

GEOGRAPHIC INFORMATION SCIENCE AND TECHNOLOGY - 5-YEAR BACHELOR OF SCIENCE AND MASTER OF SCIENCE IN GEOGRAPHY

Program Requirements

First Year

| Fall | | Semester Credit Hours |
|---|--|-----------------------|
| GEOG 203 | Planet Earth | 3 |
| GEOG 213 | Planet Earth Lab | 1 |
| GEOG 215 | Geospatial Cornerstone | 1 |
| MATH 140 | Mathematics for Business and Social Sciences | 3 |
| Life and physical sciences ¹ | | 4 |
| Select from the following: | | |
| ATMO 201 & ATMO 202 | Weather and Climate and Weather and Climate Laboratory | |
| GEOL 101 & GEOL 102 | Principles of Geology and Principles of Geology Laboratory | |
| BIOL 101 | Botany | |
| BIOL 111 | Introductory Biology I | |
| CHEM 119 | Fundamentals of Chemistry I | |
| PHYS 201 | College Physics | |
| Communication (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#communication) | | 3 |
| Semester Credit Hours | | 15 |
| Spring | | Semester Credit Hours |
| GEOG 201 | Introduction to Human Geography | 3 |
| MATH 142 | Business Calculus | 3 |
| POLS 206 | American National Government | 3 |
| Life and physical sciences ¹ | | 4 |
| Select from the following: | | |
| OCNG 251 & OCNG 252 | The Blue Planet - Our Oceans and The Blue Planet - Our Oceans Laboratory | |
| GEOL 106 | Historical Geology | |
| BIOL 107 | Zoology | |
| BIOL 112 | Introductory Biology II | |
| CHEM 120 | Fundamentals of Chemistry II | |
| PHYS 202 | College Physics | |
| Communication (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#communication) | | 3 |
| Semester Credit Hours | | 16 |

Second Year

| Fall | | Semester Credit Hours |
|--|--|-----------------------|
| GEOG 232 | Cartography and Visualization | 3 |
| CSCE 110 or CSCE 111 | Programming I or Introduction to Computer Science Concepts and Programming | 4 |
| POLS 207 | State and Local Government | 3 |
| American history (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#american-history) | | 3 |
| Social and behavioral sciences (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#social-behavioral-sciences) | | 3 |
| Semester Credit Hours | | 16 |
| Spring | | Semester Credit Hours |
| GEOG 352/GEOL 352 | GNSS in the Geosciences | 3 |
| STAT 303 | Statistical Methods | 3 |
| American history (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#american-history) | | 3 |
| Language, philosophy and culture (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#language-philosophy-culture) | | 3 |
| Human or physical geography elective ² | | 3 |
| General elective ³ | | 3 |
| Semester Credit Hours | | 18 |

Third Year

| Fall | | Semester Credit Hours |
|---|--|-----------------------|
| GEOG 361 | Remote Sensing in Geosciences | 4 |
| GEOG 390 | Principles of Geographic Information Systems | 4 |
| Creative arts (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#creative-arts) | | 3 |
| GIST techniques elective ⁴ | | 4 |
| General elective ³ | | 3 |
| Semester Credit Hours | | 18 |
| Spring | | Semester Credit Hours |
| GEOG 312 | Data Analysis in Geography | 3 |
| GEOG 450 | Field Geography | 3 |
| GIST techniques elective ⁴ | | 4 |
| General elective ³ | | 6 |
| Semester Credit Hours | | 16 |

Fourth Year

| Fall | | Semester Credit Hours |
|-------------------------------------|---------------------------------|-----------------------|
| GEOG 610 | Geographical Methods and Theory | 3 |
| Advanced GIST elective ⁵ | | 4 |
| Graduate elective ⁶ | | 3 |
| General elective ³ | | 6 |
| Semester Credit Hours | | 16 |
| Spring | | Semester Credit Hours |
| GEOG 476 | GIS Practicum | 3 |
| GEOG 611 | Geographical Research Design | 3 |

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|------------------------------------|----------|------------|
| GEOG 691 | Research | 2 |
| Graduate elective ⁶ | | 3 |
| General elective ³ | | 6 |
| Semester Credit Hours | | 17 |
| Fifth Year | | |
| Fall | | |
| Graduate elective ⁶ | | 9 |
| Semester Credit Hours | | 9 |
| Spring | | |
| GEOG 691 | Research | 6 |
| Graduate elective ⁶ | | 3 |
| Semester Credit Hours | | 9 |
| Total Semester Credit Hours | | 150 |

¹ 8 hours required. Department requires that you take two in the same discipline to meet this requirement.

² Select from GEOG 301, GEOG 304, GEOG 305, GEOG 306, GEOG 309, GEOG 311, GEOG 320, GEOG 323, GEOG 324, GEOG 325, GEOG 327, GEOG 330, GEOG 331, GEOG 335, GEOG 355, GEOG 360, GEOG 370/ MARS 370, GEOG 380, GEOG 400, GEOG 401, GEOG 404, GEOG 406, GEOG 420, GEOG 430, GEOG 434, GEOG 435, GEOG 440, GEOG 442/ GEOS 442, GEOG 467.

³ Select any courses from 100-499 not used elsewhere. (Except AERS 100-499 (<http://catalog.tamu.edu/undergraduate/course-descriptions/aers/>); ASCC 100-499 (<http://catalog.tamu.edu/undergraduate/course-descriptions/ascc/>); ENGL 103; KINE 198, KINE 199; MATH 102; MATH 142, MATH 150, MATH 151, MATH 168, MATH 171; MLSC 100-499 (<http://catalog.tamu.edu/undergraduate/course-descriptions/mlsc/>); NVSC 100-499 (<http://catalog.tamu.edu/undergraduate/course-descriptions/nvsc/>); SOMS 100-499 (<http://catalog.tamu.edu/undergraduate/course-descriptions/stat/>); STAT 211, STAT 302, STAT 303).

⁴ Select from GEOG 391, GEOG 392, GEOG 398, GEOG 461, GEOG 475, GEOG 477, GEOG 478, GEOG 479.

⁵ Select from GEOG 461, GEOG 475, GEOG 479. A course used to fulfill this requirement cannot also be counted as fulfilling a GIST techniques elective.

⁶ Select from any 600-level geography course except GEOG 651, GEOG 659, GEOG 660, GEOG 676, GEOG 678, GEOG 691. Up to 2 hours of graduate electives may be used towards the undergraduate degree's general electives.

Two courses in the degree plan must be Writing Intensive courses designated by the department in the schedule of classes. Also, International and Cultural Diversity Elective (3 hours) and Cultural Discourse (3 hours) must be incorporated into the degree.

The program includes a total of 152 hours, which up to 2 hours may be applied toward both the Bachelor of Science in Geographic Information Science and Technology and the Master of Science in Geography (thesis option).