SCIENTIFIC APPLICATIONS IN JUSTICE
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Program in Criminal Justice
Rutgers, The State University of New Jersey
Learning Goals:
A Statement of Principles

The Program Committee for the Program in Criminal Justice at Rutgers University in New Brunswick has adopted a series of learning goals for students who complete the major. These goals represent the consensus of the faculty regarding the concepts a student should grasp and the skills a student should acquire in the course of completing the major. These goals guide the choices faculty make about the structure of the curriculum and the requirements for our majors. Moreover, they guide faculty and instructors preparing course material and teaching courses.

The Program in Criminal Justice will provide students with a rich understanding of crime and criminal justice in the United States and abroad through an interdisciplinary approach that blends a strong liberal arts educational experience with pre-professional instruction in the field of criminal justice. Graduates of the program will be well-informed citizens on the topic of crime and justice, and qualified for graduate study or for employment as practitioners in a variety of legal, policymaking, and law enforcement fields.

Criminal justice majors graduating from a research university should be able to use critical thinking, factual inquiry, and the scientific approach to solve problems related to individual and group behavior. In addition, students should have an understanding of the legal, political and policymaking processes that affect criminal justice systems in the United States and elsewhere in the world. Finally, students should be familiar with the institutional structures and latest developments in the field in order to engage in meaningful debate about current public policy issues.

Learning Goals for Criminal Justice Majors

1. **Competence:**

Theory. Students who complete the major in criminal justice should understand and be able to articulate, both orally and in writing, the core theoretical concepts that form the foundation of analysis and research in criminology and criminal justice today. Core concepts are derived from explanations of crime from a variety of perspectives, including biogenic, psychological, and sociological approaches. There are myriad theories of crime that are informed by these perspectives, including, classical, control, critical, ecology, labeling, learning, strain, and traitbased approaches. Theoretical literacy should extend to multicultural and international understanding.

Institutions. Students who complete the major in criminal justice should understand the special role of three types of institutions: Police, Corrections, and Courts. In addition, students should know how institutional forms vary across jurisdictions and how these institutions interact with and influence each other.

Research Methods. Students who complete the criminal justice major should be familiar with the tools, techniques, and data sources necessary for empirical analysis. Students should understand the various ways that empirical analysis is used in the scientific approach: for description, for developing, and for testing theories. They should be able to analyze data using computer applications and should be familiar with basic statistical techniques and regression analysis. They should be able to read and assess research from a wide range of sources, including general interest, academic, and government publications.

2. **Critical Thinking:** Upon completion of the major students should be able to apply their understanding of core concepts and quantitative tools to analyze and research real world problems, and evaluate alternative policy proposals on a range of criminal justice issues, from micro-level analyses relevant to particular cases to management concerns to macro-level analyses of legislative and other broad-scale policies. Accomplishment of this goal will require that students can apply their literacy and numeracy skills to different institutional structures, within the U.S. and across countries.

3. **Scholarship:** Qualified majors should have an opportunity through such avenues as advanced coursework, internships, and faculty interactions to conduct independent research on matters of central relevance to the field of criminal justice.

PURPOSE OF THE COURSE:

Contributions of physical science to crime prevention, detection, and prosecution; significant forensic aspects of chemistry, biology, geology, and physics as applied to prevention planning, contraband control, preserving evidence, ballistics, optics, sound, and sampling natural materials. This course teaches the proper use of forensic science necessary for a successful criminal justice system. The students will be involved in the examination of data from the various forensic discipline such as crime scene, fingerprinting, impression evidence, serology, DNA, ballistics, pathology, toxicology, anthropology, trace, etc. Each student will learn how to determine the quality of this evidence and draw conclusions based on their findings. Studying what are valid scientific findings has extreme importance to policing, prosecution and post-conviction. Specific techniques utilized in homicides, arson, sexual assaults, property crimes and homeland security will be studied and demonstrated. Although a classroom setting, students will have the opportunity to use and train with select equipment. Students will conduct mock trials demonstrating their ability to use science in the courtroom. Strict emphasis on evidence admissibility and the hearings involved include review of Frye, Daubert and the Federal Rules of Evidence.

READING ASSIGNMENTS:

No textbook is required for this course. All reading material will be available online and through class handout.

GRADING:

Quizzes 20% Exams 80%

SYLLABUS

June	25	The Crime Scene, Physical Evidence
	27	Evidence Admissibility, Scientific Analysis
July	2	Fingerprints, Footprints
	4	No Class
	9	Toolmarks, Ballistics
	11	Exam 1
	16	Hairs/Fibers, Serology, DNA
	18	Pathology, Anthropology, Toxicology
	23	Reconstruction
	25	Crime Labs, Ethics
	30	Use of Scientific Evidence in the Courtroom
August	1	Exam 2