Syllabus: SOC 430, Social Network Analysis.

Winter 2018.
Fully Online.

Instructor Information

Instructor
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Office Location & Hours
Social Sci. Bldg. Room 430,
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General Information

Course Description

Welcome to Social Network Analysis class! The concept of social networks have become commonplace with the introduction of social networking websites and platforms, including but not limited to Facebook, Twitter, Reddit, and LinkedIn. These websites take social networking as a way of accessing people and resources seriously and implementing it in our daily lives. However, scholars of Social Network Analysis (SNA) have been thinking critically about social networks for a very long time. For sociologists, social networks have a broader meaning: face-to-face relationships, online relationships, economic relationships, organizational associations, exchanges among people and institutions are different kinds of social networks, to name a few, and sociologists have developed various tools to analyze these networks and their implications on social structures as well as social action.

Learning Expectations and Goals

This class will introduce you to the basic concepts, theories, and a variety of the techniques to study and analyze networks in the social sciences. By the end of the class, you will see that social networks concepts are pervasive throughout our everyday lives, and that social network analysis is a useful set of tools that can help you under and think critically about your social reality. In short, the learning expectations and goals are:

(1) The basic concepts and theories of Social Network Analysis;
(2) Using R Programming Environment to do basic mathematical calculations and Social Network Analysis;

Course Format, D2L & Technology

The course is offered in an **asynchronous** online format. An asynchronous format means that we do not have a specific time to be all online. Rather, you can take the course on your own pace and in accordance with your schedule. However, you are expected to complete your assignments in weekly periods.

Therefore, you are expected to visit the D2L page of the class frequently throughout the semester. All the information you need will be available through D2L web page designed for this course. You will be following online lecture videos and written descriptions to complete your weekly assignments. At the end of each lecture video, you will be asked to complete a short quiz to reinforce your knowledge of the topic. Please see the "Course Requirements" section for the details about the quizzes.

You will also develop programming skills in R Language in this class, and therefore you are expected to download R (for free) through https://www.r-project.org/ . It is also recommended to download R Studio, but not required. There are several programs available for Social Network Analysis (SNA), yet R is not only useful for SNA but also for other statistical analyses as well as data mining. Therefore, learning the R language will be a great asset to your skill set and will be greatly appreciated by your future employers. A wide variety of online courses offered to teach programming in R in platforms such as Coursera, Datacamp, and such, is an indicator of that. In this class, you will be asked to complete your Swirl assignments using the R Programming Environment. Please see the "Course Requirements" section for the details about the Swirl assignments.

You can find the course schedule on page 5.

Course Materials

Required Materials

The students are required to watch all lecture videos, take all the quizzes, and complete all Swirl assignments. There are no required books for this class.

Suggested Materials

I will incorporate material from John Scott's *Social Network Analysis, Fourth Edition* (2017) for this class and prepare the lecture materials based on the content available in this book. It is recommended that you have a copy of the book but not required. A copy of the book is available at the UA Library, but unfortunately, no online copy of the book is available. However, students can request 10% of the book via requesting book chapters, using the "Borrow and Request" feature on the UA Library Webpage.

Course Requirements

This class does not have any prerequisites, but it is an upper-division course. It is assumed that students have a basic familiarity with sociology or another social science. All students are expected to advocate for themselves and to work regularly throughout the course.

There are less than five weeks to cover everything that a standard course would cover. **We will move fast!** However, if at any point you feel that you are struggling, please contact me. If difficulties prevent you from completing the course, please get in contact with Dean's Office as well.

The course is organized on a **weekly schedule**. Readings, assignments, etc. for the week will be posted ahead of time. Therefore, you have the chance to move on to the following week's materials, if you choose to do so.

Technology requirements for this course:

- High-speed internet connection and access to D2L
- R Programming Environment: R is an open source software to visualize and analyze data, including but not limited to Social Network data. The software is downloadable for free and safely from the official R Project webpage at https://www.r-project.org/ . It is also suggested to download R Studio, an open source and free integrated development environment, through https://www.rstudio.com/ , but not required.

Quizzes

A short quiz will follow some of the lecture videos. The quizzes are designed to reinforce your knowledge on the topics covered in the preceding lecture videos (See learning goals and objectives #1). These quizzes will be short and multiple-choice. The students can take all quizzes as many times as they like, and the students' success rate is published right after they take the quizzes. There will be 10 quizzes in total, and each quiz will be graded out of 4 points.

Swirl Assignments

The Swirl assignments are designed to teach how to use R Programming Environment. (See learning goals and objectives #2). We will learn about what Swirl is throughout the course. There will be 6 homework assignments to be completed throughout the semester. Completing the accompanied swirl assignment will be enough to complete the homework assignment. Each Swirl Assignment will be graded out of 10 points.

Grading Scale

Name	Date
A	90-100
B	80-89
C	70-79
D	60-69
E	<60

Grading

Assignment type	Points total
Quizzes	30
Swirl Assignments and R Tutorial Assignments	50
Capstone Project	20
FINAL CALCULATED GRADE	**100**

Additional Information and Resources

Required or Special Materials

There are no required or special materials for taking this class -- except for your personal computer, and having a reliable and steady internet connection.

Make-up and Late Work Policy

The only acceptable reasons for making up a test or submitting work late are the following:

- Holidays or special events observed by organized religions to which students are affiliated;
- Absences pre-approved by the UA Dean of Students (or Dean's designee).

Attendance Policy

The UA's policy concerning Class Attendance and Administrative Drops is available at:
http://catalog.arizona.edu/2014-15/policies/classatten.htm

The UA policy regarding absences on and accommodation of religious holidays is available at
http://deanofstudents.arizona.edu/policies-and-codes/accommodation-religious-observance-and-practice.

Absences pre-approved by the UA Dean of Students (or Dean designee) will be honored. See:
http://uhap.web.arizona.edu/chapter_7#7.04.02

Honors Credit

Students wishing to contract this course for Honors Credit should email me to set up an appointment to discuss the terms of the contract and to sign the Honors Course Contract Request Form. The form is available at
http://www.honors.arizona.edu/documents/students/ContractRequestFrom.pdf.Academic

Classroom Behavior

The Arizona Board of Regents' Student Code of Conduct, ABOR Policy 5-308, prohibits threats of physical harm to any member of the University community, including to one's self. See: http://policy.arizona.edu/threatening-behavior-students.

Integrity

Students are expected to follow the University's Code of Academic Integrity (http://deanofstudents.arizona.edu/codeofacademicintegrity). Practices such as cheating – including copying from the Internet full sentences without properly citing – are inappropriate and will result in sanctions.

If you are unsure about what is plagiarism or cheating, please consider to take a look on the following webpage:
http://thinktank.arizona.edu/information/plagiarism-education-workshops

Students with Disabilities

If you anticipate or experience physical or academic barriers based on disability, please notify the instructor immediately. Also, please register at the Disability Resource Center (DRC) (http://drc.arizona.edu/) (520-621-3268) and request an official notification for accommodation. Please be sure to do that as soon as possible for you to be able to participate fully in the class.

Additional Resources for Students

UA Non-discrimination and Anti-harassment policy:
http://policy.arizona.edu/sites/default/files/Nondiscrimination.pdf

UA Academic policies and procedures are available at:
http://catalog.arizona.edu/2014-15/policies/aaindex.html

Student Assistance and Advocacy information is available at:
http://deanofstudents.arizona.edu/student-assistance/students/student-assistance

Confidentiality of Student Records

http://www.registrar.arizona.edu/ferpa/default.htm

Subject to Change Statement

The information contained in the course syllabus, other than the grade and absence policy, may be subject to change with advance notice, as deemed appropriate by the instructor.

Course Schedule

Week 1:

Introduction to Social Network Analysis (SNA)

Introduction to SOC 430
Lesson 1: What Kind of Data is Used in SNA? (Lecture video)
Quiz 1
Lesson 2: Is There a Social Network Theory? (Lecture video)
Lesson 3: Organizing and Analyzing Data, Part 1 (Lecture video)
Quiz 2
Lesson 4: Organizing and Analyzing Data, Part 2 (Lecture video)
Quiz 3
Introduction to R: How to Download R and R Studio (Three separate videos)
Download R and RStudio *now*

Week 2:

R Programming with Swirl Exercises (Assignments 1-6)
R Programming (cont'd) (Lecture Video)
R Tutorial Assignment 1 (includes a descriptive video)
Lesson 5: Ego Network vs. Whole Network (Lecture video)
Lesson 6: Degree (Lecture video)
Quiz 4
Lesson 7: Walk, Path, Length and Distance
Lesson 8: Directed Networks, Flow of Information and Resources
Lesson 9: Density
Quiz 5
Lesson 10: Centrality
R Tutorial Assignment 2 (includes a descriptive video)

Week 3:

Social Network Studies (Lecture Video)
Mark Granovetter: Strength of Weak Ties (YouTube Video)
Matthew O. Jackson: Microfinance Networks in India (YouTube Video)
Stanley Milgram: Six Degrees of Separation (and more) (YouTube Video)
Ronald Burt: Structural Holes and Brokering among Communities (YouTube Video)
Short Introduction to Network Structure and Communities (w/ Ronald Breiger's description) (YouTube Video)

Lesson 11: Groups, Factions and Social Divisions
Quiz 6
R Tutorial Assignment 3 (includes a descriptive video)
Lesson 12: Structural Locations and Equivalence
R Tutorial Assignment 4 (includes a descriptive video)

Week 4:

A note on TCE Online evaluations
Introduction to Week 4
Video tutorial (not an assignment): Plotting Networks with R
Capstone Project