



Plan of Study

To fulfill CAMPEP requirements, each student must take 23 CR of core didactic coursework. Students are expected to have completed the equivalent of two semesters of anatomy and physiology and either a major or minor in physics. Student that have not completed this coursework prior to entering are required to complete BIOL 203 and 204 (or BIOL 301 and 302) or equivalent to fulfill the former, and the necessary physics courses for the latter.

The *suggested* plan of study also includes an additional 9 CR of selective coursework, such as clinical internships and advanced coursework related to their research. Students who wish to emphasize in Radiation Therapy Physics are encouraged to take HSCI 690 – Radiation Therapy Physics Competencies I and II; while those interested in Diagnostic Therapy Physics are encouraged to take HSCI 672 – MRI QA Internship and HSCI 674 Radiological Imaging Physics Internship. The list of selectives can be found at the bottom of this document and on our website.

FIRST YEAR

Fall Semester

- _____ (4) BIOL 203 - Human Anatomy & Physiology I
- _____ (3) HSCI 312 - Radiation Science Fundamentals
- _____ (2) HSCI 313 - Principles of Radiation Detection and Measurement
- _____ (3) HSCI 526 - Principles of Health Physics and Dosimetry
- _____ (1) HSCI 696 - Seminar in Health Sciences (initial student seminar)

Spring Semester

- _____ (4) BIOL 204 - Human Anatomy & Physiology II
- _____ (2) HSCI 514 - Radiation Instrumentation Laboratory
- _____ (3) HSCI 540 - Radiation Biology
- _____ (3) HSCI 570 - Introduction to Medical Diagnostic Imaging
or
HSCI 572 - Radiation Oncology Physics
- _____ (1) GRAD 612 - Responsible Conduct in Research
- _____ (0) HSCI 696 - Seminar in Health Sciences (attending)

Summer Semester

- _____ (3) HSCI 690 - Radiation Therapy (RT) Clinical Rotation I (clinical selective)
or
HSCI 699 – Research PhD Thesis
- _____ (3) HSCI 699 – Research PhD Thesis

SECOND YEAR

Fall Semester

- _____ (2) HSCI 574 - Medical Health Physics
- _____ (3) HSCI 690 – Radiation Therapy Physics Competencies II (clinical selective)
or
HSCI 672 – MRI QA Internship (clinical selective)
or
HSCI 699 – Research PhD Thesis
- _____ (0) HSCI 696 - Seminar in Health Sciences (attending)
- _____ (3-6) Medical Physics Selectives



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Spring Semester

- _____ (3) HSCI 572 - Radiation Oncology Physics
or
HSCI 570 - Introduction to Medical Diagnostic Imaging
_____ (3) HSCI 690 - Radiation Therapy Physics Competencies II (clinical selective)
or
HSCI 674 Radiological Imaging Physics Internship (clinical selective)
or
HSCI 699 – Research PhD Thesis
_____ (3-6) Medical Physics Selectives

Summer Semester

- _____ (6) HSCI 699 – Research PhD Thesis

THIRD YEAR

Fall Semester

- _____ (1) HSCI 696 – Seminar in Health Sciences (attending)
_____ (8) HSCI 699 – Research PhD Thesis

Spring Semester

- _____ (1) HSCI 696 – Seminar in Health Sciences (attending)
_____ (8) HSCI 699 – Research PhD Thesis

Summer Semester

- _____ (6) HSCI 699 – Research PhD Thesis

FOURTH YEAR

Fall Semester

- _____ (1) HSCI 696 – Seminar in Health Sciences (attending)
_____ (8) HSCI 699 – Research PhD Thesis

Spring Semester

- _____ (1) HSCI 696 – Seminar in Health Sciences (attending)
_____ (8) HSCI 699 – Research PhD Thesis

Summer Semester

- _____ (6) HSCI 699 – Research PhD Thesis

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.



Plan of Study

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.