M.P.S. IN MARINE GEOSCIENCES

Overview
The Master of Professional Science (M.P.S) Degree in Marine Geosciences with a track in Environmental Geology offers students a specialized degree that combines knowledge in theoretical areas of geology with technical expertise in geochemistry, geophysics, and hydrogeology to address, study and mitigate naturally and anthropogenically-derived geologic hazards and topical issues of concern to society such as climate change and sea level rise. The degree requires a total of 30 credit hours and an internship and is typically completed in 12 – 18 months.

Admission Requirements
Students applying to the program are required to have a bachelor degree, preferably in geology or geochemistry or geography.

An application to the MPS program consists of the following (Fall & Spring admissions only):

Online CollegeNet application
Transcripts from all institutions in which a degree(s) was awarded and a transcript evaluation (for non-U.S. academic institutions)
Three letters of recommendation
TOEFL or IELTS scores (for international applicants)

The Graduate Record Examination Test (GRE) score is not required for admission. You may optionally submit your GRE score.

A file is considered "ready for review" upon receipt of all items listed above. If admission to the MPS program is granted, it will be contingent upon receipt of all items listed above (including official records transcripts and test scores) and the following for international applicants:

Statement of Financial Responsibility Form (SFR) and corresponding bank letter
Color copy of current visa (if available)
Color copy of passport
Copy of diploma and certified English translation

Permanent Residents must provide a color copy of his/her Permanent Resident card.

Deadline for submitting an application for international students is June 1st, and for domestic students is July 1st at 11:59PM. Undergraduate scholastic performance, previous work experience, Graduate Record Examination scores, TOEFL/IELTS scores (if applicable), and the letters of recommendation are all considered in evaluating an applicant.

International Transcript Evaluation
Costs and Financial Aid
Application Deadlines

Applications for Spring Admissions (Not open for Spring 2024):
Now - November 15th (U.S. Citizens and Permanent Residents)
Now - November 1st (International Applicants)

Applications for Fall Admissions:
Now - July 15th (U.S. Citizens and PermanentResidents)
Now - June 1st (International Applicants)

Students who applied will be selected by a committee, consisting of the faculty teaching the core courses within the program.

Curriculum Requirements
Three core courses are required in each semester plus one additional elective course, totaling 24 course credits. An internship counting for six credits recommended but can be partly offset by taking additional courses.
<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td><strong>Core Courses</strong></td>
<td></td>
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</tr>
<tr>
<td>MGS 611</td>
<td>Earth Surface Processes</td>
<td>3</td>
</tr>
<tr>
<td>MGS 624</td>
<td>Seismic Interpretation of Carbonate Systems</td>
<td>3</td>
</tr>
<tr>
<td>MGS 628</td>
<td>Analyze and Visualize Geoscience Data (Analyze and Visualize Geoscience Data (NEW COURSE))</td>
<td>3</td>
</tr>
<tr>
<td>MGS 634</td>
<td>Hydrological Hazards</td>
<td>3</td>
</tr>
<tr>
<td>MGS 6## Environmental Site Assessment (NEW COURSE)</td>
<td>3</td>
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</tr>
<tr>
<td>MGS 6## Saltwater Intrusion in South Florida (NEW COURSE)</td>
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<tr>
<td><strong>Electives</strong></td>
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<tr>
<td>EVR 660 &amp; EVR 661 Introduction to Marine Geographic Information Systems and Introduction to Marine Geographic Information Systems - Laboratory</td>
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<td></td>
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<tr>
<td>MGS 613</td>
<td>Introductory Geochemistry</td>
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<tr>
<td>MGS 614</td>
<td>Geophysics</td>
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<tr>
<td>MGS 627</td>
<td>Analysis of Carbonate Cores and Logs</td>
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<tr>
<td>MGS 635</td>
<td>Geological Hazards</td>
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<tr>
<td>MGS 6## Using Drones in Geoscience (NEW COURSE)</td>
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<td>MGS 6## Preparation for Professional Geology Licensure (NEW COURSE)</td>
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<tr>
<td>MGS 750</td>
<td>Stable Isotopes in Biogeochemical Processes</td>
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<tr>
<td>MGS 768</td>
<td>Radiogenic Isotope Geochemistry</td>
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<tr>
<td><strong>Internship</strong></td>
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<td>6</td>
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<tr>
<td>MGS 805 (NEW COURSE)</td>
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<td><strong>Total Credit Hours</strong></td>
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**Sample Plan of Study**

**Year One**

**Fall**

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**Credit Hours**

12

**Spring**

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**Credit Hours**

12

**Summer**

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**Credit Hours**

6

**Total Credit Hours**

30

**Mission**

The Mission of Marine Geosciences: Environmental Geology program is to provide an education for students who want to translate their passion for the environment into a fulfilling career.

**Program Goals**

The goal of the Environmental Geology track is to give the students a rigorous academic grounding in environmental geology and training in field and laboratory techniques for providing sound advice for 1) responsibly development of coastal and urban areas, and 2) mitigating naturally and anthropogenically-derived geologic hazards at the local and national levels.
Student Learning Outcomes

The offered interdisciplinary courses aim to provide the students with an applied understanding of how to utilize geophysical, geochemical and hydrogeological techniques to evaluate, remediate, and monitor the impact or potential impact of environmental changes.

**Learning Outcome 1:** The student will learn to integrate the geological context of a study site with the observations and analyses from hydrogeology, geochemistry and geophysics.

**Learning Outcome 2:** Students will be able to document the composition and stratigraphy of a study site using outcrop and core information together with (near)surface geophysical techniques such as reflection seismic and ground penetrating radar techniques.

**Learning Outcome 3:** Students will be familiarized with various aspects of hydrological and geological hazards.

**Learning Outcome 4:** Students will learn the techniques of an environmental site assessment including geochemical and hydrological analyses and write a report for clients or government.

**Learning Outcome 5:** Students will learn the most up-to-date geochemical techniques for assessing hazards such as ground water contamination and spills.

**Learning Outcome 6:** Students can elect to be prepared for the Professional Geology License in the State of Florida.

**Learning Outcome 7:** Students will learn the skills to analyze and break down the interconnections between different types of data, both visually and analytically using different plotting and statistical methods.

**Learning Outcome 8:** Students will learn how to acquire and process drone images for site evaluation and mapping purposes.