Core Medical Physics Courses (23 hours)

All MP students are required to take the following courses. 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 BMS 510 (Gross Anatomy) or equivalent.

- HSCI 312* – Radiation Science Fundamentals (3 CR)
- HSCI 313* – Principles of Radiation Detection and Measurement (2CR)
- HSCI 514 – Radiation Instrumentation Laboratory (2 CR)
- HSCI 526 – Principles of Health Physics and Dosimetry (3 CR)
- HSCI 540 – Radiation Biology (3 CR)
- HSCI 570 – Introduction to Medical Diagnostic Imaging (3 CR)
- HSCI 572 – Radiation Oncology Physics (3CR)
- HSCI 574 – Medical Health Physics (2 CR)
- HSCI 696† – Seminar in Health Sciences (1 CR)
- GRAD612 – Responsible Conduct in Research (1 CR)
- AAPM/RSNA – Professional Conductivity (online)

Note:

- † - 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.

Therapeutic Radiological Physics Track

In addition to the core MP courses (23 hours), all MS and Ph.D. students on the Therapeutic Radiological Physics track are required to take an additional 9 hours of coursework in radiation therapy.

- STAT 511 or 512 – Statistical Methods or Applied Regression Analysis (3 CR)
- HSCI 690 Radiation Therapeutic Physics Clinical Competencies – Part I (3 CR)
- HSCI 690 Radiation Therapeutic Physics Clinical Competencies – Part II (3CR)

Diagnostic Radiological Physics Track

In addition to the core MP courses (23 hours), MS and Ph.D. students on the Diagnostic Radiological track are required to take an additional 9 hours of coursework in diagnostic imaging.

- HSCI 590 – Molecular Imaging (3CR)
- Electives‡ (6 CR)

Note:   ‡ - Within the diagnostic imaging track, students are encouraged to fill elective credits with Clinical Diagnostic Imaging Courses (6CR) and/or to acquire an emphasis in particular area of the Imaging Sciences: PET/SPECT (NM), Magnetic Resonance Imaging (MRI), Optical Imaging (OPT), or Image and Signal Processing Techniques (ISP).