CIS 310 Introduction to the Structure and Mechanics of Social Networks

Syllabus

Instructor information

- Instructor: Christian Trefftz
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- Office hours: MWF 10-11am and by appt.

General Course Information

Course Description: A study of networks as implemented in typical on-line social network sites. This course examines a) the basics of representing and analyzing networks, b) the tools for implementing and managing an online social network, and c) the techniques for discovering and exploiting valuable information that resides in networks.

Text: The Little Book of Network Analysis, Scripps (download from BB).

The last day to drop with a grade of "W" is October 26.

Academic Honesty: All students are expected to adhere to the academic honesty standards set forth by Grand Valley State University. In addition, students in this course are expected to adhere to the academic honesty guidelines as set forth by the School of Computing and Information Systems, the details of which can be found here.

Learning Objectives

This course is part of GVSU's General Education Program. CIS 310 is designed to help you learn:

1. How to link course material to information, innovation, and technology.
2. How complementary and competing perspectives contribute to the ongoing discussion about information, innovation, and technology.
3. Collaboration, which is the process of working together and sharing the workload equitably to progress toward shared objectives, learned through structured activities that occur over a significant period of time. Students will:
    - Contribute to the development of shared goals within the group.
    - Contribute their own knowledge and expertise to the group.
    - Participate actively and responsibly in all group activities.
    - Honestly assess their own contributions and the contributions of others.
4. Integration, which is the process of synthesizing and applying existing knowledge, past experiences, and other perspectives to new, complex situations. Students will:
    - Draw conclusions from examples, facts, and/or theories from more than one field of study or perspective.
    - Adapt and apply skills, abilities, theories, or methods to explore complex issues in original ways.
    - Effectively communicate synthesized knowledge in ways that are inclusive of diverse audiences and perspectives.
    - Demonstrates Self-reflection, building on prior experiences and responding to new and challenging contexts presented in the course.
5. Problem solving, which is the process of designing and evaluating strategies to answer open-ended questions or achieve desired goals. Students will:
    - Construct clear and insightful problem statements that prioritize relevant contextual factors.
    - Identify multiple approaches for solving the problem within the given context.
    - Design and fully explain proposed solutions that demonstrate deep comprehension of the problem.
    - Evaluate the feasibility of solutions considering aspects such as the historical context and ethical, legal, or practical impact of potential solutions.

Teaching in the liberal tradition is at the heart of Grand Valley's identity, and this focus is critical in our General Education Program. Liberal education transcends the acquisition of information; it goes beyond the factual to ask important evaluative and philosophical questions. Liberal learning holds the fundamental principles and suppositions of a body of knowledge up to inquiry, question, and discussion. It helps a person recognize the assumptions under which he or she operates and encourages the examination and questioning of those assumptions. Liberal learning begins in the General Education Program and continues through the more specialized studies comprising each student's major and minor areas of study.

Assignments

Homework: Weekly homework will be assigned to reinforce the course topics.

Project: The project in this course will involve students creating a network from original data sources.

Testing: There will be a midterm exam plus the final. All tests will be announced in advance. Make-ups are at the discretion of the instructor. The FINAL EXAM will be given on Tuesday Dec 11 from 8am to 10am. This is the officially schedule time for the final exam and no student will be allowed to take it at any other time without prior approval by the instructor.

The student is responsible for material covered or announcements made in class any day he/she is absent.

Grading Scale

percent	grade	percent	grade
94 - 100	A	77 - 79	C+
90 - 93	A-	73 - 76	C
87 - 89	B+	70 – 72	C-
83 – 86	B	67 – 69	D+
80 – 82	B-	60 – 66	D
		below 60	F

Point Distribution

	points	%
homework	70	35.0
project1	20	10.0
project2	20	10.0
exam 1	40	20.0
final	50	25.0
total	200	100.0

Schedule

week of	chapter	lecture	homework	exams
8/27	1	Introduction	hw1	
9/3	2	Example networks	hw2	
9/10	3	Network representations	hw3	
9/17	4	Characteristics of special networks	hw4	
9/24	5	Metrics		
10/1	5	Metrics (cont) & tools	hw5	
10/8				exam 1
10/15	6	Social considerations	hw6	
10/222	7	Models of formation	hw7	
10/29	8	Network mining, part 1		
11/5	8	Network mining, part 2	hw8	
11/19	9	Security, privacy and trust		
11/19		catch up		
11/26		Visualization & Review		
12/3		Project presentations	projects due	
	Final exam 12/11/17 from 8 to 10 am			

List of Policies that apply to all courses

This course is subject to the GVSU policies listed at

http://www.gvsu.edu/coursepolicies/