

## Master of Science

# Physics (MS)

### Admission

Applicants for admission to graduate study must have an earned bachelor's degree in physics or a closely related discipline from an accredited institution or an equivalent degree from a foreign institution. The applicant is normally required to have a minimum cumulative grade point average of 3.0 on a 4.0 scale. The general portion of the Graduate Record Examination (GRE) is optional for application to either the master's or the doctoral program; applicants to the doctoral program are encouraged to take the GRE specialized physics test as well. The Test of English as a Second Language (TOEFL) is required of all nonnative speakers of English who have resided in the U.S. for less than ten years.

While no promise of financial support is given for M.S. students, occasionally they will be supported as teaching assistants. Old Dominion University requires that all graduate teaching assistants who do not speak English as a first language pass a test of spoken English.

Admission decisions are based on undergraduate achievement, GRE scores (if available), and personal reference letters. Graduate study may commence at the beginning of any academic term. Decisions regarding financial support for students entering in the fall term are normally made by April 15, so a student's completed application must be received by January 15. Anyone who applies after January 15 should communicate directly with the Department of Physics concerning the availability of support.

### Curriculum Requirements

A student may select either the thesis or non-thesis option. For either option, each student's course of study must have the advance approval of the graduate program director.

#### Non-Thesis Option

Thirty graduate credits that must include the following courses:

PHYS 556	Intermediate Quantum Mechanics	3
or PHYS 621	Quantum Mechanics I	
PHYS 603	Classical Mechanics	3
PHYS 604	Classical Electrodynamics I	3
PHYS 791	Seminar I	1

No more than 12 credits numbered at the 500 level may be used to meet this requirement.

Up to 12 credits from other University departments may be used to meet this requirement if approved by the graduate program director.

#### Written Examination

In addition to these course requirements, the candidate must pass a written comprehensive examination. It is usually taken just before the student's third semester of study. If a student fails this examination, he or she is allowed a second attempt, which must be at the time when the Written Examination is next given. In all but the most extraordinary circumstances, a student will not be allowed any additional attempts to pass this examination. Normally, this written examination is the same as the written portion of the Ph.D. Candidacy Examination, graded at the master's level.

#### Thesis Option

Thirty graduate credits that must include the following courses:

PHYS 556	Intermediate Quantum Mechanics	3
or PHYS 621	Quantum Mechanics I	
PHYS 603	Classical Mechanics	3
PHYS 604	Classical Electrodynamics I	3
PHYS 698	Research	3

PHYS 699	Thesis	3
PHYS 791	Seminar I	1

No more than 12 credits numbered at the 500 level may be used to meet this requirement.

Up to 12 credits from other university departments may be used to meet this requirement if approved by the graduate program director.

#### Thesis Research

A student's research is supervised by his or her MS thesis committee. The committee is composed of three faculty members from the Physics Department (thesis advisor plus two additional faculty).

The format of the thesis is specified by the Guide for Preparation of Theses and Dissertations. The thesis defense is the final examination that a student must pass to receive a master's degree. This is a public presentation of the results contained in his or her thesis.