

FORENSIC SCIENCE, M.S.

Admission Requirements Admission Policy

Applicants are reviewed on a rolling basis with earlier applications receiving greater consideration. The program recommends submitted completed applications and all required credentials prior to March 1.

The complete application process includes:

1. Submission of the Marshall University Graduate College Application available online at www.marshall.edu/graduate (<http://www.marshall.edu/graduate/>).
2. Completion of a Free Application for Federal Student Aid (FAFSA) as soon after January 1 as possible at www.fafsa.ed.gov (<http://www.fafsa.ed.gov>).
3. Submission of formal transcript(s) documenting that the applicant has:
 - a. Completed a bachelor's degree in a forensic or natural science, computer science, computer electronic or electrical engineering, information systems or information technology (or its equivalent coursework in a relevant field) from an accredited institution of higher learning.
 - b. Achieved an overall Grade Point Average of 3.0 or better.
 - c. Completed 1 academic year of biology and its associated labs with no grade of less than a C.
 - d. Completed 1 academic year of general chemistry and its associated labs with no grade of less than C.
 - e. Completed 1 academic year of organic chemistry and its associated labs with no grade of less than C.
 - f. Completed 1 academic year of physics and its associated labs with no grade of less than C.
 - g. It should be noted that successful completion of an undergraduate course in biochemistry is recommended, but not required, prior to entry into this program.
4. Graduate Record Exam (GRE)

Applicants should achieve a score of 150 or higher on the verbal and quantitative sections and a score of 3.5 or higher on the analytical writing section.
5. Formal Letters
 - a. Applicant's personal statement providing reasons why he or she should be admitted to the Forensic Science program.
 - b. 3 letters of recommendation on formal letterhead from individuals familiar with applicants' moral character, academic acumen and aptitude, integrity, and work ethic.

Full admission to the program, once an offer is made, is also contingent on successful completion of a background check, documentation of hepatitis B vaccination/titer or formal declination of vaccination, and receipt of other documentation required for enrollment.

Program Requirements

The FEPAC-accredited Master of Science degree in Forensic Science is a broad-science-based, five-consecutive semester curriculum. While all

forensic science students are required to complete a research project, both thesis and non-thesis options are available.

Thesis Option: The thesis option stresses a research component where students conduct original research and prepare, as well as defend, a written thesis based on their investigative findings. The thesis option requires a minimum of FSC 685 Intro Research (3 credit hours) and FSC 681 Thesis (3 credit hours) in addition to the general Core Curriculum and a minimum of one Area of Emphasis. The thesis option often requires 1-2 additional semesters to complete. The students' research committee consists of a minimum of three working professionals or faculty skilled in the art with at least one external to the academic program. The students' thesis defense and presentation is in addition to the research project and associated activities described for the non-thesis option.

Non-Thesis Option: The research project associated with the non-thesis option is required of all forensic science students. Students electing the non-thesis option are required to successfully complete an applied research project during their summer internship which requires a research paper, as well as formal slide-based and poster presentations to be presented at regional or local meetings. The committee composition for the non-thesis option is similar to the thesis option.

Areas of Emphasis

The Forensic Science Program offers four areas of emphasis that students may complete to enhance the core curriculum. The student is required to complete at least one area of emphasis but may complete up to four. Completing multiple areas of emphasis is contingent on maintaining good academic standing while enrolled in the program. Students may choose from the following four Areas of Emphasis:

Crime Scene Investigation

The Crime Scene Investigation emphasis provides students with the tools and hands-on experience to excel and become leaders in their field. The Forensic Science program has its own Crime Scene House that allows students to obtain real-world experience and training through the completion of mock crime scene exercises.

Digital Forensics

Computers and other digital devices hold a wealth of information including text, digital images, audio and video, which can serve as key evidence for solving crimes. Forensic software programs can be used to image digital storage media and the images can be analyzed using a variety of investigative software programs. Mobile phone forensics is an area that is emphasized in the forensic science courses, as well as investigation of computers and gaming devices. The opportunity to participate in hands-on experiences with investigative tools allows students to participate in mock investigations in preparation for careers in this exciting discipline.

DNA Analysis

The Marshall University Forensic Science Center is home to the academic program as well as a service-oriented DNA laboratory. This lab also serves as the Combined DNA Index System (CODIS) for West Virginia. The DNA emphasis exceeds the DNA Advisory Board standards by requiring a total of 8 graduate-level credit hours addressing the DNA guidelines.

Forensic Chemistry

Students pursuing careers in forensic drug analysis, toxicology, and trace evidence will benefit from the completion of the Forensic Chemistry emphasis. As some agencies may require 30 or more hours of chemistry coursework, the Forensic Chemistry emphasis provides additional education and hands-on training to meet these federal and state guidelines.

Other Requirements

In the third term, students are required to complete an approved research-based internship in a crime laboratory or other approved facility. In the fifth term, students are expected to pass a written, comprehensive examination.

Plan of Study

Core Curriculum

The core curriculum is required of all forensic science students to provide broad-based education and experience. The core curriculum includes:

Code	Title	Credit Hours
Core Curriculum		
FSC 604	Genetics & DNA Technology	3
FSC 606	Crime Scene/Death Investiga	2
FSC 612	Intro Foren Micro/Trace	2
FSC 618	Forensic Comparative Sciences	2
FSC 622	Forensic Analytical Chem	3
FSC 623	Forensic Chemistry Laboratory	1
FSC 624	Biochemistry: Forensic Science	4
FSC 630	Internship	5
FSC 632	Found Fund Digital Forensics	3
FSC 665	Legal Court in Forensic	3
FSC 680	Seminar (semesters 1, 2, 4, 5)	1
FSC 619	Forensic Statistics	3
Approved Elective		3
Areas of Emphasis		
Select one of the following:		7-11
Crime Scene Investigation (p. 2)		
Digital Forensics (p. 2)		
DNA Analysis (p. 2)		
Forensic Chemistry (p. 2)		
Total Credit Hours		42-46

Areas of Emphasis

Crime Scene Investigation

In addition to the core curriculum, this area of emphasis includes:

Code	Title	Credit Hours
FSC 607	Blood Stain Pattern Analysis	3
FSC 615	Adv Crime Investigation	3
FSC 617	Adv Crime Photo & Document	3
Total Credit Hours		9

Total including Core requirements 47 hrs.

Digital Forensics

For the Digital Forensics area of emphasis, the student must complete the following courses in addition to the core curriculum:

Code	Title	Credit Hours
FSC 605	F S Digital Imaging	3
FSC 609	Network Forensics	3
FSC 634	Comp Search & Seizure	3
FSC 676	Adv Dig Evid Detect Recovery	2
Total Credit Hours		11

Total including core requirements 49

DNA Analysis

For the Forensic DNA Analysis area of emphasis, the student must complete the following courses in addition to the core curriculum:

Students considering a career in Forensic DNA Analysis are encouraged to enroll in FSC 650 Special Topics, Crime Laboratory Technical Assistance (Fall, 2 credits; and Spring, 2 credits).

Code	Title	Credit Hours
FSC 600	Cell & Molecular Biology	3
FSC 603	Genetics-DNA Lab	1
FSC 627	Human Genetics	2
FSC 629	Advanced DNA Technologies	2
Total Credit Hours		8

Total including core requirements 46 hrs.

Forensic Chemistry

This emphasis requires the completion of the following chemistry related courses in addition to the core curriculum:

Code	Title	Credit Hours
FSC 608	Forensic Toxicology	3
FSC 626	Advanced Drug Analysis	2
FSC 628	Chem Analysis Trace Evidence	2
Total Credit Hours		7

Total including core requirements 45 hrs.