Forensic Science (M.S.F.S.)

View PDF of Forensic Science Admissions Checklist
Prospective students should use this checklist to obtain specific admissions requirements on how to apply to Graduate School.

View PDF version of the Forensic Science catalog description

Degree Offered: M.S.F.S.
Director: Linville
Phone: (205) 934-2069
E-mail: jjlinvill@uab.edu
Web site: www.uab.edu/justice-sciences/

Faculty
Steve Drexler, Adjunct Faculty; Conventional Criminalistics
Elizabeth Gardner, Assistant Professor
Jay Glass, Adjunct Faculty; Questioned Death Investigation
Curt Harper, Instructor; Forensic Toxicology
Jason Linville, Assistant Professor, MSFS Director
Dan Matteo, Adjunct Faculty; Forensic Drug Chemistry
James Phillips, Adjunct Faculty; Law, Evidence, and Procedure
Mitch Rector, Adjunct Faculty; Conventional Criminalistics
Anthony Skjellum, Professor (Computer and Information Sciences); Computer Forensics
Karen Valencia, Instructor; Forensic Toxicology
Gary Warner, Professor (Computer and Information Sciences); Computer Forensics

Program Information
The Master of Science in Forensic Science program is designed to prepare individuals for careers in various forensic science and conventional analytical laboratories, emphasizing the application of scientific methods and technologies to legal proceedings. With thoughtful planning, many students have found the program offerings helpful in building a strong foundation to pursue doctoral (Ph.D. and M.D.) studies. The program also offers, in conjunction with the Department of Computer and Information Sciences, the opportunity for students to pursue a graduate certificate in computer forensics that involves additional, elective coursework.

The program support includes many UAB faculty members from other departments, personnel from the Alabama Department of Forensic Sciences’ Birmingham laboratory, the Jefferson County Medical Examiner’s Office, the Birmingham Police Department, and local forensic science-related private institutions. In addition, the program maintains a close working relationship with the DNA profiling laboratories of the Alabama Department of Forensic Sciences and hosts the editorial offices of the Forensic Science Review (the only review journal in forensic science). Faculty research and practice focus especially on forensic aspects of drug chemistry and DNA-based identification.

Minimum admission requirements include a B.S. degree in Chemistry, Biology, or a related natural science. Coursework should include the completion of one year of general chemistry, one year of organic chemistry, and quantitative analysis. Coursework is designed for qualified students to begin in fall and complete the program in 21 months. Admission is granted for the fall term only.

According to the National Institute of Justice (2004), students wishing to pursue a career in forensic science should be aware that positions in these fields usually require extensive background checks similar to those required for law enforcement personnel, and are likely a condition of employment. (National Institute of Justice (2004). Education and Training in Forensic Science: A Guide for Forensic Science Laboratories, Educational Institutions, and Students. NCJ Report 203099. Washington, DC: United States Department of Justice, pp. 7-10).

UAB graduates from the Master of Science in Forensic Science program are very successful in gaining employment within a year of graduating. During 2009-2011, the program graduated 25 students. Twenty-two of them currently are working in a laboratory, are teaching, or continuing their education in graduate school. Of these graduates, 14 are working in forensic science laboratories ranging from the FBI lab in Quantico, Virginia to a Sheriff’s Department Lab in Ventura, California.

Additional Information

Deadline for Entry Term(s): Fall
Course Descriptions

All forensic science courses have a Justice Sciences (JS) prefix. Unless otherwise noted, all courses are for 3 semester hours of credit.

Justice Science (JS)

502. Introduction to Computer Forensics. Overview of retrieval, preservation, and presentation of evidence found in computers and other electronic communication devices.

551. Research Methods in Forensic Science. Exploration of research methods used in forensic science, including data collection techniques and reporting of results.

567. Forensic Toxicology. Discussion of drugs and poisons occurring in biological evidence, including the pharmacokinetic and pharmacodynamic properties of drugs and poisons, evidence collection and handling, selection of the most appropriate evidence, and analytical methods of detection.


650. Advanced Questioned-Death Investigation. Examination of forensic pathology as used in/applied by local medical examiners' offices.

656. Advanced Forensic Approaches to Osteology. Overview of the study of human remains as applied to forensic science. Collection and analysis of bones, including determination of age, sex, and race of subject.

670. Elements of Forensic Science. Introduction to philosophical considerations and historic landmarks in the discipline; overview of major sub-disciplines in forensic science; examination of the role of expert witnesses and their importance.

671. Conventional Criminalistics I. Exploration of basic methodologies and approaches for analyzing trace and transfer evidence; examination of major evidence categories.

672. Conventional Criminalistics II. Examination of advanced methods for the analysis of trace and transfer evidence including methodologies for examination of firearms, and questioned documents. Prerequisite: JS 671.

673. Forensic Drug Analysis. Discussion of the isolation, identification, and quantification of commonly abused drugs and common poisons; interpretation of findings and correlation with legal applications.

674. Biological Methods in Forensic Science. Examination of biological evidence in crime laboratory, including identification of bloodstains and semen stains, and DNA typing of blood, bloodstains, and other body fluids.


676. Advanced Biological Methods in Forensic Science. Examines current issues and trends in forensic DNA analysis, including STR polymorphisms, stutter analysis, low copy number analysis, and Y-STRs. Prerequisite: JS 674.

677. Advanced Forensic Toxicology. Discussion of relevant analyses conducted for drugs and poisons occurring in biological evidence, including evidence collection and handling, selecting the most appropriate evidence, and the analytical process; examination of the pharmacokinetic and pharmacodynamic properties of detected substances.

679. Seminar in Forensic Science. Review, discussion, and presentation of the forensic literature; forensic science in the news, media, and public opinion.
680. **Graduate Internship in Forensic Science.** Field experience in forensic science agency. May be repeated for credit. 3-6 hours.

681. **Directed Research in Forensic Biology (Non-thesis).** Forensic science problems, issues, and theories. May be repeated for credit. 1-6 hours.

682. **Directed Research in Forensic Chemistry (Non-thesis).** Forensic science problems, issues, and theories. Includes laboratory component. May be repeated for credit. 1-6 hours.

684. **Thesis Research in Forensic Science.** Prerequisite: Admission to candidacy. May be repeated for credit. 1-6 hours.