**MEDICAL PHYSICS, MS**

The program is designed for full-time students who wish to pursue a career as a medical physicist either as a researcher, as a certified clinical profession or in industry. The program will require successful completion of a minimum of 38 credits for Master’s degree and completion of a research thesis (in conjunction with one or more of the faculty). Full-time master’s students will complete the program in two years.

**Admission Requirements**
- B.S. degree or B.A. degree in physics, applied physics, or one of the physical sciences, including physics training at least equivalent to a minor
- Official transcript of school record, personal statement, three letters of recommendation, and curriculum vitae
- Demonstrated proficiency in written and spoken English (TOEFL/IELTS required for non-native English speakers)
- General GRE exam scores are required (physics GRE is recommended)

**Tuition and Fees for the 24 Month Program**
A non-refundable application fee of $115 is payable by credit card at time of application. 2021-2022 tuition at the Johns Hopkins School of Medicine for full-time graduate students is $58,000. There is also a one-time matriculation fee of $740.

**Resources**
For more information on graduate education at the Johns Hopkins University School of Medicine, see: Johns Hopkins University School of Medicine Graduate Programs (https://www.hopkinsmedicine.org/som/education-programs/graduate-programs/)

**Program Requirements**
This program consists of 38 credits (cr). There is also an ethics and responsible conduct of research requirement.

**Courses**

**Core Medical Physics Courses (20 Cr)**
All Medical Physics students are required to take the following courses:

- Radiological Physics and Dosimetry (3 cr)
- Radiobiology (3 cr)
- Radiation Therapy Physics (3 cr)
- Radiation Protection and Safety (3 cr)
- Fundamentals of Human Physiology (4 cr)
- Medical Imaging Systems (3 cr) ECE
- Academic & Research Ethics at JHSPH (0 cr)*
- Responsible Conduct of Research (0 cr)*
- Medical Physics Seminar (1 cr) must be taken each semester, but only 1 credit can be counted toward degree requirement

*University requirement for graduation; no credit

**Research Project (6 Cr)**
Students are required to take at least 6 cr of independent research project or Master’s thesis research.

**Elective Courses (12 Cr)**
Student shall take 12 or more additional credit hours from the following list of courses.

- Radiopharmaceutical Imaging and Therapy (3 cr)
- Modern Biomedical Imaging Instrumentation and Techniques (3 cr)
- Magnetic Resonance in Medicine (3 cr)
- Nuclear Medicine Imaging (3 cr)
- Advanced Image Reconstruction (3 cr)
- Quantitative Imaging Analysis (3 cr)
- Organ Physiology (6 cr)
- Image Processing & Analysis (3 cr)
- Image Processing & Analysis II (3 cr)
- Medical Image Analysis (3 cr)
- Ultrasound and Photoacoustic Beamforming (3 cr)
- X-ray Imaging and Computed Tomography (3 cr)
- Imaging Instrumentation (4 cr)
- Statistics for Laboratory Scientists I (4 cr)
- Methods in Biostatistics I (4 cr)
- Molecular Imaging (3 cr)