Physics, M.S.

Return to: Undergraduate & Graduate Degrees

Code: 8830 (400801–01)

The Department of Physics offers programs leading to the degree of Master of Science in two general areas and several specialties:

I. Applied and Theoretical Physics
   1. Acoustics
   2. Cosmology
   3. Environmental Physics
   4. General Relativity
   5. Ion beam analysis and modification
   6. Material Science
   7. Sensor Development
   8. Ultrasonics

II. Computational Physics
   1. Geophysics
   2. Physical Acoustics
   3. Planetary Science
   4. Signal Analysis
   5. Underwater Acoustics

These programs are designed to prepare scientists and engineers to enter various science and technical fields or assist them in improving their skills within their current employment.

Prerequisites

Admission into the program assumes an undergraduate degree in science or engineering with a strong mathematical preparation. A lack of preparation in certain areas may be remedied by taking a limited number of advanced undergraduate courses during the first year of graduate study. The Graduate Record Examination (GRE) General Test including the verbal, mathematical and analytical components of the test must be taken and scores received by the University before the first semester of graduate study.

Course Requirements

The specific courses taken and the choice of a secondary area pursued will be selected by the student in consultation with his/her advisor and the Graduate Coordinator of the Department of Physics. The following two tracks are available.

Thesis Track:

The prospective candidate must complete 30 semester hours of which 18 semester hours are in physics courses carrying graduate credit; 12 of these semester hours must be in 500-level courses. In addition, at least 6 semester hours must be completed in an approved secondary area. The total requirement is completed with 6 credit hours for a completed thesis in one of the areas listed above. Most students are expected to be in the thesis track.

Non-thesis Track:

The prospective candidate must complete 33 semester hours of which 27 semester hours are in physics courses carrying graduate credit; 18 of these semester hours must be in physics courses at the 500-level, including the Research Project course; 6 semester hours should be in an approved secondary area.

Other Requirements

The prospective candidate must demonstrate his/her over-all competence by passing a comprehensive examination.

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