

Data Analytics and Security

Last Updated: Fri, 01/09/2026

Course prefix: INTA

Course number: 4803

Section: AB

CRN (you may add up to five):
33184

Instructor First Name: Austin

Instructor Last Name: Beacham

Semester: Spring

Academic year: 2026

Course description:

The use of data analytics has exploded across almost every facet of life, from private businesses to policymaking to academic research. We have new techniques and methods to answer questions both old and new.

This course has two primary objectives. First, it introduces students to a wide range of methods and tools for empirical data analysis in social science research. Second, it aims to develop students' skills in identifying good social science research questions and creating research designs that can best answer those questions, particularly focused on research topics related to Comparative Politics and International Relations. In other words, the goal of the course is to help you identify good questions to ask about the social world, and know what methods you can use to answer those questions. Examples of tools that we will discuss include geospatial data analysis, remote sensing, text as data, large language models (LLMs), and visual analytics. To be clear, you are not expected to master any of these tools, but rather become familiar with them enough to be able to more easily apply them in your own life should you choose to dedicate more time to them. We will also be reading and discussing published academic research that uses the methods that we will learn, to provide students examples of what research can look like.

Course learning outcomes:

By the end of this seminar, students will be proficient in the basics of analysis of social science data using a number of tools, able to identify good research questions and designs, able to clearly and effectively communicate their results, and have the necessary knowledge to take additional seminars on more advanced topics not offered by the Nunn School.

Required course materials:

There are no required textbooks for this course. I will provide PDFs for all articles that are assigned, which are available through the Georgia Tech library.

Grading policy:

The course will consist of the following:

- 4 Homework Assignments (45% total)
- Research Project (40%)
- Participation (15%)

A: 90-100

Superior performance

B: 80-89

Above-average, high-quality performance

C: 70-79

Average (not inferior) performance

D: 60-69

Below-average performance

F: 0-59

Unacceptable performance

Attendance policy:

This is an in-person course and as such there will not be remote attendance options nor recorded lectures (with some scheduled exceptions). We will have in-depth class discussions throughout the semester about research design and tools, as well as the specifics of individual articles that we read. I will provide multiple avenues to participate in these discussions. Students are expected to have completed the readings **prior** to class. Preparedness and level of engagement are both factors of the participation grade. I reserve the right to call on individuals at random or administer reading quizzes, although I prefer not to. Additionally, attendance is part of the participation grade. You are allowed three unexcused absences; after this, failure to attend will negatively impact your participation grade.

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.