

GEOG 6730: Seminar in Geographic Information Science

Focus: Geographic Knowledge Representation

COURSE SYLLABUS Spring Semester, 2020

When: Monday @ 2:00pm – 4:45 pm

Where: Clippinger, 102

Instructor: Dr. Gaurav Sinha (*Associate Professor, Department of Geography*)

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Office Hours: M/W/F @ 9:15 am – 10:45 am (*and by appointment*)

Course overview

The term “Geographic Information Science” (GIScience) was first introduced in early 1990’s, and since then has been widely adopted. Unfortunately, a common mistake has been to use it in the same context as the much older “Geographic Information Systems”. As will be revealed through discussions, readings and projects in this class, the two terms refer to substantially different bodies of knowledge. A simple way to distinguish between *GI Systems* and *GI Science* is to understand the latter as the *science* of geographic information and the critical analysis of the design and applications of geographic information systems.

In this class, students will learn how to think critically about geographic information (GI) and apply those ideas and analytical methods to their chosen academic areas of specialization. GI is the basis of a significant amount of individual, societal, and governmental decision making. How we individually perceive and act on geographic information is dependent on both innate cognitive faculties and acquired cultural and scientific concepts. On the other hand, our role as agents of geographic information is critical in the evolution of societies and their relationship with their governments. In this course, students will learn to critically assess the various ways in which GI is produced, perceived, and consumed by individuals and societies. Weekly readings will focus on topics such as: **space and place, cognitive geography, critical GIS, participatory mapping, spatiotemporal modeling, and geospatial ontology/semantics, and geospatial data science.**

After a few weeks of fundamental readings on the philosophy of geographic information and methods in geographic science, subsequent readings will be selected based on students' research interests so that they can ultimately introduce new philosophical ideas and analytical methods in their theses/dissertations. Critical use and exploration of geospatial technologies and GIS software applicable to the student's work may also be discussed, if needed, through targeted readings.

The purpose of the class is to get the students to engage in discussions pertaining to a wide variety of applied geographic analysis related topics and train them to adopt different analytical perspectives depending on what type of geographic information is being considered. By the end of this seminar class, students will better understand the nature of the geographic information they are collecting and develop critical insights about the methods they plan to use to represent, analyze, and share that information.

Note: Students from all backgrounds in the social, environmental, and computational sciences can benefit from a GIScience perspective. Prior background in geography or GIS is NOT a pre-requisite for this class. However, an interest in geographic information and philosophical analysis is a must.

Grading (4 credits)

This seminar will rely mostly on class discussions of assigned readings as a medium of learning. The instructor will only act as a facilitator to clarify doubts or to moderate debates, if necessary. The grading criteria will be subject to the fulfillment of the following requirements:

- Each week, one student will be assigned the responsibility of leading and moderating discussions.
- Students will be expected to prepare notes for every assigned reading and submit at least two questions for *every* reading to the moderator at least one day in advance.
- Students will be expected to participate *actively* in class and online discussions.
- Student will be expected to submit two papers on topics of interest.
- The first paper would be a lit-review paper or an extended applied project-paper on an approved topic and will be due by the 7th week of the semester. Students may be asked to read and provide reviews of others' papers.
- Students will also be required to submit a research paper on a topic decided after discussions with the instructor.
- The research paper topic should be discussed well in advance of and finally approved by the 8th week of the semester.
- An abstract for the paper will be expected by the 9th week of the semester.
- A first draft of the research paper will be expected by the 13th week of the semester.
- All students will also be required to present their research paper on the last day of class.
- The final version of the research paper will be due on the last exam day of the semester.
- The final grade will be calculated based on the following allocations and grading criteria:
 - *Participation in class discussions* 70%
 - *Final paper & presentation* 30%

*Grading Criteria**

Grade	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	F
% Range	100-94	93-90	89-87	86-84	83-80	79-77	76-74	73-70	69-67	66-64	63-60	≤59

*No automatic incomplete grade will be given.

Academic Integrity

Please help maintain an academic environment of mutual respect and fair treatment. Academic misconduct will not be tolerated and will be dealt with procedurally in accordance with the Ohio University [Student Code of Conduct](#) policies. Students should read the code and be careful to abide by the code. Specifically, for this class, it should be noted that although collaborative learning and working on assignments is encouraged, students must write up their assignments individually. Plagiarism from your current or former students will not be tolerated and reported to proper authorities. Additionally, depending on the perceived severity of the violation, the instructor's response may range from imposing grade penalty to assigning an automatic failure grade. Students may appeal academic sanctions through the grade appeal process. Note that University Judiciaries may impose additional sanctions.

Institutional Equality

In compliance with the Americans with Disabilities Act (ADA), all students who have a document disability are entitled to "reasonable academic accommodations." Any student who suspects s/he may need an accommodation based on the impact of a disability should contact the class instructor privately to discuss the student's specific needs and provide written documentation from the Office of Student Accessibility Services.