



## Plan of Study

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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 at the bottom 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 301 and 302 or BIOL 203 and 204 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.

Many of the above course requirements are included in the B.Sc. in RHS 4+1 Pre-Medical Physics plan of study. The *suggested* plan of study for the "+1" year includes additional didactic coursework (CAMPEP required), at least 6 CR of research project coursework (CAMPEP required) and at least 9 CR of selective coursework. A total of 30 credit hours must be taken over the Summer, Fall and Spring semesters to obtain a M.Sc. degree.

### **FIRST YEAR**

#### **Summer Semester (6 CR)**

- \_\_\_\_\_ (3) HSCI 690 – Radiation Therapy (RT) Clinical Rotation I (clinical selective)  
or  
HSCI 590 – Independent Research Project  
\_\_\_\_\_ (3) HSCI 590 – Independent Research Project

#### **Fall Semester (12 CR)**

- \_\_\_\_\_ (2) HSCI 590 – Human Sectional Anatomy  
\_\_\_\_\_ (3) HSCI 690 – Radiation Therapy Physics Competencies II (clinical selective)  
or  
HSCI 672 – MRI QA Internship (clinical selective)  
\_\_\_\_\_ (3) HSCI 590 – Independent Research Project  
\_\_\_\_\_ (1) HSCI 696 – Seminar in Health Sciences (initial student seminar)  
\_\_\_\_\_ (3) Medical Physics Selectives

#### **Spring Semester (12 CR)**

- \_\_\_\_\_ (3) HSCI 674 – Radiological Imaging Physics Internship (clinical selective)  
or  
HSCI 590 – Independent Research Project  
\_\_\_\_\_ (0) HSCI 696 - Seminar in Health Sciences  
\_\_\_\_\_ (9) Medical Physics Selectives

#### Notes:

- Students are required to enroll in HSCI 696 Seminar in Health Sciences spring and fall semesters while in the graduate program. However, only 1 credit hour applies towards the completion of the required coursework.



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### Selective Courses:

- Physics Minor (if necessary)
    - PHYS 340 - Modern Physics Lab (required)
    - PHYS 342 - Modern Physics (required)
    - PHYS 330 - Intermediate Electricity and Magnetism (recommended)
    - PHYS 322 - Optics
    - PHYS 310 - Intermediate Mechanics
    - PHYS 360 - Quantum Mechanics
    - PHYS 400 or 500 level courses
  - Advanced Coursework
    - HSCI 305 - Basics In Oncology
    - HSCI 534 - Applied Health Physics
    - HSCI 516 - Molecular Imaging in Nuclear Medicine
    - BME 595 - Theory of MRI
    - HSCI 590 - Data Acquisition and Image Reconstruction in MRI
    - HSCI 590 - Magnetic Resonance Spectroscopy
    - STAT 511 - Statistical Methods
    - STAT 512 - Applied Regression Analysis
  - Clinical Internships
    - HSCI 690 - Radiation Therapy Physics Competencies Intern I
    - HSCI 690 - Radiation Therapy Physics Competencies Intern II
    - HSCI 672 - MRI QA Internship
    - HSCI 674 - Diagnostic Imaging Physics Internship
  - Research
    - HSCI 590 - Independent Research
    - HSCI 698\* - MS Research Thesis
    - HSCI 699 - PhD Research Thesis
- \* Students performing an MS Thesis, 6-CR of HSCI 590 is replaced by HSCI 698.