

## **Geospatial Sciences, B.S.**

### **Program Description**

The Bachelor of Science with a major in Geospatial Sciences (GSS) integrates various geospatial technologies with applied research domains. The GSS program aims at producing high caliber graduates who are well trained in the theory and application of geospatial technologies, including GIS, remote sensing, and land surveying. Students receive fundamental knowledge of geospatial skills, along with specific content in one of three concentration: human-environment systems, information systems, or land surveying. Geospatial Sciences provide students a set of skills to manipulate, analyze, assess, and visualize data by way of digital maps and/or map imagery to solve problems. Graduates of the major have obtained geospatial jobs related to crime analysis, emergency services, engineering, epidemiology, environmental management, forestry, housing, marketing, military sciences, sustainability, land surveying, transportation, urban planning, and utilities, among others.



This program is a part of the Norman J. Radow College of Humanities and Social Sciences.

### **Admission, Enrollment, and Graduation Policies**

#### **Admissions Requirements**

This program does not have specific admission requirements and only admission to Kennesaw State University is required. For more information, please visit the Admissions section of the Catalog.

#### **Graduation Requirements**

Each student is expected to meet the requirements outlined in Academic Policies 5.0 PROGRAM REQUIREMENTS & GRADUATION.

### **Program Course Requirements**

#### **Core IMPACTS Curriculum (42 Credit Hours)**

General Education Core IMPACTS Curriculum

#### **Core Field of Study (18 Credit Hours)**

Students must earn a "C" or better in these courses.

**Required Courses (6 Credit Hours)**

- GEOG 1110: The Digital Earth
- GEOG 2391: Professionalism and Ethics

**Core Elective Courses (6 Credit Hours)**

Select 3 credit hours from the following list of courses:

- GEOG 1101: Introduction to Human Geography
- GEOG 1125: Resources, Society, and the Environment
- GEOG 1130: World Regional Geography

Select 3 credit hours from the following list of courses:

- GEOG 1112K: Introduction to Weather and Climate
- GEOG 1113K: Introduction to Landforms

**Elective Courses (6 Credit Hours)**

Select 6 credit hours of 1000–2000 level coursework from the University Catalog.

**Major Requirements (15 Credit Hours)**

Students must earn a "C" or better in these courses.

- GEOG 3305: Introduction to Cartographic Processes
- GEOG 3315: Introduction to Geographic Information Systems
- GEOG 4405: Advanced Geographic Information Systems
- GEOG 4410: Introduction to Remote Sensing
- SURV 3320: Photogrammetry and Drone Analysis

**Major Electives (9 Credit Hours)****GIS and Remote Sensing Elective Courses (6 Credit Hours)**

Select 6 credit hours from the following list of courses:

- GEOG 4500: Advanced Topics in Geospatial Science \* may be repeated for credit if the topics are different.
- GIS 3398: Internship \*\*This is an extra 3 hours in addition to the required 6 hours for the Human-Environment Systems and Information Systems concentrations.
- GIS 4100: Directed Applied Research
- SURV 3451: Terrain Analysis

***Experience Elective Courses (3 Credit Hours)***

**Select 3 credit hours from the following list of courses:**

- GEOG 4100: Directed Applied Research
- GEOG 4499: Senior Seminar in Geography
- Any 3000/4000 level Study Abroad course

***Major Concentrations (36 Credit Hours)***

Students must earn a "C" or better in these courses.

***Human-Environmental Concentration******Required Courses (9 Credit Hours)***

- GEOG 2200: Research Methods
- or
- TCOM 2010: Technical Writing
- GIS 3398: Internship

***Elective Courses (12 Credit Hours)***

Select 3 credit hours from Group A, 3 credit hours from Group B and an additional 6 credit hours of coursework from Groups A and/or B.

**Group A: Physical and Environmental Courses**

Select a minimum of 3 credit hours from the following list of courses:

- ANTH 4430: Environmental Anthropology Field Methods
- ENVS 3720: Sustainability at KSU
- ENVS 3730: Natural Resource Management
- GEOG 3700: Introduction to Environmental Studies
- GEOG 3800: Climatology
- GEOG 3850: Global Climate Change
- GEOG 3900: Biogeography
- GEOG 4700: Geomorphology
- POLS 3356: U.S. Environmental Policy & Politics
- POLS 4456: International Environmental Policy

**Group B: Human and Society Courses**

Select a minimum of 3 credit hours from the following list of courses:

- ANTH 3307: Cultural Anthropology
- GEOG 3000: Geography of Beer
- GEOG 3310: Historical Geography
- GEOG 3320: Political Geography
- GEOG 3330: Economic Geography
- GEOG 3340: Cultural Geography
- POLS 4412: Urban Politics
- SOCI 4464: Population and Demography
- GEOG 4300: Urban Geography
- GEOG 4345: Population Geography

#### Free Electives (15 Credit Hours)

Select 15 credit hours of 1000–4000 level coursework from the University Catalog. In accordance with KSU Graduation Policy, students must earn a grade of "D" or better in these courses while maintaining a minimum 2.00 cumulative GPA.

#### **Information Systems Concentration**

##### Required Courses (9 Credit Hours)

- IS 2200: Information Systems and Communication
- GIS 3398: Internship

##### Elective Courses (12 Credit Hours)

Select 12 credit hours from the following list of courses:

- IS 3020: Application Development I
- IS 3100: Information Systems Management
- IS 3220: Global IS Project Management
- IS 3260: Web Development I
- IS 3280: Data Management
- IS 3740: Human Computer Interaction
- IS 3760: Web Development II
- ISA 3100: Principles of Information Security

#### Free Electives (15 Credit Hours)

Select 15 credit hours of 1000–4000 level coursework from the University Catalog. In accordance with KSU Graduation Policy, students must earn a grade of "D" or better in these courses while maintaining a minimum 2.00 cumulative GPA.

***Land Surveying Concentration***

Upon completion of the Geospatial Science, BS degree requirements and this concentration students will be awarded the Land Surveying Certificate.

***Required Courses (27 Credit Hours)***

Students will complete the Land Surveying Certificate (18 Credit Hours) coursework requirements and the following courses:

- EDG 2160: Civil Graphics and Computer Aided Drafting
- SURV 3451: Terrain Analysis
- SURV 4110: Geospatial Sciences Practice

***Free Electives (9 Credit Hours)***

Select 9 credit hours of 1000–4000 level coursework from the University Catalog. In accordance with KSU Graduation Policy, students must earn a grade of "D" or better in these courses while maintaining a minimum 2.00 cumulative GPA.

**Program Total (120 Credit Hours)**