# FORENSIC SCIENCE (FRSC)

**FRSC 2600 - Survey of Forensic Science**
3 Credits
Students learn scientific methodology, its rules and norms, as applied in the biological and chemical analysis of crime and how these methodologies are used to evaluate legal arguments and solve legal issues. They also learn how the technical/scientific analysis articulates with the different components of the legal system.
**Attributes:** Anthropology Elective, Natural Science Req (A&S), Social Science Req (A&S), UUC:Natural & Applied Science

**FRSC 2800 - Professional Issues in Forensic Science**
3 Credits
This lecture course will explore the intersection of Forensic Science with topics such as ethics, courtroom/expert witness testimony, quality assurance, law, professional practice, and social justice. This class will allow students to bridge the gap between an introductory survey of forensics class and advanced classes by discussing topics that will affect their ability to succeed in the field of forensic science. The class will discuss current topics in the media and the role of the forensic scientist in these topics. (Offered in Fall and Spring)
**Prerequisite(s):** FRSC 2600
**Restrictions:**
Enrollment is limited to students with a program in Forensic Science.

**Attributes:** Social Science Req (A&S), UUC:Social & Behavioral Sci

**FRSC 2930 - Special Topics**
3 Credits (Repeatable for credit)

**FRSC 2980 - Independent Study**
1 or 3 Credits (Repeatable for credit)

**FRSC 3150X - True Crime: Forensic and Literary Perspectives**
3 Credits
This course examines the intersection of forensic science and literary/media history in several major true crime case studies. How does true crime portray or misconceive forensic science? How does true crime distinguish itself from other kinds of crime-related genres? Why do certain cases garner attention, and what cultural crises do they address? Students will learn techniques utilized in crime laboratories and sometimes apply those techniques to older case studies. They will also become adept close readers of a variety of texts, such as podcasts, documentaries, non-fiction novels, and newspaper articles.
**Prerequisite(s):** CORE 1000; CORE 1500*; Minimum Earned Credits of 60; CORE 1900

* Concurrent enrollment allowed.
**Attributes:** Literature Requirement (A&S), FRSC - Crime Scene Inv Conc El, English Form & Genre, Forensic Science Elective, Forensic Science - Minor Elect, Literature BA Requirement(CAS), Literature BS Requirement(CAS), UUC:Collaborative Inquiry, UUC:Writing Intensive

**FRSC 3200 - Forensic Photography**
2 Credits
This course introduces students to the principles and practices of forensic photography. Topics include basic techniques for using SLR cameras, lighting, exposure, and composition, as well as advanced skills for documenting crime scenes, evidence, and autopsies. Students will learn to produce court admissible photographic evidence and understand the legal and ethical considerations in forensic imaging.
**Attributes:** FRSC - Criminalistics Conc Ele, FRSC - Crime Scene Inv Conc El, Forensic Science Elective, Forensic Science - Minor Elect, UUC:Creative Expression

**FRSC 3300 - Boom! Explosives Investigation and Analysis**
3 Credits
This advanced course examines forensic explosives analysis, encompassing the chemical properties of energetic materials, established methods in scene processing and evidence collection and the evaluation of pre- and post-blast evidence. Students will explore a range of techniques for explosive identification, including chromatography, mass spectrometry, and spectroscopy, evaluating the strengths and limitations of each method within the context of forensic investigations. This exploration will include the identification of components and the reconstruction of explosive devices. Furthermore, the course will address the legal and ethical aspects of explosives investigations, including the role of expert testimony. Through critical analysis of real-world scenarios, students will develop a comprehensive understanding of the complexities inherent in forensic explosives analysis.
**Prerequisite(s):** FRSC 2600; CHEM 1110; CHEM 1120; CORE 1900
**Attributes:** FRSC - Criminalistics Conc Ele, FRSC - Crime Scene Inv Conc El, Forensic Science Elective, Forensic Science - Minor Elect, UUC:Writing Intensive

**FRSC 3400 - Digital Forensic Investigation**
3 Credits
Digital Forensic Investigation is the application of science and reasoning to investigate digital devices for the presence of evidence. This course will introduce various methodologies and applications of digital forensic investigations including computer and cell phone analysis.
**Attributes:** FRSC - Criminalistics Conc Ele, Forensic Science Elective, Forensic Science - Minor Elect, Social Science Req (A&S)

**FRSC 3500 - Forensics and Law**
3 Credits
Forensics and Law will build on the survey of forensic science class and introduce more in-depth analysis of criminal law and our criminal justice system, strengthen the students understanding of the law and enhance the students' ability to think critically and analytically. Moreover, the course will provide a platform to demonstrate practical applications of criminal law and procedure to forensics. This course will prepare the student to achieve higher levels of learning in their degree curriculum and serve as a solid foundation of knowledge for future work in forensic science.
**Attributes:** Forensic Science - Minor Elect, Social Science Req (A&S)

**FRSC 3620 - Forensic Chemistry**
2 Credits
Forensic Chemistry is the application of chemical methods to the analysis of evidence from a crime scene. This course will introduce types of forensic evidence processed by a forensic chemist and methods of analysis, with a focus on instrumentation.
**Prerequisite(s):** FRSC 2600; CHEM 1110 and CHEM 1115; CHEM 1120 and CHEM 1125; CHEM 2410 and CHEM 2415
**Corequisite(s):** FRSC 3621
**Attributes:** Natural Science Req (A&S), Social Science Req (A&S)

**FRSC 3621 - Forensic Chemistry Laboratory**
1 Credit
Forensic Chemistry lab will include hands on learning of techniques utilized in crime laboratories. This practical component will supplement the corresponding lecture taught in Forensic Chemistry and requires advanced laboratory skills.
**Prerequisite(s):** FRSC 2600; CHEM 1110 and CHEM 1115; CHEM 1120 and CHEM 1125; CHEM 2410 and CHEM 2415
**Corequisite(s):** FRSC 3620
**Attributes:** Natural Science Req (A&S), Social Science Req (A&S)

**FRSC 3625 - Forensic Chemistry for the Investigator**
2 Credits
Forensic Chemistry is the application of chemical methods to the analysis of evidence from a crime scene. This course will introduce such types of forensic evidence and focus on chemical screening and processing techniques utilized by the crime scene investigator. An overview of laboratory methods will also be provided.
**Prerequisite(s):** FRSC 2600
**Attributes:** Natural Science Req (A&S)

**FRSC 3630 - Forensic Biology**
2 Credits
This course is the application of biological science to both the collection and analysis of evidence. This course will provide in-depth study of various methodologies and applications of biological principles and their applications to Forensic Science. Topics include Serology (Biological Screening), DNA analysis, DNA interpretation, and Bloodstain Pattern Analysis.
**Prerequisite(s):** FRSC 2600
**Corequisite(s):** FRSC 3631
**Attributes:** Natural Science Req (A&S), Social Science Req (A&S)

**FRSC 3631 - Forensic Biology Laboratory**
1 Credit
Forensic Biology lab will include hands on learning of techniques utilized in crime laboratories. This practical component will supplement the corresponding lecture taught in Forensic Biology and requires advanced laboratory skills.
**Corequisite(s):** FRSC 3630
**Attributes:** Natural Science Req (A&S)

**FRSC 3635 - Forensic Biology for Investigators**
2 Credits
This course will be an overview of the biological evidence and techniques used in forensic science, specifically focused on the types of biological evidence that may be encountered at the crime scene. Topics will include presumptive testing, alternate light sources, bloodstain pattern analysis, forensic DNA analysis, hair analysis, pathology, ethics, and reporting.
**Prerequisite(s):** FRSC 2600

**FRSC 3640 - Fingerprints**
3 Credits
This lecture/laboratory course is meant to serve as an introduction to the chemical and physical techniques used in the collection, preservation, documentation, analysis, and interpretation of pattern evidence, specifically fingerprint evidence. Topics include fingerprint enhancement, comparisons, and evaluations. During the laboratory component of the class students will apply the theory learned to the processing of mock evidence for fingerprints in a variety of ways.
**Attributes:** FRSC - Criminalistics Conc Ele, Forensic Science Elective, Forensic Science - Minor Elect, Social Science Req (A&S)

**FRSC 3650 - Forensic Laboratory Techniques for the Investigator**
1 Credit
Forensic Laboratory Techniques for the Investigator is the application of lecture material from courses such as Forensic Biology and Forensic Chemistry to a laboratory setting. This course will introduce various laboratory techniques in a practical ways for students who will be working in fields such as law enforcement, law, crime scene investigation, and fingerprints. The course will focus on how evidence collected at the crime scene can be analyzed by the crime lab in various disciplines such as biology and chemistry.
**Prerequisite(s):** FRSC 2600
**Attributes:** Forensic Science - Minor Elect

**FRSC 3660 - Forensic Microscopy**
3 Credits
Students analyze forensic evidence through the practical application of microscopy methodologies. This course examines the theoretical foundations of microscopy, focusing on the techniques of stereomicroscopy and polarized light microscopy. Through a comprehensive exploration of these techniques, and others, students gain an understanding of their applications in forensic science. Students will develop the skills required for the identification, examination, and documentation of trace materials encountered in criminal investigations.
**Prerequisite(s):** FRSC 2600; (CHEM 1110 or CHEM 1130)
**Restrictions:**
Enrollment is limited to students with a program in Forensic Science.

**Attributes:** FRSC - Criminalistics Conc Ele, FRSC - Crime Scene Inv Conc El, Forensic Science Elective, Forensic Science - Minor Elect

**FRSC 3910 - Internship**
1-6 Credits (Repeatable for credit)
**Prerequisite(s):** CORE 1000; CORE 1500*

* Concurrent enrollment allowed.
**Attributes:** UUC:Reflection-in-Action

**FRSC 3930 - Special Topics**
1-3 Credits (Repeatable for credit)

**FRSC 3980 - Independent Study**
1 or 3 Credits (Repeatable for credit)

**FRSC 4020 - Forensic Science Practicum I**
1-3 Credits (Repeatable for credit)
Fieldwork in forensic science at forensic labs, county morgue, and other governmental agencies, as well as business and private social service organizations. Approval of the instructor required. Every Semester.
**Attributes:** Social Science Req (A&S)

**FRSC 4030 - Forensic Practicum II**
1-3 Credits (Repeatable for credit)
Continuation of fieldwork in forensic science at forensic labs, county morgues, and other governmental agencies, as well as business and private social service organizations. Approval of the instructor required. Every Semester.
**Attributes:** Social Science Req (A&S)

**FRSC 4550 - Crime Scene Investigation**
2 Credits
This course is the application of science to both the collection and analysis of evidence at a crime scene. This course will provide in-depth study of various methodologies and applications of crime scene processing. Topics include shooting reconstruction and fingerprint analysis as well as searching, documentation, collection, and analysis of evidence at crime scenes.
**Prerequisite(s):** FRSC 2600
**Corequisite(s):** FRSC 4551
**Attributes:** FRSC - Criminalistics Conc Ele, Social Science Req (A&S)

**FRSC 4551 - Crime Scene Investigation Laboratory**
1 Credit
Crime Scene Investigation lab will utilize the techniques learned during the corresponding lecture to effectively process a crime scene start to finish. This is a hands on laboratory class which requires advanced skills in crime scene processing and forensic science techniques.
**Corequisite(s):** FRSC 4550
**Attributes:** FRSC - Criminalistics Conc Ele

**FRSC 4610 - Death Investigation**
2 Credits
This course exposes the various forensic disciplines involved in a medicolegal death investigation and teaches the tools and techniques necessary to perform such an investigation. Disseminating this information is also covered. The course teaches the 29 national guidelines in Death Investigation: A Guide for the Scene Investigator. FRSC 2600 Introduction to Forensic Science is a prerequisite. Registration in this course requires concurrent registration in the Medicolegal Death Investigator Course sponsored by the Pathology department in the School of Medicine.
**Prerequisite(s):** FRSC 2600
**Attributes:** FRSC - Crime Scene Inv Conc El, Forensic Science Elective, Forensic Science - Minor Elect, Social Science Req (A&S)

**FRSC 4615 - Advanced Death Investigation**
2 Credits
This workshop is designed for the instruction of experienced medicolegal death investigators, forensic pathologists, law enforcement officers, forensic scientists, physicians, attorneys, and investigative personnel who have previous been trained in a basic death investigation program.
**Prerequisite(s):** FRSC 4610
**Attributes:** FRSC - Crime Scene Inv Conc El, Forensic Science Elective, Social Science Req (A&S)

**FRSC 4650 - Advanced Crime Scene Reconstruction**
2 Credits
Crime Scene Reconstruction is the application of science and reasoning to try and piece together what happened at a crime scene and in what order those events happened. This course will introduce various methodologies and applications of crime scene reconstruction including bloodstain pattern analysis and shooting reconstruction.
**Prerequisite(s):** 1 course from FRSC 2600, FRSC 4550, and FRSC 4551
**Corequisite(s):** FRSC 4651
**Attributes:** FRSC - Criminalistics Conc Ele, Forensic Science Elective, Forensic Science - Minor Elect, Social Science Req (A&S)

**FRSC 4651 - Advanced Crime Scene Reconstruction Laboratory**
1 Credit
Crime Scene Reconstruction is the application of science and reasoning to try and piece together what happened at a crime scene and in what order those events happened. This laboratory course will introduce various methodologies and applications of crime scene reconstruction through hands on processing and techniques.
**Prerequisite(s):** 1 course from FRSC 2600, FRSC 4550, and FRSC 4551
**Corequisite(s):** FRSC 4650
**Attributes:** FRSC - Criminalistics Conc Ele, Forensic Science Elective, Forensic Science - Minor Elect, Social Science Req (A&S)

**FRSC 4710 - Forensic Science Laboratory Assistant**
1-3 Credits (Repeatable up to 6 credits)
Provides the opportunity for students to apply the knowledge and skills they have gained from previous courses by helping to setup, design, and research new laboratory topics for Forensic Biology, Forensic Chemistry, and/or Crime Scene Investigation. The student will assist other students throughout the laboratory classes and provide feedback as necessary.
**Restrictions:**
Enrollment is limited to students with a program in Forensic Science.

**Attributes:** Special Approval Required, Social Science Req (A&S)

**FRSC 4750 - Forensic Science Senior Seminar**
1 Credit
A seminar course required as a culminating experience for all seniors majoring in Forensic Science. This capstone course integrates prior learning while exploring current research, contemporary issues and professional standards in forensic science.
**Prerequisite(s):** CORE 1900; CORE 1500; CORE 1200*; CORE 2500*; CORE 1000

* Concurrent enrollment allowed.
**Attributes:** Social Science Req (A&S), UUC:Self in the World

**FRSC 4760 - Independent Research in Forensic Science**
3 Credits (Repeatable up to 6 credits)

**FRSC 4910 - Internship**
1-6 Credits (Repeatable for credit)
**Prerequisite(s):** CORE 1500*; CORE 1000

* Concurrent enrollment allowed.
**Attributes:** UUC:Reflection-in-Action

**FRSC 4930 - Special Topics**
1-3 Credits (Repeatable for credit)

**FRSC 4960 - Capstone in Forensic Science**
3 Credits (Repeatable up to 6 credits)
This course provides the opportunity for students to synthesize the knowledge and skills they have gained from previous courses. In the process of examining conventional common sense assumptions, students are encouraged to think critically and deeply about themselves and the world in which they live and how Forensic Science contributes to the world. Students will be working on real life problems related to Forensic Science and may include cold case reviews and/or legal reviews of cases.
**Prerequisite(s):** FRSC 2600; FRSC 3630; FRSC 3620
**Restrictions:**
Enrollment is limited to students with a major in Forensic Science.

**Attributes:** Special Approval Required, Social Science Req (A&S)

**FRSC 4970 - Advanced Independent Research in Forensic Science**
3 Credits (Repeatable up to 6 credits)
This course provides students with research experience under the general guidance of a faculty member. Student involvement in various components of the faculty member's research project(s) is the typical form. The course provides competitive advantages for students interested in applying to graduate schools.
**Prerequisite(s):** FRSC 2600; FRSC 3630; FRSC 3620
**Restrictions:**
Enrollment is limited to students with a major in Forensic Science.

**Attributes:** Special Approval Required, Social Science Req (A&S)

**FRSC 4980 - Advanced Independent Study in Forensic Science**
1-3 Credits (Repeatable for credit)

**FRSC 5610 - Death Investigation**
2 Credits (Repeatable for credit)
This course exposes the various forensic disciplines involved in a medicolegal death investigation and teaches the tools and techniques necessary to perform such an investigation. Disseminating this information is also covered. The course teaches the 29 national guidelines in Death Investigation: A Guide for the Scene Investigator. Registration in this course requires concurrent registration in the Medicolegal Death Investigator Course sponsored by the Pathology department in the School of Medicine. (Offered annually)

**FRSC 5615 - Advanced Death Investigation**
2 Credits (Repeatable for credit)
This workshop is designed for the instruction of experienced medicolegal death investigators, forensic pathologists, law enforcement officers, forensic scientists, physicians, attorneys, and investigative personnel who have previously been trained in a basic death investigation program. (Offered occasionally)