Social Network in Practice

Term 2 (2020-2021) – UGEC2532

Lecturer	Dr. Jeff WONG
Class Time	Wednesday 2:30 PM – 5:15 PM
Zoom	https://cuhk.zoom.us/j/91430520951?pwd=UEgramZPQjRHbFBqVUN2aEQvTWdRZz09
Office Hours	By appointment only
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Course Website	https://www.math.cuhk.edu.hk/~jwong/UGEC2532/

Course Overview

This course will provide executive summaries of foundational social network (**SN**) studies and analysis (as used in an introductory level of research or business) in layman's terms.

The goal of this course is to provide concepts, models, and methods that will help students develop better decision making skills and strategies based on different types of social networks.

Required Text

Ian McCulloh, Helen Armstrong, Anthony Johnson. *Social Network Analysis with Applications.* Wiley, 2013. The e-version of this book can be found at the CUHK Library.

Grades

50%	Social Network Project
	Presentation, Final project paper
50%	Class Participation
	Attendance + Class discussion, One in-class Quiz, One out-of-class activity, Two assignments

Course Objectives

- learn inquiry, argumentation and higher-level thinking rather than just facts
- develop the ability to think critically and scientifically about things happening in today's world
- describe the general concepts of mathematical models used in social and behavioral sciences and study the advantages and disadvantages of these SN models
- apply scientific tools to analyze SN phenomena in real-life.

A few highlights:

- Format of Final Project

  Numerous project topics include but are not limited to:

The collaborative network	The friendship network
The business network	The international relational network
The community network	The mobile game network
The criminal network	The network media and network analysis E.g., YouTube, Facebook, Twitter
The dating and matching network	The organization network
The e-discovery network	The teenager network
The education and health network	The terrorist network
The family network	The trust network
The financial network	The world trade network

Presentation

The schedule and order of the presentation will be determined in the first class. The presentation can be either a group presentation (up to four students — the best teams often have students from different backgrounds (e.g., sociology, science, engineering, finance, marketing, etc.)) or an individual

presentation. Each presentation will be 15 minutes in length, followed by a 2-minute discussion and a 3-minute Q&A.

<u>Final paper</u>

We will announce more criteria about the final paper once you have formed your own group (up to four students) or you have decided to do your own project. Each student must write and submit her/his report. The final paper should be no more than 2500 words (excluding tables, figures, and references).

- ■ Out-of-class activity

The aim of this out-of-class activity is to connect people outside the classroom and observe the social network phenomena in real-life. Each year the topic will vary and the activity will be conduct in the last two weeks of the course. In the past, we had the following activities:

- ✓ 2016 - 2017 Small world phenomenon at CUHK
- ✓ 2017 - 2018 Local community detection
- ✓ 2018 - 2019 Analyzing your affiliation networks at CUHK