# Master of Science in Medical Physics

The MSMP program is built on courses accredited by the Commission on Accreditation of Medical Physics Education Programs (CAMPEP), through which students will become familiar with the major texts and literature in the area of medical physics. Students will be exposed to a wide array of radiation treatment techniques and quality control procedures, and they will also perform cutting-edge research with renowned researchers. These experiences will equip students with the knowledge, skills and experiences necessary to further their careers in medical physics.

## Admissions

For a list of MSMP admissions requirements, please visit the Department of Radiation Oncology website (https://radonc.wustl.edu/education/master-of-science-in-medical-physics/admissions/).

## Program Format

The MSMP program is designed for full-time study over the course of two academic years, starting in the fall semester. A minimum of 36 units of credit are required for degree completion, and this requirement will be met with a combination of core courses, department-approved electives, and either thesis research or clinical rotations. Courses will run over a traditional 16-week semester schedule during the fall and spring semesters. During the summer, students will be expected to work on their thesis research or clinical project, and they will also have the opportunity to perform clinical rotations to fine-tune their clinical skills.

## Course Schedule

### Clinical Project Stream

| Course | Fall Units | Spring Units | Summer Units |
|---|---|---|---|
| First Year | | | |
| Principles of Human Anatomy and Development (Biol 4580) | 3 | — | — |
| Clinical Imaging Fundamentals (MedPhys 501) | 2 | — | — |
| Radiological Physics and Dosimetry (MedPhys 502) | 3 | — | — |
| Independent Study (MedPhys 503) | 1 | — | — |
| Radiobiology (MedPhys 505) | — | 2 | — |
| Radiation Oncology Physics (MedPhys 506) | — | 3 | — |
| Biological Imaging Technology (BME 589) | — | 3 | — |
| Independent Study II (MedPhys 503) | — | 1 | — |
| Summer: Optional clinical rotation, clinical project, or studentship | — | — | |
| | **9** | **9** | **0** |
| Second Year | | | |
| Radiation Protection and Safety (MedPhys 521) | 2 | — | — |
| Clinical Rotations (MedPhys 522) | 1 | — | — |
| Clinical Project (MedPhys 503C) | 3 | — | — |
| Elective Course I | 3 | — | — |
| Advanced Clinical Medical Physics Lab (MedPhys 523) | — | 2 | — |
| Ethics, Professionalism, and Current Topics (MedPhys 504) | — | 1 | — |
| Elective Course II | — | 3 | — |
| Elective Course III | — | 3 | — |
| Summer: Optional clinical rotation | — | — | |
| | **9** | **9** | **0** |

### Thesis Research Stream

| Course | Fall Units | Spring Units | Summer Units |
|---|---|---|---|
| First Year | | | |
| Principles of Human Anatomy and Development (Biol 4580) | 3 | — | — |
| Clinical Imaging Fundamentals (MedPhys 501) | 2 | — | — |
| Radiological Physics and Dosimetry (MedPhys 502) | 3 | — | — |
| Independent Study (MedPhys 503) | 1 | — | — |
| Radiobiology (MedPhys 505) | — | 2 | — |
| Radiation Oncology Physics (MedPhys 506) | — | 3 | — |
| Biological Imaging Technology (BME 589) | — | 3 | — |
| Independent Study II (MedPhys 503) | — | 1 | — |
| Summer: Optional clinical rotation, thesis research | — | — | |
| | **9** | **9** | **0** |
| Second Year | | | |
| Radiation Protection and Safety (MedPhys 521) | 2 | — | — |
| Clinical Rotations (MedPhys 522) | 1 | — | — |
| Thesis Research I (MedPhys 503T) | 3 | — | — |
| Elective Course I | 3 | — | — |

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|---|---|---|---|
| Advanced Clinical Medical Physics Lab (MedPhys 523) | — | 2 | — |
| Ethics, Professionalism, and Current Topics (MedPhys 504) | — | 1 | — |
| Thesis Research II (MedPhys 503T) | — | 3 | — |
| Elective Course II | — | 3 | — |
| Summer: Optional enhanced clinical rotation, thesis research | — | — | |
| | **9** | **9** | **0** |