HYDROLOGY (M.S.)

Description

This program is intended for students with an interest in ground- and surface-water hydrology, water quality, quantitative and statistical hydrology, and water resource management. Durham, where the university is located, is situated where the Oyster River enters Great Bay, one of the most important estuaries of the Gulf of Maine. Only ten miles away are the Atlantic beaches and Portsmouth, a deep water harbor.

Admission Requirements

An applicant to the M.S. program is expected to have completed one year of calculus and at least four semesters of college chemistry, physics, and/or biology; and to have an undergraduate degree or equivalent in geology, chemistry, physics, mathematics, engineering, or the biological sciences. Students lacking some background in a particular area may be admitted provided they are prepared to complete courses, without graduate credit, in which they may be deficient. The program of study a student wishes to follow and the student’s undergraduate major determine the level of preparation necessary. The preparation of each student is determined before the beginning of the first semester in residence in order to plan the course of study. Each entering student is assigned an academic adviser to assist in planning a program of study.

Requirements

Degree Requirements

Students in the thesis option must satisfactorily complete at least 30 graduate credits, which include the credits accumulated in the core curriculum. Students in this option must complete a 6 credit master’s thesis (ESCI 899) and give an oral presentation of the results.

Students in the non-thesis option must satisfactorily complete at least 34 graduate credits, which includes the core curriculum, a 2-credit directed research project (ESCI #898 Directed Research), and a written and oral presentation of that research.

Hydrology

The core curriculum for the major in hydrology normally includes:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ESCI 805</td>
<td>Principles of Hydrology</td>
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<tr>
<td>ESCI 810</td>
<td>Groundwater Hydrology</td>
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Required Courses:

- ESCI 997 Seminar in Earth Sciences (first year)
- ESCI 998 Proposal Development (first year)

Select Master’s Thesis or Directed Research:

- ESCI 899 Master’s Thesis
- ESCI #898 Directed Research

In each of the options listed above, additional electives are to be selected from 800- and 900-level courses in the department and/or from courses numbered 700 and above in related disciplines outside of the department (e.g., civil and environmental engineering, natural resources, chemistry, mathematics and statistics, and computer science). More detailed information is available from the department.