

Radiological Health Sciences-Medical Physics Combined Degree Plan of Study

To fulfill CAMPEP requirements, each student must take 25 CR of didactic coursework and 6 CR of independent research. The Purdue MP program requires a minimum an additional 9 CR of additional coursework defined as selectives. The list of selectives can be found on the next page of this document and on our website, and includes advanced courses, clinical internships, and independent research credit.

Upon entry into the program, students are expected to have completed the equivalent of two semesters of anatomy and physiology. Students that have not completed prior course work in anatomy and physiology are required to complete one of the following options: BIOL 20300 and 20400 or equivalent.

The following plan of study is for incoming students with either a major or minor in Physics. For those students who do not have a physics minor, an alternative plan of study that includes the necessary physics courses should be drafted.

The suggested plan of study includes 25 CR didactic coursework (CAMPEP required), 6 CR of research project coursework (emphasized by CAMPEP) and 6 CR of clinical internship coursework and advanced coursework related to their research.

Undergraduate: 12 CR transfer to graduate degree

- ___ (3) F HSCI 31200 Radiation Science Fundamentals^
- ___ (2) F HSCI 31300 Principles of Radiation Detection and Measurement
- ___ (2) Sp HSCI 51400 Radiation Instrumentation Laboratory
- ___ (3) F HSCI 52600 Principles of Health Physics & Dosimetry
- ___ (3) Sp HSCI 54000 Radiation Biology
- ___ (3) Sp HSCI 57000 Introduction to Medical Diagnostic Imaging
- ___ (3) Sp HSCI 57200 Radiation Oncology Physics
- ___ (2) F HSCI 57400 Medical Health Physics

Graduate Requirements: 19 CR

- ___ (2) F HSCI 54100 Human Sectional Anatomy
- ___ (1) Sp HSCI 61300 Professionalism and Professional Development in Health Sciences AND AAPM/RSNA Professional Conductivity (online)
- ___ (6) F,Sp,Su HSCI 59000 Independent Topics (Research)
OR
HSCI 69800 MS Research Thesis
- ___ (1) F,Sp HSCI 69600 Graduate Seminar*

Medical Physics Selective Courses (9 Credits)

___ () _____ ___ () _____ ___ () _____

Electives (0 Credits)

___ () _____ ___ () _____ ___ () _____

F=Fall, Sp=Spring, Su=Summer

*All students are required to take HSCI 69600 for credit once and for 0 credit all remaining fall and spring semesters.

A minimum of 24 coursework credit hours with no more than 6 credit hours at the 300 or 400 level is required for the M.S. degree. The student's advisory committee may approve alternative coursework in a plan of study that will assist the student in their research, including independent study projects under the guidance of a faculty member.

Note: Graduate courses taken while registered as a graduate student at Purdue University may be considered for fulfilling the plan of study requirements only if the student has received grades of C or better. For courses at the 300 or 400 level taken as a graduate student or courses that represent either undergraduate or graduate excess credit or transfer credit, grades of B or better are required for fulfilling plan of study requirements.

Medical Physics Selective Courses:**Supplemental Coursework:****Anatomy and Physiology**

- ___ (4) FSu BIOL 20300 Human Anatomy & Physiology I
- ___ (4) SSu BIOL 20400 Human Anatomy & Physiology II

Physics Minor – if previous coursework does not include a physics minor

- ___ (4) F PHYS 31000 Intermediate Mechanics
- ___ (3) F PHYS 32200 Optics
- ___ (3) F PHYS 33000 Intermediate Electricity and Magnetism (recommended)
- ___ (1) FSp PHYS 34000 Modern Physics Lab (required)
- ___ (3) FSp PHYS 34200 Modern Physics (required)
- ___ (3) Sp PHYS 36000 Quantum Mechanics
- ___ Varies Varies PHYS 40000- or 50000-level courses

A grade of B or better in all 10000, 20000, 30000 or 40000 level classes.

Clinical Internship Selective Courses*

- ___ (3) Sp HSCI 67200 MRI QA Internship
- ___ (3) Su HSCI 67400 Diagnostic Imaging Physics Internship
- ___ (3) Su HSCI 67600 RT Clinical Competencies I
- ___ (3) Sp HSCI 67700 RT Clinical Competencies II

*Timing of the clinical internships are subject to change. Please keep in touch with the program director to learn about the latest schedule. It is highly recommended that students take 6 CR of clinical selective courses.

Advanced Coursework

- ___ (3) Sp HSCI 52500 Statistics for Health Sciences
- ___ (3) F,Sp,Su STAT 51100 Statistical Methods
- ___ (3) F,Sp,Su STAT 51200 Applied Regression Analysis
- ___ (3) FSp HSCI 30500 Basics of Oncology
- ___ (3) Sp HSCI 53400 Applied Health Physics I
- ___ (2) F HSCI 51600 Molecular Imaging in Nuclear Medicine
- ___ (3) Sp BME 51500 Practical MRI and Applications
- ___ (3) Varies HSCI 59000 Data Acquisition and Image Reconstruction in MRI
- ___ (3) Sp HSCI 59000 Magnetic Resonance Spectroscopy

Research

- ___ (0-8) FSpSu HSCI 59000 Independent Research Project
- ___ (0-8) FSpSu HSCI 69800 MS Research Thesis
- ___ (0-8) FSpSu HSCI 69900 PhD Research Thesis

* Students performing an MS Thesis, 6-CR of HSCI 590 is replaced by HSCI 698.

Suggested Arrangement of Courses:*Summer:*

Credits	Course Name
3	HSCI 67600 OR HSCI 67400
3	HSCI 59000 Independent Research Project OR HSCI 69800
6	

Fall:

Credits	Course Name
2	HSCI 54100
3	HSCI 59000 Independent Research Project OR HSCI 69800
1	HSCI 69600
3	Elective or Medical Physics Selective
9	

Spring:

Credits	Course Name
1	HSCI 61300 & AAPM/RSNA Professional Conductivity
3	HSCI 67700 OR HSCI 67200
0	HSCI 69600
4	Elective or Medical Physics Selective
8	