

Geospatial Information Science and Technology, B.S.

The B.S. in GIST provides a quality educational experience that combines proficiency in spatial thinking and geospatial data science analysis with fluency in geographic information systems, remote sensing, and visualization.

General Requirements

- Total credits (college requirement): 120
- 3000-level or above credits (university requirement): 42
- Fulfillment of University Studies Program: 30
- Fulfillment of major requirements

University Studies Program

This degree requires that [The University Studies Program 2015](#) requirements are met before graduation. Some of the courses required for this major fulfill USP requirements, but not all. Students should check their degree evaluations and consult with their assigned academic advisor to discuss their specific course plan.

- [C1 - Communication 1](#) Credits: 3
- [C2 - Communication 2](#) Credits: 3
- [C3 - Communication 3](#) Credits: 3
- [Q - Quantitative Reasoning](#) Credits: 3
- [PN - Physical and Natural World \(1\)](#) Credits: 3
- [PN - Physical and Natural World \(2\)](#) Credits: 3
- [H - Human Culture \(1\)](#) Credits: 3
- [H - Human Culture \(2\)](#) Credits: 3
- [V - U.S. & WY Constitution](#) Credits: 3
- [FYS or USP Elective - Any 3-credit hour of FYS or 3-credit hours of USP electives](#) Credits: 3

Major Requirements (32 Credits)

Required Courses (26 credits)

- [GIST1001 - GIST Orientation and Portfolio](#) Credits: 1
- [GIST1200 - Geospatial Foundations](#) Credits: 3
- [GIST2110 - Techniques in Cartography](#) Credits: 3
- [GIST2150 - Introduction to Programming in Geospatial Information Science and Technology](#) Credits: 3
- [GIST2200 - Spatial Data Visualization](#) Credits: 3
- [GIST2310 - Intro to Geographic Information Systems](#) Credits: 4
- [GIST3140 - Introduction to Remote Sensing](#) Credits: 3
- GIST 3050- Spatial Database Design and Management Credits: 3
- GIST 4780- GIS&T Capstone Credits: 3

Experiential Learning Requirement (6 credits)

Students must take 6 credit hours of experiential learning by taking one of the following:

- 6 credits of GIST4870 Internship in Geospatial Information Science and Technology

OR

- 6 credits of GIST4950 Undergraduate Research in Geospatial Information Science and Technology

OR

- 3 credits of GIST4870 Internship in Geospatial Information Science and Technology and 3 credits of GIST4950 Undergraduate Research in Geospatial Information Science and Technology

GIST Electives (30 credits)

Students must take 30 credits of GIST electives; up to 10 credits can be from GIST-related courses from other disciplines, with approval from their advisor; at least 18 of the 30 must be upper division (3000 or above).

- [GIST2140 - Survey of Remote Sensing Applications](#) Credits: 3
- [GIST4130 - Applied Remote Sensing for Agricultural Management](#) Credits: 3
- [GIST4211 - Advanced Remote Sensing](#) Credits: 3
- [GIST4410 - UAS Sensors and Platforms](#) Credits: 1
- [GIST4420 - UAS Mission Planning](#) Credits: 1
- [GIST4430 - UAS Regulations and Safety](#) Credits: 1
- [GIST4440 - UAS Ground School and Operations](#) Credits: 2
- [GIST4450 - UAS Data Acquisition and Processing](#) Credits: 3
- [GIST4790 - Special Topics in Geospatial Information Science and Technology](#) Credits: 3

Discipline Concentration Requirement (varies; typically 16-24 credits)

GIST is best practiced with a specialized knowledge base outside of GIST. Students must declare a minor in another discipline or create discipline concentration outside of GIST, with approval of their advisor; a second major can also meet this requirement.

Mathematics and Statistics Requirement (9-10 credits)

Students must take 5-6 credits of math and 4 credits of statistics by taking the following:

Mathematics requirement (fulfills USP Q requirement):

- [MATH1400 - College Algebra](#) Credits: 3

AND

- [MATH1405 - Trigonometry](#) Credits: 3

OR

- [MATH1450 - Algebra and Trigonometry](#) Credits: 5

Statistics Requirement:

- [STAT2050 - Fundamentals of Statistics](#) Credits: 4

OR

- [STAT2070 - Introductory Statistics for the Social Sciences](#) Credits: 4
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