BIOMEDICAL FORENSIC SCIENCES, MS

Contact

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Faculty

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M.S. in Biomedical Forensic Sciences

The M.S. in Biomedical Forensic Sciences is a pre-medical post-baccalaureate program intended for students who wish to enhance their academic credentials for admission to medical school. The degree is very well suited for careers in forensic pathology, clinical toxicology or other areas of medicine. The degree requires 36 credits, as outlined below.

Student Learning Outcomes

1. Scientific Knowledge and Principles - Apply the scientific foundational principles of forensic science in the criminal justice and national security realms.
2. 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.
3. Research and Critical Thinking - Use a rationale-based approach to evaluate and analyze a situation and/or in problem solving.
4. Ethics and Quality - Assess and apply ethical standards, integrity, professionalism, and quality assurance protocols and standards in the field of forensic science.
5. Communication and Collaboration - Effectively communicate scientific principles with objectivity and transparency to stakeholders, including scientists and non-scientists.
6. Practical Implementation - Investigate biological evidence using various scientific techniques and interpret the results obtained.

Required Coursework

Code	Title	Credits
Gateway Courses		
FSC 606	Advanced Forensic Science	3
FSC 631	Statistics for Forensic Science	3
FSC 645	Forensic Biochemical Analysis with lab	3
FSC 651	Forensic Pathology	3
FSC 653	Forensic Toxicology	3
or FSC 657	Principles of Human Toxicology	
Elective Courses		
At least one * course required		
Select 18 credits from the following:		21
FSC 605	Basic Laboratory Skills for Advanced Research	
FSC 632	Research and Career Resources	
FSC 633	Quality Assurance and Ethics	
FSC 634	Anatomy & Physiology for Forensic Medicine	
FSC 635	Medicolegal Death Investigation I	
FSC 641	Forensic Analysis of Biological Evidence with lab *	
FSC 644	Forensic Chemical Analysis	
FSC 646	Instrumental Forensic Chemical Analysis Laboratory *	
FSC 652	Forensic Mental Health	
FSC 653	Forensic Toxicology	
FSC 655	Computational Forensics	
FSC 656	Mobile Forensics and Social Networking	
FSC 657	Principles of Human Toxicology	
FSC 661	Firearms and Impression Evidence	
FSC 663	Bloodstain Pattern Analysis with lab	
FSC 664	Latent Print Processing with lab	
FSC 665	Latent Prints with practicum	
FSC 667	Forensic Photography with lab	
FSC 668	Crime Scene Investigation with lab	
FSC 669	Science of Countering Weapons of Mass Destruction	
FSC 670	Experience Credit	
FSC 671	Firearms and Impressions Evidence II	
FSC 672	Advanced Light Microscopy	
FSC 673	Mechanics of Modern Firearms with lab	
FSC 674	Forensic DNA Analysis with practicum *	
FSC 675	Latent Prints II	
FSC 676	Cold Cases	
FSC 678	Crime Scene Investigation II with lab	
FSC 679	Microbial Forensic Science *	
FSC 690	Independent Study	
ANT 633	Human Osteology	
ANT 634	Anthropology of Death	
ANT 636	Bioarchaeology	
BIO 501	Biology of Cancer	
BIO 503	Developmental Biology	
BIO 565	Cellular Physiology	
BIO 607	Advanced Neuroscience	
BIO 634	Advanced Microscopy Techniques in Cell and Developmental Biology Lab (*)	
BIO 638	Open Problems in Soft Interfaces	
BIO 643	Seminar in Epigenetics	
BIO 650	Seminar in Evolutionary Genetics	
BIO 656	Seminar in Human Disease Genomics	
BIO 662	Molecular Genetics	
BIO 663	Molecular Biotechnology *	
BIO 665	Molecular Biology Laboratory *	
CHE 575	Organic Spectroscopy	
CHE 612	Metals in Medicine	
CHE 614	Introduction to Medicinal Chemistry	
CHE 627	Organic Chemistry of Biological Molecules	
CHE 635	Physical Cell Biology	
CHE 677	Proteins and Nucleic Acids Lab *	
CHE 678	Perspectives in Biochemistry	
IST 602	Digital Forensics	
LIN 671	Dimensions of Bilingualism and Multiculturalism	

PSY 854	Bayesian Statistical Analysis	
SWK 626	Persons in Social Context	
SWK 724	Psychopathology	
Internship or Independent Study Research		
3 credits required		
FSC 670	Experience Credit	1-6
FSC 690	Independent Study	1-6
(Additional credits may be used to satisfy elective requirements)		
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: 36 credits		

Degree

Master of Science