Updated February 13, 2019

POLITICAL NETWORKS
Government 400 002 (CRN: 20089)
George Mason University
Tuesdays and Thursdays 10:30am – 11:45am
Music Theater Building 1004
Spring 2019

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Office Hours: Tuesdays & Thursdays 1:30am – 3:00pm, or by appointment
Course Website: Available for enrolled students at http://blackboard.gmu.edu

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Schar School Main Office: Research Hall 359

I. Course Description

The study of networks, connections, or relationships in politics is intuitive. In this course we learn the theory, methods, and applications of a systematic study of networks in politics. For many decades the study of politics has been dominated by studying individuals and institutions. In this course, we challenge the basic assumptions of those individualistic approaches and look at specific cases where it may be unreasonable to assume that people or events are independent of one another. The course is interdisciplinary, drawing strongly from sociology, statistics, and computer science. Networks are a ubiquitous feature of the natural and social world and we will draw upon examples and lessons from many fields, from genetics to anthropology, to understand how networks operate in politics. The course covers theories of social network analysis and applies them to questions of politics. To do so, we will also apply methodological tools and software to social network data. The course is introductory and provides somewhat of a survey of the field. Students are not required to have a quantitative background, but those who have previous experience with statistics or data analysis may have an advantage in becoming familiar with the techniques.

II. Course Objectives

I have three broad objectives for this course. First, students will learn the fundamental theoretical and methodological concepts in social network analysis as it relates to politics. Second, students will learn basic network analytical skills and develop the ability to use basic tools in at least one software program. This will include best practices for gathering and managing network data. Third, I aim to stimulate students' curiosity about politics and creative means of studying questions pertinent to modern problems and interests.

III. Teaching Philosophy and Teaching Style

My teaching philosophy is based on three primary principles.

- First, I believe the gap between undergraduate and graduate coursework in political science is too broad. I therefore introduce advanced theoretical concepts in undergraduate classes so that students understand the true value of studying politics as a science; moreover, should any student choose to pursue advanced or graduate work in political science, they will be well prepared.

- Second, I believe in incorporating current events into classroom lessons. Nothing in science seems concrete until one can "see it with their own eyes." Reading a daily newspaper and following current events, then applying theoretical concepts to political happenings helps to clarify theoretical concepts and demonstrate their utility.

- Third, as this class has a significant practical component, I intend to provide ample opportunities for students to practice techniques in and out of class using exercises and other pedagogical devices. It will be important for students to remain active with the activities and to engage in practice with the software and techniques. Learning is an active, not passive, process.

- Finally, as an instructor and a leader of class discussions on everything from lawmaking to elections, I aim to remain politically neutral and non-partisan. Students should learn to collect and evaluate information on their own. I would not want students who disagree with my political views to hear all course information with a skeptical ear; nor would I want students who tend to agree with my views to accept everything I say at face value. I encourage students to express their views, be critical, and challenge information when it is appropriate.

My teaching style is consistent with my philosophy. I use a Socratic-style in the classroom in which I frequently ask questions and encourage an interactive learning experience. I do my best to learn students' names, encourage participation, and create, what I hope is, an open learning environment where students feel free to question, comment, and explain how they view course content. Such an environment helps to foster student interaction, thinking, and analytical and creative skills. Moreover, while lectures are important because they help to distribute necessary information and facts, they are not usually the most effective way to learn information. For this reason, we will do a variety of activities in the classroom. Successful performance in this course will include classroom participation and working in and out of class with your peers.

IV. Student Responsibilities

A. Class Attendance and Participation. Learning is an *active*, rather than *passive*, exercise. Accordingly, every student is expected to attend class as well as be prepared to ask questions about and comment on the readings. You need to complete the daily reading assignment *prior*

to the class meeting. You will be much more successful in this class if you attend regularly, take notes, pay attention, and participate.

B. Readings. As is the case with attendance, keeping pace with the reading is essential to succeeding in this class. It is *your* responsibility to obtain copies of the readings prior to the date we will discuss them in class. I will do everything I can to make this task easier for you. You will be much more successful in this course if you complete the assigned readings and **take notes** on them.

C. Technology Laptops, tablets, and smart phone are a considerable distraction in class. A student can become easily distracted by non-class alternatives that compete for your attention. In addition, research shows that students tend to retain more information by taking notes by hand rather than on a computer. However, this course is technology heavy as we will be learning statistical software that is probably unfamiliar to you. It requires considerable practice and training. Therefore, I leave it to students to make their own choice about how to maximize their in-class learning. If you choose to use a laptop, make a commitment to only using content related to class.

D. Cheating, Plagiarism, and Academic Integrity. Students in this course will be expected to comply with the George Mason University Honor Code (see http://honorcode.gmu.edu/). There are three simple guidelines to follow with respect to academic integrity: (1) all work you submit must be your own; (2) when using the work or ideas of others, including fellow students, give full credit through accurate citations; and (3) if you are uncertain about the expectations for any assignment, ask for clarification. Any student engaged in any academic misconduct *will receive an F on the offending exam or assignment.* Egregious violations will result in an F grade for the course and will be reported to the appropriate Dean's office. These violations include cheating on an exam, using someone else's work as your own, and plagiarizing the written word. Plagiarism (using someone else's words or ideas without providing credit or citation) is a serious offense. *If you have any questions at all about what constitutes cheating, plagiarism, or academic misconduct, please ask the instructor.*

E. Students with Disabilities. If you have a disability for which you are or may be requesting an accommodation, please let me (the instructor) know and contact the Office of Disability Services (ODS) at (703) 993-2474 or *http://ods.gmu.edu*. All discussions with me regarding disabilities are confidential.

F. Email. Mason uses only Mason e-mail accounts to communicate with enrolled students. Students must activate their Mason e-mail account, use it to communicate with their department and other administrative units, and check it regularly for important university information including messages related to this class. *Email etiquette:* An email is a professional correspondence; do not write it as if it is a text message, snap, tweet, or IM. Always use a salutation and sign your name. Consider creating a signature that automatically inserts your name and basic contact information at the bottom of your emails. Use proper punctuation and grammar.

G. Dropping or withdrawing. The last day to add this course is Tuesday, January 29, 2019. The last day to drop the class with no tuition penalty is February 5, 2019. Students may elect to withdrawal from the class (with 100% tuition liability) between February 6 – February 12. From February 26 – March 25 students may elect to use a Mason "selective withdrawal" to drop the course (you can only do this three times during your time as a Mason student). After March 25 there are no options for withdrawing from the course. More information on drop and withdrawal policies is here. If you have concerns about your performance in the course, or you find yourself unable to perform for any reason, you should discuss your concerns with your teaching assistant, professor, advisor, and Assistant Dean (in that order). Students seeking to drop or withdrawal are responsible for doing so on their own in Patriot Web. If you need help or advice, please see your academic advisor. The advisors in the Schar School main office (3rd floor Research Hall) can also help.

V. Course Requirements and Graded Evaluation

There are four graded requirements for this course, described below. Grades will be calculated on a non-curved typical A-F scale where,

93-100	A	87-89	B+	77-79	C+	67-69	D+	< 60	F
90-92	A-	83-86	B	73-76	C	63-66	D		
		80-82	B-	70-72	C-	60-62	D-		

Warm-up activities (5%) We will start each class meeting with a warm up activity that helps to reinforce concepts taught previously in class. These activities will be open-book, open-note, and completely collaboratively with classmates. This counts as participation and attendance points. Your lowest three warm-up scores will be excluded from your course grade.

Problem Set Assignments (20%) There will be regular exercises for students to complete. Most of these will be able to be completed on-line or completed through a software program (UCInet) and submitted on-line. Details on these assignments will be presented in class and on Blackboard.

Midterm Exam (25%) This will be an in-class exam covering material from the first half of the course. The exam will include multiple choice, short answer, and analytical (homework style) questions based on material presented in class and in the readings. A study guide will be posted on-line no later than one-week before the exam. The midterm will be in-class on **Thursday, March 7.**

Research Poster (25%) Each student will complete a research project that culminates in the production of an academic poster. Students will present posters in a public session (more details later). Posters will contain the content of a complete academic paper (statement of a research question, theory, hypotheses, test, analysis). In these projects students will use one of

several suggested datasets and demonstrate ability to apply analytical concepts to original questions relating to the dataset of choice. Students must use proper citation in their posters.

Final Exam (25%). This will be an in-class exam covering material from the entire course (comprehensive), though concentrating on material from the last half of the course. The exam will include identifications, short answers, and analytical questions based on class exercises, material presented in class, and in the readings. A study guide will be posted on-line no later than one-week before the exam. The exam will be administered during the regular final exam scheduled time for our class on **Wednesday, May 10, 2017 at 1:30pm – 4:15pm**. This is the ONLY time to take the exam.

VI. Policies on late work, make-ups and extra credit

A. *Can I submit an assignment late?* Students may submit an assignment after its due date for a 5% (off the total possible score) penalty per-24-hour period that the assignment is late.

B. *What if I miss an exam?* Make-up exams are only given in the case of verified illness or family emergency, such as a death in the family. Documentation is necessary to receive a qualified make-up examination. Students who arrive late to an in-class exam may still sit for the exam if no other student has already submitted their exam; once a single student hands-in their exam, no others may begin the exam.

C. *What can I do if I perform poorly on an assignment?* Students who receive a 72% or less on a homework assignment or essay (not exam) may re-do the assignment for a replacement grade. Re-do assignments are subject to a 5% per day penalty starting from the day graded assignments were returned to students in class (regardless of attendance). Assignments that were originally submitted past the due date are NOT eligible for re-do.

VII. Texts

The reading assignments are chosen to buttress and expand on the analytic foundation laid in class. **Please notify the instructor about problems obtaining the readings as soon as possible**. The following materials are required and can be found at the campus bookstore.

Barabási, Albert-László. 2010. *Bursts: The Hidden Patterns Behind Everything We Do, from you E-mail to Bloody Crusades*. New York: Plume.

Borgatti, Stephen P., Martin G. Everett, and Jeffrey C. Johnson. 2018. *Analyzing Social Networks, 2nd ed*. Los Angeles: SAGE.

Hassanpour, Navid. 2016. *Leading from the Periphery and Network Collective Action.* Cambridge, United Kingdom ; Cambridge University Press.

Hanneman, Robert, and Mark Riddle. [ON-LINE] 2005 *Introduction to Social Network Methods*. Riverside, CA: University of California, Riverside. Full text available for free here: http://faculty.ucr.edu/~hanneman/nettext/.

Luke, Douglas A. 2015. *A User's Guide to Network Analysis in R*. 1st ed. 2015 edition. Cham Hildesheim New York: Springer. (PDF available on Blackboard, Fulltext available at library.gmu.edu with login credentials)

Victor, Jennifer Nicoll, Alexander H. Montgomery, and Mark Lubell, eds. 2017. *Oxford Handbook of Political Networks*. AVAILABLE AT LIBRARY.GMU.EDU (login using gmu credentials)

VIII. Software

The primary software we will learn in this course for doing network analysis is called ***R***. You may have already learned some ***R*** in another class (GOV 300?). ***R*** is a command-line statistical programming language that is free and open source. It can be operated in Mac OS, Windows, or Linux. There are a number of free packages available in R for network analysis and visualization. R offers an ideal environment for network analysis, but the learning curve to learn the language is steep. You can download R here: https://cran.r-project.org/

Follow this tutorial for getting started: https://swirlstats.com/students.html

Alternatively, for students who are highly averse to learning how to code in a statistical language, there is an alternative software you can use called ***UCInet***. *UCInet* is a graphical user interface (GUI) (i.e., point and click) for social network analysis. UCInet has network visualization software built-in, called NetDraw. It is described in two of the books below (Hanneman and Riddle, and Borgatti, et al.). A 90-day free trial is available; a student license is $40. UCInet can only be operated on Microsoft Windows operating software. We will not spend time in class learning UCInet because we will focus our time on learning R. The software is available here: https://sites.google.com/site/ucinetsoftware/home

IX. Course Schedule and Reading Assignments

Tues., Jan. 22 INTRODUCTION TO THE COURSE AND THE STUDY OF NETWORKS IN POLITICS

Part I: Foundations and Tools

Thurs., Jan. 24 DEVELOPING INTUITIONS

Barabási, Chs. 1-5

Victor, Jennifer Nicoll, Alexander H. Montgomery, and Mark Lubell. 2017 (in press), "Introduction" in Oxford Handbook of Political Networks, Victor, Montgomery, & Lubell, eds. AVAILABLE AT LIBRARY.GMU.EDU (login using gmu credentials)

Tues., Jan. 29 - Thurs., Jan. 31 FUNDAMENTAL COMPONENTS OF A NETWORK

Borgatti, et al., Ch. 1

Luke, Ch. 1

Hanneman and Riddle, Preface, Chs. 1-2

Patty, John and Maggie Penn, "Network Theory and Political Science," (2016) in Oxford Handbook of Political Networks, Victor, Montgomery, & Lubell, eds. AVAILABLE AT LIBRARY.GMU.EDU (login using gmu credentials)

Tues., Feb. 5 - Thurs., Feb. 7 MATHEMATICAL FOUNDATIONS OF GRAPH THEORY/SOFTWARE INTRODUCTION

Borgatti, et al., Ch. 2

Hanneman and Riddle, Chs. 5-6

Luke, Ch. 2

Gross, Justin H. and Joshua Jansa, "Relational Concepts, Measurement, and Data" (2017) in *Oxford Handbook of Political Networks*, Victor, Montgomery, & Lubell, eds. AVAILABLE AT LIBRARY.GMU.EDU (login using gmu credentials)

Tues., Feb. 12 - Thurs., Feb. 14 SOCIAL NETWORK RESEARCH DESIGN AND DATA COLLECTION

Borgatti, et al., Chs. 3 - 5

Luke, Ch. 3

Tues., Feb. 19 - Thurs., Feb. 21 VISUALIZATION OF NETWORK DATA

Borgatti, et al., Ch. 7

Hanneman and Riddle, Chs. 3 – 4

Luke, Chs. 4 - 5

Pfeffer, Jürgen "Network Visualization," (2017) in *Oxford Handbook of Political Networks*, Victor, Montgomery, and Lubell, eds. AVAILABLE AT LIBRARY.GMU.EDU (login using gmu credentials)

Tues., Feb. 26 - Thurs., Feb. 28 THE UBIQUITY OF NETWORKS

Barabási, Chs. 6 - 10

"Connected: The Power of Six Degrees," a documentary film by Annamaria Talas (2009). We will watch this movie in class on Tuesday, this week.

Tues., Mar. 5 - Thurs., Mar. 7 Exam Review (Tues)

Midterm Exam (Mar. 7)

Spring Break
March 11-17, 2019

Part II: Network Properties & Applications

Tues., Mar. 19 - Thurs., Mar. 21

NETWORK ANALYSIS

Borgatti, et al., Ch. 8

Perliger, Arie. 2017. "Terrorism Networks." In in *Oxford Handbook of Political Networks*, Victor, Montgomery, and Lubell, eds. AVAILABLE AT LIBRARY.GMU.EDU (login using gmu credentials)

Kinsella, David and Alexander H. Montgomery. 2017. "Arms Supply and Proliferation Networks." in *Oxford Handbook of Political Networks*, Victor, Montgomery, and Lubell, eds. AVAILABLE AT LIBRARY.GMU.EDU (login using gmu credentials)

Tues., Mar. 26 (JNV birthday) - **Thurs., Mar. 28**

THE WHOLE ENCHILADA

Borgatti, et al., Chs. 9 - 10

Luke, Ch. 7

Hanneman & Riddle, Chs. 8, 10

Tues., Apr. 2 - Thurs., Apr. 4

NETWORK APPLICATIONS

Barabási, Chs. 11 – 15

Rolfe, Meredith and Stephanie Chan. 2017 "Voting and Political Participation" in *Oxford Handbook of Political Networks*, Victor, Montgomery, and Lubell, eds. AVAILABLE AT LIBRARY.GMU.EDU (login using gmu credentials)

Ratliff, Lauren Santoro and Paul A. Beck. 2017. "Social Networks and Vote Choice," in *Oxford Handbook of Political Networks*, Victor, Montgomery, and Lubell, eds. AVAILABLE AT LIBRARY.GMU.EDU (login using gmu credentials)

Tues., Apr. 9 - Thurs., Apr. 11

CONNECTIVITY

Hanneman & Riddle, Ch. 7

Barabási, Chs. 16 – 20

Herrnson Paul, and Justin H. Kirkland. 2017. "Political Parties and Campaign Finance," in *Oxford Handbook of Political Networks*, Victor, Montgomery, and Lubell, eds. AVAILABLE AT LIBRARY.GMU.EDU (login using gmu credentials).

Koger, Gregory, Seth E. Masket, and Hans Noel. 2017. "American Political Parties as Networks," in *Oxford Handbook of Political Networks*, Victor, Montgomery, and Lubell, eds. AVAILABLE AT LIBRARY.GMU.EDU (login using gmu credentials).

Tues., Apr. 16 - Thurs., Apr. 18

SUBGROUPS

Borgatti, et al., Ch. 11

Luke, Ch. 8

Hanneman & Riddle, Ch. 11

Tues., Apr. 23 - Thurs., Apr. 25 NETWORKS AND COLLECTIVE ACTION

Hassanpour, Chs. 1 - 3

Heaney, Michael T. and James M. Strickland. 2017. "A network approach to interest group politics, " in *Oxford Handbook of Political Networks*, Victor, Montgomery, and Lubell, eds. AVAILABLE AT LIBRARY.GMU.EDU (login using gmu credentials).

Tues., Apr. 30 - Thurs., May 2 ADVANCED TOPICS

Hassanpour, Chs. 4 - 6

Barabási, Chs. 21 - 28

Borgatti, et al., Ch. 12 (Equivalent Networks)

Hanneman & Riddle, 12. Equivalence

Hanneman & Riddle, 13. Similarity and Structural Equivalence

Tues., May 14 **FINAL EXAM 10:30AM – 1:15PM**