ICS 455 : Social Network Analysis

A. Course Description

Credits: 4

Prerequisites: ICS 240 Introduction to Data Structures AND ICS 311 Database Management Systems

Lab Hours/ Weeks: Corequisites: None

Lecture Hours/ Week :

MnTC Goals: None

This course provides an introduction to the field of social network analysis. Social network analysis is applied in different areas such as health, cyber security, information retrieval and communications. The focus of this course is on network analysis and theory. This course introduces the main structural concepts of social networks, and it combines theory and practice using programming. Students will explore several examples related to social network analysis. Students will apply NetworkX Python library in creating, manipulating, and study of the structure of social network.

B. Course Effective Dates: 05/02/2018 - Present

C. Outline of Major Content Areas:

See Course Description for major content areas.

D. Learning Outcomes (General)

1. Demonstrate an understanding of social network analysis theory and application.
2. Distinguish the different types of social networks such as one mode networks, two modes networks, ego centric networks.
3. Analyze social networks from different perspectives such as node level, group level and network level.
4. Experiment with the different types of social network analysis measures and algorithms.
5. Test and practice social network analysis using NetworkX library in Python

E. Learning Outcomes (MN Transfer Curriculum)

This contains no goal areas.

F. Special Information

Note: Students are responsible to both be aware of and abide by prerequisites for ICS courses for which they enroll, and will be administratively dropped from a course if they have not met prerequisites.