

**Forensic Science I
202-351**

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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 trait

based 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:

Forensic science has been a popular college major in the United States for the past 20 years due to the prominence of the career and portrayal in the media. Educating the entry level forensic scientist is often left to forensic programs or general science academics. The optimal forensic scientist will have a strong background in biology and chemistry with knowledge of the criminal justice system. If a college graduate possesses an education in forensic laboratory methods, general science and criminal justice, they would be highly marketable for employment by crime labs in the United States. Employers often find that applicants lack either a strong traditional science background or the ability to apply this traditional science to matters of the law.

To provide both lecture and laboratory training to general science majors who wish to pursue a career in forensic science. To provide criminal justice majors with an education that applies forensic science to the criminal investigation.

The course is designed to include all disciplines of forensic science while making use of already existing laboratory equipment. The course would consist of a full year of lectures, with a lab each week. Students will get hands-on training in most of the procedures used by modern crime

labs as well as learn about the history of how these techniques came into use. Each laboratory is designed to handle 15 students. Part of the forensic education will include field trips to a county medical examiner to view an autopsy and tour of the New Jersey State Police crime lab to view the trace, anthropology, ballistics, computer crimes and DNA facilities.

Grading

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| Quizzes | 20% |
| Midterm Exam | 25% |
| Final Exam | 25% |
| Lab Reports | 30% |

SYLLABUS

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| September | 6 | History of Forensic Science |
| | 11 | Scientific Integrity, and Ethics |
| | 13 | Classification and Individualization |
| | 18 | Crime Scene Processing |
| | 20 | Crime Scene Processing |
| | 25 | Fingerprinting |
| | 27 | Fingerprinting |
| October | 2 | Footprinting |
| | 4 | Footprinting |
| | 9 | Soil analysis |
| | 11 | Soil analysis |
| | 16 | Trace Evidence |
| | 18 | Midterm Exam |
| | 23 | Trace Evidence - Hair/Fiber |
| | 25 | Trace Evidence - Hair/Fiber |
| November | 30 | Trace Evidence – Gun Shot Residue |
| | 1 | Glass Analysis |
| | 6 | Toolmark |
| | 8 | Toolmark |
| | 13 | Firearms |
| | 15 | Firearms |
| | 20 | Crime Scene Photography |
| | 22 | No Class |
| | 27 | Serology |
| | 29 | Serology |
| December | 4 | DNA |
| | 6 | DNA |
| | 11 | DNA |
| | 13 | Final Exam Review |

Final Exam December 18th 8:00pm