

GTECH 710 – Introduction to Geographic Information Science

Spring 2015

Tuesdays, 5:35 – 8:15 PM

Place of Instruction:	HN 1090B-2 (small geography computer lab)
Credits/hours:	3/3
Instructor:	Carsten Kessler, carsten.kessler@hunter.cuny.edu
Office Hours:	Tuesdays 3 – 5 PM
Office:	HN 1025A
Pre-/Corequisites:	GTECH 709 – Introduction to Geographic Information Systems

Course Description

In this course, we will introduce the theoretical foundations for the concepts covered in GTECH 709, which is a co-requisite for this course. The course does **not** have a corresponding lab, as the practical application of the concepts taught here will be covered in the GTECH 709 labs. Instead, the instructor will show plenty of practical examples, use cases, and demos for illustration in the lecture. In the second part of each session, a student will present a research paper related to the session's topic, followed by a discussion. The paper presentations will be assigned in the first meeting. Moreover, there will be a weekly reading assignment, for which each student has to turn in a short abstract (100 words) and three questions for discussion in class.

Textbook

There is no required textbook for this class. Instead, we will be reading and discussing seminal papers on the respective topics.

Learning Objectives

By the end of the course it is expected that students will be familiar with core concepts of geography and geographic information science such as location, place, process, event, and spatial autocorrelation. Moreover, students will know about the theoretical foundations of tools such as spatial databases and geo web services. The preliminary goal of this course is to lay the theoretical and conceptual foundations for specialized GIS courses.

Criteria for evaluation

Abstracts & questions	20%
Presentation	20%
Participation in class	10%
Midterm	20%
Final exam	30%

Policy on Incomplete (IN) and Credit/No-Credit (CR/NC) grades

A final grade of IN (incomplete) will not be given except under the most extraordinary, and documented, circumstances. CR/NC is not available to students enrolled in GTECH 732 or any other graduate-level course in the Hunter College School of Arts & Sciences.

Course Policies

Communication

All email messages about this course should include GTECH 732 in the subject line and be signed with your full name.

Participation

Attendance is crucial. Assuming that the class-learning environment is active learning, adherence to protocols and the course timetable is very important. Lateness in arriving at class will not be tolerated. Class participation includes timely attendance and participation in organized class discussions, accomplishments of in-class tasks, and preparation of the reading assignments.

Hunter College Policy on Academic Integrity

Hunter College regards acts of academic dishonesty (e.g., plagiarism, cheating on examinations, obtaining unfair advantage, and falsification of records and official documents) as serious offenses against the values of intellectual honesty. The College is committed to enforcing the CUNY Policy on Academic Integrity and will pursue cases of academic dishonesty according to the Hunter College Academic Integrity Procedures.

ADA Policy

In compliance with the American Disability Act of 1990 (ADA) and with Section 504 of the Rehabilitation Act of 1973, Hunter College is committed to ensuring educational parity and accommodations for all students with documented disabilities and/or medical conditions. It is recommended that all students with documented disabilities (Emotional, Medical, Physical, and/or Learning) consult the Office of AccessABILITY, located in Room E1214B, to secure necessary academic accommodations. For further information and assistance, please call: (212) 772-4857 or (212) 650-3230.

Tentative Schedule

This syllabus is subject to updates. Changes will be announced on Blackboard.

<i>Week</i>	<i>Date</i>	<i>Topic</i>
1	Feb 3	Introduction
2	Feb 10	Core concepts of GIScience
3	Feb 17	The theory of reference systems, position vs. location, the concept of place
4	Feb 24	Accuracy, uncertainty, error
5	Mar 3	Databases and spatial extensions
6	Mar 10	Gazetteers
7	Mar 17	NeoGeography, Participatory and Collaborative GIS
8	Mar 24	Midterm
9	Mar 31	Data integration: Syntactic and semantic interoperability
	<i>Apr 7</i>	<i>No class – spring recess</i>
10	Apr 14	Time in GIS: Processes, events, and time geography
11	Apr 21	Tobler’s law and spatial autocorrelation (online lecture)
12	Apr 28	Geo web services and Spatial Data Infrastructures
13	May 5	Dynamic geo-visualization and map interaction
14	May 12	Current issues in GIScience research
15	May 19	Final exam