Bachelor of Science Degree in Interdisciplinary Studies - Cybercrime Major

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Philip Mann, Program Coordinator and Faculty Advisor (pmann@odu.edu)

Four-Year Plan - IDS - Cybercrime Major - BS (http://catalog.odu.edu/undergraduate/collegeofartsletters/interdisciplinarystudies/cybercrime/ids-cybercrime-bs-fouryearplan/)

- The four-year plan is a suggested curriculum to complete this degree program in four years. It is just one of several plans that will work and is presented only as broad guidance to students. Each student is strongly encouraged to develop a customized plan in consultation with their academic advisor. Additional information can also be found in Degree Works.

This program explores cybercrime from an interdisciplinary perspective that merges the disciplines of criminal justice, computer science, and information technology. Students will receive a foundational understanding of crime and criminal justice and more in-depth understanding about cybersecurity, cyber law, and digital forensics. In addition, students will receive a basic introduction to information technology.

While many crimes have decreased over the past 25 years, the one group of crimes that has increased dramatically is cybercrimes. Careers responding to cybercrime have grown tremendously over the past decade. While many of these careers require in-depth understanding about computer engineering and computer science, many careers also require a broader orientation grounded in the social sciences. Across the country there are 350,000 current vacancies in cybersecurity-related careers. Roughly ten percent of those vacancies are in Virginia.

Cybersecurity experts across the world agree that academic programming should be interdisciplinary in nature. While many universities have difficulty developing interdisciplinary majors, the IDS degree at ODU provides a national model that can be used to develop a cybercrime major grounded in the social sciences. ODU’s current cybersecurity and cyber operations majors fill the employment gap for technologically-driven careers. The cybercrime major will fill the employment gap in the area of policy- and legal-driven careers.

Lower-Division General Education

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Written Communication</td>
<td>**</td>
</tr>
<tr>
<td>Oral Communication</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics (MATH 102M or MATH 103M with a C or better and MATH 162M required)</td>
<td>6</td>
</tr>
<tr>
<td>Language and Culture</td>
<td>0-6</td>
</tr>
<tr>
<td>Information Literacy and Research</td>
<td>3</td>
</tr>
<tr>
<td>Human Creativity</td>
<td>3</td>
</tr>
<tr>
<td>Interpreting the Past</td>
<td>3</td>
</tr>
<tr>
<td>Literature</td>
<td>3</td>
</tr>
<tr>
<td>Philosophy and Ethics</td>
<td>3</td>
</tr>
<tr>
<td>The Nature of Science</td>
<td>8</td>
</tr>
<tr>
<td>Impact of Technology (met in the major by CYSE 200T/IT 200T)</td>
<td>3</td>
</tr>
<tr>
<td>Human Behavior (CRJS 215S required)</td>
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</tbody>
</table>

Interdisciplinary Studies Core

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>IDS 300W</td>
<td>Interdisciplinary Theory and Concepts (grade of C or higher required)</td>
</tr>
<tr>
<td>IDS 493</td>
<td>Interdisciplinary Electronic Portfolio Project</td>
</tr>
<tr>
<td>CRJS 368</td>
<td>Internship (Students may also enroll in CYSE 494 upon approval by the Director of the Center for Cybersecurity Education and Research.)</td>
</tr>
<tr>
<td>or CYSE 368</td>
<td>Cybersecurity Internship</td>
</tr>
</tbody>
</table>

Cybercrime Core * 15

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRJS 310</td>
<td>Cybercriminology: Foundations</td>
</tr>
<tr>
<td>CYSE/CRJS 406</td>
<td>Cyber Law</td>
</tr>
<tr>
<td>CYSE 407</td>
<td>Digital Forensics</td>
</tr>
<tr>
<td>CRJS 409</td>
<td>Crime and Computer Applications</td>
</tr>
<tr>
<td>CRJS 222</td>
<td>The Criminal Justice System</td>
</tr>
<tr>
<td>SOC 337</td>
<td>Social Research Methods</td>
</tr>
</tbody>
</table>

Select three from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRJS 319</td>
<td>Public and Private Security</td>
</tr>
<tr>
<td>CRJS 320</td>
<td>Law and Social Control</td>
</tr>
<tr>
<td>CRJS 323</td>
<td>Police in American Society</td>
</tr>
<tr>
<td>CRJS 340</td>
<td>White-Collar Crime</td>
</tr>
<tr>
<td>CRJS 344</td>
<td>Social Science and Crime Mapping</td>
</tr>
<tr>
<td>CRJS 345</td>
<td>Organized Crime: A Survey of Domestic and World-Wide Organized Crime Activities</td>
</tr>
<tr>
<td>CRJS 404</td>
<td>Law and Digital Forensics</td>
</tr>
<tr>
<td>CRJS 415</td>
<td>Courtroom As a Social System</td>
</tr>
<tr>
<td>CRJS 421</td>
<td>Deviant Behavior</td>
</tr>
<tr>
<td>CRJS 462</td>
<td>Substantive Criminal Law</td>
</tr>
</tbody>
</table>

Technical Base ** 15

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>IT/CYSE 200T</td>
<td>Cybersecurity, Technology, and Society</td>
</tr>
<tr>
<td>CYSE 250</td>
<td>Basic Cybersecurity Programming and Networking</td>
</tr>
<tr>
<td>CYSE 300</td>
<td>Introduction to Cybersecurity</td>
</tr>
</tbody>
</table>

Select two from the following: ***

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 133</td>
<td>Introduction to Programming in Java</td>
</tr>
<tr>
<td>CS 150</td>
<td>Problem Solving and Programming I</td>
</tr>
<tr>
<td>CS 170</td>
<td>Introduction to Computer Architecture I</td>
</tr>
<tr>
<td>CS 250</td>
<td>Problem Solving and Programming II</td>
</tr>
<tr>
<td>IT 201</td>
<td>Introduction to Information Systems</td>
</tr>
<tr>
<td>IT 205</td>
<td>Introduction to Object-Oriented Programming</td>
</tr>
<tr>
<td>IT 315</td>
<td>Introduction to Networking and Security</td>
</tr>
<tr>
<td>IT 325</td>
<td>Web Site and Web Page Design</td>
</tr>
<tr>
<td>IT 450</td>
<td>Database Concepts</td>
</tr>
</tbody>
</table>

Total Hours 92-98

* Grade of C or better required in both written communication courses and in ENGL 110C before declaring major. ENGL 231C is recommended as the second written communication course.

** Further math may be necessary for upper-level electives. Offered online only.

*** Other courses may be substituted with the approval of the program coordinator.

++ Prerequisites may be required; review the course description or consult an advisor. Other courses may be substituted with the approval of the program coordinator.

+++ Students may also select cybersecurity (CYSE) courses at the 300 or 400 level not otherwise required.
Electives
Elective courses may be taken for the remainder of the minimum 120 credits required for the degree.

Upper-Division General Education
• Option A. Approved Minor, 12-24 hours; also second degree or second major
• Option B. Interdisciplinary Minor, 12 hours specified by the department, 3 of which may be in the major area of study
• Option C. An approved certification program such as teaching licensure
• Option D. Two Upper-Division Courses from outside the College of Arts and Letters or from the Social Science Component within the College of Arts and Letters that are not required by the major (6 hours).

Requirements for Graduation
Requirements for graduation include a minimum cumulative grade point average of 2.00 overall and in the major, 120 credit hours, which must include both a minimum of 30 credit hours overall and 12 credit hours of upper-level courses in the major program from Old Dominion University, completion of ENGL 110C, ENGL 211C or ENGL 221C or ENGL 231C, and the writing intensive (W) course in the major with a grade of C or better, and completion of Senior Assessment.

Honors Program in Interdisciplinary Studies
Qualified students in the interdisciplinary studies majors may earn honors by fulfilling all degree requirements and meeting the honors requirements listed below.

1. Attain an overall grade point average of 3.25.
2. Attain a grade point average in the major of 3.5.
3. Complete two upper-division courses designated as honors courses: IDS 300W and IDS 493.
4. Complete at least 60 credits at Old Dominion University, 54 of which must be in grade-point graded courses.

An application for departmental honors must be provided by the student for approval by the Director of Interdisciplinary Programs.

Cybercrime Interdisciplinary Minor
Philip Mann, Program Coordinator and Faculty Advisor (pmann@odu.edu)

The interdisciplinary minor in cybercrime provides students with an understanding of crime and deviance in the digital environment. Students will be required to take two introductory courses in the cybercrime and cybersecurity majors, respectively. In these core courses, students will learn the fundamental issues involved in cybercrime (computer system architectures, critical infrastructures, cyber threats and vulnerabilities) and cybercrime (defining and describing the different types of computer-related crimes, the techniques used by law enforcement, and the legal issues inherent in combating cybercrime). They can then expand their knowledge by taking electives in psychology, political science, criminal justice, information technology, or cybersecurity. The minor aspires to develop graduates who can think critically about how human behavior impacts and is impacted by computer technologies.

Three credit hours in the interdisciplinary minor may be in the major if a major course is listed as an option for the interdisciplinary minor. As such, it will be credited toward both the major and the interdisciplinary minor. Interdisciplinary minors require 12 credit hours of 300/400-level courses selected from at least two different disciplines with a maximum of six credits from any one discipline. Course substitutions may be approved by the interdisciplinary minor coordinator.

For completion of a minor, a student must have a minimum grade point average of 2.00 in all courses specified as a requirement for the minor exclusive of lower-level courses and prerequisite courses and complete a minimum of six hours in upper-level courses in the minor requirement at Old Dominion University.

<table>
<thead>
<tr>
<th>Prerequisite</th>
<th>Core</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRJS 215S</td>
<td>Introduction to Criminology</td>
<td>3</td>
</tr>
<tr>
<td>CRJS 310</td>
<td>Cybercriminology: Foundations</td>
<td>3</td>
</tr>
</tbody>
</table>

Select two of the following electives:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CYSE 301</td>
<td>Cybersecurity Techniques and Operations</td>
</tr>
<tr>
<td>CYSE 307</td>
<td>Digital Forensics</td>
</tr>
<tr>
<td>CRJS 340</td>
<td>White-Collar Crime</td>
</tr>
<tr>
<td>CRJS 344</td>
<td>Social Science and Crime Mapping</td>
</tr>
<tr>
<td>CRJS/CYSE 406</td>
<td>Cyber Law</td>
</tr>
<tr>
<td>PHIL 355E</td>
<td>Cybersecurity Ethics</td>
</tr>
<tr>
<td>PSYC 307</td>
<td>Institutionalization of Human-Centered Computing</td>
</tr>
<tr>
<td>PSYC 344</td>
<td>Human Factors</td>
</tr>
<tr>
<td>POLS 350T</td>
<td>Technology and War</td>
</tr>
</tbody>
</table>

Total Hours: 12

* Not included in the calculation of the grade point average for the minor.
** The two courses from the core and the two electives must be selected from at least two different disciplines with no more than six credits from any one discipline.

CYBERSECURITY Courses

CYSE 001. Cybersecurity SFS LeADERS. 0 Credits.
This course outlines the curricular and co-curricular requirements for Scholarship for Service Students in the Cyber LeADERS program.

CYSE 100. Cyber Explorers and University Orientation. 1 Credit.
This course provides an introduction to cyber hygiene and orientation to university life.

CYSE 200T. Cybersecurity, Technology, and Society. 3 Credits.
Students will explore how technology is related to cybersecurity from an interdisciplinary orientation. Attention is given to the way that technologically-driven cybersecurity issues are connected to cultural, political, legal, ethical, and business domains.

CYSE 201S. Cybersecurity and the Social Sciences. 3 Credits.
This course addresses the social, political, legal, criminological, and economic dimensions of cybersecurity through a social science framework. Students are introduced to a human-factors approach to understanding cybersecurity threats. Attention is given to the social factors that contribute to cyber incidents and the political and legal mechanisms that are developed to control the behaviors of those who create risks and cybersecurity incidents. The class also explores how cybersecurity is studied by social scientists in various social science disciplines.

CYSE 202G. Information Literacy for Cybersecurity. 3 Credits.
This course provides an in-depth introduction to information literacy from library and information science, information ethics, and computer science perspectives along with applications to cybersecurity research and professional activity. This course is aligned with Old Dominion University’s general education learning outcomes for information literacy. Prerequisites: ENGL 110C.

CYSE 250. Basic Cybersecurity Programming and Networking. 3 Credits.
This course introduces the cybersecurity-centric programming and networking concepts. Students will develop problem solving skills by using low-level programming languages (including C and assembly) and learn fundamentals of network protocols. This course is the technical base for students to take cybersecurity major courses. No prior knowledge of programming and networking is assumed. Prerequisite: MATH 162M or higher.
CYSE 270. Linux System for Cybersecurity, 3 Credits.
This course introduces the basic operations in major Linux distros for cybersecurity using both graphical interface and command line interface. Students will learn about the basic installation and configuration, file systems management, shell scripts, and user authentication in Linux systems. This course is the technical base for students to take cybersecurity major courses.

CYSE 280. Windows System Management and Security, 3 Credits.
This course introduces tools and techniques used to configure, manage and implement Windows and its security-related features. Students will install, configure, manage and secure Windows client & server operating systems and related networking environment using a variety of software tools. This course also details how to mitigate malware threats, identify security issues by using auditing and the Advanced Threat Analysis feature in Windows Server, secure virtualization platform, and use new deployment options for enhancing the security.

CYSE 300. Introduction to Cybersecurity, 3 Credits.
This course provides an overview of the field of cybersecurity. It covers core cybersecurity topics including computer system architectures, critical infrastructures, cyber threats and vulnerabilities, cryptography, information assurance, network security, and risk assessment and management. Students are expected to become familiar with fundamental security concepts, technologies and practices, and develop a foundation for further study in cybersecurity. Prerequisite: MATH 162M or permission of the instructor.

CYSE 301. Cybersecurity Techniques and Operations, 3 Credits.
This course introduces tools and techniques used to secure and analyze large computer networks and systems. Students will explore and map networks using a variety of diagnostic software tools, learn advanced packet analysis, configure firewalls, write intrusion detection rules, perform forensic investigation, and practice techniques for penetration testing. Prerequisite: MATH 162M or permission of the instructor.

CYSE 368. Cybersecurity Internship, 1-6 Credits.
This course allows students to volunteer to work in an agency related to cybersecurity. Students must volunteer for 50 hours per course credit and complete course assignments. Prerequisite: approval by the Director of the Center for Cybersecurity Education and Research.

CYSE 395. Topics in Cybersecurity, 1-3 Credits.
Study of selected topics in cybersecurity. Prerequisites: junior standing.

CYSE 404. Law and Digital Forensics, 3 Credits.
This course will focus on the intersection of digital forensics and the criminal justice system, namely how digital forensics is understood and applied to key criminal justice, constitutional and statutory considerations within the criminal justice system. Students will explore such topics as the nature and types of cybercrime; search and seizure principles in the digital world; finding, handling and maintaining chain of custody of digital evidence; interviewing individuals relating to digital evidence and related activities; and testifying in court about digital evidence matters. Prerequisites: Junior standing or permission of instructor.

CYSE 406. Cyber Law, 3 Credits.
This course tackles two major cyber law subjects. The first part of the course examines various U.S. laws and legal considerations that impact the digital and cyberspace worlds from traditional civil, and to a lesser extent, traditional criminal perspectives. The second part will familiarize cyber operations professionals about the extent of and limitations on their authorities to ensure operations in cyberspace are in compliance with U.S. law, regulations, directives and policies. The course will also introduce students to miscellaneous cybersecurity topics such as the Federal Acquisition Requirements. Prerequisite: junior standing.

CYSE 407. Digital Forensics, 3 Credits.
This course introduces the basic concepts and technologies of digital forensics. Students will learn the fundamental techniques and tools utilized for collecting, processing, and preserving digital evidence on computers, mobile devices, networks, and cloud computing environments. Students will also engage in oral and written communication to report digital forensic findings and prepare court presentation materials. Prerequisites: declared major and junior standing.

CYSE 409. Crime and Computer Applications, 3 Credits.
The purpose of this interdisciplinary course is to introduce students to the ways in which computers are involved in the commission and the investigation of crime. Students will learn the fundamentals of cryptography and steganography and the tools used to perform these activities. Students will also use forensic software to identify, gather, and verify relevant digital evidence. Cross-listed with CRJS 409. Prerequisite: CRJS 310 or permission of instructor.

CYSE 416/516. Cyber Defense Fundamentals, 3 Credits.
This course focuses on cybersecurity theory, information protection and assurance, and computer systems and networks security. The objectives are to understand the basic security models and concepts, learn fundamental knowledge and tools for building, analyzing, and attacking modern security systems, and gain hands-on experience in cryptographic algorithms, security fundamental principles, and Internet security protocol and standards. (Offered fall) Prerequisite: permission of the instructor. Pre- or corequisite: ECE 355 or equivalent or permission of the instructor.

CYSE 417. Digital Leadership, 3 Credits.
This course explores technology as it relates to leadership experiences. Theories, case studies and real world examples are analyzed to show both successful and unsuccessful uses of online and digital approaches that inform leaders' communication strategies. Students will explore how their own digital identities may impact their futures as leaders. They will also learn how to create digital identities that will shape their professional identities throughout their careers. Prerequisites: Junior standing or permission of instructor.

CYSE 419/519. Cyber Physical System Security, 3 Credits.
Cyber Physical Systems (CPS) integrate computing, networking, and physical processes. The objectives of this course are to learn the basic concepts, technologies and applications of CPS, understand the fundamental CPS security challenges and national security impact, and gain hands-on experience in CPS infrastructures, critical vulnerabilities, and practical countermeasures. Prerequisite: ECE 355 or permission of the instructor.

CYSE 420/520. Applied Machine Learning in Cybersecurity, 3 Credits.
This course introduces the concepts and technologies of machine learning with a focus on applications related to cybersecurity. The objectives are to learn fundamental knowledge and practical experience and identify the use case of machine learning techniques in cybersecurity. The course will discuss traditional and advanced machine learning techniques, e.g., neural network, deep convolutional neural network, generative adversarial network, and transfer learning algorithms. Students will engage in oral and written communication by reporting and presenting the materials of the course project. Prerequisites: CYSE 250 or permission of the instructor.

CYSE 425W/525. Cybersecurity Strategy and Policy, 3 Credits.
This writing intensive course explores cybersecurity policy and strategy and introduces students to the essentials of strategy development and policy making in cybersecurity. Topics considered include planning principles in cyber strategy; risk management and cybersecurity policy; the connections between cybersecurity policies, businesses, and governmental institutions; the knowledge, skills, and abilities needed to develop and implement cybersecurity policy; the social, political and ethical implications that arise in cybersecurity policies and strategies; strategies to assess cybersecurity policy; and the ties between national security and cybersecurity policy. Prerequisites: ENGL 110C and ENGL 211C or ENGL 221C or ENGL 231C with a grade of C or better and CYSE 200T or POLS 101S.

CYSE 426/526. Cyber War, 3 Credits.
This course explores the national security dimensions of cybersecurity and examines cyber war in international relations. Exploration of cyber war begins with an examination of cybersecurity as a component of national security and investigates the topics of U.S National Cybersecurity and other national approaches to cyber war. The topics of cyber deterrence, cyber as a military domain, the roles of international organizations in cyber war, cyber terrorism, the role of social media, and information warfare will be discussed. The international dimension of cybersecurity is also discussed. Prerequisites: CYSE 200T or POLS 101S or permission of the instructor.
CYSE 450. Ethical Hacking and Penetration Testing. 3 Credits.
This course introduces the basic terminologies used in ethical hacking and useful tools in relation to penetration testing on Kali Linux. Students will learn to explore the vulnerabilities in various systems and operate the industry-leading tools and framework to perform the penetration testing on different target systems. Prerequisites: CYSE 270 and CYSE 301 or permission of the instructor.

CYSE 494. Entrepreneurship in Cybersecurity. 3 Credits.
This course is designed to help students enhance their personal and professional development through innovation guided by faculty members and professionals. It offers students an opportunity to integrate disciplinary theory and knowledge through developing a nonprofit program, product, business, or other initiative. The real-world experiences that entrepreneurs provide will help students understand how academic knowledge leads to transformations, innovations, and solutions to different types of problems. The course can be delivered either as an independent project for individual students or as group projects similar to those sometimes offered in topics courses. Prerequisite: Approval by the Director of the Center for Cybersecurity Education and Research.

CYSE 495/595. Topics in Cybersecurity. 1-3 Credits.
The advanced study of selected cybersecurity topics designed to permit small groups of qualified students to work on subjects of mutual interest. These courses will appear in the course schedule, and will be more fully described in information distributed to academic advisors. Prerequisite: permission of the instructor.

CYSE 496/596. Topics in Cybersecurity. 1-3 Credits.
The advanced study of selected cybersecurity topics designed to permit small groups of qualified students to work on subjects of mutual interest. These courses will appear in the course schedule, and will be more fully described in information distributed to academic advisors. Prerequisite: permission of the instructor.

CYSE 497/597. Tutorial Work in Special Topics in Cybersecurity. 1-3 Credits.
Independent reading and study on a topic to be selected under the direction of an instructor. Conferences and papers as appropriate. Prerequisites: senior standing and approval of the Director of the Center for Cybersecurity Education and Research.

CYSE 498/598. Tutorial Work in Special Topics in Cybersecurity. 1-3 Credits.
Independent reading and study on a topic to be selected under the direction of an instructor. Conferences and papers as appropriate. Prerequisites: senior standing and approval of the Director of the Center for Cybersecurity Education and Research.

CRIMINAL JUSTICE Courses

CRJS 215S. Introduction to Criminology. 3 Credits.
Introduction to criminology as a science, including the study of crime, criminals, and society's response to them.

CRJS 222. The Criminal Justice System. 3 Credits.
A study of social response to criminal behavior as cases move through the machinery of justice. Describes the interdependence of crime statistics, law enforcement, criminal courts, and correctional procedures for purposes of analyzing the entire system.

CRJS 226S. Honors: Introduction to Criminology. 3 Credits.
Open only to students in the Honors College. Special honors section of CRJS 215S.

CRJS 262. Law and the Criminal Justice System. 3 Credits.
The course covers both substantive and procedural law related to the definitions, investigations, processing and punishment of crimes. It is meant to provide the students with an overall understanding of the articulation between law and the criminal justice system.
CRJS 340. White-Collar Crime. 3 Credits.
This course will describe and explain corporate, state-corporate, government (state) crime and crimes of globalization from sociological and criminological perspectives. Although the course will deal with the general topic of white collar crime, the specific focus will be on organizational offenders such as business corporations, government, state agencies and international finance organizations. Prerequisites: CRJS 215S.

CRJS 344. Social Science and Crime Mapping. 3 Credits.
A critical exploration of applying geographic information system (GIS) to view, understand, question, interpret, and visualize social science and crime data that reveal relationships, patterns, and trends. Students will learn to 1) frame a research question or hypothesis from a location-based perspective; 2) collect, create and examine geographically referenced demographic, social, and criminological data; 3) learn to use GIS mapping software to visualize, manage and analyze this data in order to investigate the relationship between geographic, demographic, social and criminological variables; and 4) arrive upon decisions and conclusions and communicate these via the creation of publishable maps. Prerequisites: SOC 201S or CRJS 215S or permission of the instructor.

CRJS 345. Organized Crime: A Survey of Domestic and World-Wide Organized Crime Activities. 3 Credits.
A broad survey of the history and consequences of organized crime in the United States and the world. Special focus will be directed at the economic, social and developmental effects of organized criminal activities. Prerequisites: CRJS 215S, CRJS 222, or CRJS 262.

CRJS 350. Victimology. 3 Credits.
Examination of the multifaceted problem of criminal victimization. Focuses on defining victimization, the incidents of victimization, social characteristics of victims, treatment of victims in the criminal justice system, and efforts designed to alleviate the consequences of victimization. Prerequisites: SOC 201S or CRJS 215S or six hours of social science perspective or permission of the instructor.

CRJS 355. Crime and the Community. 3 Credits.
This course focuses on the effect of crime on communities and the ways in which communities affect crime. The class considers both ethnographic community studies as well as larger-scale demographic analysis. Prerequisites: CRJS 215S or SOC 201S or permission of the instructor.

CRJS 356. Gangs. 3 Credits.
This course seeks to evaluate issues central to the study of modern gangs, such as gang definitions, prevalence, proliferation, migration, formation, histories, and gang/gang member characteristics. Another objective is to understand why and how young people both join and leave their gangs and explore how gang structure and organization can influence gang and gang member behavior, including their involvement in violence, other illegal acts, their victimization, and the gendered experiences of female gang members. Students will also review assess policies and efforts regarding gang prevention, intervention, and suppression and distinguish between stereotypes/myths and realities about gangs and gang members based on empirical research and theory. Prerequisite: SOC 201S or CRJS 215S.

CRJS 368. Internship. 1-6 Credits.
This course allows students to volunteer to work in an agency related to their major. Students must volunteer for 50 hours per course credit. Prerequisites: Approval by the department internship director.

CRJS 370. State Crime. 3 Credits.
This course explores state crime from a sociological and criminological perspective. It examines historical and current cases of governmental crime at home and abroad. It also explores the intertwinement of states with other states, corporations, and, when applicable, international financial institutions as well as their roles in facilitating or constraining acts of state crime. Finally, the class discusses the problems of control, domestically and internationally. Prerequisites: CRJS 215S or permission of the instructor.

CRJS 375. Crime Prevention. 3 Credits.
This course provides an introduction to the approaches and practices of crime prevention. In addition, the course discusses primary, secondary, and tertiary crime prevention measures aimed at reducing or eliminating crime. Finally, the course addresses research and information on many aspects of crime prevention, including the physical environment and crime, neighborhood crime prevention, and crime in schools. Prerequisites: CRJS 215S or permission of the instructor.

CRJS 395. Topics in Criminal Justice. 1-3 Credits.
A study of selected topics designed for nonmajors or for elective credit within a major. These courses will appear in the course schedule, and will be more fully described in information distributed to academic advisors. Prerequisites: CRJS 215S or permission of the instructor.

CRJS 396. Topics in Criminal Justice. 1-3 Credits.
A study of selected topics designed for nonmajors or for elective credit within a major. These courses will appear in the course schedule, and will be more fully described in information distributed to all academic advisors. Prerequisites: CRJS 215S or permission of the instructor.

CRJS 401. Understanding Violence. 3 Credits.
Examines a variety of forms of violence from suicide, child abuse, rape and family violence, terrorism, torture, death squads and the death penalty and hate violence. Explores the circumstances, rationalizations, patterns, explanations and effects on survivors. Prerequisites: CRJS 215S or SOC 201S or permission of instructor.

CRJS 403. Violence in the World of Children. 3 Credits.
This child-centered course examines the interaction of adults in violent conflict with the world of children, children's experience of violence and its meaning in the lives of children. Topics include: valuing children, violence toward children in culture, families, and schools; child physical and sexual abuse and neglect; gangs, violent communities and children and war. The effects of childhood experiences of violence, children's coping with violence, and alternatives to violence are also developed. Prerequisites: SOC 201S or CRJS 215S or six hours in human behavior or permission of the instructor.

CRJS 404. Law and Digital Forensics. 3 Credits.
This course will focus on the intersection between digital forensics and the criminal justice system, namely how digital forensics is understood and applied to key criminal justice, constitutional and statutory considerations within the criminal justice system. Students will explore such topics as the nature and types of cybercrime; search and seizure principles in the digital world; finding, handling and maintaining chain of custody of digital evidence; interviewing individuals relating to digital evidence and related activities; and testifying in court about digital evidence matters. Prerequisites: Junior standing or permission of instructor.

CRJS 406. Cyber Law. 3 Credits.
This course tackles two major cyber law subjects. The first part of the course examines various U.S. laws and legal considerations that impact the digital and cyberspace worlds from traditional civil, and to a lesser extent, traditional criminal perspectives. The second part will familiarize cyber operations professionals about the extent of and limitations on their authorities to ensure operations in cyberspace are in compliance with U.S. law, regulations, directives and policies. The course will also introduce students to miscellaneous cybersecurity topics such as the Federal Acquisition Requirements. Cross-listed with CYSE 406 and CPD 406. Prerequisite: CRJS 262 or junior standing.

CRJS 407. Violence Against Children Internationally. 3 Credits.
This course focuses on the research on child maltreatment abuse internationally, in particular on the most common types of child abuse and neglect—i.e., perpetrated by parents, family members. The negative effects of child abuse and neglect are associated subsequently with every social problem from poverty, teenage motherhood, substance abuse, violent crime, domestic violence, and mental health problems, to ill-health—from cancer to diabetes. Prerequisites: SOC 201S or CRJS 215S.
CRJS 408. Children's Rights and the Law. 3 Credits.
A study of the law concerning children from a children's rights perspective. The rights of children in the US will be compared to other nations with special emphasis being placed on the UN Convention on the Rights of the Child. Prerequisites: SOC 201S OR CRJS 215S or related social science Way of Knowing or permission of the instructor.

CRJS 409. Crime and Computer Applications. 3 Credits.
The purpose of this interdisciplinary course is to introduce students to the ways in which computers are involved in the commission and the investigation of crime. Students will learn the fundamentals of cryptography and steganography and the tools used to perform these activities. Students will also use forensic software to identify, gather, and verify relevant digital evidence. Cross-listed with CYSE 409. Prerequisite: CRJS 310 or permission of the instructor.

CRJS 410. Correctional Treatment. 3 Credits.
Methods and programs which attempt to correct the behaviors of juvenile delinquents and adult criminal offenders are explored. Treatment strategies employed in both community and institutional settings are examined. Techniques of classification and the role of the correctional worker are also discussed. Prerequisites: CRJS 215S or CRJS 222 or permission of the instructor.

CRJS 415. Courtroom As a Social System. 3 Credits.
An overview of the role of all of the actors in the American courtroom, the interaction of these actors and the effect of social forces on their behavior. Includes prosecutor, plaintiff and defense lawyers, judges, juries, eye witnesses, expert witnesses, and court staff. Prerequisites: CRJS 222 or permission of the instructor.

CRJS 416. The American Jury. 3 Credits.
A review of the literature, law and practical materials that cover the American jury system from the creation of the master list through the verdict. Includes history, social context and jury selection. Prerequisites: CRJS 222 or permission of the instructor.

CRJS 418. Crime, Society, and the Media. 3 Credits.
A critical exploration of media portrayals of crime and criminal justice. News and entertainment genres are examined. Connections between the mass media and crime, culture, politics, society, and individual behavior receive special attention. Prerequisites: CRJS 215S or CRJS 222 or permission of the instructor.

CRJS 419. Animals and Society. 3 Credits.
This is a class about the role of nonhuman animals in society. Animals are used to entertain, to do work, to provide companionship, to provide food, and more. In this class, we discuss the causes and consequences of both individual and institutional animal abuse. Society's relation to wildlife is also an important component and includes poaching, sport and trophy hunting, and society's reaction to wolves, coyotes, and wild horses in the West. Cross-listed with SOC 419. Prerequisite: Any human behavior (S) course, such as SOC 201S, CRJS 215S, PSYC 201S, COMM 200S, or permission of instructor.

CRJS 421/521. Deviant Behavior. 3 Credits.
A study of various definitions and forms of deviant behavior, theoretical explanations of causes of deviant behavior, and the impact of deviant behavior on society and the individual. Prerequisites: SOC 201S or CRJS 215S or permission of the instructor.

CRJS 423. Public Policy in Criminal Justice. 3 Credits.
A study of the nature, development, and utilization of public policy within agencies of the criminal justice system. Topics include policy formulation, constraints on policy makers, influence of constituencies, and the role of research information. Case studies of issues such as crime control, prison overcrowding, police use of deadly force, the death penalty and parole guidelines will be undertaken. Prerequisite: CRJS 215S.

CRJS 424. Juvenile Justice: Issues, Policy, and Practice. 3 Credits.
This course will provide an overview of significant policy issues in contemporary juvenile justice. The first objective of the course is to examine the nature, extent, treatment and control of juvenile delinquency. The second objective of the course is to discuss the history of juvenile justice policy reform and evidence-based practices. Third, the course will identify and analyze a number of key juvenile justice policy issues, including: mental health, gender disparities, disproportionate minority contact (DMC), trauma, adult transfer and certification, as well as policies and practices for preventing and responding to delinquency. Prerequisites: CRJS 215S.

CRJS 426W/526. Criminological Theory. 3 Credits.
An in-depth study of the major theoretical issues in criminology. Deals extensively with issues of crime causation. This is a writing intensive course. Prerequisites: Senior standing, CRJS 215S, and grade of C or better in ENGL 211C or ENGL 221C or ENGL 231C, or permission of the instructor.

CRJS 427/527. Gender-Based Violence. 3 Credits.
This course takes an expansive and intersectional approach to studying various forms of gender-based violence, from the interpersonal to the systemic, institutional, and cultural. Prevalence, risk factors, theoretical explanations, and legal remedies related to topics such as intimate partner violence, sexual assault on college campuses, gender-based violence in the military, sexual violence against undocumented immigrants, commercial sexual exploitation, and racism and reproductive health will be examined. Prerequisites: SOC 201S or CRJS 215S or other human behavior course or permission of instructor.

CRJS 430. Homicide. 3 Credits.
This course explores the topic of homicide in the U.S. It includes a discussion of the types of homicide, historical patterns and trends, and characteristics of offenders and victims. A variety of theoretical frameworks are utilized to examine homicide at micro and macro levels. In-depth examination of specific types of homicide is included. Prerequisites: SOC 201S or CRJS 215S or another human behavior course.

CRJS 431. Serial Offenders. 3 Credits.
This course explores the topic of serial offenders, also referred to as repeat offenders, recidivists, and career criminals. The course begins with an overview and discussion of patterns of crime, followed by a discussion of relevant theoretical perspectives. We also discuss profiling and the role it can play in the investigation of serial crimes. Next, we move into modules devoted to specific types of crime (arson, rape, homicide, etc.), and discuss the research on serial offenders in each group. Finally, prevention, as well as social policy issues, are addressed. Prerequisites: SOC 201S or CRJS 215S.

CRJS 436. Capstone Research Project. 3 Credits.
Students work in groups to plan, design, and carry out a research project. Final papers which report the results for the study are presented in a formal research seminar. The projects reflect the knowledge gained from undergraduate work and training received in STAT 130M and SOC 337. Prerequisites: Senior standing, STAT 130M and SOC 337.

CRJS 441/541. Drugs and Society. 3 Credits.
The study of sociological and social-psychological explanations of drug-use behaviors and of legal and medical control of drugs. Topics include changes in the legal status of drugs, cross-cultural and historical variations in the control of drugs, and social epidemiology of drug use in contemporary society. Prerequisites: SOC 201S or CRJS 215S.

CRJS 444. Community Justice. 3 Credits.
This is a service learning course designed to study how the emerging field of community justice, a neighborhood-based strategy, can reduce crime and improve public safety by investing in social, human and cultural capital. Prerequisites: SOC 201S or CRJS 215S.

CRJS 445. Workplace Law and Society. 3 Credits.
This course examines the laws of the workplace from a sociological and issue-driven approach considering two perspectives—both employer and employee. Relevant laws are identified, explored and made relevant through examples of their application in real-world situations. Sometimes the wisdom of these laws will be challenged; students will be encouraged to raise questions about a law's utility, justice or fairness, whether in principle or in application. Prerequisite: Junior standing.
CRJS 448. Women, Sex Discrimination and the Law. 3 Credits.
This course introduces students to legal issues which specifically affect women and examines historical attitudes that have been used to justify differential treatment of women. It explores various legal approaches used to achieve equal protection under the law and examines a variety of specific topics such as: the equal protection analysis; Title VII and Title IX and their relationship to sex discrimination; affirmative action; and reproductive freedom. Prerequisites: CRJS 215S or permission of the instructor.

CRJS 450/550. Blacks, Crime and Justice. 3 Credits.
Examines historical and contemporary theories and research on African-Americans, criminal behavior and the administration of justice. Selected topics will include African-American perspectives, the death penalty, victimization, police brutality, and justice systems in Africa and the Caribbean. Prerequisites: CRJS 215S and CRJS 222 or permission of the instructor.

CRJS 451. Race, Ethnicity, Crime and Justice. 3 Credits.
This course will examine the intersectionality of race, ethnicity, crime, justice and the operation of the criminal justice system and will critically assess controversial issues surrounding race, ethnicity, crime, and justice. Students will discuss contemporary social justice issues as they relate to race, ethnicity, crime, and justice. The theoretical frameworks that explain the intersection between race, ethnicity, crime and justice will be examined. The course will also investigate the broad range of policy issues and recommendations impacting communities of color and the administration of criminal and social justice. Prerequisite: CRJS 215S or SOC 201S.

CRJS 452. Diversity in Criminal Justice Organizations. 3 Credits.
This course examines the impact of diversity, culture, and ethnic origin in criminal justice organizations. The course is designed to better prepare students to meet the challenge of diversity in criminal justice organizations. Prerequisites: SOC 201S or CRJS 215S or permission of instructor.

CRJS 462/562. Substantive Criminal Law. 3 Credits.
This course deals with the major substantive concepts involved in American criminal law, including development of criminal law, elements of criminal liability, defenses against criminal responsibility, and descriptions and definitions of specific offenses. Prerequisites: CRJS 215S or CRJS 222 or permission of the instructor.

CRJS 475/575. Criminal Justice Systems Around the World. 3 Credits.
The study of criminal justice systems around the world in order to understand how criminal behavior is defined and responded to in various cultures. Cultural differences will be highlighted in order to recognize that definitions of and responses to crimes closely reflect the cultures in which they exist. Prerequisites: CRJS 215S or CRJS 222 or permission of the instructor.

CRJS 494. Entrepreneurship in Sociology/Criminal Justice. 3 Credits.
This course is designed to help students enhance their personal and professional development through innovation guided by faculty members and professionals. It offers students an opportunity to integrate disciplinary theory and knowledge through developing a nonprofit program, product, business, or other initiative. The real-world experiences that entrepreneurships provide will help students understand how academic knowledge leads to transformations, innovations, and solutions to different types of problems. The course can be delivered either as an independent project for individual students or as group projects similar to those sometimes offered in topics courses. Prerequisite: junior standing.

CRJS 496/596. Topics in Criminal Justice. 3 Credits.
The advanced study of selected topics designed to permit small groups of qualified students to work on subjects of mutual interest which, due to their specialized nature, may not be offered regularly. These courses will appear in the course schedule, and will be more fully described in information distributed to academic advisors. Prerequisites: CRJS 215S or permission of the instructor.

CRJS 497/597. Independent Study. 1-3 Credits.
Independent reading and study on a topic to be selected under the direction of an instructor. Conferences and papers as appropriate. Prerequisites: Senior standing and approval of the department chair.

CRJS 498/598. Tutorial Work in Special Topics in Criminal Justice. 1-3 Credits.
Independent reading and study on a topic to be selected under the direction of an instructor. Conferences and papers as appropriate. Prerequisites: Senior standing and approval of the department chair.