Soc 6108H
Networks II – Social Network Analysis
Syllabus
Winter 2022

Course Information			
Instructor	Chris Smith (she/her)	Email	cm.smith@utoronto.ca
Classroom	725 Spadina, Room 385	Office	725 Spadina, Room TBA
Meeting Time	Thursdays 9:10 AM – 12:00 PM	Office Hours	Thursdays 12:00 PM – 1:00 PM or by appointment
Course Website	https://q.utoronto.ca/courses/244774		

Course Description

Social network perspectives prioritize the interdependence among social actors, view the social world as patterns or regularities in relationships, and focus on how relationships affect networked actors' behavior and outcomes. Social network analysis (SNA) is the corresponding method for investigating and measuring social structures and the dependencies between actors. This course primarily focuses on SNA methods.

The SNA techniques covered in this course are applicable to various data types, and we will work on making data and our analyses relational. The readings for this course include empirical examples that use a variety of social network analysis measurements paired with methodological pieces on those SNA measures. This course relies on the free statistical and graphical platform R. This is a 3-hour long seminar, and generally the last hour is reserved for SNA lab work in R.

Course Goals & Outcomes

- Evaluating social network analysis in empirical research and map the steps of replication
- Converting theoretical network concepts into measurements and code
- Become familiar with the open-source statistical software R and RStudio and gain confidence in using it for your independent research
- Practicing journal-style writing about network data and social network analysis methods

- Proposing and/or conducting independent social network analysis research

Evaluation Components

Component	Description	Due Date	Weight
Article expert	Students will alternate being experts on the empirical readings of the week. The expert will introduce one article's main points and guide a discussion through the social network analysis	On-going	10%
Journal Article Section: Methods	Students will practice writing a journal article section that justifies their selection of SNA methods. (2-3 pages double-spaced, requiring citations)	23/01/22	10%
Journal Article Section: Data & Sample	Students will practice writing a journal article section that explains their relational data and sample. (2-4 pages double-spaced, visualization, requiring citations)	06/02/22	10%
Journal Article Section: Measurements I	Students will practice writing a journal article section that explains and justifies their measurements. (2-3 pages double-spaced, table, requiring citations)	20/02/22	10%
Project Proposal & Workshop	Students will share a 1-2 page description of their project ideas in advance of the class. Students will read all the descriptions in advance of class. The class session will be a workshop for each student's project for feedback, and students will provide feedback on each other's descriptions	03/03/22	5%
Journal Article Section: Measurements II	Students will practice writing a journal article section that explains and justifies their measurements. (2-4 pages double-spaced, tables, requiring citations)	20/03/22	10%
Final Project Presentations	Students will present the progress on their project to the class and will receive feedback from the class. (presentation length TBA depending on final enrolment size, a visual presentation aid such as PowerPoint, feedback to classmates)	31/03/22	5%
Written Final Project	Final papers may include a journal article style empirical paper using social network analysis on students' own data, a journal article style empirical paper replicating a social network analysis study, or a research proposal for a SNA empirical study (approximately 20 pages, double-spaced)	07/04/22	40%

Late submissions of written assignments need to be discussed in advance of the deadline with me. There is no late option for presenting and workshopping as these impact everyone in the course. If you need to change the date for which you are the article expert, please find another student to swap with. Email me and the student with whom you are swapping to confirm.

Required Materials

Required Book:
Wasserman, Stanley, and Katherine Faust. 1994. *Social Network Analysis: Methods and Applications*. New York: Cambridge University Press.

All other readings are available through the library, or I will provide scanned chapters.

Technology Requirements:
- Access to an up-to-date laptop on which you can download R and RStudio

Course Schedule

	Introduction
Week 1 06 January	Methods https://www.r-project.org https://cran.r-project.org https://www.rstudio.com
	Social Networks as Method

Week 2
13 January
	Empirical
	Christakis, Nicholas A., and James H. Fowler. 2009. *Connected: The Surprising Power of Our Social Networks and How They Shape Our Lives*. New York: Little, Brown and Company.
	  • Chapter 1 "In the Thick of It" pp. 3-32
	
	Kadushin, Charles. 2012. *Understanding Social Networks: Theories, Concepts, and Findings*. New York: Oxford University Press.
	  • Chapter 1 "Introduction" pp. 3-12
	  • Chapter 12 "Coda: Ten Master Ideas of Social Networks" pp. 201-212
	
	Light, Ryan, and James Moody (eds.). 2021. "Network Basics: Points, Lines, and Positions." Pp. 17-34 in *The Oxford Handbook of Social Networks*. New York: Oxford University Press.
	
	Methods
	Ognyanova, Katherine. 2018. Introduction to R and Network Analysis.

Week 3 20 January	**Relational Data Collection** <u>Empirical</u> adams, jimi, Tatiane Santos, and Venice Ng Williams. 2021. "Strategies for Collecting Social Network Data: Overview, Assessment, and Ethics." Pp. 119-36 in *The Oxford Handbook of Social Networks*, edited by R. Light, and J. Moody. New York: Oxford University Press. Milgram, Stanley. 1967. "The Small World Problem." *Psychology Today* 2(1):60-67. Small, Mario. 2017. *Someone to Talk to*. New York: Oxford University Press. • Appendix A "Qualitative Analysis" pp. 181-97 • Appendix B "Quantitative Analysis" pp. 199-212 Smith, Chris M. 2019. *Syndicate Women: Gender and Networks in Chicago Organized Crime*. Oakland, CA: University of California Press. • Chapter 2 "Mapping Chicago's Organized Crime and Illicit Economies" pp. 18-32, 38-41 <u>Methods</u> Wasserman, Stanley, and Katherine Faust. 1994. *Social Network Analysis: Methods and Applications*. New York: Cambridge University Press. • Chapter 2 "Social Network Data: Collection and Applications" pp. 28-66
Week 4 27 January	**Network Samples & Visualizations** <u>Empirical</u> Christakis, Nicholas A., and James H. Fowler. 2007. "The Spread of Obesity in a Large Social Network over 32 Years." *New England Journal of Medicine* 357(4):370-79. Garip, Filiz, Burak Eskici, and Ben Snyder. 2015. "Network Effects in Migrant Remittances: Evidence from Household, Sibling, and Village Ties in Nang Rong, Thailand." *American Behavioral Scientist* 59(9):1066-82. <u>Methods</u> Heckathorn, Douglas D., and Christopher J. Cameron. 2017. "Network Sampling: From Snowball and Multiplicity to Respondent-Driven Sampling." *Annual Review of Sociology* 43:101-119.

| | Ognyanova, Katherine. 2021. Network Visualization with R. https://kateto.net/workshops/sunbelt/sunbelt2021.pdf. |

Week 5 03 February	**Two-Mode Networks & Ego-Networks** Empirical Malinick, Todd E., D. B. Tindall, and Mario Diani. 2013. "Network Centrality and Social Movement Media Coverage: A Two-Mode Network Analytic Approach." *Social Networks* 35(2):148-58. Marsden, Peter V. 1987. "Core Discussion Networks of Americans." *American Sociological Review* 52:122-31. Methods Opsahl, Tore. 2013. Two-mode Networks. https://toreopsahl.com/tnet/two-mode-networks/. Perry, Brea L., Bernice A. Pescosolido, and Stephen P. Borgatti. 2018. *Egocentric Network Analysis: Foundations, Methods, and Models*. Cambridge University Press. • Chapter 2 "Sociocentric and Egocentric Approaches to Networks" pp. 20-34
Week 6 10 February	**Density & Distance** Empirical Bearman, Peter S., James Moody, and Katherine Stovel. 2004. "Chains of Affection: The Structure of Adolescent Romantic and Sexual Networks." *American Journal of Sociology* 110(1):44-91. Haynie, Dana L. 2001. "Delinquent Peers Revisited: Does Network Structure Matter?" *American Journal of Sociology* 106(4):1013-57. Methods Wasserman, Stanley, and Katherine Faust. 1994. *Social Network Analysis: Methods and Applications*. New York: Cambridge University Press. • Chapter 4 selection "Graphs and Matrices" pp. 92-121

Week 7 17 February	**Centrality & Brokerage** Empirical Padgett, John F., and Christopher K. Ansell. 1993. "Robust Action and the Rise of the Medici, 1400-1434." *American Journal of Sociology* 98(6):1259-319. Methods Bonacich, Phillip. 1987. "Power and Centrality: A Family of Measures." *American Journal of Sociology* 92(5):1170-82. Freeman, Linton C. 1979. "Centrality in Social Networks Conceptual Clarification." *Social Networks* 1(3):215-39. Wasserman, Stanley, and Katherine Faust. 1994. *Social Network Analysis: Methods and Applications*. New York: Cambridge University Press. • Chapter 5 selection "Centrality and Prestige" pp. 169-198
No class 24 February	**Reading Week**
Week 8 03 March	**Project Workshops** Required Reading Classmates' project proposal drafts shared in advance
Week 9 10 March	**Directed & Weighted Relationships** Empirical Green, Ben, Thibaut Horel, and Andrew V. Papachristos. 2017. "Modeling Contagion through Social Networks to Explain and Predict Gunshot Violence in Chicago, 2006 to 2014." *Journal of American Medical Association* 177(3):326-33. Marsden, Peter V., and Karen Campbell. 2012. "Reflections on Conceptualizing and Measuring Tie Strength." *Social Forces* 91:17-23. Methods Wasserman, Stanley, and Katherine Faust. 1994. *Social Network Analysis: Methods and Applications*. New York: Cambridge University Press. • Chapter 4 selection "Graphs and Matrices" pp. 121-145 • Chapter 5 selection "Centrality and Prestige" pp. 198-219

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Week 10 17 March	**Multiplexity**
	Empirical Gondal, Neha. 2022. "Multiplexity as a Lens to Investigate the Cultural Meanings of Interpersonal Ties." *Social Networks* 68:209-17. Smith, Chris M., and Andrew V. Papachristos. 2016. "Trust Thy Crooked Neighbor: Multiplexity in Chicago Organized Crime Networks." *American Sociological Review* 81(4):644-67. Verbrugge, Lois M. 1979. "Multiplexity in Adult Friendships." *Social Forces* 57(4):1286-309. Methods TBD
Week 11 24 March	**Exponential Random Graph Models**

	Empirical
	Goodreau, Steven M., James A. Kitts, and Martina Morris. 2009. "Birds of a Feather, or Friend of a Friend? Using Exponential Random Graph Models to Investigate Adolescent Social Networks." *Demography* 46(1):103-25.
	
	Wimmer, Andreas, and Kevin Lewis. 2010. "Beyond and Below Racial Homophily: ERG Models of a Friendship Network Documented on Facebook." *American Journal of Sociology* 116(2):583- 642.
	
	Methods
	Krivitsky, Pavel N., et al. 2021. Exponential Random Graph Models (ERGMs) using statnet. http://statnet.org/Workshops/ergm_tutorial.html.
	
	Lusher, Dean, Johan Koskinen, and Garry Robins. 2013. *Exponential Random Graph Models for Social Networks: Theory, Methods, and Applications*. New York: Cambridge University Press.
	    • Chapter 4 "Simplified Account of an Exponential Random Graph Model as a Statistical Model" pp 29-36
	    • Chapter 5 "Example Exponential Random Graph Model Analysis" pp. 37-46

Week 12 31 March	**Final Projects – Putting it All Together**
	In-class final project presentations

Academic Integrity Clause

Copying, plagiarizing, falsifying medical certificates, or other forms of academic misconduct will not be tolerated. Any student caught engaging in such activities will be referred to the Dean's office for adjudication. Any student abetting or otherwise assisting in such misconduct will also be subject to academic penalties. Students are expected to cite sources in all written work and presentations. See this link for tips for how to use sources well: (http://www.writing.utoronto.ca/advice/using-sources/how-not-to-plagiarize).

According to Section B.I.1.(e) of the Code of Behaviour on Academic Matters it is an offence "to submit, without the knowledge and approval of the instructor to whom it is submitted, any academic work for which credit has previously been obtained or is being sought in another course or program of study in the University or elsewhere."

By enrolling in this course, you agree to abide by the university's rules regarding academic conduct, as outlined in the Calendar. You are expected to be familiar with the Code of Behaviour on Academic Matters (http://www.artsci.utoronto.ca/osai/The-rules/code/the-code-of-behaviour-on-academic-matters) and Code of Student Conduct (http://www.viceprovoststudents.utoronto.ca/publicationsandpolicies/codeofstudentconduct.htm) which spell out your rights, your duties and provide all the details on grading regulations and academic offences at the University of Toronto.

Normally, students will be required to submit their course essays to Turnitin.com for a review of textual similarity and detection of possible plagiarism. In doing so, students will allow their essays to be included as source documents in the Turnitin.com reference database, where they will be used solely for the purpose of detecting plagiarism. The terms that apply to the University's use of the Turnitin.com service are described on the Turnitin.com web site.

Accessibility Services

It is the University of Toronto's goal to create a community that is inclusive of all persons and treats all members of the community in an equitable manner. In creating such a community, the University aims to foster a climate of understanding and mutual respect for the dignity and worth of all persons. Please see the University of Toronto Governing Council "Statement of Commitment Regarding Persons with Disabilities" at http://www.governingcouncil.utoronto.ca/Assets/Governing+Council+Digital+Assets/Policies/PDF/ppnov012004.pdf.

In working toward this goal, the University will strive to provide support for, and facilitate the accommodation of individuals with disabilities so that all may share the same level of access to opportunities, participate in the full range of activities that the University offers, and achieve their full potential as members of the University community. We take seriously our obligation to make this course as welcoming and accessible as feasible for students with diverse needs. We also understand that disabilities can change over time

and will do our best to accommodate you.

Students seeking support must have an intake interview with a disability advisor to discuss their individual needs. In many instances it is easier to arrange certain accommodations with more advance notice, so we strongly encourage you to act as quickly as possible. To schedule a registration appointment with a disability advisor, please visit Accessibility Services at http://www.studentlife.utoronto.ca/as, call at 416-978-8060, or email at: accessibility.services@utoronto.ca. The office is located at 455 Spadina Avenue, 4th Floor, Suite 400.

Additional student resources for distressed or emergency situations can be located at distressedstudent.utoronto.ca; Health & Wellness Centre, 416-978-8030, http://www.studentlife.utoronto.ca/hwc, or Student Crisis Response, 416-946-7111.

Equity and Diversity Statement

Equity and Diversity

The University of Toronto is committed to equity and respect for diversity. All members of the learning environment in this course should strive to create an atmosphere of mutual respect. As a course instructor, I will neither condone nor tolerate behaviour that undermines the dignity or self-esteem of any individual in this course and wish to be alerted to any attempt to create an intimidating or hostile environment. It is our collective responsibility to create a space that is inclusive and welcomes discussion. Discrimination, harassment and hate speech will not be tolerated.

Additional information and reports on Equity and Diversity at the University of Toronto is available at http://equity.hrandequity.utoronto.ca.