FORENSIC SCIENCES (FORS)

Explanation of Course Numbers

- Courses in the 1000s are primarily introductory undergraduate courses
- Those in the 2000s to 4000s are upper-division undergraduate courses that also may be taken for graduate credit with permission and additional work assigned
- Those in the 6000s and 8000s are for master’s, doctoral, and professional-level students
- The 6000s are open to advanced undergraduate students with approval of the instructor and the dean or advising office

FORS 2104W. Introduction to Forensic Sciences. 3 Credits.
Topics in the application of science to the criminal justice system, including personal identification, analysis of drugs, forms of trace evidence, identification of biological fluids, forensic pathology, and forensic toxicology. Includes a significant engagement in writing as a form of critical inquiry and scholarly expression to satisfy the WID requirement.

FORS 2107. Fundamentals of Forensic Science. 4 Credits.
The application of science to the criminal justice system. Recognizing, analyzing, and interpreting evidence specific to fields such as CSI, fingerprint/trace evidence analysis, analysis of drugs, biological fluids, entomology.

FORS 2151. Crime Scene Investigation. 4 Credits.
Examination, analysis, and reconstruction of crime scenes; principles from biology, chemistry, and physics applied to identification, documentation, preservation, and collection of physical evidence.

FORS 5099. Variable Topics. 1-99 Credits.

FORS 6004. Fundamentals of Forensic Science I. 3 Credits.
This course surveys crime scene investigation techniques, medicolegal death investigation, and patterned evidence examination. This satisfies the 10 hours instruction for a FEPAC accredited MFS degree in the core topics of crime scene investigation, physical evidence concepts, and pattern evidence. This course helps students prepare for the American Board of Criminalistics (“ABC”) examination in the disciplines of firearms and toolmarks, fingerprints, and questioned documents. Lectures are given by faculty members and guest lecturers who are subject matter experts on the topic presented. This course includes a four hour laboratory (fingerprints). This is a required course for MFS and CSI students. This course, along with FORS 6005 Fundamentals of Forensic Science II, replaces FORS 6213, Elements of Forensic Science (3 Credits). Prerequisite: None.

FORS 6005. Fundamentals of Forensic Science II. 3 Credits.
This course surveys the traditional crime laboratory (criminalistics) disciplines—specifically forensic drug chemistry, forensic toxicology, trace evidence, fire debris, explosives, and forensic molecular biology. This satisfies the 10 hours instruction for a FEPAC accredited MFS degree in the core topics of analytical chemistry and instrumental methods of analysis, drug chemistry/toxicology, microscopy and materials analysis, and forensic biology. This course helps students prepare for the American Board of Criminalistics (“ABC”) examination in the disciplines of forensic biology, trace evidence, fire debris, controlled substances, and toxicology/blood alcohol determinations.

FORS 6010. Bloodstain Pattern Analysis I. 3 Credits.
Human blood in flight and the patterns it makes on target surfaces. Crime scene investigation, crime scene analysis, and crime scene reconstruction. Laboratory fee. Restricted to graduate students. Recommended background: FORS 6251 and FORS 6256.

FORS 6011. Bloodstain Pattern Analysis II. 3 Credits.
Continuation of the concepts learned in FORS 6010. Serving as an expert witness; refining blood pattern analysis and documentation skills; effectively communicating observations, analysis, and conclusions in the courtroom. Laboratory fee. Restricted to graduate students. Prerequisites: FORS 6010. Recommended background: FORS 6251 and FORS 6256.

FORS 6020. Ethics, Professional Responsibility, and Quality Assurance. 2 Credits.
Issues of forensic science laboratory professional responsibility, including ethics, public policy, and quality assurance. Satisfies 10 hours of instruction for a Forensic Science Education Programs Accreditation Commission (FEPAC) accredited MFS degree in the core topics of ethics and professional responsibility and quality assurance; also assists in preparation for the American Board of Criminalistics examination in the area of ethics. Taken online during the summer session.

FORS 6201. Forensic Biology. 3 Credits.
Principles of the forensic analysis of blood and other biological materials. Specific procedures and techniques used in forensic biology and serology. Laboratory fee.

FORS 6203. Examination of Questioned Documents. 3 Credits.
Theory and principles of handwriting and handprinting, duplicating processes, paper manufacture and fiber analysis; studies of paper and methods of examining questioned documents. Laboratory fee.

FORS 6204. Firearms and Toolmark Identification. 3 Credits.
Methods for identifying firearms, bullet cartridge casings, toolmarks, gunshot residue, obliterated serial numbers, tire marks, and footprints. Laboratory fee.
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<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tr>
<td>FORS 6206.</td>
<td>Trace Evidence Analysis. 3 Credits.</td>
<td>Principles that govern the analysis of trace evidence, including recovery, transference, interpretation, and comparison. Assessment of evidentiary value, reporting, and court testimony. Laboratory fee.</td>
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<td>FORS 6207.</td>
<td>Photography in the Forensic Sciences. 3 Credits.</td>
<td>Basic use of forensic photography, including selection and use of equipment, photographs as evidence, close-up work, and common misconceptions. Laboratory fee.</td>
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<td>FORS 6209.</td>
<td>Forensic Chemistry. 3 Credits.</td>
<td>Includes a general overview of chemical analysis, analytical methods, instrumental methods, and forensic applications. Includes toxicology. Recommended background: undergraduate electrophoretic separations. It is a required course for MFS students with concentration in Forensic Chemistry and Forensic Toxicology. Recommended background: undergraduate analytical methods.</td>
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<td>FORS 6241.</td>
<td>Forensic Molecular Biology I. 3 Credits.</td>
<td>Techniques of molecular biology applied to the collection, examination, analysis, and interpretation of biological evidence.</td>
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<td>FORS 6240.</td>
<td>Forensic Drug Analysis. 3 Credits.</td>
<td>Examination of dosage forms of drugs. Laboratory exercises include color spot tests, crystal tests, infrared spectrometry and gas chromatography-mass spectrometry. Laboratory fee.</td>
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<td>FORS 6241.</td>
<td>Forensic Molecular Biology I. 3 Credits.</td>
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FORS 6242. Forensic Molecular Biology II. 3 Credits.
Advanced methods of forensic molecular biology. Laboratory examinations and classifications of dried blood and other biological materials through a variety of nuclear and mitochondrial markers. Laboratory fee. Prerequisites: FORS 6241 and permission of the instructor.

FORS 6243. Forensic Molecular Biology III. 3 Credits.

FORS 6247. Population Genetics. 3 Credits.
Origin, maintenance, and possible significance of genetic variation in populations. Selection, genetic drift, and population structure are emphasized. Both theoretical and applied aspects of population genetics are discussed. Same as BISC 6228.

FORS 6251. Crime Scene Investigation I. 3 Credits.
Examination, analysis, and reconstruction of crime scenes. Principles from biology, chemistry, and physics applied to identification, documentation, preservation, and collection of physical evidence. Laboratory fee.

FORS 6252. Crime Scene Investigation II. 3 Credits.
Continuation of FORS 6251. Examination, analysis, and reconstruction of crime scenes. Principles from biology, chemistry, and physics applied to identification, documentation, preservation, and collection of physical evidence. Laboratory fee.

FORS 6254. Forensic Psychiatry. 3 Credits.
Introduction to the constructs of dynamic psychiatry, psychiatric treatment, and the nomenclature of mental disorders. Consideration of expert testimony, direct examination, and cross-examination in hospitalization and criminal cases.

FORS 6255. Investigation of Child Abuse. 3 Credits.
This course integrates medical, scientific, psychological, sociological and legal information for investigators and professionals involved in the field of child abuse. Special emphasis is placed on the application of research-supported data to situations involving the murder, abuse and exploitation of children.

FORS 6256. Forensic Pathology. 3 Credits.
Terminology and scientific techniques used in medico-legal investigations, sudden or unexpected deaths, homicides, suicides, accidental deaths, and trauma.

FORS 6257. Medicolegal Death Investigation. 3 Credits.
Medical, scientific, sociological, and legal methodologies applied to forensic investigations. Aspects of death scene analysis by a medical examiner, including autopsy procedures, unidentified remains, child death investigations, and mass disaster investigations. Laboratory fee. Prerequisites: FORS 6256 and permission of the instructor.

FORS 6290. Selected Topics. 3 Credits.
Current issues in research, investigation, and law.

FORS 6292. Graduate Seminar. 1 Credit.
Students in designated forensic sciences degree programs must register for this course in their first semester and again after completion of the required independent research project.

FORS 6295. Research. 1-12 Credits.
Research on problems approved by the department, under the supervision of an appropriate member of the program faculty. Admission by permission only.

FORS 6298. Forensic Sciences Practicum. 1-3 Credits.
Internship experience in a forensic science laboratory or criminal justice agency, under the supervision of an appropriate member of the program faculty. Students must preregister for this course. Admission by permission only.

FORS 6998. Thesis Research. 3 Credits.

FORS 6999. Thesis Research. 3 Credits.