



Oregon Medical Physics Program

Oregon State University
&
Oregon Health Sciences University



The Oregon Medical Physics (OMP) graduate program is focused on the clinical application of radiation sciences in medicine. The curriculum prepares graduates for positions in a clinical setting, both collaborating with radiation oncologists to design treatment plans for cancer and ensuring safe use of radiation in the clinic. The program covers a broad area of both biological and physical science including: ionizing radiation interactions, radiation therapy techniques and instrumentation, diagnostic imaging physics, radiation protection, radiation oncology, and biological effects of radiation.

Curriculum

The graduate degrees offered are; a Masters of Medical Physics (professional non-thesis option), a Masters of Science in Medical Physics (with thesis), or a Ph.D. in Medical Physics. As a full time student, the MS can be completed in a two-year time period. All degree options will require 39 credit hours of didactic classroom and laboratory instruction, as well as a full-time clinical practicum. In total, the Masters of Medical Physics (the professional degree) and the MS will require a minimum of 51 credit hours and the PhD will require a minimum of 135 credit hours. Although the professional degree does not require a thesis, all degree options will culminate with an oral examination at the end of the program.

The graduate coursework will consist of common, core Medical Physics instruction that is shared between the two sponsoring organizations. This core has been developed based on the recommendation of the accrediting organizations in Medical Physics. The student, along with his or her graduate committee, will develop a program of study that meets the equivalent of the required coursework listed below.

Core MP Courses	Credit Hours
• Radiophysics	3
• Radiation Therapy	3
• Applied Therapy	3
• Applied Therapy Lab	2
• Applied Radiation Safety	3
• Radiation Biology	4
• Shielding & External Dosimetry	4
• Advanced Radiation Detection	4
• Diagnostic Imaging Physics	3
• Oncology for the Physicist	2
• Statistics	3
• Principles of Scientific Conduct	2
• Seminar/Journal Club	3
• Clinical Practice	3-12



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Admissions

Admissions into the Oregon Medical Physics Program will be limited. Successful applicants will have a strong physics background and hold an undergraduate degree in a physical science or related engineering discipline. It is strongly encouraged that applicants have completed coursework in electromagnetism and college level calculus, including differential equations. Preference will be given to applicants also having completed undergraduate coursework in quantum mechanics and biology. A course in anatomy and physiology is required for the program, but can be taken concurrent with the first graduate year. Strong candidates who have not fulfilled all of the above prerequisites may be accepted on a probationary basis, provided all necessary coursework is successfully completed within the first academic year. Questions regarding academic credentials should be directed to the program director.

Prospective students must also meet the minimum admission requirements for Oregon State University and Oregon Health Sciences University Graduate Schools. Applicants must have a combined GPA of at least 3.00 on the last 90 quarter (60 semester) credit hours of graded undergraduate work and all graded academic work completed after the first undergrad degree. Applicants must also demonstrate an acceptable score on the general GRE (the GRE Advanced Physics Exam is not required). Admission to the OMP Program is competitive and meeting the minimum admission requirements does not guarantee admission. For more information regarding admission requirements and procedures, please visit the department of Nuclear Engineering and Radiation Health Physics website at: http://ne.oregonstate.edu/prospective/graduate_student_index.html.