The broad objective of the academic discipline of geography is to understand and improve the human environment: Earth. Understanding the Earth's surface requires a consideration of both natural and social processes, hence geography is by nature interdisciplinary. Human-environment interactions are of particular interest in geography. The area of concentration in Geographic Information Science and Technology offers students a broad perspective on the Earth as human habitat, while permitting them to complete two supporting minors in other disciplines. The area of concentration is flexible in that numerous courses are included to permit a student to build a course of study in geography that is tailored to his or her interests. Ideally, the minors would be in related fields to build depth and breadth around themes that the student wishes to emphasize.

**Program Requirements**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Semester Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOG 390</td>
<td>Principles of Geographic Information Systems</td>
<td>4</td>
</tr>
<tr>
<td>GEOG 361</td>
<td>Remote Sensing in Geosciences</td>
<td>4</td>
</tr>
<tr>
<td>GEOG 352/GEOL 352</td>
<td>GNSS in the Geosciences</td>
<td>3</td>
</tr>
<tr>
<td>GEOG 475</td>
<td>Advanced Topics in GIS (Geographic Information Systems)</td>
<td>4</td>
</tr>
</tbody>
</table>

Select from the following: 6-8

- CSCE 111 Introduction to Computer Science Concepts and Programming
- ESSM 459 Programming for Spatial Data Applications
- GEOG 232 Cartography and Visualization
- GEOG 312 Data Analysis in Geography
- GEOG 392 GIS Programming
- GEOG 398 Interpretation of Aerial Photographs
- GEOG 461 Digital Image Processing in the Geosciences
- GEOG 461 Digital Image Processing in the Geosciences
- GEOG 475 Advanced Topics in GIS (Geographic Information Systems)
- GEOG 479 Principles of Geocomputation

**University and College Requirements**

- GEOG 213 Planet Earth Lab 1
- MATH 140 Mathematics for Business and Social Sciences 3
- MATH 142 Business Calculus 3
- POLS 206 American National Government 3
- POLS 207 State and Local Government 3
- Life and Physical Sciences elective 8

Select one of the following: 1

- ATMO 201 Weather and Climate
- & ATMO 202 and Weather and Climate
- & OCNG 251 Laboratory
- & OCNG 252 and Oceanography
- Oceanography Laboratory
- BIOL 101 Botany
- & BIOL 107 and Zoology
- BIOL 111 Introductory Biology I
- & BIOL 112 and Introductory Biology II
- CHEM 119 Fundamentals of Chemistry I
- & CHEM 120 and Fundamentals of Chemistry II
- GEOL 101 Principles of Geology
- & GEOL 102 and Principles of Geology
- & GEOL 106 Laboratory and Historical Geology
- PHYS 201 College Physics
- & PHYS 202 and College Physics

American history (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#american-history) 6
Communication (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#communication) 6
Creative arts (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#creative-arts) 3
Cultural discourse (http://catalog.tamu.edu/undergraduate/general-information/degree-information/cultural-discourse-requirements) 2
International and cultural diversity (http://catalog.tamu.edu/undergraduate/general-information/degree-information/international-cultural-diversity-requirements) 2
Language, philosophy and culture (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#language-philosophy-culture) 3
Social and behavioral sciences (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#social-behavioral-sciences) 3
Minor 1 15-18
Minor 2 15-18
General electives 26

Total Semester Credit Hours 120

1 Department requires that you take 8 hours of Life & Physical Sciences in the same discipline to meet this requirement.
2 A graduation requirement includes 3 hours of International and Cultural Diversity (http://catalog.tamu.edu/undergraduate/general-information/degree-information/international-cultural-diversity-requirements) course and 3 hours of Cultural Discourse (http://catalog.tamu.edu/undergraduate/general-information/degree-information/cultural-discourse-requirements). A course satisfying a University Core category, a college/department requirement, or a general elective may be used to satisfy this requirement.