

FORENSIC SCIENCE, MS

Contact

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Faculty

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The Masters of Science in Forensic Science is a 36-credit hour program of study designed to offer students both a global perspective and an opportunity for in-depth study at the graduate level in forensic science. The degree provides students with a fundamental understanding of the concepts and principles involved in the application of scientific techniques to forensic investigations and to the criminal justice system. The graduate MS in Forensic science offers a comprehensive exploration of various forensic science areas, along with the opportunity for in-depth focus in specific sub-disciplines based on the chosen concentration. The required research/internship experience allows students to gain real-world experience in the field of forensic science. This program is well-suited for students interested in crime scene investigation, latent prints, firearms analysis, local or federal law enforcement, and other related fields.

Student Learning Outcomes

- Scientific Knowledge and Principles** - Apply the scientific foundational principles of forensic science in the criminal justice and national security realms.
- Research and Critical Thinking**
 - Identify needs for research in forensic science and critique empirical scientific studies as they relate to the reliability, accuracy, and limitations of forensic practices.
 - Use a rationale-based approach to evaluate and analyze a situation and/or in problem solving.
- Ethics and Quality** - Assess and apply ethical standards, integrity, professionalism, and quality assurance protocols and standards in the field of forensic science.
- Communication and Collaboration** - Effectively communicate scientific principles with objectivity and transparency to stakeholders, including scientists and non-scientists.
- Practical Implementation** - Investigate evidence using various analytical techniques. Apply forensic science principles in research or an internship.

Program Requirements

Code	Title	Credits
I. Gateway Courses		
FSC 606	Advanced Forensic Science	3
FSC 631	Statistics for Forensic Science	3
FSC 632	Research and Career Resources	3
FSC 633	Quality Assurance and Ethics	3
FSC 668	Crime Scene Investigation with lab	3

II. Electives - 18 credits required

At least 9 elective credits must be a part of a designated concentration. Student-specific concentrations, potentially including FSC 690, may be allowed by petition.

III. Internship or Independent Study Research 3

FSC 670	Experience Credit
FSC 690	Independent Study

(additional credits may be used to satisfy elective requirements)

IV. Seminar Requirement

Each student is required to take FSC 680 (zero credits) each semester and receive a passing grade in the course by attending at least 50% of the offered seminars and complete a final reflection each semester.

Total Credits 36

Biology Concentration

Code	Title	Credits
FSC 641	Forensic Analysis of Biological Evidence with lab	3
FSC 645	Forensic Biochemical Analysis with lab	3
FSC 672	Advanced Light Microscopy	3
FSC 674	Forensic DNA Analysis with practicum	3
FSC 676	Cold Cases	3
FSC 679	Microbial Forensic Science	3
BCM 678	Perspectives in Biochemistry	3
BIO 634	Advanced Microscopy Techniques in Cell and Developmental Biology Lab	3
BIO 662	Molecular Genetics	3
BIO 663	Molecular Biotechnology	3
BIO 665	Molecular Biology Laboratory	3
CHE 677	Proteins and Nucleic Acids Lab	3

Crime Scene Investigation Concentration

Code	Title	Credits
FSC 663	Bloodstain Pattern Analysis with lab	3
FSC 665	Latent Prints with practicum	3
FSC 667	Forensic Photography with lab	3
FSC 668	Crime Scene Investigation with lab	3
FSC 678	Crime Scene Investigation II with lab	3

Forensic Anthropology Concentration

Code	Title	Credits
ANT 600	Selected Topics (Reading the Body)	1-6
ANT 633	Human Osteology	3
ANT 634	Anthropology of Death	3
ANT 636	Bioarchaeology	3

Forensic Chemistry Concentration

Code	Title	Credits
Courses marked with * is a required course in this concentration		
FSC 644	Forensic Chemical Analysis	3
FSC 645	Forensic Biochemical Analysis with lab	3
FSC 646	Instrumental Forensic Chemical Analysis Laboratory (*)	3
FSC 657	Principles of Human Toxicology	3

CHE 575	Organic Spectroscopy	3
CHE 677	Proteins and Nucleic Acids Lab	3

Impressions Evidence Concentration

Code	Title	Credits
FSC 661	Firearms and Impression Evidence	3
FSC 664	Latent Print Processing with lab	3
FSC 665	Latent Prints with practicum	3
FSC 671	Firearms and Impressions Evidence II	3
FSC 673	Mechanics of Modern Firearms with lab	3
FSC 675	Latent Prints II	3

Jurisprudence Concentration

Code	Title	Credits
LAW 604	Criminal Law	3
LAW 708	Constitutional Criminal Procedure - Investigative	3
LAW 718	Evidence	4
LAW 759	Computer Crimes	3
LAW 796	Constitutional Criminal Procedure - Adjudicative	3

Linguistics Concentration

Code	Title	Credits
LIN 601	Introductory Linguistic Analysis	3
LIN 631	Phonological Analysis	3
LIN 671	Dimensions of Bilingualism and Multiculturalism	3
LIN 675	Forensic Linguistics	3

Medicolegal Death Investigation Concentration

Code	Title	Credits
FSC 634	Anatomy & Physiology for Forensic Medicine	3
FSC 635	Medicolegal Death Investigation I	3
FSC 651	Forensic Pathology	3

National Security Concentration

Code	Title	Credits
FSC 669	Science of Countering Weapons of Mass Destruction	3
LAW 700	National Security Law	3
LAW 790	Counterterrorism and the Law	3
LAW 832	Cyber Security Law and Policy	3
NUC 520	Radiochemistry, Nuclear Fuel Reprocessing and Nonproliferation	3
PAI 738	US Intelligence Community: Governance & Practice	3
PAI 739	US Defense Strategy, Resources, & Military Operations	3

Psychiatry & Behavioral Science Concentration

Code	Title	Credits
FSC 652	Forensic Mental Health	3
PSY 674	Advanced Social Psychology	3
SWK 626	Persons in Social Context	3
SWK 724	Psychopathology	3

Toxicology Concentration

Code	Title	Credits
Courses marked with * is a required course in this concentration		
FSC 645	Forensic Biochemical Analysis with lab	3
FSC 646	Instrumental Forensic Chemical Analysis Laboratory (*)	3
FSC 651	Forensic Pathology	3
FSC 653	Forensic Toxicology	3
FSC 657	Principles of Human Toxicology	3

Full Electives List

Code	Title	Credits
FSC 605	Basic Laboratory Skills for Advanced Research	1
FSC 634	Anatomy & Physiology for Forensic Medicine	3
FSC 635	Medicolegal Death Investigation I	3
FSC 640	Special Topics in Advanced Forensics	3
FSC 641	Forensic Analysis of Biological Evidence with lab	3
FSC 644	Forensic Chemical Analysis	3
FSC 645	Forensic Biochemical Analysis with lab	3
FSC 646	Instrumental Forensic Chemical Analysis Laboratory	3
FSC 651	Forensic Pathology	3
FSC 652	Forensic Mental Health	3
FSC 653	Forensic Toxicology	3
FSC 655	Computational Forensics	3
FSC 656	Mobile Forensics and Social Networking	3
FSC 657	Principles of Human Toxicology	3
FSC 661	Firearms and Impression Evidence	3
FSC 663	Bloodstain Pattern Analysis with lab	3
FSC 664	Latent Print Processing with lab	3
FSC 665	Latent Prints with practicum	3
FSC 667	Forensic Photography with lab	3
FSC 669	Science of Countering Weapons of Mass Destruction	3
FSC 670	Experience Credit	1-6
FSC 671	Firearms and Impressions Evidence II	3
FSC 672	Advanced Light Microscopy	3
FSC 673	Mechanics of Modern Firearms with lab	3
FSC 674	Forensic DNA Analysis with practicum	3
FSC 675	Latent Prints II	3
FSC 676	Cold Cases	3
FSC 678	Crime Scene Investigation II with lab	3
FSC 679	Microbial Forensic Science	3
FSC 690	Independent Study	1-6
ANT 600	Selected Topics (Reading the Body)	1-6
ANT 633	Human Osteology	3
ANT 634	Anthropology of Death	3
ANT 636	Bioarchaeology	3
BCM 678	Perspectives in Biochemistry	3
BIO 634	Advanced Microscopy Techniques in Cell and Developmental Biology Lab	3
BIO 662	Molecular Genetics	3
BIO 663	Molecular Biotechnology	3

BIO 665	Molecular Biology Laboratory	3
CHE 575	Organic Spectroscopy	3
CHE 677	Proteins and Nucleic Acids Lab	3
IST 602	Digital Forensics	3
LAW 604	Criminal Law	3
LAW 700	National Security Law	3
LAW 708	Constitutional Criminal Procedure - Investigative	3
LAW 718	Evidence	4
LAW 759	Computer Crimes	3
LAW 790	Counterterrorism and the Law	3
LAW 796	Constitutional Criminal Procedure - Adjudicative	3
LAW 832	Cyber Security Law and Policy	3
LIN 601	Introductory Linguistic Analysis	3
LIN 631	Phonological Analysis	3
LIN 671	Dimensions of Bilingualism and Multiculturalism	3
LIN 675	Forensic Linguistics	3
NUC 520	Radiochemistry, Nuclear Fuel Reprocessing and Nonproliferation	3
PAI 738	US Intelligence Community: Governance & Practice	3
PAI 739	US Defense Strategy, Resources, & Military Operations	3
PSY 674	Advanced Social Psychology	3
PSY 854	Bayesian Statistical Analysis	3
SWK 626	Persons in Social Context	3
SWK 724	Psychopathology	3

Comments

Law courses are open to MS in Forensic Science students by consent of the instructor. Although these courses are usually held once a year (Evidence is offered every semester), the law college cannot guarantee that these courses will be offered every year, but instead offered irregularly on a demand basis within the law school. MS students should also be aware that the law school's calendar is somewhat different from the rest of the campus and students enrolled in LAW courses will be expected to take exams and complete work based upon the law college's academic schedule (although the Law College exempts non-law students from the application of their grading curves).