Farmingdale State College
STATE UNIVERSITY OF NEW YORK

Criminal Justice: Law Enforcement Technology

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School of Engineering Technology

Bachelor of Science Degree

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.

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Fall 2017- Subject to Revision

Liberal Arts and Sciences	(61 credits)
EGL 101 Composition I: College Writing (GE)	3
EGL 102 Composition II: Writing About Literature	3
PSY 101 Intro to Psychology (GE)	3
PSY 315 Abnormal Psychology	3
SOC 122 Intro to Sociology (GE)	3
Foreign Language (GE)	3
The Arts (GE)	3
MTH 110 Statistics (GE)	3
Natural Science with a Lab (GE)	4
American/Other World/Western Civilization History (GE)	3
Humanities (GE)	3
Liberal Arts/Science Elective (GE)	3
Free Liberal Arts/Sciences Elective	24

Note: The Liberal Arts and Science electives must include at least 9 credits selected from the following courses: PSY 300, PSY 304, PSY 331, SOC 223, SOC 224, SOC 225, SOC 229, SOC 231.

Required courses in the Major	(61 credits)
CRJ 100 Introduction to Criminal Justice	3
CRJ 101 Law Enforcement Community Relations	3
CRJ 115 Computer Forensics	3
CRJ 200 Criminal Investigation	3
CRJ 201 Criminalistics	3
CRJ 203 Criminology	3
CRJ 204 Criminal Law	3
CRJ 205 Criminal Procedure Law	3
CRJ 217 Computer Forensics II	3
CRJ 218 Computer Forensics III	3
CRJ 307 Criminal Justice Database Operation	4
CRJ 308 Forensic Technology	4
CRJ 406 Crime Analysis and Mapping	4

CRJ 407 Crime Prevention Systems	4
CRJ 410W Senior Project	3
Free Electives	12
Total Credits:	**122**

Degree Type: BS
Total Required Credits: 122

Course Descriptions

EGL 101 Composition I: College Writing (GE)
This is the first part of a required sequence in college essay writing. Students learn to view writing as a process that involves generating ideas, formulating and developing a thesis, structuring paragraphs and essays, as well as revising and editing drafts. The focus is on the development of critical and analytical thinking. Students also learn the correct and ethical use of print and electronic sources. At least one research paper is required. A grade of C or higher is a graduation requirement. Note: Students passing a departmental diagnostic exam given on the first day of class will remain in EGL 101; all others will be placed in EGL 097. Prerequisite is any of the following: successful completion of EGL 097; an SAT essay score (taken prior to March 1, 2016) of 7 or higher; an SAT essay score (taken after March 1, 2016) of 5 or higher; on-campus placement testing. Credits: 3

EGL 102 Composition II: Writing About Literature
This is the second part of the required introductory English composition sequence. This course builds on writing skills developed in EGL 101, specifically the ability to write analytical and persuasive essays and to use research materials correctly and effectively. Students read selections from different literary genres (poetry, drama, and narrative fiction). Selections from the literature provide the basis for analytical and critical essays that explore the ways writers use works of the imagination to explore human experience. Grade of C or higher is a graduation requirement. Prerequisite(s): EGL 101 Credits: 3

PSY 101 Intro to Psychology (GE)
This course is designed to present basic psychological concepts and to introduce students to the scientific study of behavior. Core topics include methods of psychological research, the biological bases of behavior, principles of learning, memory and cognition, personality, and psychopathology. Other selected topics to be covered would include the following: motivation and emotion, life-span development, social psychology, health psychology, sensation and perception, intelligence, human sexuality, statistics, and altered states of consciousness. Credits: 3

PSY 315 Abnormal Psychology
In this course the student will learn about concepts, theories, and issues in psychopathology (the study of mental illness and behavioral disorders). Topics may include historical background, mental health professionals, legal issues, normality/abnormality, etiology/assessment/ diagnosis/therapy, anxiety/stress/depression, personality disorders, sexual deviance, schizophrenia, neurological dysfunction, substance abuse, and psychophysiological disorders. The applications of psychology to personal problem solving will also be explored. Prerequisite(s): PSY 101 Credits: 3

SOC 122 Intro to Sociology (GE)
This is an introductory course designed to familiarize students with the field of sociology. In addition to learning about the central concepts and major theoretical sociological perspectives, students study human behavior in groups, the organization of social life, the impact of social institutions on individuals, and the process of sociological research. Great emphasis is also placed upon development of students' "sociological imagination" – specifically, the ability to understand the ways that our

individual lives are shaped by larger social forces and institutions. Note: Students who take SOC 122 may not receive credit for SOC 122W. Credits: 3

MTH 110 Statistics (GE)
Basic concepts of probability and statistical inference. Included are the binominal, normal, and chi-square distributions. Practical applications are examined. Computer assignments using Minitab form an integral part of the course. Prerequisite(s): MP2 or MTH 015 Credits: 3

CRJ 100 Introduction to Criminal Justice
Philosophical and historical background of policing throughout the free world; special emphasis is placed on the heritage of British and American policing, the governmental role of law enforcement in society; administration of American justice at all levels of government. The role of technology in law enforcement and crime prevention; history, modes and impact. Credits: 3

CRJ 101 Law Enforcement Community Relations
Emphasis will be placed on the numerous and complex factors involved in the areas of human relations as they affect law enforcement. An examination of prejudices, myths, and discrimination, how to control them, and their impact in law enforcement. The use of information management tools for classifying cases with respect to issues of bias. Credits: 3

CRJ 115 Computer Forensics
This course is an orientation to the study of computer forensic methods. The course will include an analysis of computer hardware that is utilized in forensic investigations such as motherboards, BIOS settings, hard and floppy disk drives and controllers, SCSI controllers and drives and implementations, RAID controllers, boot sequences and related components. Also, this course will introduce the student to methods used in analyzing data storage devices and will include an examination of the physical structures, surfaces and formats of hard disks and other media. Credits: 3

CRJ 200 Criminal Investigation
Introduction to criminal investigation, technical methods used at the crime scene; development of clues, identification of suspects; criminal investigation procedures including the theory of an investigation; conduct at crime scenes; collection and preservation of physical evidence, analysis of the elements that constitute all crimes. Note: The course may be offered as a writing intensive course at the discretion of the Criminal Justice Department. Students cannot get credit for both CRJ 200 and CRJ 200W. Prerequisite(s): EGL 101 Credits: 3

CRJ 201 Criminalistics
The role of the Crime Laboratory in the law enforcement organization; scope of a criminalistic operation; organizational orientation of the criminalistics laboratory. Reconstruction of the crime scene through computer animation methods. Credits: 3

CRJ 203 Criminology
This course introduces anthropological, biological and economical, ecological, philosophical, psychological, psychiatric and sociological theories of criminal behavior as well as research evidence on the basic patterns of crime and crime trends. Computer-based data analysis of index crimes selected from the Uniform Crime Reports compiled by the Federal Bureau of Investigation and National Crime Victimization Survey. Credits: 3

CRJ 204 Criminal Law
Elements and proof of frequent concern in law enforcement, with reference to principal rules of criminal liability. Importance of criminal law at the enforcement levels is considered from crime prevention to courtroom appearance. Particular emphasis will be placed on the New York State Penal Law. Case analysis method is employed to study case precedents. Computer software for rapid information retrieval will be introduced. Credits: 3

CRJ 205 Criminal Procedure Law
Rules of evidence of particular importance at the operational level in law enforcement with emphasis on criminal procedure in areas such as arrest, force, and search and seizure. Particular emphasis will be placed on the New York State Criminal Procedure Law. The use of case tracking tools within prosecution and court units and systems; the use of case outcome analytical techniques to determine trends in practice and effectiveness. Credits: 3

CRJ 217 Computer Forensics II
Computer Forensics II is a continuation of CRJ 115. This course covers topics such as disk geometry and organization. Master boot sector record and volume record creation and organization, file signatures for data type identification, cyclic redundancy checksum for data integrity validation, and RSA's MD5 hash values for file authentication. Other subjects introduced include the UNIX "grep" search utility, search string techniques and file signature matching, and recovery of files that are intentionally deleted, hidden, or renamed. The course examines advanced computer-based evidentiary and "discovery" data methodologies, and includes a study of evidence identification, documentation, and chain of custody procedures. Prerequisite(s): CRJ 115 Credits: 3

CRJ 218 Computer Forensics III
This course examines federal, state, and local computer fraud statutes to provide the student with a legal foundation to approach computer investigations. The course includes lecture elements that provide the student with the skills necessary to conduct successful computer-related investigations, and includes an examination of the processes involved in preparing an affidavit for a search warrant. Prerequisite(s): CRJ 217 Credits: 3

CRJ 307 Criminal Justice Database Operation
The course introduces students to the meaning and structure of criminal justice data, the design of and security for criminal, legal and classified databases, the management of competing information security and confidentiality concerns, and the rights to access criminal justice records on the part of the public, corporate interests and the media. The course examines criminal justice data collection throughout the legal lifecycle (complaint, arrest, prosecution, court, corrections, probation and parole); understanding all through the prism of authenticity, value, timeliness, accountability, integration and prevention. Prerequisite(s): CRJ 115 Corequisite(s): CRJ 307L Credits: 4

CRJ 308 Forensic Technology
The course will introduce the student to photographic and video equipment and methods that are used for crime scene documentation and police surveillance operations, including forensic imaging analysis. The course will include a study of camera design and operation, lens selection and functions, role of light and illumination technologies, digital image editing software, and a review of the chain of custody procedures in recording and archiving images for courtroom presentation. Prerequisite(s): CRJ 201 Corequisite(s): CRJ 308L Credits: 4

CRJ 406 Crime Analysis and Mapping
Students will learn how to analysis and apply sampled data distributions to crime patterns. Digital tools will allow students to identify trends and patterns in order to determine police service allocations based on collected data The science and foundation principles of geographical information systems design and operation will be reviewed. Homeland Security implications as well as publicly available geospatial information will also be covered as specific applications for mapping techniques. Prerequisite(s): CRJ 307 Corequisite(s): CRJ 406L Credits: 4

CRJ 407 Crime Prevention Systems
This course will introduce the student to the theory and practice of crime prevention and examine topics such as the relationship of the built environment to crime, designing out crime, threat assessment, target hardening, and the like. The course will also focus on residential and commercial crime prevention systems. In addition, an analysis of false alarms from the perspective of the environment, end-user errors, and equipment malfunctions will be conducted. The course concludes

with a review of police studies that have examined the nature and extent of the false alarm problem as well as the laws that regulate the use of crime prevention systems by public and private agencies. Prerequisite(s): CRJ 406 Corequisite(s): CRJ 407L Credits: 4

CRJ 410W Senior Project
Independent study of a Security Systems or related area of interest to both the student and a faculty member who shall act as project Advisor. The project selected will utilize competencies acquired in previous Security Systems and related courses. Credits: 3

Admission to Farmingdale State College - State University of New York is based on the qualifications of the applicant without regard to age, sex, marital or military status, race, color, creed, religion, national origin, disability or sexual orientation.