

# Special Topics

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Last Updated: Wed, 03/18/2026

**Course prefix:** CS

**Course number:** 4803

**Section:** GIS

**CRN**

57906

**Instructor first name:** Clio

**Instructor last name:** Andris

**Semester:** Summer

**Academic year:** 2026

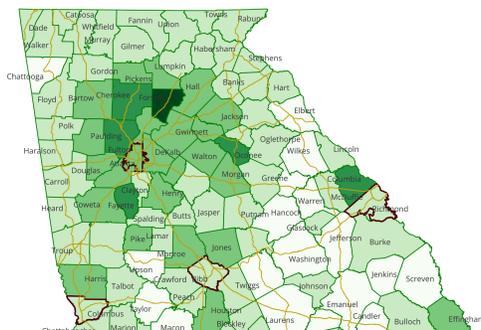
**Course description:**

The primary objective for this course is to help students **build an online visualization & GIS portfolio** to show they can manage, visualize and analyze spatial data and add to their resume/skillsets for industry, government, NGOs, etc. We cover topics related to society such as average income, the built environment such as buildings and roads, physical environment such as terrain operations, and technologies such as Google Maps.

Introduction to computing with spatial datasets, including lessons on geographic information fundamentals, projections, spatial operations, raster and imagery data analysis, and cartographic design principles that are used to digitally model social and environmental processes.

The course exposes computation-focused students to maps, data analysis and methods in Geographic Information Systems and Science (GIS). It helps students learn the fundamentals of spatial data representation, formats, map projections, GIS operations and computing, cartography, and multi-criteria decision-making. Students are welcome to use a technology of their choice (such as Python or ArcPro), but labs will be primarily taught in the open-source QGIS computing environment and using PyQGIS. This course teaches students how to make maps using geodata visualization strategies and cartographic standards.

Median Income by County in the State of Georgia (2020)



**Academic honesty/integrity statement:**

Students are expected to maintain the highest standards of academic integrity. All work submitted must be original and properly cited. Plagiarism, cheating, or any form of academic dishonesty will result in immediate consequences as outlined in the university's academic integrity policy.