



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



# **MASTER OF SCIENCE IN BIOMEDICAL RESEARCH TECHNOLOGIES**



## A ONE YEAR MASTER OF SCIENCE IN BIOMEDICAL RESEARCH TECHNOLOGIES



Boston University School of Medicine  
Graduate Medical Sciences

### Program Overview

The application of advanced technologies is a critical aspect of biomedical research. **The one-year M.S. in Biomedical Research Technologies** provides participants with the skills and knowledge to support research investigations in core discovery areas including:

Micro and Nano Imaging  
Genomics  
Proteomics  
Transgenics

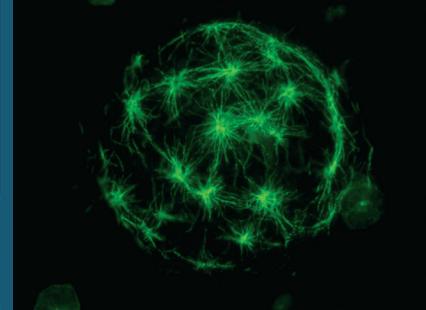
Program participants will gain a solid understanding of research principles, the relevance of these principles to an array of biomedical problems, and the technical skills to implement research technologies to achieve discovery goals. Graduates will be able to apply ongoing and emerging technologies to biomedical research in highly competitive research settings in the pharmaceutical industry or academia. The program also provides a solid foundation for continued education towards Ph.D. or M.D. degrees. Our graduates matriculated in medical/graduate school or a have secured a position.

“ Boston University’s mission of fostering and advancing interdisciplinary biomedical research is well reflected in the program. Our goal is to provide students with theoretical and practical knowledge related to different biomedical research core technologies used in addressing an array of pathologies, from cancer, to diabetes, to bone disease, to name a few.

- Dr. Katya Ravid, Director,  
M.S. Biomedical Research  
Technologies Program,  
Boston University School of Medicine

### Program Highlights:

- It is one of the few programs offered that is specifically focused on biomedical research core technologies
- Program was developed with input from colleagues affiliated with leading pharmaceutical companies
- Full-time, 32-credit graduate program begins in August and can be **completed in one year**
- Program includes seven required courses and 2-3 elective courses as well as an 8 credit practical course in demonstration of technology, designed to be completed over three semesters
- In the first semester, the Practicum course includes 2 research practica, each in a different core technology, followed by a Capstone project or library-based thesis that is completed over the second and third semesters
- Courses taught by world-class faculty from Boston University’s School of Medicine
- High levels of mentoring and advising provided to support each student’s success
- The degree is awarded by the Division of Graduate Medical Sciences at Boston University School of Medicine



Boston University School of Medicine  
Graduate Medical Sciences

Students complete 24 credits of classroom-based coursework and 8 credits of Practicum and Thesis research.

## CURRICULUM

### REQUIRED COURSES

#### Fall Semester

Biological Core Technology	3 credits
Biochemistry/Cell Biology (valid for medical school)	6 credits
Organ System Disease (may be offered in spring)	2 credits

#### Spring Semester

Elementary Biostatistics	2 credits
Molecules to Molecular Therapeutics	2 credits
Biological Core Technology - Practicum	4 credits

#### Summer Semester:

Capstone Project or Library-Based Thesis	Continuing Student
--	--------------------

### Sample Elective Courses:

See our full selection of electives here: <http://www.bumc.bu.edu/gms/brt/curriculum/courses/>

#### Clinical/Translational Research

- Management of Clinical Research
- Regulatory and Compliance Issues
- Good Clinical Practice in Clinical Research
- Designing Clinical Research Studies
- Legal and Ethical Issues in Clinical Research
- Essential Readings in Translational Research
- Fundamentals of Medical Biotechnology

#### Science Behind Technology

- Gene Targeting in Transgenic Mice
- Mass Spectrometry, Proteomics and Functional Genomics
- Molecular Basis of Neurologic Diseases
- Pathology and Pathophysiology of Disease
- Human Biospecimens for Research
- Business of Science



## A ONE YEAR MASTER OF SCIENCE IN BIOMEDICAL RESEARCH TECHNOLOGIES



Boston University School of Medicine  
Graduate Medical Sciences

### Admissions

You can apply to the program any time after September 1st. Applications are reviewed on a rolling basis and applicants will be notified of their acceptance within four to six weeks. To be considered for admission for Fall 2019, your application must be completed by June 1, 2019.

### Application Requirements

- To be eligible for admission, students must have completed a Bachelors degree from an accredited college or university in biological, biomedical or biotechnology sciences, including a passing grade in Organic Chemistry and/or Biochemistry or Molecular Biology
- We also require applicants to submit test scores from either the Graduate Record Examination (GRE), the Medical College Admission Test (MCAT), or the Dental Admission Test (DAT)
- Applicants whose native language is not English must complete the TOEFL exam
- To apply to the program, please visit [bu.edu/gms](http://bu.edu/gms) and click on Admissions

### 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). Tuition costs are determined by the Boston University Board of Trustees and are subject to change on annual basis. Students in the program may also incur additional costs for transportation, academic supplies, personal costs and housing.

The Financial Aid Office at Boston University's Division of Graduate Medical Sciences is available to assist students in identifying sources of financial support including graduate and research assistantships, fellowships, and federal loans.

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

### For more information about the Biomedical Research Technologies program please contact:

Dr. Louis Gerstenfeld  
Program Co-Director  
72 E. Concord St., Evans Building E243  
Boston, MA 02118  
617-358-3653  
[lgersten@bu.edu](mailto:lgersten@bu.edu)

Dr. Francesca Seta  
Program Co-Director of Admissions  
650 Albany St., Room 720  
Boston, MA 02118  
617-358-7814  
[setaf@bu.edu](mailto:setaf@bu.edu)

[www.bumc.bu.edu/gms/biomedicalresearchtech](http://www.bumc.bu.edu/gms/biomedicalresearchtech)