Certificate in Medical Physics Plan of Study

Purdue University – School of Health Sciences – College of Health and Human Sciences
18 Credits

Requirements (18 Credits)

- HSCI 52600 (3): Principles of Health Physics & Dosimetry – Fall
- HSCI 54000 (3): Radiation Biology – Spring
- HSCI 54101[1] (4) OR 59000 (4): Human Sectional Anatomy – Fall
- HSCI 57000 (3): Introduction to Medical Diagnostic Imaging – Spring
- HSCI 57200 (3): Radiation Oncology Physics – Spring
- HSCI 57400 (2): Medical Health Physics – Fall
- Complete AAPM/RSNA Ethics and Professionalism Modules (online)

Recommended Courses (8 Credits)

- HSCI 31200 (3): Radiation Science Fundamentals – Fall
- HSCI 31300 (2): Principles of Radiation Detection and Measurement – Fall
- HSCI 51400 (3): Radiation Instrumentation Laboratory – Spring

Advanced Courses

- BME 51500 (1): Practical MRI and Applications – Spring
- BME 55500 (3): Magnetic Resonance Imaging Theory – Fall
- HSCI 52500 (3): Statistics for Health Sciences – Fall
- HSCI 53400 (3): Applied Health Physics – Spring
- HSCI 51600 (2): Molecular Imaging in Nuclear Medicine – Fall
- HSCI 57100 (3): Magnetic Resonance Spectroscopy – Spring
- HSCI 59000 (3): Data Acquisition and Image Reconstruction in MRI – Varies
- STAT 51100 (3): Statistical Methods – Fall, Spring, Summer
- STAT 51200 (3): Applied Regression Analysis – Fall, Spring, Summer

Students without a background in radiation science will also be required to take HSCI 31200 Radiation Science Fundamentals. Additional courses may be recommended depending on the student's previous radiation science experience. Students are welcome to enroll in advanced courses as their schedule allows.

Because the two-semester Medical Physics certificate demands a significant academic commitment, it is not recommended for students simultaneously enrolled in a doctoral program or employed full-time in roles such as postdoctoral fellowships. To be competitive for a Medical Physics residency, students are advised to devote their full attention to this program.

The following plan of study is for incoming students with either a major or minor in Physics.

The program and courses are offered only in person.

Suggested Arrangement of Courses:

Summer: 0 Credits
Clinical shadowing

Fall: 12 Credits
HSCI 31200 (3) – recommended
HSCI 52600 (3)
HSCI 57400 (2)
HSCI 54101 OR 59000 (4) Human Sectional Anatomy
Complete AAPM/RSNA Ethics and Professionalism Modules (online)

Spring: 9 Credits
HSCI 54000 (3)
HSCI 57000 (3)
HSCI 57200 (3)
CAND 99100 (0)