

# Physics MS

## Master of Science in Physics - Option I Thesis

The Master of Science in Physics with a research thesis is ordinarily chosen by those students preparing for industrial employment, college teaching, or for further graduate study leading to the PhD degree. The degree program requires a minimum of 30 semester hours, including 2 courses allotted to the thesis.

### Thesis (6 semester hours)

PHYS 518	Thesis (6 semester hours required)	3-6
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Only 6 semester hours of credit for 518 per degree will be given upon satisfactory completion of the requirement

### Required Core Courses (12 semester hours)

PHYS 511	Advanced Classical Mechanics	3
PHYS 512	Classical Electromagnetic Theory	3
PHYS 517	Mathematical Methods in Physics	3
PHYS 520	Quantum Mechanics	3

### Approved Courses (9 semester hours)

9 semester hours (3 courses) on approval of graduate advisor	9
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### Graduate Seminar (1-3 semester hours)

PHYS 501	Graduate Seminar (1 semester hour, for a total of 3 semester hours.)	1
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All physics graduate students must register for 501 each semester in residence

<b>Total Hours</b>	<b>30</b>
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## Master of Science in Physics - Option II Non-Thesis

### Applied Physics Emphasis

#### Research (3 semester hours)

PHYS 595	Research Literature and Techniques (3 semester hours required)	3
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#### Required Courses (9 semester hours)

PHYS 511	Advanced Classical Mechanics	3
PHYS 512	Classical Electromagnetic Theory	3
PHYS 517	Mathematical Methods in Physics	3

#### Physics Component (12 semester hours)

Students must complete four of the following courses:

PHYS 520	Quantum Mechanics	3
PHYS 521	Solid State Physics	3
PHYS 523	Advanced Atomic, Molecular, and Materials Physics	3
PHYS 524	Surface Physics	3
PHYS 514	Statistical Physics	3
PHYS 542	Advanced Instrumentation and Control	3
PHYS 552	Advanced Micro-Controller Electronics	3

3 semester hours (1 course) taken in consultation with advisor.	3
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#### Electives (9 semester hours)

(9 semester hours) selected in consultation with the advisor.	9
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#### Graduate Seminar (1-3 semester hours)

PHYS 501	Graduate Seminar (1 semester hour, for a total of 3 semester hours)	1
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All physics graduate students must register for 501 each semester in residence

<b>Total Hours</b>	<b>36</b>
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**Note:** Successful completion of the Comprehensive Exam is required of all students.