and Management
Pharmaceutical Corporations, Research and Development
Public Health Agencies

Dental Hygiene (BS Degree Completion) Program Outcomes:

- 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 appreciate 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 empowered to seek 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 of Science Degree Completion Program in dental hygiene, you are required 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.

To facilitate transfer into graduate level programs, the Dental Hygiene Department has established seamless transfer agreements with Stony Brook University, School of Health Technology and Management for a Master of Science in Health Care Policy and Management, and University of Bridgeport, Fones School of Dental Hygiene for a Master of Science in Dental Hygiene.

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

Dental Hygiene

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.

*Gainful Employment Mandatory Disclosure Statement

Visual Communications: Art & Graphic Design

Bachelor of Technology Degree

The Visual Communications Department has a history of more than a half-century of innovation and excellence. Our design program offers a comprehensive and relevant educational experience that prepares students to be real-life creative problem solvers in traditional as well as emerging fields. Upon graduation, they demonstrate valuable professional skills and technological competencies vital for succeeding in an evolving creative environment.

The Visual Communications: Art & Graphic Design Baccalaureate Degree experience also includes opportunities that enable students to gain essential professional experience and participate beyond the classroom: two internship courses encourage students to pursue professional opportunities while the "in-house" agency courses allow students to work collaboratively and directly with clients. The Design Club and a student chapter of the AIGA, the premiere professional association for design, give our students an opportunity to participate in the industry as student learners. There are also industry-related field trips and special study abroad programs with trips that range from a few weeks to an entire semester.

The success of graduates in positions of responsibility in some of the best-known agencies, design teams, studios and corporations in the region and around the country illustrates the strength of our program. Many alumni have become thriving entrepreneurs by opening their own agencies and art-related businesses or as well as through active freelance careers.

For additional information, or to schedule an interview and tour of our facilities, please contact the Visual Communications Department.

Typical Employment Opportunities

Art Director
Brand Identity Designer
Creative Director
Editorial Designer
Graphic Designer
Interface Designer
Mobile Interface Designer
Package Designer
Photographer
Production Manager
Social Media Designer
User Experience Designer
Visual Content Developer
Web Designer & Developer
Web Developer

Visual Communications (BT) Program Outcomes:

- Graduates will receive a strong foundation in design, will have opportunities to explore, experiment, and master skillsets in traditional disciplines and digital techniques.
- Graduates will demonstrate diverse knowledge and skills required to perform professionally in an evolving creative work environment.
- Graduates will exhibit the knowledge necessary to understand design from an historical perspective, as well as current and future trends of industry.
- Graduates will have learned specific professional skills addressing résumé development, self-promotion, job search skills, industry procedures and practices and presentation techniques.
- Graduates will have created a portfolio of work, which will meet industry demands in order to successfully compete in the current job market.

Biology

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 procedural 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 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 (AS) Program Outcomes:

- Graduates will have knowledge of the complexities involved in law enforcement and its administration.
- Graduates will have an understanding of investigative procedures and evidence management in police operations and will be competent in the administration of chain of custody proceeds that emphasize the courts.
- Graduates will have an understanding of sources of criminal activity and behavior.
- Graduates will gain understanding of criminal law and procedure, and its relationship to crime prevention and detection.
- Graduates will have an appreciation and understanding of the necessity for personal integrity, professional ethics, and cultural awareness.

Applied Gerontology

Bachelor of Science Degree

The Bachelor of Science in Applied Gerontology is offered in the school of Health Sciences at Farmingdale State College.

The field of gerontology is expanding as the number of elders in America continues to increase, quickly outpacing other segments of the population.

By 2030 the older population will be more than twice their number from 2000. With over 13% of Americans currently over the age of 65 and projected to be 19% in 2030, our society will be facing crucial issues about aging which will impact the lives of most Americans.

The Applied Gerontology program aims to improve the quality of life of the aged. Central issues to the study of aging are individual, social, and institutional-based. The multidisciplinary course work follows these issues and provides proficiency in all aspects of working with, and administering to, an aging population.

This bachelor's program is designed to prepare students for entry-level occupational positions in the growing field of aging as well as providing skills and knowledge necessary for graduate and professional school entrance.

All Applied Gerontology students will complete a 4-credit hour internship during their academic work. Students have the opportunity to work in area agencies on aging, private, state, and federal aging, care management organizations, advocacy organizations and non-profits serving older adults and their families.

The structure of the program centers on the traditional 8-semester format with additional options to incorporate approved transfer courses, and full

Criminal Justice

and part-time options. Adult learners and change of career applicants are encouraged to apply and accommodated multiple online/hybrid class opportunities.

Assisted Living Administrations
Consultant/Advocate
Estate Preservation
Federal/State/Local Gov. Agencies
Geriatric Care Managers
Health Educators
Health Insurance Companies
Home Health Care Administration
Hospice Facility Administration
Hotel Facilities Administration
Long-term care Administrator
Rehabilitation Facilities
Research settings
Residential Care Centers
Skilled Nursing Administration

Applied Gerontology (BS) Program Objectives:

- Graduates will demonstrate an appreciation of fundamental interdisciplinary evidence-based awareness of geriatric care. They will apply personal and social responsibility to ethical behavior in all settings dealing with the elderly and the aging process.
- Graduates will employ effective oral and written communication skills needed in a global information society.
- Graduates will evaluate, interpret, and analyze current issues in geriatric science/ administration. They will extrapolate theoretically effective answers to solve problems involving the elderly.
- Graduates will demonstrate the knowledge base skills needed to interpret analyze and evaluate the gerontology field and to prepare for further professional and graduate education.

Air Force ROTC

The minor in Air Force ROTC is offered to any Farmingdale baccalaureate student completing the courses of study listed below. The minor not only prepares cadets for active duty service but provides any student the opportunity to study one of our country's major instruments of power, the United States Military. In addition to studying Air Force organizations, missions, and operations, the student will gain a broad perspective of the military in general by studying the history of all Department of Defense Services and completing a leadership and/or business course emphasizing the key elements of leadership required of an Air Force Officer. The AFR courses are conducted at Manhattan College on Fridays. Completion of the minor does not fulfill all commissioning requirements.

Aviation

Student Learning Outcomes:

- Students will demonstrate diverse knowledge of the United States Military.
- Students will have an appreciation of the historical development for the Department of Defense Services.
- Students will gain the ability to apply leadership skills required of an Air Force Officer.
- Students will be able to work effectively on teams.

About 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).

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 Registrar's Office. 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.

- 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.

- Only students in 4 year baccalaureate 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.
- Students must maintain a minimum cumulative GPA of at least 2.0 in their minor. Some minors may require a higher GPA.
- 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). **Academic minors may not apply to all curricula.**
- Students are permitted to double-count courses.
- Students are only permitted to take more than one minor with appropriate written approval of their department chair or curriculum Dean.

- Graduates will develop a firm appreciation of culture, ethics, esthetics, cultural awareness, and lifelong learning.

Medical Laboratory Science

Medical Laboratory Science

Bachelor of Science Degree

The BS program in Medical Laboratory Science 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 Science 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 Laboratory Science 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 Laboratory Science is also designed to meet the accreditation standards outlined by the National Accrediting Agency for Clinical Laboratory Science (NAACLS). Accreditation of the BS program was awarded in 2013 so that graduates of the program are eligible to take the national certification examination offered by the American Society for Clinical Pathology Board of Certification (ASCP-BOC). Passing of this certification examination designates the graduate as MLS (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 MLS curriculum. Students are responsible for providing their own transportation to and from the clinical sites. A laboratory fee that covers a lab coat, personal protective equipment, and other general supplies for use during laboratory sessions will be collected from students enrolled in all laboratory courses offered in the MLS department.

Students enrolled in the MLS program will have the opportunity to participate in the MLS Club on campus.

Please refer to the Safety and Technical Standards in the front section of the College catalog.

Typical Employment Opportunities

Graduates may obtain employment as medical laboratory scientists/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.

Medical Laboratory Science (BS) Program Outcomes:

- 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

Applied Psychology

Psychology

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 Outcomes:

- 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.

In addition to curricular options, the College has a vibrant Psychology Club and an honor society (Psi Chi).

Liberal Arts and Sciences

Liberal Arts & 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 prerequisites for their chosen majors.

Each student's schedule of courses is arranged after careful consultation with a program advisor every semester.

Liberal Arts and Sciences (AA) Program Outcomes:

- Graduates will develop the broad-based knowledge and skills necessary for upper division study and success in a variety of career choices.

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.

This program is accredited by the National Accrediting Agency for Clinical Laboratory Science (NAACLS), 5600 N. River Road, Suite 720, Rosemont, IL 60018-5119, www.naacls.org

Global Business Management

Business

Bachelor of Science Degree

The Bachelor of Science in Global Business Management is designed to prepare students for the rapidly growing and evolving field of global business. In today's increasingly interlinked world economy, virtually all business involves international human resources, management, marketing, supply chain management, and finance. In addition, information technology and legal systems must be understood and coordinated on a global basis. The Global Business Management program, through required and a wide array of elective courses allows students to complete degree requirements focusing on key aspects of international business. Students in the program will also develop an appreciation and understanding of other cultures through foreign language and area studies courses, which allow them to explore countries and languages of particular interest. As part of the Global Business program, study at campuses outside the United States is strongly encouraged.

Typical Employment Opportunities

International Marketing/Sales/Advertising
Management of Multinational Corporations (MNCs)
International Human Resource Management
Global Strategic Planning Management
Product/Service Development
Product/Brand Management
Procurement/Purchasing Management
Quality Management
International Supply Chain Management
Strategic Sourcing
International Logistics
Warehouse and Distribution Center Management
Site and Outsourcing Management
Production Management in Manufacturing and Service Enterprises

Global Business Management (BS) Program Outcomes:

- Graduates will be effective communicators and possess critical thinking skills necessary to analyze and solve problems in a global context.
- Graduates will have an appreciation of multiple cultures and learn to work effectively in a multi-cultural and diverse environment in different areas of the world.
- Graduates will have an understanding of global financial theories and systems, global markets, and legal issues in an international environment.
- Graduates will have the ability to work well in global teams and understand the social context of businesses in a global society.

Geographic Information Systems

History, Politics and Geography

Bachelor of Science Degree

Bachelor of Science degree in Geographic Information Systems (GIS) - This is an applied degree in geography and the spatial sciences that aims to generate workforce-ready graduates who are well trained in the technology, theory, and application of geographic information systems. The GIS program provides students with critical thinking skills such as analyzing, synthesizing, visualizing and evaluating data by way of digital maps and/or map imagery to solve problems related to urban and regional design, marketing and industrial location, transportation, agriculture, forestry, environmental systems, engineering, epidemiology, emergency services, crime analysis and utilities.

Completion of the degree would count toward the educational requirement for GISP (GIS Professional) Certification.

Typical Employment Opportunities

GIS Analyst
Geospatial Intelligence Analyst
Geospatial Application Developer
Urban and Regional Design
Agriculture Technology
Natural Resources Analyst
GIS Network Engineer
Epidemiology
Emergency Services
Crime Analysis
Utilities
Local and National Government
GIS Energy Analyst
GIS Transportation and Logistics Analyst

Geographic Information Systems (BS) Program Outcomes:

- Graduates will utilize the scientific method and various informational and analytical tools for solving problems related to human and physical geography.
- Graduates will apply understanding of the importance of space and place in key issues facing contemporary society, combined with the ability use data to solve pressing problems in the environmental sciences, salesforce management, public health, public policy, etc.
- Graduates will debate, quantify, and qualify the interrelationships between human, physical, and biotic systems on the Earth's surface.
- Graduates will integrate spatial analysis into interdisciplinary research problems.
- Graduates will compose essays that: 1) cogently convey technical information retrieved through independent research; 2) rely on print and/or digital sources of a scholarly nature; and 3) are generally free of grammatical, spelling, punctuation and other errors.

Bioscience

Biology

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: Organic Chemistry I & II, Biochemistry, Lab Management & Informatics, Laboratory Research/Education

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: Calculus I with Applications, College Physics I & II, Organic Chemistry I & II, Biochemistry, Lab Management & Informatics. (See Pre-Health Professions Advisement on the Farmingdale State College website.)

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

Bioscience (BS) Program Outcomes:

- 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.

Computer Engineering Technology

Bachelor of Science Degree

The Bachelor of Science degree program in Computer Engineering 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 engineering 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 based systems.

This program is accredited by the Engineering Technology Accreditation Commission of ABET, www.abet.org

Computer Engineering Technology (BS) Program Outcomes:

- Graduates will be technically competent and have the necessary skills, and experience with modern tools of their discipline to enter careers where they can apply their knowledge in the areas of networking and data communications, microprocessors, digital systems, and technical project management.

- Graduates will exhibit good communication skills, an ability to work collaboratively as a member of a team, as well as a recognition of the need for life-long learning and a commitment to continuous improvement.

Student Learning Outcomes:

Upon completion of the program students will be able to:

1. Apply knowledge, techniques, skills, and modern tools of mathematics, science, engineering, or technology to solve broadly-defined engineering problems appropriate to the discipline
2. Design systems, components, or processes meeting specified needs for broadly-defined engineering problems appropriate to the discipline
3. Apply written, oral, and graphical communication in broadly defined technical and nontechnical environments; and an ability to identify and use appropriate technical literature
4. Conduct standard tests, measurements, and experiments and to analyze and interpret the results to improve processes
5. Function effectively as a member or leader on a technical team

ABET Data

Architectural Engineering Technology

Architecture & Construction Management

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.

Architectural Engineering Technology (BS) Program Outcomes:

- Graduates will have broad background in one or more areas of design: architectural, construction, site and structural in addition to history, theory and technology. Graduates will assume professional positions in architectural and building construction industry.
- Graduates will be creative problem solvers in industry.
- Graduates will be effective communicators in professional setting.
- Graduates will adapt state of the art technologies to improve processes in industry.
- Graduates will pursue continuing education and professional development opportunities to function effectively as a member or leader on a technical team.

This program is accredited by the Engineering Technology Accreditation Commission of ABET, www.abet.org

Graduates may sit for the Architecture Registration Exam (A.R.E in New York State after working under a registered architect for four years and be licensed as an architect with an additional three years of work under a registered architect.

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 Learning Outcomes: Architectural Engineering Technology

1. An ability to apply knowledge, techniques, skills, and modern tools of mathematics, science, engineering, or technology to solve broadly-defined engineering problems
2. An ability to design systems, components, or processes meeting specified needs for broadly-defined engineering problems appropriate to Architectural Engineering Technology
3. An ability to conduct standard tests, measurements, and experiments and to analyze and interpret the results to improve processes
4. An ability to function effectively as a member or leader on a technical team
5. An ability to apply written, oral, and graphical communication in both technical and nontechnical environments; and an ability to identify and use appropriate technical literature

ABET Data

Construction Management Engineering Technology 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.

This program is accredited by the Engineering Technology Accreditation Commission of ABET, www.abet.org.

In New York State, graduates may sit the First Engineering (FE) Exam upon graduation and the Professional Engineering (PE) exam after working six years under a professional engineer.

Construction Management Engineering Technology (BS) Program Outcomes:

- 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 creative problem solvers in industry.
- Graduates will be effective communicators in professional setting.
- Graduates will adapt state of the art technologies to improve processes in industry.
- Graduates will pursue continuing education and professional development opportunities to develop a leader or member of a technical team.

Potential Employment Opportunities

Project Manager
Assistant Project Manager
Construction Manager
Project Super

Student Club - Architecture and Construction Technology (ACT) Club

Student Learning Outcomes: Construction Management Engineering Technology

1. An ability to apply knowledge, techniques, skills, and modern tools of mathematics, science, engineering, or technology to solve broadly-defined engineering, technical, or scientific problems appropriate to Construction Engineering Management Technology
2. An ability to design systems, components, processes, procedures, or programs meeting specified needs for broadly-defined engineering, technical, or scientific problems appropriate to Construction Management Engineering Technology
3. An ability to apply written, oral, and graphical communication in both technical and nontechnical environments; and an ability to identify and use appropriate technical literature
4. An ability to develop and conduct standard tests, measurements, experiments, or test hypotheses and to analyze and interpret the results and use scientific judgment to draw conclusion and to improve processes
5. An ability to function effectively as a member or leader on a technical team that establish goals, plan tasks, meet deadlines, and analyze risk and uncertainty
6. An ability to understand ethical and professional responsibilities and the impact of technical and/or scientific solutions in global, economic, environmental, and societal contexts

ABET Data

Applied Mathematics Mathematics 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 Learning 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.

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)

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

Applied Mathematics (BS) Program Outcomes:

- Graduates will know the methods and techniques of applied mathematics and will understand the underlying theoretical foundations
- Graduates will have the knowledge and skills needed to be productive problem solvers and critical thinkers
- Graduates will possess both depth and breadth in the mathematical sciences
- Graduates will possess important contextual skills including computer skills, communication skills, and the ability to collaborate with others on mathematical projects

Professional Communications

Bachelor of Science Degree

The Bachelor of Science degree program in Professional Communications prepares its graduates for employment with companies and organizations in all of those fields that rely on effective communication, including mass media (newspapers, radio, television), website and social media, health delivery systems, the biopharmaceutical industry, marketing and public relations firms, colleges and universities, sports organizations, and non-profits. Employees in these positions are responsible for creating proposals, articles, presentations, marketing materials, educational materials, grant applications, legal documents, and financial reports, drawing on skill in conducting background research and the ability to write well.

The curriculum in this program reinforces the ability of its students to write effectively while providing the opportunity for hands-on practice in the use of all forms of communication in this rapidly evolving field. Core courses in the major range from advanced writing and editing, research techniques, and communications theory to digital media and methods, media in communications, and writing for electronic media. This preparation is supplemented by support courses in advanced Psychology, Speech, and Visual Communications and the availability of elective courses in various specialties of professional communications.

Students in this curriculum gain a broad academic background through the completion of both General Education requirements and various Arts & Sciences electives. Additional breadth of preparation is achieved through the completion of a Concentration consisting of 12 credits in courses in a specific academic area outside of Professional Communications (English, Speech, Sociology, Psychology, etc.).

The capstone of the program is a senior internship placement in a local company or organization that provides direct experience and the opportunity to apply the skills gained in the program in a professional environment.

Professional Communications (BS) Program Mission:

The mission of this program supports the mission of the college by encouraging its graduates to be imaginative, critical thinkers and successful problem solvers. Its inclusion of a broad preparation in the arts & sciences is intended to provide its students with an appreciation of culture, ethics, aesthetics, citizenship, cultural diversity, and the interrelationships among the applied arts and sciences, technologies, and society. The curriculum is designed to produce graduates who meet the needs of regional employers, thereby promoting the economic, social and cultural development of the region.

Professional Communications (BS) Program Outcomes:

Students who graduate with a Bachelor of Science degree in Professional Communications will have -

- Mastery of a full range of communications skills which are needed in every company and organization and that can lead to successful career paths in a wide range of businesses, industries, and organizations.
- A foundation in the liberal arts and sciences that will encourage them to aspire to be exemplary citizens, scholars, professionals, and leaders in society, consistent with the mission of the College.

Student Learning Outcomes:

- Students will be able to identify, gather, synthesize, and cite information and sources to support the preparation of professional documents and presentations of all types.
- 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 based on the application of standards of grammar, mechanics and syntax.
- Students will be able to deliver effective oral presentations following appropriate practices, including the utilization of audio-visual materials or technology to enhance their presentations.
- Students will be able to create and update web-based media for optimum effect, making use of the technology associated with electronic media.

Marketing Certificate

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.

*Gainful Employment Mandatory Disclosure Statement

Computer Security Technology

Bachelor of Science Degree

The Bachelor of Science degree in Computer Security Technology prepares students to combat security issues and challenges in the digital environment, including computer systems, computer networks and cyberspace. Graduates will be able to face the security threats and protect valuable information and/or physical resources from unauthorized access and malicious activities. In addition to preparing students for rewarding careers in the security industry, the program prepares students for lifelong learning and advanced studies in related disciplines.

Typical Employment Opportunities

Corporate Security
Federal, State and Local Security Agencies
Software Industries
Computer and Information Systems Manager

Computer Security Technology (BS) Program Outcomes:

- Graduates will demonstrate the knowledge-based skills to analyze and excel in computer and cyber security technologies.
- Graduates will demonstrate an appreciation of professional requirements, ethics and leadership skills.
- Graduates will utilize effective oral and written communication skills.
- Graduates will apply critical thinking skills to analyze current issues and develop innovative solution techniques.

Business Management

Bachelor of Science Degree

The Bachelor of Science 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. In addition, the program provides for 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 on specific areas of business such as Accounting, Management, Marketing, and International Business or choose from a wide variety of courses in Business Computer Systems and/or Sport Management.

Typical Employment Opportunities

Marketing
Management and Leadership
Entrepreneurship
Accounting and Finance
Customer Relations
Financial Services
Global Business
Production, Quality Control, Inventory and Logistics

Business Management (BS) Program Outcomes:

- Graduates will have the necessary skills to understand and perform in different areas of business in the modern world economy.
- Graduates will be effective communicators and possess critical thinking skills necessary to analyze and solve problems.
- Graduates will function well in teams, develop creative problem solving skills and have the ability to use current technologies in management contexts.
- Graduates will have an understanding of social and ethical issues, data analysis skills, financial theories, and a knowledge of the global economic, political, and legal context within which businesses function.
- Graduates will have an appreciation of markets and organizational behavior, organizational systems and processes, and learn to work effectively in a diverse environment.

Mechanical Engineering Technology

Mechanical Engineering Technology

Bachelor of Science Degree

The Bachelor of Science degree program in Mechanical Engineering Technology is designed to provide students with a foundation of knowledge and hands-on experience that are required and utilized by the industry. The program offers traditional courses such as Statics, Dynamics, Strength of Materials, Material Science, Machine & Product Design, Applied Fluid Mechanics, Applied Thermodynamics, and Applied Heat Transfer providing graduates with a solid foundation of the field. The program also offers numerous technology-based and practical courses such as Computer Aided Design (CAD), Computer Aided Manufacturing (CAM), Computer Aided Engineering (CAE), Computer Numeric Control (CNC) Machining, Quality Control, Electronic Packaging Applications, Electromechanical Control Systems, Robotics, and HVAC Systems providing students with a well-balanced and needed background in Mechanical Engineering Technology. These technology based courses are delivered through our state-of-the-art laboratories. Students also benefit from the required senior project that provides the students with valuable integrating capstone experience.

This program is ideal for high school graduates and Mechanical Engineering Technology associate degree graduates who wish to enter careers in the design, installation, manufacturing, testing, technical sales, maintenance, HVAC, and other endeavors typically associated with mechanical components and systems.

This is a four-year program. Students may matriculate on a full-time or part-time basis. This program is accredited by the Engineering Technology Accreditation Commission of ABET, www.abet.org.

Typical Employment Opportunities

Mechanical Engineer
Product Design Engineer
Mechanical System Engineer
Process Design Engineer
HVAC System Engineer
Technical Writer
Field Service Engineer
Manufacturing Engineer
Project Engineer
Equipment Testing Engineer

Mechanical Engineering Technology (BS) Program Educational Objectives:

- Graduates will have the knowledge and skills to enter careers in the design, installation, manufacturing, testing, technical sales, maintenance, and other endeavors typically associated with mechanical components and systems.
- Graduates will have the ability to provide solutions and solve mechanical engineering technology related problems.

- Graduates will have the technical background to advance in their careers with an understanding and necessity for personal integrity, ethical behavior, cultural awareness, lifelong learning, and continuous improvement.

Student Learning Outcomes

- an ability to apply knowledge, techniques, skills and modern tools of mathematics, science, engineering, and technology to solve broadly-defined engineering problems appropriate to the discipline;
- an ability to design systems, components, or processes meeting specified needs for broadly-defined engineering problems appropriate to the discipline;
- an ability to apply written, oral, and graphical communication in broadly-defined technical and non-technical environments; and an ability to identify and use appropriate technical literature;
- an ability to conduct standard tests, measurements, and experiments and to analyze and interpret the results to improve processes; and
- an ability to function effectively as a member as well as a leader on technical teams.

ABET Data

Nutrition Science

Nutrition Science and Wellness

Bachelor of Science Degree

The Nutrition Science baccalaureate degree contains a strong scientific base that is applied throughout the curriculum. It is designed for students interested in nutrition, food, and the relationship of diet to human health, fitness, and disease prevention—for which current interest has never been greater than today. Graduates will learn to examine complex relationships in human nutrition and food technology. Course work includes understanding obesity and weight management, nutritional influences on chronic disease, dietary intake patterns, addressing nutrient industry and marketing trends, and food/nutrient recommendations to protect the population and promote optimum health.

Graduates will be prepared for further academic professional studies or graduate school including medical, dental, occupational/physical therapy, pharmacy, and advanced graduate study in nutrition science. The nutrition science program is independent of the licensure in dietetics and cannot be used to directly achieve clinical internships.*

**Please note: The Nutrition Science degree does not lead to becoming a licensed dietitian after graduation. If you are interested in becoming a Registered Dietitian, it is vital that you understand the additional education requirements determined by the Accreditation Council for Education in Nutrition and Dietetics (ACEND). This Nutrition Science degree provides a strong science and nutrition background for other allied health care settings and work in both the private and public sectors.*

Typical Employment Opportunities

Graduates are eligible for a variety of careers in both private and public sectors.

Opportunities found in, but not limited to:

Healthcare Field
Sport & Fitness Industry
Food Technology
Biomedical and Laboratory Research
County, State and Federal Government Nutrition Services
Cooperative Extension
Food and Agriculture Industry
Nutraceutical Industry
Non-Profit Nutritional Support Programs
Graduate Education

Nutrition Science (BS) Program Outcomes:

- Graduates will demonstrate professional and personal ethics with a cultural awareness for dietary intake and skills in maintaining health and disease prevention throughout the life span (Professionalism/Leadership).
- Graduates will employ effective oral and written communication skills (Communication/Marketing).
- Graduates will apply critical thinking skills to evaluate, interpret, and analyze current issues in nutrition utilizing theoretically based problem solving skills (Critical Thinking).
- Graduates will be able to investigate, differentiate, and extrapolate nutrition science data and trends. This will allow them to excel in the nutrition sciences and to prepare for further professional and graduate education (Knowledge).

Criminal Justice: Law Enforcement Technology

Criminal Justice

- Provide students access to a high-quality, affordable education in the field of aviation.
 - Develop relationships with our extensive local and global industry partners that provide students with applied learning opportunities and experiences.
 - Maintain a low student to faculty ratio for a diverse student body
- The program prepares students to be marketable in the following areas: Finance and Public Relations, Accounting and Marketing, Aviation Laws and interaction between the aviation industry and government and Management of all aspects of airports.
- [Student Achievement Data](#)

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 courseware 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 adequately prepare them for graduate studies in criminal justice and related fields.

Students majoring in Criminal Justice: Law Enforcement Technology will take a total of 122 credits of which 61 credits are in criminal justice and 61 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.

Criminal Justice: Law Enforcement Technology (BS) Program Outcomes:

- Graduates will have knowledge of criminal investigations and criminalistics and be able to analyze the elements that constitute crimes and effectively apply scientific methods towards crime scene investigations.
- Graduates will have knowledge of the technologies used in a variety of criminal justice and law enforcement applications ranging from crime scene investigations to digital forensic investigations.
- Graduates will gain competencies in evidence collection, documentation, analysis and maintenance of chain of custody as well as the laws and guidelines associated with these matters.
- Graduates will take specialized courses to gain knowledge in areas such as geographical information systems, crime analysis and prevention, security, and law enforcement technologies.

Aviation Administration

Aviation

Bachelor of Science Degree

The Aviation Administration major is a specialized aviation management program accredited by the Aviation Accreditation Board International (www.aabi.aero) through February, 2023. The program prepares graduates for entry-level managerial positions in the Airport and Air Cargo segments of the air transportation industry, the Airline Industry, the FAA and the General Aviation Industry.

A grade of "C" or better is required in all AVN courses (including electives) for graduation from the Aviation Administration Program. Students who are unable to obtain a minimum grade of "C" after the second attempt in any AVN classes must obtain permission from the Chairperson of the department to remain in the program. This will apply for each course that needs to be retaken for the third time.

Aviation Administration (BS) Program Educational Goals:

Our goal is to:

- Produce graduates that possess the relevant knowledge, skills and attitudes to competently and ethically function as a manager in the aviation industry.

Computer Systems Technology Certificate

Computer Programming and Information Systems

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.

***Gainful Employment Mandatory Disclosure Statement**

Interaction Design (IXD)

Visual Communications

Bachelor of Technology Degree

The Interaction Design Bachelor of Technology degree focuses on human behavior and user experience in the design and development of mobile applications, responsive web design and user experiences, service design, social networks, way-finding projects, brick and mortar and on-line retailing, exhibit design and more. This program encourages a culture in which students learn the value of collaboration, vision, risk-taking, discovery, entrepreneurship, passion, social responsibility and play. Students will immerse themselves in an environment that focuses on the practical application of user-centered, needs-based design solutions built upon strong research and development, observation, and prototyping.

Interaction Designers have the ability to influence the future development of products, systems and services in fields as diverse as education, healthcare, banking, business, and more. Graduates of the program will enter into employment such as mobile interface design, web design, user experience design (UX), user interaction design (UI), human computer interaction and more.

For additional information, or to schedule an interview and tour of our facilities, please contact the Visual Communications Department at 631-420-2181

Typical Employment Opportunities

- Application Development
- Data Visualization
- Immersive Experience
- Interactive Installation
- Kiosk Design and Development
- Museum Experience Design
- User Experience Design (UX)
- User Interface Design (UI)
- Web Development and Design

Interaction Design (IXD) (BT) Program Outcomes:

- Graduates will develop and build upon strong foundational design skills through exploration and experimentation.
- Graduates will master skill sets in traditional and digital techniques to design successful interactive experiences.
- Graduates will exhibit an understanding of graphic design and interaction design from both an historical perspective as well as from a contemporary perspective with current and future trends of industry being paramount.
- Graduates will build professional skills including resume development, self promotion, job search, industry procedures and practices and presentation techniques.
- Graduates will present a portfolio of work in order to successfully compete in the current job market and to apply for graduate study. In

this portfolio, students will demonstrate knowledge of current technical and conceptual interaction design standards.

Horticultural Technology Management

Urban Horticulture and Design

Bachelor of Technology Degree

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, public gardens and garden centers.

Horticultural Technology Management (BT) Program Outcomes:

This major has two concentrations: Landscape Development and General Horticulture.

General Horticulture (BT) Program Outcomes:

- Graduates will receive a strong foundation in science and master skillsets utilizing traditional and cutting edge techniques.
- Graduates will demonstrate diverse knowledge and skills required to perform professionally in today's complex multi-disciplinary environment.
- Graduates will exhibit the knowledge necessary to understand horticulture from an historical perspective, as well as current and future trends of industry.
- Graduates will have learned specific professional skills addressing the science and art of growing and utilizing cultivated plants to beautify, enhance and restore private and public landscapes, and become familiar with ever-changing industry procedures, practices and techniques.
- Graduates will have learned specific professional skills addressing resume development, self-promotion and job search skills in order to successfully compete in the current job market.

Landscape Development (BT) Program Outcomes:

- Graduates will receive a strong foundation in design, and master skillsets utilizing traditional and cutting digital techniques.
- Graduates will demonstrate diverse knowledge and skills required to perform professionally in today's design environment.
- Graduates will exhibit the knowledge necessary to understand design from an historical perspective, as well as current and future trends of industry.
- Graduates will have learned specific professional skills addressing resume development, self-promotion, job search skills, industry procedures and practices and presentation techniques.
- Graduates will have created a portfolio of work, which will meet industry demands in order to successfully compete in the current job market.

Aeronautical Science Professional Pilot

Bachelor of Science Degree

Aviation

Farmingdale State College's Department of Aviation offers the premier collegiate aviation program on Long Island, and in the region. The professional pilot program is currently accredited by the Aviation Accreditation Board International (www.aabi.aero) through February, 2023.

The degree 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.

A grade of "C" or better is required in all AVN courses (including electives) for graduation from the Professional Pilot Program. Students who are unable to obtain a minimum grade of "C" after the second attempt in any AVN class must obtain permission from the Chairperson of the department to remain in the program. This will apply for each course that needs to be retaken for the third time.

Flight training students must maintain a cumulative GPA of 2.0 and must be in Good Academic standing at the completion of each semester or they may be removed from their flight training schedule.

Please refer to the Safety and Technical Standards in the front section of the College catalog.

Program Educational Goals:

Graduates will possess the necessary knowledge, skills and attitudes to competently and ethically function as professional pilots in the aviation industry.

Our goal is to:

- Be a premier collegiate aviation program providing access to a high-quality, affordable education leveraging our location in complex airspace and all-weather conditions.
- Produce graduates that possess the necessary knowledge, skills and attitudes to competently and ethically function as professional pilots in all segments of aviation.
- Provide a flight training environment that develops the skills needed to build and promote a culture of safety.
- Maintain a low student-to-faculty ratio for a diverse student body.

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
- Certified Flight Instructor Instrument (CFII) 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 elect to fly during the summer.

Flight Training Costs: Flight training fees and related equipment and publications are in addition to college tuition and fees. Flight fees must be paid each semester regardless of scheduled flight time.

Student Achievement Data

Security Systems

Bachelor of Science Degree

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 who integrates crime prevention theory with the design philosophy and hardware and software components of security systems. Criminal justice

Security Systems/Law Enforcement Technology

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 (BS) Program Outcomes:

- 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.

Communication Minor

The Minor in Communication is open to all baccalaureate students outside the Professional Communications program, and consists of five courses for a total of 15 credits. Of the five courses, three are required and two are electives to be selected from any other available PCM courses at the 300-level. Students taking this minor will gain a solid foundation in Professional Communication, including an introduction to the various communication industries, the application of various methods and technologies for effective communication in organizations, and the ability to write, edit and produce various types of communications.

Professional Communications

Student Learning Outcomes:

- Students will improve their ability to create professional communication documents and presentations using Microsoft Office applications, designed according to the purpose, function, and venue for which these are intended.
- Students will develop skill in writing for electronic media making use of industry-standard software programs in computer laboratories equipped with individual student stations.
- Students will become proficient in the process of executing a communication project, from the development of the concept to the presentation of the final product.
- Students will become familiar with a range of practical applications within the field of communication so that they are able to recognize the potential of each, and to select appropriate methods for accomplishing tasks as future employees of companies and organizations.

About 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).

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 Registrar's Office. 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.

- 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.
- Only students in 4 year baccalaureate 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.
- Students must maintain a minimum cumulative GPA of at least 2.0 in their minor. Some minors may require a higher GPA.
- 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). **Academic minors may not apply to all curricula.**
- Students are permitted to double-count courses.
- Students are only permitted to take more than one minor with appropriate written approval of their department chair or curriculum Dean.

Computer Programming and Information Systems

Computer Programming and Information Systems

Bachelor of Science Degree

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

As reported in the United States Department of Labor Occupational Outlook Handbook, employment of programmers, web developers, systems analysts and network architects is projected to grow in the range of 22 – 30 percent from 2010 to 2020, faster than the average projected growth for overall occupations.

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 courses in Programming, Systems Development, Networking, Web Development or Database. Each course 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

Computer Support Specialists
Information Technology Specialists
Data Communications Analysts
Quality Assurance Technicians
ERP Analyst
Systems Analysts
Programmer/Analysts
Data Base Analysts
Web Developers
Network Administrators
Software Applications
Computer Network Technologist
CISCO Computer Network Technologist
Infor Applications Specialist for Visual and Cloud Suite Interfaces
ERP Software Analyst Oracle Software Applications

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 Programming & Information Systems (BS) Program Outcomes:

- 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 had experiential learning opportunities such as internships and/or capstone projects.
- Graduates will have an understanding of social and ethical issues as it relates to information technology.
- Graduates will be effective communicators and work successfully in teams.

Sport Management

Sport Management

Bachelor of Science Degree

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
Team/League Sponsorship, Ticketing
Professional Sports Organizations
Collegiate Sport Management and Marketing
Broadcasting/Communications
Sports Information Director/Media Relations
Event Management
Sport Agent
Director of Athletics
Associate Athletic Director/Compliance

Sport Management (BS) Program Outcomes:

- Graduates will have knowledge of the global and complex sports industry.
- Graduates will have knowledge of integration of the special nature of sports, management and marketing theory, and administrative principles.
- Graduates will be able to demonstrate competency in the management and leadership dimensions of sport.
- Graduates will be able to analyze and synthesize information/data and present their findings in a coherent manner.
- Graduates will be regular contributors to sport management and/or related fields.
- Graduates will exhibit an understanding of the necessity for personal integrity, ethical behavior, cultural awareness and lifelong learning.

Electrical Engineering Technology

Electrical and Computer Engineering Technology

Bachelor of Science Degree

The Bachelor of Science degree program in Electrical Engineering Technology is designed to meet the transfer and continuing education needs of associate degree graduates in EET or other related disciplines as well as to address the industry needs for graduates with sound and current skills in electrical engineering technology.

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. Transfer admission is open to students from closely allied degree programs and with proper academic advisement the students are able to complete the degree requirements in a timely fashion.

Program graduates, known as engineering technologists, are well prepared for a wide range of industry positions in the areas of electronic product development, automated testing, quality control, technical sales, technical writing, management, etc.

This program is accredited by the Engineering Technology Accreditation Commission of ABET, www.abet.org

Electrical Engineering Technology (BS) Program Outcomes:

- Graduates will be technically competent and have the necessary skills, and experience with modern tools of their discipline to enter careers where they can apply their knowledge in the areas of electronics, communications, systems, and technical project management.
- Graduates will use scientific methodologies and critical thinking skills to identify, analyze, and design solutions to technical problems in the areas of electronics, communications, and systems.
- Graduates will exhibit good communication skills, an ability to work collaboratively as a member of a team, as well as a recognition of the need for life-long learning and a commitment to continuous improvement.

Student Learning Outcomes:

Upon completion of the program students will be able to:

1. Apply knowledge, techniques, skills, and modern tools of mathematics, science, engineering, or technology to solve broadly-defined engineering problems appropriate to the discipline
2. Design systems, components, or processes meeting specified needs for broadly-defined engineering problems appropriate to the discipline
3. Apply written, oral, and graphical communication in broadly defined technical and nontechnical environments; and an ability to identify and use appropriate technical literature
4. Conduct standard tests, measurements, and experiments and to analyze and interpret the results to improve processes
5. Function effectively as a member or leader on a technical team

ABET Data

Ornamental Horticulture Certificate

Urban Horticulture and Design

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.

*Gainful Employment Mandatory Disclosure Statement

Manufacturing Engineering Technology

Mechanical Engineering Technology

Bachelor of Science Degree

The Bachelor of Science degree program in Manufacturing Engineering Technology is designed to provide students with a foundation of knowledge and hands-on experience that is required and utilized by the industry. The program offers traditional courses such as Statics, Strength of

Materials, and Material Science providing graduates with a solid foundation of the field. The program also offers numerous technology-based and practical courses such as Computer Aided Design (CAD), Computer Aided Manufacturing (CAM), Computer Numeric Control (CNC) Machining, Tooling for Composites, Electronic Packaging Applications, Electromechanical Control Systems, Robotics, and Statistical Quality Control providing students with a well-balanced and needed background in Manufacturing Engineering Technology. These technology-based courses are delivered through our state-of-the-art laboratories. Students also benefit from the required senior project that provides the students with a valuable integrating capstone experience. In addition, this program is designed to allow students to extend their knowledge and skills in other areas such as Automotive, Business, Construction, Electrical, Facility, and Mechanical to support different aspects of manufacturing.

This program is ideal for high school graduates and Mechanical Engineering Technology associate degree graduates who wish to enter careers in manufacturing process and systems design, operations, quality, continuous improvement, lean manufacturing, and sustainability.

This is a four-year program. Students may matriculate on a full-time or part-time basis. This program is accredited by the Engineering Technology Accreditation Commission of ABET, www.abet.org.

Typical Employment Opportunities

Manufacturing Engineer
Product Design Engineer
Mechanical System Engineer
Process Design Engineer
Technical Writer
Field Service Engineer
Equipment Testing Engineer
Quality Control (QC) Engineer
Project Engineer
CNC Programmer

Manufacturing Engineering Technology (BS) Program Educational Objectives:

- Graduates will have the knowledge and skills to enter careers in manufacturing process and systems design, operations, quality, continuous improvement, lean manufacturing, and sustainability.
- Graduates will have the ability to provide solutions and solve manufacturing engineering technology related problems.
- Graduates will have the technical background to advance in their careers with an understanding and necessity for personal integrity, ethical behavior, cultural awareness, lifelong learning, and continuous improvement.

Student Learning Outcomes

- an ability to apply knowledge, techniques, skills and modern tools of mathematics, science, engineering, and technology to solve broadly-defined engineering problems appropriate to the discipline;
- an ability to design systems, components or processes meeting specified needs for broadly-defined engineering problems appropriate to the discipline;
- an ability to apply written, oral, and graphical communication in broadly-defined technical and non-technical environments; and an ability to identify and use appropriate technical literature;
- an ability to conduct standard tests, measurements, and experiments and to analyze and interpret the results to improve processes; and
- an ability to function effectively as a member as well as leader on technical teams.

[ABET Data](#)

Landscape Development Associate in Applied Science Degree

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

Landscape Development (AAS) Program Outcomes:

- Graduates will receive a strong foundation in design, and master skill sets utilizing traditional and cutting digital techniques.
- Graduates will demonstrate diverse knowledge and skills required to perform professionally in today's design environment.
- Graduates will exhibit the knowledge necessary to understand design from an historical perspective, as well as current and future trends of industry.

Criminal Justice: Police, Courts and Corrections

Criminal Justice

Bachelor of Science Degree

The Bachelor of Science program in Criminal Justice: Police, Courts, and Corrections prepares students for careers in law enforcement and corrections on the local, state, and federal levels. Career opportunities for graduates also exist with the courts, as well as with private police and military police forces.

The program blends coursework in patrol operations, homeland security and counterterrorism, courts and the judiciary, probation and parole, privacy law, civil rights and liberties, law enforcement administration, leadership and ethics, intelligence operations, and intelligence analysis to provide students with the ability to develop tactical and strategic plans to reduce crime and protect society.

The goal of this program is to produce graduates with a critical understanding of criminal justice agency operations, theories, and practices, crime and its causes, how intelligence operations and analysis can improve the ability of the police to counter terrorism and crime and who are prepared to use modern criminal justice agency operations and specialized approaches in the design of crime reduction programs.

Typical Employment Opportunities:

Police and Sheriff's Patrol Officers
Transit and Railroad Police
New York Detectives and Criminal Investigators
New York State Probation Office and Correctional Treatment Specialist

Criminal Justice: Police, Courts, and Corrections (BS) Program Objectives:

- Graduates will be able to utilize intelligence operations and analysis in the design of police strategic and tactical planning efforts.
- Graduates will be able to undertake and complete the design and implementation of criminal justice agency programs aimed at reducing crime.
- Graduates will be able to develop an assessment program which measures and evaluates criminal justice agency performance.
- Graduates will be able to formulate and interpret policies the impact the criminal justice system in its efforts toward public safety.

General Horticulture

Urban Horticulture and Design

Associate in Applied Science Degree

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
Sales Manager
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 Garden Maintenance
Public Garden Employment

General Horticulture (AAS) Program Outcomes:

- Graduates will receive a strong foundation in science and master skillsets utilizing traditional and cutting edge techniques.
- Graduates will demonstrate diverse knowledge and skills required to perform professionally in today's complex multi-disciplinary environment.
- Graduates will exhibit the knowledge necessary to understand horticulture from an historical perspective, as well as current and future trends of industry.