

University of Massachusetts Lowell

**EXAMPLE ACADEMIC PLAN FOR PhD in PHYSICS - MEDICAL PHYSICS OPTION
Entering with BS in Physics**

This sequence assumes the entering student has adequate preparation in undergraduate Mechanics, Electricity and Magnetism, Quantum Mechanics and Statistical Mechanics; therefore no physics remedial courses (95.500 level) are necessary.

Year 1, Semester 1 (Fall)

| | | |
|--------|-----------------------------------|-----|
| 95.605 | Mathematical Methods of Physics I | (3) |
| 98.501 | Radiation Safety and Control – I | (3) |
| 98.509 | Nuclear Instrumentation | (3) |
| 98.711 | Radiological Sciences Seminar | (0) |
| 96.701 | Physics Colloquium | (0) |

Year 1, Semester 2 (Spring)

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|--------|------------------------------------|-----|
| 95.606 | Mathematical Methods of Physics II | (3) |
| 98.596 | Introduction to Medical Imaging | (3) |
| 98.562 | Radiation Biology | (3) |
| 98.712 | Radiological Sciences Seminar | (0) |
| 96.702 | Physics Colloquium | (0) |

Year 1, Summer Trimester

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|--------|-----------------------------|-----|
| 34.651 | Sectional Human Anatomy | (3) |
| 34.659 | Sectional Human Anatomy Lab | (1) |

Year 2, Semester 3 (Fall)

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|--------|------------------------------------|-----|
| 98.597 | Advanced Medical Imaging Physics | (3) |
| 98.605 | Radiation Interactions & Transport | (3) |
| 98.533 | External Dosimetry and Shielding | (3) |
| 98.711 | Radiological Sciences Seminar | (0) |
| 96.701 | Physics Colloquium | (0) |

— TARGET DATE FOR COMPREHENSIVE EXAMINATION —

Year 2, Semester 4 (Spring)

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|--------|---|-----|
| 98.565 | Radiation Therapy Physics | (3) |
| 98.606 | Monte Carlo Simulation of Radiation Transport | (3) |
| 98.541 | Radiochemistry or other Elective | (3) |
| 98.712 | Radiological Sciences Seminar | (0) |
| 96.702 | Physics Colloquium | (0) |

Year 3, Semester 5 (Fall)

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|--------|-------------------------------------|-----|
| 95.615 | Quantum Mechanics I | (3) |
| 98.676 | Graduate Medical Physics Internship | (1) |

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|--------|---------------------------------------|-----|
| 95.731 | Advanced Project | (3) |
| IB.520 | Ethical Issues in Biomedical Research | (1) |
| 98.711 | Radiological Sciences Seminar | (1) |
| 96.701 | Physics Colloquium | (0) |

Year 3, Semester 6 (Spring)

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|--------|-------------------------------------|-----|
| 95.616 | Quantum Mechanics II | (3) |
| 98.665 | Advanced Radiation Therapy Physics | (3) |
| 98.686 | Advanced Medical Physics Internship | (1) |
| 95.731 | Advanced Project | (3) |
| 98.712 | Radiological Sciences Seminar | (0) |
| 96.702 | Physics Colloquium | (0) |

— TARGET DATE FOR GRADUATE RESEARCH ADMISSION EXAM —

Year 4, Semester 7 (Fall)

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|--------|-------------------------------|-----|
| | Approved Elective | (3) |
| 96.756 | PhD dissertation Research | (6) |
| 98.711 | Radiological Sciences Seminar | (0) |
| 96.701 | Physics Colloquium | (0) |

Year 4, Semester 8 (Spring)

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|--------|-------------------------------|-----|
| | Approved Elective | (3) |
| 96.756 | PhD dissertation Research | (6) |
| 98.712 | Radiological Sciences Seminar | (0) |
| 96.702 | Physics Colloquium | (0) |

Year 5, Semester 9 (Fall)

| | | |
|--------|-------------------------------|-----|
| 96.756 | PhD dissertation Research | (9) |
| 98.711 | Radiological Sciences Seminar | (0) |
| 96.701 | Physics Colloquium | (0) |

Year 5, Semester 10 (Spring)

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|--------|-------------------------------|-----|
| 96.756 | PhD dissertation Research | (9) |
| 98.712 | Radiological Sciences Seminar | (0) |
| 96.702 | Physics Colloquium | (0) |

— TARGET DATE FOR DISSERTATION DEFENSE —