

Master of Science in Biomedical Forensic Sciences



Program Overview

The MS in Biomedical Forensic Sciences trains individuals for a variety of disciplines applied to crime scene investigation and evidence analysis. The only program of its kind based at a major medical center, students benefit from unique opportunities to engage with forensic science practitioners, examine cadavers, utilize extensive laboratory and library resources and access a 32-acre outdoor forensic science research facility that includes a dedicated crime scene house and non-human decomposition field.

In addition, the University's medical campus, home to Boston's largest research park, is very close to the Office of the Chief Medical Examiner for Massachusetts, as well as the Boston Police Department's Crime Laboratory.

Program Highlights

- Only program of its kind based at a medical school, and one of the few forensic science graduate programs offered in New England
- Emphasis on biomedical specialties including toxicology, body fluid identification, DNA analysis and medicolegal death investigation
- Access to state-of-the-art laboratory equipment used in forensic DNA analysis, drug chemistry, trace analysis and microscopy
- Coursework in criminal law, including a mock court class designed to prepare students to give expert witness testimony
- Accredited by the Forensic Science Education Programs Accreditation Commission (FEPAC)
- The full-time, 38-credit program begins in September; however, students can take classes in the spring as non-degree students while applying for fall admission. Please contact the Program Administrator to inquire about part-time attendance.
- All classes are taught by faculty who are also accomplished forensic science professionals and frequently sought after by trial lawyers and media organizations.

The Biomedical Forensic Sciences program presented and provided all of the necessary courses, topics and tools to enter the forensics field. The faculty members were great mentors - both during my time in the program and beyond; their support, guidance and connections to the forensic science community are large part of what makes the student experience in the BMFS program so positive.

- Rebecca Millard, Class of 2020



- Field experiences build skills in crime-scene sketching, bloodstain pattern analysis, photography, and the documentation, collection and packaging of physical evidence.
- All students complete a program of independent research that is incorporated into a thesis of publishable quality.
- While not required, students are encouraged to participate in internships at crime laboratories, law enforcement agencies or research laboratories.
- Graduates pursue careers as forensic scientists, DNA analysts, chemists, toxicologists, death investigators and crime scene responders at the local, state and federal level, or choose to continue their education in MD, PhD or other advanced degree programs.
- The degree is awarded by Graduate Medical Sciences at Boston University Chobanian & Avedisian School of Medicine.

Curriculum

The curriculum includes 10 core courses, two forensic laboratory courses and four elective courses, which enable students to deepen knowledge in various areas of interest or pursue a concentration in either Forensic Biology/DNA Analysis, Forensic Chemistry/Toxicology or Forensic Medicine/Death Investigation. Students also have the option to complete up to six elective credits outside of the approved Biomedical Forensic Sciences program with their advisor’s approval.

Clinical Path

Course Title	Credits
Criminal Law and Ethics	2 credits
Crime Scene Investigation	3 credits
Forensic Biology	3 credits
Forensic Chemistry	3 credits
Trace Evidence Analysis	3 credits
Forensic Toxicology	3 credits
Molecular Biology of Forensic DNA Analysis	3 credits
Criminal Law II -- Mock Court	2 credits

Directed Research and Professionalism in Biomedical Forensic Sciences	2 credits
Research in Biomedical Forensic Sciences	2 credits

Forensic Laboratory Courses (students must complete 4 credits)

Course Title	Credits
Forensic Instrumental Analysis Laboratory	2 credits
Forensic Biology Laboratory	2 credits
Forensic DNA Analysis Laboratory	2 credits
Forensic Toxicology Laboratory	2 credits

Elective Courses (students must complete 8 credits)

Course Title	Credits
Pattern Evidence Analysis	2 credits
Forensic Pathology and Medicolegal Death Investigation	2 credits
Advanced Topics in DNA Analysis	2 credits
Case Practicum in Forensic Biology-DNA	2 credits
Analysis of Controlled Substances	2 credits
Advanced Topics in Forensic Chemistry	2 credits

Bloodstain Pattern Analysis	2 credits
Advanced Topics in Crime Scene Investigation	2 credits
Analysis of Ignitable Liquids and Explosives	2 credits
Publication and Communication of Research in BMFS	2 credits
Internship in Biomedical Forensic Sciences	2 credits

Admissions Criteria

To be considered for enrollment in September, completed applications must be received no later than July 31. Priority for admission and available lab assistantships or scholarships will be given to those who submit their completed applications by March 1, with applications received after this date considered as they are received. For additional admissions information, please visit <https://www.bumc.bu.edu/gms/bmfs/admissions/>.

Eligibility Requirements

- Have a baccalaureate degree in natural or engineering science from an accredited university (refer to website to see pre-requisites required with other majors)
- Optional: Submit GRE (general test only) or MCAT scores
- Submit three letters of recommendation from faculty members in the natural sciences who can speak about the applicant's scientific experience and capabilities, or from research/laboratory supervisors/investigators
- Submit a written personal statement
- Applicants are also encouraged to submit their CV highlighting research, laboratory and academic accomplishments/skills

International students, who are welcomed to apply to the program, must submit TOEFL scores, World Education Services (WES) transcript evaluation report and financial support documentation. To be admitted, internet-based TOEFL scores must be, at minimum, 21 for Reading, 18 for Listening, 23 for Speaking and 22 for Writing.

Tuition, Financial Aid and Student Resources

Estimated tuition costs for the Biomedical Forensic Sciences program can be found here:

www.bumc.bu.edu/gms/bmfs/admissions/financial-aid/. For the most up-to-date information on GMS tuition and fees, please visit www.bumc.bu.edu/osfs/cost-of-attendance-bot/graduate-medical-sciences/. Provost scholarships are available to students who can demonstrate outstanding achievement in previous academic endeavors -- applicants need not apply separately to receive these grants.

Graduate assistantships and opportunities to teach or to work as a laboratory assistant are available exclusively to students in the program. A number of external scholarships and awards are also available, as are other employment opportunities at Boston University and the Chobanian & Avedisian School of Medicine.

The Financial Aid office at Boston University Chobanian & Avedisian School of Medicine is available to assist students in identifying sources of financial support. For more details, please visit www.bumc.bu.edu/osfs/.

The BU Office of Housing Resources provides information regarding housing, transportation, and Boston neighborhoods. For more details, visit www.bumc.bu.edu/ohr.

To apply to the program, please visit www.bumc.bu.edu/gms/admissions/.

Contact

For more information, please contact:

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