

## MEDICAL PHYSICS

### PROFESSIONAL SCIENCE MASTER (P.S.M.)

*(Minimum of **38** credits required) (Changes effective spring 2025)*

The Professional Science Master (P.S.M.) with major in Medical Physics degree is an interdisciplinary program that develops advanced scientific knowledge and professional skills. The program provides hands-on learning through on-site training. It aims to engage students with professional goals and help them become scientists uniquely suited to the 21st-century workplace.

Medical physics is an applied branch of physics devoted to the application of concepts and methods from physics to the diagnosis and treatment of human disease. A qualified medical physicist is competent to practice independently in one or more of the subfields (tracks) of medical physics.

The program requires **38** credits. It provides professional training in partnership with area hospitals and concentrates on the medical physics radiation therapy track, which employs approximately 75 percent of the medical physicists.

#### Admission Requirements

In addition to meeting all of the University and College admission requirements for graduate study, applicants for the Medical Physics program must meet all of the following departmental requirements:

1. A B.S. or B.A. in Physics. Candidates with a B.S. in Biology, Chemistry, Computer Science or Engineering with a minor in Physics are considered;
2. At least a 3.0 (of a 4.0 maximum) GPA in science and mathematics courses;
3. Have taken the general GRE. No minimum score is required. (GRE scores more than five years old will not be accepted);
4. Approval from the Department of Physics.

#### Degree Requirements

##### Core Courses - 18 credits

Radiation Biology	RAT 6204	3
Radiation Physics	RAT 6686	3
Radiation Therapy Physics	RAT 6628	3
Medical Imaging Physics	RAT 6616	3
Nuclear Medical Physics	RAT 6687	3

Radiation Protection and Safety	RAT 6310	3
<b>Additional Required Courses - 20 credits</b>		
Advanced Photon Beam Radiation Therapy	RAT 6629	3
Radiation Therapy: Clinical Practicum and Shadowing	RAT 6947	3
Shielding and Commissioning	RAT 6376	3
Seminar in Medical Physics	RAT 6932	1
Special Topics (such as Human Morphology and Function 1)	BSC 5931	3
Special Topics (such as Human Morphology and Function 2)	BSC 5931	3
Master's Thesis	RAT 6975	4