



**Boston University** School of Medicine  
Graduate Medical Sciences



# **MASTER OF SCIENCE IN BIOMEDICAL FORENSIC SCIENCES**



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### Program Overview

The M.S. 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 crime scene house
- Open fields, wooded areas and a cranberry bog
- A 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, pathology, DNA analysis and bloodstain pattern analysis
- 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 – students can take classes in the spring as non-degree students while applying for fall admission
- All classes are taught by faculty who are also accomplished forensic science professionals and frequently sought after by trial lawyers and media organizations
- 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, death investigators and crime scene responders at the local, state and federal level, or choose to continue their education in M.D., Ph.D. or other advanced academic programs
- The degree is awarded by Graduate Medical Sciences at Boston University School of Medicine



Through the class curriculum, laboratory experiments, thesis research and mentoring, I had many opportunities to learn from professors who have practical experiences and are active members in their fields.

- Drew Horsley, Class of 2014



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## CURRICULUM

The curriculum includes 10 core courses, 2 forensic laboratory courses and 4 elective courses, which enable students to deepen knowledge in various areas of interest or pursue a concentration in either Forensic Biology/DNA Analysis or Forensic Chemistry/Toxicology. 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.

### Core Curriculum:

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)

Forensic Instrumental Analysis Laboratory	2 credits
Forensic Biology Laboratory	2 credits
Forensic DNA Analysis Laboratory	2 credits
Trace Evidence Analysis Laboratory	2 credits

### Elective Courses: (students must complete 8 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 <sup>^</sup>	2 credits
Advanced Topics in Forensic Chemistry <sup>^</sup>	2 credits
Bloodstain Pattern Analysis	2 credits
Advanced Topics in Crime Scene Investigation	2 credits
Publication and Communication of Research in BFS	2 credits
Internship in Biomedical Forensic Sciences**	2 credits

\*Approved Forensic Biology/DNA Analysis Concentration Elective

<sup>^</sup>Approved Forensic Chemistry/Toxicology Concentration Elective

\*\*May count towards the completion of a concentration



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### Admissions

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.

### Eligibility Requirements

- Have a baccalaureate degree in natural or engineering science from an accredited university
- 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 C.V. highlighting research, laboratory and academic accomplishments/skills

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

### Tuition, Financial Aid and Student Resources

For the most up to date information on tuition and fees please visit [www.bumc.bu.edu/gms/students/financing-options](http://www.bumc.bu.edu/gms/students/financing-options). 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 School of Medicine.

The Financial Aid Office at Boston University School of Medicine is available to assist students in identifying sources of financial support.

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

To apply to the program, please visit [bu.edu/gms](http://bu.edu/gms) and click on Admissions.

### For more information about the M.S. in Biomedical Forensic Sciences please contact:

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