

MEDICAL PHYSICS, PHD

REQUIREMENTS

MINIMUM GRADUATE SCHOOL REQUIREMENTS

Review the Graduate School minimum degree requirements (<https://guide.wisc.edu/graduate/#requirements>) and policies (<https://guide.wisc.edu/graduate/#policies>), in addition to the program requirements listed below.

MAJOR REQUIREMENTS

MODE OF INSTRUCTION

Face to Face	Evening/ Weekend	Online	Hybrid	Accelerated
Yes	No	No	No	No

Mode of Instruction Definitions

Accelerated: Accelerated programs are offered at a fast pace that condenses the time to completion. Students typically take enough credits aimed at completing the program in a year or two.

Evening/Weekend: Courses meet on the UW–Madison campus only in evenings and/or on weekends to accommodate typical business schedules. Students have the advantages of face-to-face courses with the flexibility to keep work and other life commitments.

Face-to-Face: Courses typically meet during weekdays on the UW–Madison Campus.

Hybrid: These programs combine face-to-face and online learning formats. Contact the program for more specific information.

Online: These programs are offered 100% online. Some programs may require an on-campus orientation or residency experience, but the courses will be facilitated in an online format.

CURRICULAR REQUIREMENTS

Requirement Detail

Minimum Credit Requirement	54 credits
Minimum Residence Credit Requirement	32 credits
Minimum Graduate Coursework Requirement	32 credits must be graduate-level coursework. Refer to the Graduate School: Minimum Graduate Coursework (50%) Requirement policy: https://policy.wisc.edu/library/UW-1244 (https://policy.wisc.edu/library/UW-1244/).
Overall Graduate GPA Requirement	3.00 GPA required. Refer to the Graduate School: Grade Point Average (GPA) Requirement policy: https://policy.wisc.edu/library/UW-1203 (https://policy.wisc.edu/library/UW-1203/).

Other Grade Requirements n/a

Assessments and Examinations Candidates are expected to take the Oral Qualifying Examination by the end of the fourth semester of study, and to take the PhD Preliminary Examination by the end of the third year of study. Permission of the Department Chair is required if the PhD Preliminary Examination must be taken after the end of the third year. Defense of a dissertation is required within five years of successful completion of the PhD Preliminary Examination.

Language Requirements No language requirements.

Graduate School Breadth Requirement A doctoral minor or graduate/professional certificate is not required for students in the Medical Physics Graduate Program as graduate students enroll in sufficient breadth courses. However, a student can complete a minor or certificate offered by another graduate program at UW–Madison, if desired and with the approval of their advisor. Please see the Medical Physics Graduate Student Handbook (<https://www.medphysics.wisc.edu/wp/graduate-program>) for more information.

REQUIRED COURSES

Code	Title	Credits
Foundational		
MED PHYS/ B M E/H ONCOL/ PHYSICS 501	Radiation Physics and Dosimetry ¹	3
MED PHYS/ B M E 573	Mathematical Methods in Medical Physics ¹	3
MED PHYS 510	Fundamentals of Cellular, Molecular, and Radiation Biology ¹	3
MED PHYS 701	Ethics and the responsible conduct of research and practice of Medical Physics ¹	1
Seminar		
Students must complete four semesters of seminar for 1 credit each.		4
MED PHYS 900	Journal Club and Seminar	
Selected Pathway		
Students complete a Clinical or Interdisciplinary Pathway. Refer to the appropriate table below for course requirements.		25–26
Research		
Students must complete sufficient research credits to satisfy the minimum credit requirement.		14–15
MED PHYS 990	Research	
Total Credits		54

Clinical Pathway²

This pathway is for students who may want to enter a medical physics residency program and obtain board certification following graduate study. Students complete all foundational coursework, clinical pathway coursework, and research credits. This pathway is Commission on Accreditation of Medical Physics Education Programs (CAMPEP) accredited.¹

Code	Title	Credits
Basic Coursework		
MED PHYS/ B M E 566	Physics of Radiotherapy ¹	3
MED PHYS/ B M E 578	Non-Ionizing Diagnostic Imaging ¹	4
MED PHYS/ B M E 580	The Physics of Medical Imaging with Ionizing Radiation ¹	4
MED PHYS 581	Laboratory for Medical Imaging with Ionizing Radiation	1
MED PHYS/N E 569	Health Physics and Biological Effects ¹	3
MED PHYS 671	Selected Topics in Medical Physics (Topic: Anatomy and Physiology) ¹	2
Advanced Coursework		
<i>MED PHYS courses numbered 600 and above</i>		
In consultation with advisor/committee, students select 6 credits of MED PHYS courses numbered 600 and above.		6
<i>Courses numbered 600 and above</i>		
In consultation with advisor/committee, students select 3 credits of courses numbered 600 and above.		3
Total Credits		26

¹ Required for Commission on Accreditation of Medical Physics Education Programs (CAMPEP) Accreditation.

² These pathways are internal to the program and represent different curricular paths a student can follow to earn this degree. Pathway names do not appear in the Graduate School admissions application, and they will not appear on the transcript.

Interdisciplinary Pathway ²

This pathway requires a majority of coursework to be completed in Medical Physics, but gives students the freedom to draw coursework from other departments to develop a curriculum tailored to their research area.

Students pursuing non-clinical careers in academia, research, industry, business, or government may choose this pathway. Students complete all foundational coursework, interdisciplinary pathway coursework, and research credits. This pathway is not Commission on Accreditation of Medical Physics Education Programs (CAMPEP) accredited.

Code	Title	Credits
Elective Medical Physics Courses		
In consultation with advisor/committee, students select at least 10 credits of coursework in MED PHYS.		10
Elective Graduate Courses		
In consultation with advisor/committee, students select at least 15 credits of graduate-level coursework focused on their research, at the 500 level or above. This may include courses in MED PHYS.		15
Total Credits		25

² These pathways are internal to the program and represent different curricular paths a student can follow to earn this degree. Pathway names do not appear in the Graduate School admissions application, and they will not appear on the transcript.