Master of Science in Medical Dosimetry: Program Degree Plan

Program Description:

Medical dosimetrists apply knowledge of anatomy, physics, oncology, radiobiology, and mathematics to create radiation treatment plans that aid in the management of cancer and other diseases. In this program, students will gain knowledge and skills through a combination of online coursework and in-person clinical training. Graduates will earn a Master of Science degree and will be eligible to take the national Medical Dosimetry Certification Board exam.

Admission Requirements:

Completed bachelor's degree or higher in a health or science field
Radiation Therapy experience is preferred but not required
Minimum cumulative GPA 3.0 (on a 4.0 scale)

Prerequisite Coursework:

- Human Biology (BI100 or equivalent)
- Human Anatomy & Physiology (BI250 & BI230 or equivalent), no lab required
- College Algebra (MA116 or equivalent) or higher
- Radiation Physics
- Medical Terminology (AL141 or equivalent)
- Introductory Writing (EN100 or equivalent)
- Communication (any course in verbal or public speaking)
- 8+ hours of documented on-site observation in Medical Dosimetry

Program Mission:

The Medical Dosimetry Program at Washburn University provides quality education and support to develop medical dosimetrists who are confident, competent, and compassionate radiation oncology professionals.

Program Student Learning Outcomes (PSLOs):

Medical dosimetry students will:

1. Demonstrate **clinical competence** and treatment planning abilities
2. Demonstrate professional written and verbal **communication skills**
3. Apply **critical thinking** to complex treatment plans and clinical situations
4. Demonstrate **professionalism** and a commitment to lifelong learning

Program Curriculum:

Master of Science in Medical Dosimetry 44 Credit Hours	
First Summer:	
AL630: Foundations of Radiation Oncology	3 cr
AL632: Cross-sectional Anatomy in Medical Dosimetry	3 cr
Semester total:	*6 cr*
Fall:	
AL634: Oncology Principles I	3 cr
AL636: Radiation Oncology Treatment Planning I	4 cr
AL638: Radiation Physics	3 cr
AL640: Ethics & Professionalism in Medical Dosimetry	2 cr
AL660: Medical Dosimetry Clinical I	4 cr
Semester total:	*16 cr*
Spring:	
AL644: Oncology Principles II	3 cr
AL646: Radiation Oncology Treatment Planning II	4 cr
AL648: Research Methodology in Medical Dosimetry	3 cr
AL650: Quality Improvement in Radiation Oncology	2 cr
AL665: Medical Dosimetry Clinical II	4 cr
Semester total:	*16 cr*
Second Summer:	
AL670: Medical Dosimetry Clinical III	3 cr
AL675: Medical Dosimetry Capstone	3 cr
Semester total:	*6 cr*