



## MEDICAL PHYSICS SLOS

### MEDICAL PHYSICS M.S. DEGREE

1. At the end of the Oregon Medical Physics Program (OMPP), the graduate will be able to explain the components, functionality and design of x-ray systems utilized in imaging and therapeutic devices found in Radiation Medicine or Diagnostic Radiology.
  - OHSU Competencies: Professional Knowledge, Communication
  - Assessment Plan Measure: Program Exams (multiple choice, short answer, problem solving, practical)
  - Bloom's Level Classification: Understanding
  - Moore's Level Classification: Level 3A Declarative Knowledge
2. At the end of the Oregon Medical Physics Program (OMPP), the graduate will be able to explain the components, functionality and design of a linear accelerator utilized for external beam radiation therapy treatment in Radiation Medicine.
  - OHSU Competencies: Professional Knowledge, Communication
  - Assessment Plan Measure: Program Exams (multiple choice, short answer, problem solving, practical)
  - Bloom's Level Classification: Understanding
  - Moore's Level Classification: Level 3A Declarative Knowledge
3. At the end of the Oregon Medical Physics Program (OMPP), the graduate will be able to communicate the risks associated with the use of radiation to members of the general public, patients, and professionals in healthcare.
  - OHSU Competencies: Communication, Evidence-Based Practice, Reasoning and Judgement, Professional Knowledge
  - Assessment Plan Measure: Oral or Written Presentation (Capstone, Journal Club, Thesis, Portfolio, Teaching)
  - Bloom's Level Classification: Applying
  - Moore's Level Classification: Level 4 Competence
4. At the end of the Oregon Medical Physics Program (OMPP), the graduate will be able to apply radiation safety principles in the calculation and design of radiation shielding. This will include communicating with a team of individuals from equipment manufacturers, design and construction, architects, hospital administration and clinicians.
  - OHSU Competencies: Safety and Quality, Systems, Teamwork
  - Assessment Plan Measure: Oral or Written Presentation (Capstone, Journal Club, Thesis, Portfolio, Teaching)
  - Bloom's Level Classification: Analyzing
  - Moore's Level Classification: Level 3B Procedural Knowledge
5. Upon graduation, students will be prepared to take Part 1 of the American Board of Radiology Initial Certification Exam.
  - OHSU Competencies: Lifelong Learning
  - Assessment Plan Measure: External National Assessments
  - Bloom's Level Classification: Applying



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- Moore's Level Classification: Level 4 Competence
- 6. Students will execute a research project based on in-depth knowledge of scientific literature, experimental design, and statistical tools.
  - OHSU Competencies: Professional Knowledge, Evidence-Based Practice, Communication
  - Assessment Plan Measure: Oral or Written Presentation (Capstone, Journal Club, Thesis, Portfolio, Teaching)
  - Bloom's Level Classification: Analyzing
  - Moore's Level Classification: Level 4 Competence
- 7. At the end of the Oregon Medical Physics Program (OMPP), students will be able to explain the biological and chemical pathway for radiation-induced carcinogenesis, including time intervals and all potential outcomes.
  - OHSU Competencies: Professional Knowledge
  - Assessment Plan Measure: Program Exams (multiple choice, short answer, problem solving, practical)
  - Bloom's Level Classification: Understanding
  - Moore's Level Classification: Level 3A Declarative Knowledge
- 8. Students will exhibit professional and ethical characteristics in the clinical areas where medical imaging exams and radiation therapy treatments are performed.
  - OHSU Competencies: Professionalism and Ethics
  - Assessment Plan Measure: Experiential (Practicum/Internship, Clinical Observation)
  - Bloom's Level Classification: Applying
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- 9. Contribute to the application and translation of new Medical Physics knowledge through scholarly inquiry, discovery, and dissemination.
  - OHSU Competencies: Professional Knowledge
  - Assessment Plan Measure: Oral or Written Presentation (Capstone, Journal Club, Thesis, Portfolio, Teaching)
  - Bloom's Level Classification: Analyzing
  - Moore's Level Classification: Level 4 Competence
- 10. Demonstrate the ability to transfer knowledge through the formal education process (ability to teach in the formal educational setting).
  - OHSU Competencies: Professional Knowledge
  - Assessment Plan Measure: Oral or Written Presentation (Capstone, Journal Club, Thesis, Portfolio, Teaching)
  - Bloom's Level Classification: Understanding
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