

Networking

ORGSTUDY 495: 003 – Special Topics
POLSCI 489: 002 – Advanced Topics in Political Science

University of Michigan
Fall 2010

Professor: Michael T. Heaney
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Office Hours: Tuesday, 2:30pm-3:30pm; Thursday, 3:30pm-4:30pm; and by appointment
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Day/Time: Tuesdays and Thursdays, 1:00pm-2:30pm
Location: Clarence Cook Little Building CCL 1570 (1100 North University Avenue)

COURSE DESCRIPTION

This course explores the relationship between formal and informal social networks and the dynamics of organizational processes. Networks may be based on friendship, technical expertise, family, authority, sexual relations, common interest, political alliances, electronic communication, or many other factors. We consider a variety of theories of networks (e.g., small worlds, the strength of weak ties, structural holes) and apply them to topics such as Facebook friendships, social movement activism, the choice of sexual partners, and advancement within a corporation. We give special attention to the question of how to "use" networks to attain organizational objectives. Computer applications are emphasized, though no specialized computing knowledge is prerequisite.

COURSE REQUIREMENTS

1. *Attendance and Class Participation.* Attendance at the Tuesday and Thursday sessions of the course is required. At the same time, the instructor recognizes that students must sometimes miss class. Thus, students missing three classes or fewer will receive no reductions in their grade and will not be asked to account for missed days. However, students missing four classes or more should account for their absences at the end of the semester by providing documentation for excused absences. Legitimate excuses for missing class include: travel for sports/academic teams associated with the University of Michigan, personal sickness, religious holidays, death of an immediate family member or grandparent. Interviewing for a job, while a very good thing to do, does not count as an excused absence. Students missing four classes or more should submit all documentation for excused absences on Friday, December 10. Please do not provide any documentation prior to December 10. *Students with more than 10 unexcused absences will not receive credit for the course.*

2. *Graded-for-Points Lab Assignments.* Students are expected to complete six lab assignments to be graded for points. Due dates for the assignments will be announced on the day when the assignment is distributed. 100 points.
3. *End-of-Semester Team Presentation.* Students will be assigned membership in small group to complete a small research exercise at the end of the semester. Each group will make a presentation to the class on either December 7 or December 9. 50 points.
4. *Midterm Exam.* An in-class, closed-book midterm exam will be given in class on Thursday, October 21. The exam will consist of short-answer questions and pencil-and-paper exercises. It will emphasize theoretical concepts and their application. 150 points
5. *Final Exam.* An in-class, closed-book final exam will be administered in CCL 1570 on Wednesday, December 15, 4-6pm. The exam will be a mix of short-answer, pencil-and-paper exercises, and essays based on reading materials, lectures, lab assignments, and discussions. 150 points.
6. *CTools.* Materials for the course, such as lecture notes, required readings, and supplemental articles, are available on CTools. Students are expected to check the CTools regularly.

ACADEMIC HONESTY

All students are required to abide by the academic honesty guidelines of the University of Michigan. Among other things, this means: (1) Students must submit only their own, original work in fulfillment of course requirements; (2) Consulted works must be cited using an accepted documentation style; and (3) Students must provide truthful representations to the professor on issues such as reasons for missing class. The professor reserves the right to clarify how this policy applies on specific assignments prior to the commencement of those assignments. Students requiring additional clarification are strongly urged to consult with the professor before submitting questionable work. Violating this policy may cause a student to suffer severe grade penalties, failure of the class, academic probation, and/or expulsion.

SPECIAL ACCOMMODATIONS

Students requiring any special accommodation for this course are responsible for making an appointment to see the professor at the beginning of the semester. Every effort will be made to accommodate your needs in accordance with University guidelines.

COURSE OUTLINE

1. Tuesday, September 7. Introduction to the Course

In-Class Movie: <http://topdocumentaryfilms.com/six-degrees-of-separation/>

2. Thursday, September 9. Small Worlds

Duncan J. Watts. 2003. *Six Degrees: The Science of a Connected Age*. Chapter 3.

The Oracle of Bacon: <http://oracleofbacon.org/index.php>

Lab Assignment #1: Searching the Internet Movie Database (Graded Check / No Check)

3. Tuesday, September 14. Linking Network Theory and the Small World Perspective

Nicholas A. Christakis 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.

David Lazer et al. 2009. "Computational Social Science." *Science*, Vol. 323, No. 5915 (February 6): 721-723.

Frigyes Karinthy. 1929 [2006]. "Chain-Links." In Mark Newman, Albert-Laslo Barabasi, and Duncan J. Watts (eds.), *The Structure and Dynamics of Networks*, 21-26. Princeton: Princeton University Press.

Derek J. de Solla Price. 1965. "Networks of Scientific Papers." *Science*, Vol. 149 (July): 510-515.

Rogrigo de Castro and Jerrold W. Grossman. 1999. "Famous Trails to Paul Erdos." *The Mathematical Intelligencer*, Vol. 21, No. 3: 51-62.

4. Thursday, September 16. Milgram's Experiment

Jeffrey Travers and Stanley Milgram. 1969. "An Experimental Study of the Small World Problem." *Sociometry*, Vol. 32, No. 4 (December): 425-443.

Duncan J. Watts. 2003. *Six Degrees: The Science of a Connected Age*. Chapter 5.

Lab Assignment #2: Replicate Travers and Milgram's Experiment (Graded 10 points)

5. Tuesday, September 21. Hubs and Power Laws

Albert-Laszlo Barabasi. 2003. *Linked*. New York: Penguin Group. Chapters 5 and 6.

Albert-Laszlo Barabasi. 2009. "Scale-Free Networks: A Decade and Beyond." *Science*, Vol. 325, No. 5939, pp. 412-413.

6. Thursday, September 23. Points, Lines, and Density

John Scott. 2000. *Social Network Analysis: A Handbook, Second Edition*. London: SAGE Publications. Chapter 4.

7. Tuesday, September 28. Handling Relational Data

Ronald L. Breiger. 1974. "The Duality of Persons and Groups." *Social Forces*, Vol. 53:181-90.

John Scott. 2000. *Social Network Analysis: A Handbook, Second Edition*. London: SAGE Publications. Chapter 3.

Lab Assignment #3: Data Manipulation (Graded Check / No Check)

8. Thursday, September 30. Centrality and Centralization

John Scott. 2000. *Social Network Analysis: A Handbook, Second Edition*. London: SAGE Publications #4. Chapter 5.

Lab Assignment #4: Basic Network Statistics (Graded 20 points)

9. Tuesday, October 5. Facebook, Twitter, and Blogs

Henry Farrell and Daniel W. Drezner. 2008. "The Power and Politics of Blogs." *Public Choice*, Vol. 134, No. 1-2 (January): 15-30.

Virginia Heffernan. 2009. "Facebook Exodus." *The New York Times*. August 26.

David Lazer. 2009. *Complexity and Social Networks Blog*. November 1.
http://www.iq.harvard.edu/blog/netgov/2009/11/network_picture_of_attacks_on.html

Recommended (not required): Sonja Utz. 2009. "The (Potential) Benefits of Campaigning via Social Network Sites." *Journal of Computer-Mediated Communication*, Vol. 14, No. 2 (March): 221-243.

Lab Assignment #5: Graphing Networks 1 (Graded Check / No Check)

10. Thursday, October 7. Mapping a Social Network

John Scott. 2000. *Social Network Analysis: A Handbook, Second Edition*. London: SAGE Publications. Chapter 8.

Linton C. Freeman. 2005. "Graphic Techniques for Exploring Social Network Data." In Peter J. Carrington, John Scott, and Stanley Wasserman (eds.), *Models and Methods in Social Network Analysis*, 248-269. Cambridge, UK: Cambridge University Press.

Lab Assignment #6: Graphing Networks 2 (Graded Check / No Check)

11. Tuesday, October 12. Probing Social Structure

John Scott. 2000. *Social Network Analysis: A Handbook, Second Edition*. London: SAGE Publications. Chapter 6.

John Levi Martin. 2009. *Social Structures*. Princeton: Princeton University Press. Chapter 2.

Lab Assignment #7: Graphing Networks 3 (Graded 20 Points)

12. Thursday, October 14. Network Surveys

Marsden, Peter V. 1990. "Network Data and Measurement." *Annual Review of Sociology*, Vol. 16: 435-463.

Casey A. Klofstad, Scott McClurg, and Meredith Rolfe. 2009. "Measurement of Political Discussion Networks: A Comparison of Two 'Name Generator' Procedures." *Public Opinion Quarterly*, Vol. 73, No. 3 (Fall): 462-483.

Ronald S. Burt. No date. *Merrill Lynch Human Resource Network*.

13. Tuesday, October 19. No class for Fall Break

14. Thursday, October 21. **MIDTERM EXAM**, closed-book, in-class (150 points)

15. Tuesday, October 26. Workshop: Writing Survey Questions

James M. Carlson and Mark S. Hyde. 2003. Boston: Houghton Mifflin. Chapter 10.

Lab Assignment #8: Drafting a Survey (Graded 10 Points)

16. Thursday, October 28. Homophily

Miller McPherson, Lynn Smith-Lovin, and James M. Cook. 2001. "Birds of a Feather: Homophily in Social Networks." *Annual Review of Sociology*, Vol. 27: 415-444.

Lab Assignment #9: Similarities in Dyads (Graded 20 points)

17. Tuesday, November 2. Weak Ties, Contagion, and Influence

Mark S. Granovetter. 1973. "The Strength of Weak Ties." *American Journal of Sociology*, Vol. 78, No. 6 (May): 1360-1380.

Mario Luis Small. 2009. *Unanticipated Gains: Origins of Network Inequality in Everyday Life*. Chapter 4.

Recommended (not required): John Levi Martin. 2009. *Social Structures*. Princeton: Princeton University Press. Chapter 5.

18. Thursday, November 4. Multiplexity

Lois M. Verbrugge. 1979. "Multiplexity in Adult Friendships." *Social Forces*, Vol. 57, No. 4 (June): 1286-1309.

David Krackhardt. 1992. "The Strength of Strong Ties: The Importance of Philos in Organizations." In N. Nohria and R. Eccles (eds.), *Networks and Organization: Structure, Form, and Action*, 216-239. Boston: Harvard Business School Press.

Lab Assignment #10: Modeling Multiple Networks (Graded 20 points)

19. Tuesday, November 9. Brokerage and Patronage

Georg Simmel. 1950. *The Sociology of Georg Simmel*, trans. Kurt H. Wolff. Glencoe, Illinois: The Free Press. Part 2, Chapters 3 and 4.

Ronald S. Burt. 1992. *Structural Holes: The Social Structure of Competition*. Cambridge, MA: Harvard University Press. Chapter 1.

Recommended (not required): John Levi Martin. 2009. *Social Structures*. Princeton: Princeton University Press. Chapter 6.

20. Thursday, November 11. Conceptualizing a Research Plan

21. Tuesday, November 16. Team Meetings

Lab Assignment #11: Preliminary Research Plan (Graded Check / No Check)

22. Thursday, November 18. Sex

Fredrik Liljeros et al. 2001. "The Web of Human Sexual Contacts." *Nature*, Vol. 411 (June 21): 907-908.

Edward O. Laumann, Stephen Ellingson, Jenna Mahay, Anthony Paik, and Yoosik Youm. 2004. *The Sexual Organization of the City*. Chicago: University of Chicago Press. Chapters 1 and 9.

Recommended (not required): Peter S. Bearman, James Moody, and Katherine Stovel. 2004. "Chains of Affection: The Structure of Adolescent Romantic Sexual Networks." *American Journal of Sociology*, Vol. 110, No. 1 (July): 44-91.

23. Tuesday, November 23. Health

Clive Thomas. 2009. "Are Your Friends Making You Fat?" *New York Times Magazine*. September 10.

Nicholas A. Christakis 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 2.

Recommended (not required): Stephen Abbott. 2009. "Social Capital and Health: The Problematic Roles of Social Networks and Social Surveys." *Health Sociology Review*, Vol. 18, No. 3 (October): 297-306.

24. Thursday, November 25. No class for Thanksgiving holiday.

25. Tuesday, November 30. Business

Mark Granovetter. 1985. "Economic Action and Social Structure: The Problem of Embeddedness." *American Journal of Sociology*, Vol. 91, No. 3 (November): 481-510.

Ronald S. Burt. 1998. "The Gender of Social Capital." *Rationality and Society*, Vol. 10, No. 1: 5-46.

Recommended (not required): Rob Cross and Robert J. Thomas. 2009. *Driving Results Through Social Networks: How Top Organizations Leverage Networks for Performance and Growth*. San Francisco: Jossey-Bass. Chapter 2.

26. Thursday, December 2. Conspiracies and Terrorism

Wayne E. Baker and Robert R. Faulkner. 1993. "The Social Organization of Conspiracy: Illegal Networks in the Heavy Electrical Equipment Industry." *American Sociological Review*, Vol. 58, No. 6 (December): 837-860.

Valdis E. Krebs. 2002. "Uncloaking Terrorist Networks." *First Monday*, Vol. 7, No. 4 (April 1).

John Bohannon. 2009. "Counterterrorism's New Tool: 'Metanetwork' Analysis." *Science*, Vol. 325, No. 5939, pp. 409-411.

27. Tuesday, December 7. Team Presentations (50 points)

28. Thursday, December 9. Team Presentations

29. Wednesday, December 15. **FINAL EXAM**, 4pm-6pm, CCL 1570, closed-book, in-class (150 points)