GEOLGY - 5-YEAR
BACHELOR OF SCIENCE AND
MASTER OF OCEAN SCIENCE
AND TECHNOLOGY

The program offers motivated and exceptional students the opportunity to achieve aspirations in an efficient 5-year combined program at Texas A&M, completing the Bachelor of Science (BS) degree (in the Department of Geology and Geophysics) and the non-thesis Master of Ocean Science and Technology (in the Department of Oceanography). The concurrent degree program will enable these motivated students to coordinate the required BS coursework and Master of Ocean Science and Technology coursework to complete the required credit hours for each degree without diminishing scope or quality of work and within 5 years.

Application and Eligibility:

- Applications to the combined program will be submitted by June 15 after the completion of the student’s junior year. Applications submitted after that time will be evaluated on a case by case basis. Once admitted to the program, students must maintain a minimum 3.0 GPA on all graduate coursework.
- Applicants must have a minimum undergraduate GPA of 3.25. Applicants should also earn a C or better in all Chemistry, Calculus and Physics courses. Once admitted to the program, students must maintain a minimum 3.0 GPA on all graduate coursework.
- A faculty advisor will be assigned to each student. Students may seek additional mentors, but a formal committee is not required.
- Students admitted into the combined program must finish the entire 150 credit hours to obtain both the Bachelor’s and Master’s degrees. Students will graduate at the completion of the 5th year in the combined program coursework (150 credit hours) with both Bachelor’s and Master’s degrees.
- Students admitted to the program will change from U4 to G7 status when they are admitted having completed at least 90 hours (end of spring semester, year 3).
- Students not accepted or not allowed to continue with the combined program will complete the 120-hour Bachelor’s degree under the standard 4 year curriculum. These students may still apply to the traditional graduate program.

Program Requirements

First Year

<table>
<thead>
<tr>
<th>Semester Credit Hours</th>
<th>Fall</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 119</td>
<td>Fundamentals of Chemistry I</td>
</tr>
<tr>
<td>ENGL 104</td>
<td>Composition and Rhetoric</td>
</tr>
<tr>
<td>GEOL 150</td>
<td>Introduction to the Solid Earth</td>
</tr>
<tr>
<td>GEOL 180</td>
<td>Introduction to Geology and Geophysics</td>
</tr>
<tr>
<td>MATH 151</td>
<td>Engineering Mathematics I</td>
</tr>
</tbody>
</table>

Spring

<table>
<thead>
<tr>
<th>Semester Credit Hours</th>
<th>Spring</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 120</td>
<td>Fundamentals of Chemistry II</td>
</tr>
<tr>
<td>GEOL 152</td>
<td>History of the Earth</td>
</tr>
</tbody>
</table>

Second Year

<table>
<thead>
<tr>
<th>Semester Credit Hours</th>
<th>Fall</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOL 203</td>
<td>Mineralogy</td>
</tr>
<tr>
<td>GEOL 210</td>
<td>Geological Communication</td>
</tr>
<tr>
<td>MATH 251</td>
<td>Engineering Mathematics III</td>
</tr>
<tr>
<td>PHYS 206</td>
<td>Newtonian Mechanics for Engineering and Science</td>
</tr>
</tbody>
</table>

Spring

<table>
<thead>
<tr>
<th>Semester Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOL 250</td>
</tr>
<tr>
<td>GEOL 304</td>
</tr>
<tr>
<td>MATH 308</td>
</tr>
<tr>
<td>PHYS 207</td>
</tr>
</tbody>
</table>

Third Year

<table>
<thead>
<tr>
<th>Semester Credit Hours</th>
<th>Fall</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOL 306</td>
<td>Sedimentology and Stratigraphy</td>
</tr>
<tr>
<td>GEOP 341</td>
<td>Fundamentals of Geophysics</td>
</tr>
<tr>
<td>American history</td>
<td>American history</td>
</tr>
</tbody>
</table>

Spring

<table>
<thead>
<tr>
<th>Semester Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOL 312</td>
</tr>
<tr>
<td>GEOL 314</td>
</tr>
<tr>
<td>GEOL 350</td>
</tr>
</tbody>
</table>

Summer

<table>
<thead>
<tr>
<th>Semester Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>American history</td>
</tr>
</tbody>
</table>

1. Applications submitted after that time will be evaluated on a case by case basis.
2. Technical elective
### Fourth Year

#### Fall

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOL 450</td>
<td>Geology Senior Project</td>
<td>3</td>
</tr>
<tr>
<td>OCNG 655</td>
<td>Experimental Design and Analysis in Oceanography</td>
<td>3</td>
</tr>
<tr>
<td>OCNG 656 or OCNG 669</td>
<td>MATLAB Programming for Ocean Sciences or Python for Geosciences</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Social and behavioral sciences (<a href="http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#social-behavioral-sciences">http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#social-behavioral-sciences</a>)</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Creative arts (<a href="http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#creative-arts">http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#creative-arts</a>)</td>
<td>3</td>
</tr>
</tbody>
</table>

| Semester Credit Hours | 15 |

#### Spring

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>OCNG 657</td>
<td>Data Methods and Graphical Representation in Oceanography</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Select one of the following:</td>
<td>3</td>
</tr>
<tr>
<td>OCNG 620</td>
<td>Biological Oceanography</td>
<td></td>
</tr>
<tr>
<td>OCNG 630</td>
<td>Geological Oceanography</td>
<td></td>
</tr>
<tr>
<td>OCNG 640</td>
<td>Chemical Oceanography</td>
<td></td>
</tr>
<tr>
<td>Technical electives</td>
<td>6</td>
<td></td>
</tr>
</tbody>
</table>

| Semester Credit Hours | 12 |

### Fifth Year

#### Fall

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>OCNG 604</td>
<td>Ocean Observing Systems</td>
<td>3</td>
</tr>
<tr>
<td>OCNG 608</td>
<td>Physical Oceanography</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Advanced specialized OCNG graduate course</td>
<td>3</td>
</tr>
</tbody>
</table>

| Semester Credit Hours | 12 |

#### Spring

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>OCNG 603</td>
<td>Communicating Ocean Science</td>
<td>3</td>
</tr>
<tr>
<td>OCNG 661</td>
<td>Advanced Oceanographic Data Analysis and Communication</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Advanced specialized OCNG graduate courses</td>
<td>3</td>
</tr>
</tbody>
</table>

| Semester Credit Hours | 12 |

| Total Semester Credit Hours | 150 |

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1. The Graduation requirements include a requirement for three hours of International and Cultural Diversity courses and three hours of Cultural Discourse courses. A course satisfying a Core category, a college/department requirement, or a free elective can be used to satisfy this requirement. See academic advisor.

2. Any science, math or engineering course that augments the degree with the approval of the advisor.

3. Graduate courses may be in Geology, Geophysics or a supporting math or science area, chosen with approval of the student's advisory committee. Students in the Thesis Option may include up to 8 hours of Research courses.

4. Students will not be permitted to receive credit for both the 400- and 600-level versions of certain courses because the content and learning outcomes are too similar (OCNG 404/OCNG 604; GEOS 470/OCNG 655)

5. The MS degree Non-Thesis Option is 36 total hours, with 6 hours double-counting with the undergraduate Technical Electives. OCNG 608 and OCNG 661 hours are applied toward both the Bachelor of Science in Geology and the Master of Ocean Science and Technology.

Any of the required courses may be taken during the Summer Sessions to diminish the heavy semester loads during Years 2 and 3.

The program includes a total of 156 hours which up to 6 hours may be applied toward both the Bachelor of Science in Geology and the Master of Ocean Science and Technology.