

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



# MASTER OF SCIENCE IN BIOIMAGING

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# **Program Highlights:**

- Students will have the opportunity to learn about all aspects of imaging from the theory underlying pulse sequencing and image acquisition to post acquisition processing of images
- Training opportunities are available on a wide range of imaging modalities such as CT, PET, SPECT, 1.5T, 3.OT, 4.7T and 11.7T MRI scanners
- Courses are taught using a combination of lecture and laboratory formats
- Students can choose from two pathways to complete the degree:

The **Clinical Path** provides students with the didactic and ethics course requirements necessary to sit fro the American Registry of Radiologic Technologies (AART) advanced certification exam. This certification allows an individual to enter the bioimaging field as a Registered MRI Technologist

The **Research Path** provides students with a research-based focus, culminating in a thesis project that prepares the individual for entry into the broader fields of academia and industry

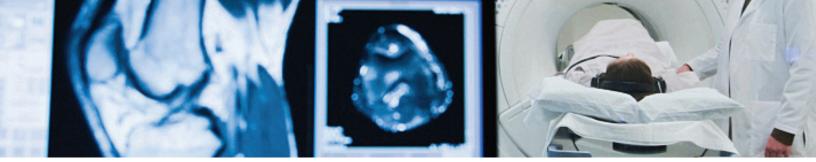
- The program can be completed in as little as one year (three semesters) or as many as five years depending upon the needs and desires of the individual student
- MS degree with either a research thesis (research path) or clinical internship and practicum (clinical path) is awarded by the School of Medicine

Visit us at www.bumc.bu.edu/mbi

# **Bioimaging Program**

The Master of Science in Biomaging is designed to fill a rapidly growing need for individuals who possess advanced and broad knowledge of the imaging methodologies used in medicine and medical research. Graduates of this program qualify for positions in the healthcare, biomedical instrumentation industries, academia, and in a wide variety of private and government research centers.

The program requires a minimum of 36 credit hours of graduate coursework. It is designed so that it can be completed in as little as one calendar year (September through August) or as many as five years depending upon the needs or desires of the individual student. Many of the courses are given in the late afternoon or early evening hours in order to accommodate students who are working. In addition, many of the courses also allow students to attend lectures remotely via internet conferencing software in order to accommodate students who have difficulty accessing campus.





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# **CURRICULUM**

# **CLINICAL PATH**

# **Fall Semester:**

Bioimaging Foundations	4 credits
Magnetic Resonance: Principles, Methods and Applications	4 credits
Radiation, Protection, Safety and Ethics	2 credits
Statistical Analysis of Neuroimaging Data	2 credits
Sectional Anatomy for Imaging Professionals	2 credits
Thesis and Practicum Design	2 credits

# **Spring Semester:**

Bioimaging Theory & Image Processing	4 credits
Methods of Functional Imaging of the Brain	2 credits
Clinical & MR Pathophysiology	4 credits
Clinical Internship	4 credits

# Summer 1:

Clinical Internship	4 credits

# Summer 2:

Bioimaging Practicum	2 credits

# RESEARCH PATH

# **Fall Semester:**

Bioimaging Foundations	4 credits
Magnetic Resonance: Principles, Methods and Applications	4 credits
Radiation, Protection, Safety and Ethics	2 credits
Statistical Analysis of Neuroimaging Data	2 credits
Sectional Anatomy for Imaging Professionals	2 credits
Thesis and Practicum Design	2 credits

# **Spring Semester:**

Bioimaging Theory & Image Processing	4 credits
Methods of Functional Imaging of the Brain	2 credits
Special Topics in Bioimaging	2 credits
Professional Skills in Bioimaging	2 credits
Directed Studies in Bioimaging	2 credits
Thesis Research	2 credits

# Summer 1:

Thesis Research	2 credits
Directed Studies in Bioimaging	2 credits

# Summer 2:

Thesis Research 2 credits



### MASTER OF SCIENCE IN BIOIMAGING



### **Admissions Criteria**

In order to be considered for admission to this program, applicants are required to have a bachelor's degree from an accredited university. Past and current students have entered the program with undergraduate degrees in the basic, biological, physical, computer or social/behavioral sciences though a few have come with backgrounds in other areas and have been quite successful in this program.

We recommend a minimum GPA of about 3.0.

We also require that prospective students submit test scores from either the Graduate Record Examination (GRE) or Medical College Admission Test (MCAT).

Prospective students whose native language is not English must complete the TOEFL exam.

We offer rolling admission but recommend that prospective applicants submit completed applications by April 1st for Fall (September) admissions and before November 1st for Spring (January) admissions. Applications received after these dates will be considered pending available space.

In order to be considered for admission, a completed application must be submitted. A completed application consists of the application, a personal statement, three letters of recommendation, and official transcripts for all colleges and universities attended.

To apply to the program, please visit 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 <a href="www.bumc.bu.edu/gms/students/financing-options">www.bumc.bu.edu/gms/students/financing-options</a>. The Financial Aid Office at Boston University School of Medicine is available to assist students in identifying sources of financial support including subsidized an unsubsidized student loans. A limited number of scholarships are awarded each year to highly qualified students.

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

### For more information contact:

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