

eSoc 302: Quantitative Methods for the Digital Marketplace

Tuesdays and Thursdays, 12:30pm – 1:45pm

Professor Yotam Shmargad

Email: yotam@email.arizona.edu

Office Location: SIRLS Building, Room 2A

Office Hours: By appointment (email me)

Course Homepage: D2L

Course Description:

This course will explore research paradigms and theoretical approaches that inform contemporary social science research, including various study designs and methods of data analysis. Though this course will introduce research methods from across the academic spectrum, quantitative analysis of both small and large data sets will be emphasized. Students will learn about basic statistical analysis and will be introduced to the emerging worlds of computational social science and social network analysis.

Upon completion of this course, students should be able to:

1. Comprehend the importance of sound social science research
2. Understand how to carry-out a research project, including basic data analysis
3. Critically evaluate assumptions and methods used in published research in the social sciences
4. Understand the ethics involved in social science research and the role of an IRB board

A Few Words on Technology:

1. You will have access to and will be required to retrieve all course materials from the course page in D2L. Please prepare now for this experience by familiarizing yourself with D2L, the web-based courseware supporting this course. Training for D2L can be found online at: <http://help.d2l.arizona.edu/students>.
2. We will be using Microsoft Excel to visualize and analyze data in this course. If you do not have a personal computer with Microsoft Excel, you will need to use one of the various computers on campus or a friend's computer in order to access the software.

Let me know ASAP if you are unable to get access to Microsoft Excel

3. Finally, always have a back-up plan. If your 'default' or most preferred computing location fails, be prepared to find a computer to use when you need a backup machine. It would be to your benefit to familiarize yourself with services offered at the university libraries and the ILC on campus.

Readings:

There is only one book that is required for *purchase* in this class: "Networked: The New Social Operating System" by Lee Rainie and Barry Wellman. The authors are both top-notch researchers of how new media and technologies influence society, and the book will serve as a good reference for the more theory-oriented material that I will cover in the course. Aside from this book, there will be many required readings. I will post these readings for you on D2L. Some come from textbooks, some from academic journals, and others are news articles that appear in many of the newspapers you read in print and online. It is *crucial* that you read all assigned readings to do well in this class. Anyone who has not done the reading will simply not be able to participate. Needless to say, this will not do good things for your grade. Come to class well-prepared and you will be well-rewarded.

Complete List of Assignments with Grade Breakdown and Due Dates:

- Quizzes/Participation (10%)
- Excel Assignments (5% each, 20% total):
 - Assignment 1: Due September 15 at 9:00am (D2L Dropbox)
 - Assignment 2: Due September 22 at 9:00am (D2L Dropbox)
 - Assignment 3: Due September 29 at 9:00am (D2L Dropbox)
 - Assignment 4: Due October 13 at 9:00am (D2L Dropbox)
- Network Assignment 1 (10%): Due October 20 at 12:30pm (Bring to class)

*Note: You must bring a **physical** copy of Network Assignment 1 to class in order to get credit*

- Network Assignment 2 (15%): Due October 27 at 9:00am (D2L Dropbox)
- Literature Review (10%): Due November 17 at 12:30pm (Bring to class)
 - 3-4 pages, double-spaced
- Presentation (10%): Due December 1 at 9:00am (D2L Dropbox)
- Final Paper (25%): Due December 8 at 9:00am (D2L Dropbox)
 - 10-12 pages, double-spaced
 - Includes: Introduction, Literature Review, Hypotheses, Data Analysis, Results, Discussion

Grade Distribution:

90-100% = A “exemplary, far beyond reqs/expectations”

80-89% = B “exceeds requirements/expectations”

70-79% = C “meets requirements/expectations”

60-69% = D “falls short of requirements/expectations”

< 60% = E “repeat of course needed”

All written work will be evaluated for format, organization, style, grammar, and punctuation as well as content and argument. Written work turned in for this course is expected to be formatted in accordance with the American Psychological Association. The instructions for course assignments will be posted on D2L well before the due dates.

Attendance, Due Dates, and Missing Work:

1. The UA’s policy concerning Class Attendance and Administrative Drops is available at:
<http://catalog.arizona.edu/2015-16/policies/classatten.htm>
2. Attendance is “voluntary,” but there is no way you will pass the class without showing up for face-to-face meetings. If you have a lot going on in your personal or professional life that will conflict with your attendance, this may not be a good time to enroll in this course! Attendance is critical.
3. All holidays or special events observed by organized religions will be honored for those students who show affiliation with that particular religion.
4. Absences pre-approved by the UA Dean of Students (or Dean designee) will be honored.
5. Arriving late and leaving early is extremely disruptive to others in the class. Please avoid this kind of disruption.
6. Missed class assignments or exams cannot be made up without a well-documented, verifiable, excuse (for example, a physician’s medical excuse). The validity of such excuses will be assessed by the professor during a face-to-face meeting. Indeed, *due dates are firm*, and late work will be accepted only with a verifiable and valid excuse.

Course Conduct and Campus Policies (be familiar with all campus policies):

1. Food and technologies are issues in classrooms. Cellular telephones are distracting, so please put them away. Laptops can be utilized, but only for note-taking purposes. Please follow classroom rules regarding food and beverages in the classroom.

2. This is a safe environment for sharing and generating unique ideas. Please try to be “open” to diverse perspectives and learn from others who may pose views that differ from your own.
3. Students are encouraged to share intellectual views and discuss freely the principles and applications of course materials. However, graded work/exercises must be the product of independent effort unless otherwise instructed. Students are expected to adhere to the UA Code of Academic Integrity as described in the UA General Catalog. See: <http://deanofstudents.arizona.edu/academic-integrity/students/academic-integrity>.
4. It is the University’s goal that learning experiences be as accessible as possible. If you anticipate or experience physical or academic barriers based on disability or pregnancy, please let me know immediately so that we can discuss options. You are also welcome to contact Disability Resources (520-621-3268) to establish reasonable accommodations. For additional information on Disability Resources and reasonable accommodations, please visit <http://drc.arizona.edu/>.
5. 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>.
6. All student records will be managed and held confidentially. <http://www.registrar.arizona.edu/ferpa/default.htm>
7. 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.
8. UA Non-discrimination and Anti-harassment policy: <http://policy.arizona.edu/human-resources/nondiscrimination-and-anti-harassment-policy>.
9. Confidentiality of Student Records: <http://www.registrar.arizona.edu/ferpa/default.htm>.
10. 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.

Requirements for the Course:

To succeed in this course, 2-3 hours of study time per hour of formal class time (or per unit) are required. This means that in addition to our three hours of formal class meeting time, 6-9 hours a week of study time are needed in order to meet course expectations. These hours should be spent on reading texts, writing papers, researching for new information, or thinking about course content. College-level reading and writing abilities are assumed.

Honors Students’ Requirements:

Students wishing to contract this course for Honors Credit should email me to set up an appointment to discuss the terms of the contact and to sign the Honors Course Contract Request Form. The form is available at <http://www.honors.arizona.edu/documents/students/ContractRequestForm.pdf>. Students earning credit with the University of Arizona Honors College will be held to the following enhancements:

1. Honors students will be required to read a total of *two full books as opposed to portions of the assigned book* expected of non-honors students.
2. Theories presented and perspectives within the two required books will be compared and contrasted in a paper to be turned in before the twelfth week of the semester. More than doing a “book report” or a “summary,” honors students will be expected to critically evaluate the positions taken by the authors of the two books. Specifically, in terms of writing this paper, students will need to present both perspectives, discuss similarities among and differences between the two, then conclude by taking a particular stance or position. Students’ positions will need to be supported with relevant research. *This completed paper will be roughly 8-10 pages.*
3. Honors students will be expected to informally ‘journal’ about the course each week. Each week, that is, students will be required to write a five-sentence paragraph reflecting on some issue or moment that has arisen in our readings or discussions (e.g., the problem with particular terms or some philosophical or practical dilemma). Ultimately, if offering a paragraph each week, honors students will have written roughly *15 reflective paragraphs for the semester.*

Section 1. Internet Research

In this first section, we will take a very close look at studies about the internet and social media. Are these technologies good or bad for society? What do they do to our relationships? In this section, we will review academic studies that address these questions. We will learn about how data are analyzed in these studies, and start collecting the data that you will use for your final projects. By the end of the first section, you should start thinking about a research topic for your final paper.

1. Tuesday, August 25: Welcome and Course Overview

Assignment for Next Class:

- Read: Zhou, L. 2014. "Facebook Plans Event to Recruit Sociologists." *Venture Beat*.
- Read: Meyer, M. N. 2014. "Everything You Need to Know about Facebook's Controversial Emotion Experiment." *Wired*.

2. Thursday, August 27: Ethics of Social Science Research

Assignment for Next Class:

- Read: Putnam, R. D. 1995. "Bowling Alone: America's Declining Social Capital." *Journal of Democracy*.
- Read: Kraut et al. 1998. "Internet Paradox: A Social Technology that Reduces Social Involvement and Well-Being?" *American Psychologist*.

3. Tuesday, September 1: Social Capital and the Internet

4. Thursday, September 3: Constructs, Variables, and Relationships

Assignments for Next Class:

- Read: Hampton, K. and B. Wellman. 2003. "Neighboring in Netville: How the Internet Supports Community and Social Capital in a Wired Suburb." *City & Community*.
- Read: Ellison et al. 2007. "The Benefits of Facebook 'Friends': Social Capital and College Students' Use of Online Social Network Sites." *Journal of Computer-Mediated Communication*.

5. Tuesday, September 8: Social Capital and Social Media

6. Thursday, September 10: Excel Workshop 1

Assignments for Next Class:

- Read: DiTommaso, E. and B. Spinner. 1997. "Social and Emotional Loneliness: A Re-Examination of Weiss' Typology of Loneliness." *Personality and Individual Differences*.
- Read: Burke et al. 2010. "Social Network Activity and Social Well-Being." *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems*.
- Complete: Excel Assignment 1

7. Tuesday, September 15: Social and Emotional Loneliness

Due Today: Excel Assignment 1 (D2L Dropbox by 9:00am)

8. Thursday, September 17: Excel Workshop 2

Assignment for Next Class:

- Read: Chapters 1, 2, and 5 of "Networked: The New Social Operating System."
- Optional: Chapters 3 and 4 of "Networked: The New Social Operating System."
- Complete: Excel Assignment 2

Section 2. Social Network Analysis

In this second section of the class, we will begin to look more closely at social networks: What do different features of our social networks say about us? We will study a variety of social network measures, including tie strength, homophily, bridging ties, and clustering. We will read from the textbook and academic articles. You will also analyze your own (or a friend's) Facebook network. By the end of the second section, we will have a complete dataset that you will work off of for your final papers.

9. Tuesday, September 22: Networked Individualism

Due Today: Excel Assignment 2 (D2L Dropbox by 9:00am)

10. Thursday, September 24: Excel Workshop 3

Assignment for Next Class:

- Complete: Excel Assignment 3

11. Tuesday, September 29: **No Class**

Due Today: Excel Assignment 3 (D2L Dropbox by 9:00am)

12. Thursday, October 1: **No Class**

Assignment for Next Class:

- Read: Granovetter, M. S. 1973. "The Strength of Weak Ties". *The American Journal of Sociology*.
- Read: Coleman, J. S. 1988. "Social Capital in the Creation of Human Capital". *The American Journal of Sociology*.

13. Tuesday, October 6: Closure and Brokerage

14. Thursday, October 8: Excel Workshop 4

Assignment for Next Class:

- Complete: Excel Assignment 4

15. Tuesday, October 13: Agency and Structure

Due Today: Excel Assignment 4 (D2L Dropbox by 9:00am)

16. Thursday, October 15: Social Network Analysis 1

Assignment for Next Class:

- Read: Watts, D. J. and S. H. Strogatz. 1998. "Collective Dynamics of 'Small-World' Networks." *Nature*.
- Read: Centola, D. 2010. "The Spread of Behavior in an Online Social Network Experiment." *Science*.
- Complete: Network Assignment 1

17. Tuesday, October 20: Small Worlds

Due Today: Network Assignment 1 (D2L Dropbox by 9:00am)

18. Thursday, October 22: Network Assignment 2

Assignment for Next Class:

- Read: Chapter 10-11 of "Networked: The New Social Operating System."
- Optional: Chapters 6-9 of "Networked: The New Social Operating System."
- Complete: Network Assignment 2

Section 3. Experimentation

In this third section, you will be developing your own research questions and exploring them using the dataset that we have constructed throughout the course. We will also be discussing a popular way of testing the causal nature of the relationships between variables: experimentation. By the end of this section, you should be well on your way towards completing your final research paper.

19. Tuesday, October 27: How to Write a Paper

Due Today: Network Assignment 2 (D2L Dropbox by 9:00am)

20. Thursday, October 29: Research Workshop 1

Assignment for Next Class

- Read: Bakshy et al. 2012. "The Role of Social Networks in Information Diffusion." *Proceedings of the 21st International Conference on the World Wide Web*.
- Read: Aral, S. and D. Walker. 2011. "Creating Social Contagion through Viral Product Design: A Randomized Trial of Peer Influence in Networks." *Management Science*.

21. Tuesday, November 3: Diffusion Experiments

22. Thursday, November 5: Research Workshop 2

23. Tuesday, November 10: How to Present

24. Thursday, November 12: Research Workshop 3

Assignment for Next Class

- Read: Godes, D. and D. Mayzlin. 2009. "Firm-Created Word-of-Mouth Communication: Evidence from a Field Test." *Marketing Science*.
- Read: Sinha, J. and J. Wang. 2013. "How Time Horizon Perceptions and Relationships Deficits Affect Impulsive Consumption." *Journal of Marketing Research*.
- Complete: Literature Review

25. Tuesday, November 17: Peer Review

Due in Class Today: Literature Review (Bring to class)

26. Thursday, November 19: Marketing Experiments

Section 4. Final Presentations and Papers

We conclude the class with a discussion of how to go about presenting research. You will share the findings of your research projects with one another and submit your final papers.

27. Tuesday and Thursday, November 24, 26: **No Class (Happy Thanksgiving!)**

28. Tuesday, December 1: Presentations 1

Due Today: Presentation (D2L Dropbox by 9:00am)

29. Thursday, December 3: Presentations 2

30. Tuesday, December 8: Course Overview

Due Today: Final paper (D2L Dropbox by 9:00am)