Fundamentals of GIS

Last Updated: Mon, 11/10/2025

Course prefix: CP

Course number: 4510

Section: C

CRN (you may add up to five):
80440

Instructor First Name: Anthony

Instructor Last Name: Giarrusso

Semester: Fall

Academic year: 2026

Course description:

The course provides a basic understanding of the tools for collecting, storing, and analyzing spatially distributed data. Basic issues of software design and application are covered.

Course learning outcomes:

The goals of this course are:
1. To expose students to ArcGIS
2. To provide students with a working knowledge of ArcGIS PRO, ESRI Story Maps and ArcGIS Online basics
3. To help students apply skills learned in this class towards other classes and/or their professional work.

GIS software packages change continually. Therefore, it is extremely important for students to understand the
basics principles of spatial analysis and how geography is represented and manipulated in a computer-based
environment. The readings and lectures are designed to serve this purpose. The lab sessions will provide
students with hands-on experience using ArcGIS PRO and ArcGIS Online, arguably the most widely used GIS
software in the world. The skills learned in this class can be applied in other classes (maps for papers, spatial
analysis, etc) or in a professional setting. By the end of the course, students are expected to understand the

basic components of a geographic information system and to be proficient using ArcGIS Pro and ArcGIS
Online

Required course materials:

Mastering ArcGIS Pro – 2nd EDITION by Maribeth Price - McGraw Hill
ISBN10: 1264091206
ISBN13: 9781264091201

Grading policy:

Student Evaluation
Students are expected to attend all classes and labs, participate in class discussions, and complete the required
readings, homework assignments, and any required exams. Unless otherwise specified, all exercises are to be
completed individually, not collaboratively. Students may discuss general concepts related to their homework,
but the assignments must be completed individually.
A = 90-100%
B = 80-90%
C = 70-80%
D = 60-70%
F = <60%

Course Grade Breakdown
(45%) Weekly HWs: See Canvas for official assignment(s) details, due dates and times. All Weekly HWs are due
either Tuesday or Thursday before class at 9:30 am. You must complete a weekly hw to have it replaced with an
extra credit.
(30%) Exam: Chapters 1 – 10 short answer, definitions, practical questions, etc.
(20%) Final Project: Using ArcGIS Online students will describe, analyze, and present topic of interest via an
ESRI Story Map. See Assignment on Canvas for details.
(5%) Class Participation: Attendance is mandatory -- roll will be taken. Four absences are permitted. These
include institute approved absences. However, more than 4 absences require documented approval for all
absences. Check Canvas for your attendance grade, which is updated weekly. The fifth absence lowers your class
participation grade by 2.5%. The sixth absence results in 0% participation grade. Policy effective beginning

Week 2.

Attendance policy:

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participation grade by 2.5%. The sixth absence results in 0% participation grade. Policy effective beginning
Week 2.

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.

Student conduct should be based on the Georgia Tech Honor Code. The Institute policy regarding student plagiarism will be strictly enforced. Any student found to violate the policy on plagiarism will receive a failing grade for the assignment and will be subject to disciplinary action as outlined within the Georgia Tech Academic Honor Code (http://www.catalog.gatech.edu/rules/18b.php) and Student Code of Conduct (http://www.catalog.gatech.edu/rules/19b.php).