CSCI 7090 Knowledge Process for GIS Data, Spring 2023

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Office hours: Monday, Wednesday, 8:00am – 9:00am; 10:30am – 11:30am; or by appointment

Folio: Course materials are available on folio.

Textbook: None

Important Dates:
August 17, Attendance Verification (the first day of classes)
January 10, Attendance Verification (the first class)
January 9-12, Drop/Add
January 16, Martin Luther King Jr. Holiday
March 6, Last day to withdraw without academic penalty
March 13-18, Spring break
May 1, Last day of classes

Course Description

This course helps students to understand the limitations of relational databases and introduces some advanced databases such as constraint databases as alternative and more powerful database management systems. Geographic Information Systems (GIS) will be introduced as a database management system for spatial and spatiotemporal data.

Course Contents

1. Advanced databases such as constraint databases.
2. Geographic Information Systems.
3. Spatial/spatiotemporal interpolation.

Goals

The goals of this course include that students learn about advanced databases for spatial and spatiotemporal data, being introduced to Geographic Information Systems (GIS). Students will understand the limitations of relational databases and current GIS software packages (ArcGIS) and apply advanced techniques to GIS.

Tentative Course Schedule

Week	Topic	Readings/Meetings
1	Course Info – Start Here (attendance verification, etc.) Project Description is released.	
2-3	Review papers for the project	handout
4	Discussion of the papers and Q&A for the project	Zoom
5-9	Geographic Information Systems, ArcGIS	handout
10-15	Spatial and spatiotemporal interpolation Working on Final Project intensively Presentations on additional papers that students researched for the project.	Handout Zoom
16-17	Project presentations	Zoom

Evaluation Scheme

No makeups will be offered except under extraordinary situations.

Projects	50%
Assignments	25%
Presentations	25%
Total score	100%

Grade	Points
A	>= 90.0
B	>=80.0
C	>=70.0
D	>=60.0
F	<60.0