MGT513 [ME]
Managing Organizational Networks
Module 1, 2017-2018

Course Information

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Classes:
Lectures: Monday & Thursday 10:30-12:20
Venue: PHBS Building, Room 231

Course Website:
http://on17.phbsclass.cn

1. Course Description

1.1 Context

Course overview:
The principal goal of this course is to advance students' understanding of and develop their proficiency for navigating within and managing an organization. Students are presented with the view of an organization as it being an inherently dynamic entity consisting of an abundant number of highly fluid relationships—among humans and other entities. In this course students will develop deep insight into how real-world organizations actually behave in both the macro (group) and micro (individual) sense, as well as in the often overlooked meso (the layer linking micro and macro) perspective. To manifest students' understanding of these concealed dimensions, the contemporary concepts and ideas of two methodologies, Social Network Analysis (SNA) and Dynamic Network Analysis (DNA), are introduced and extensively applied in the context of a business organization.

Prerequisites:
The prerequisites for this course are a general and basic familiarity with business organizations, organization behavior and general management ideas, arrived at either through coursework, or personal experience. Graduate-level completion of such courses would situate the student for deeper learning and understanding of the course material.

1.2 Textbooks and Reading Materials

Featured reference texts (specific readings will be provided to the student):

- *Social Network Analysis (2011). McCulloch, Ian*

Academic readings [provided to students]:

- Frantz, Terrill L. (2012) A Social Network View of Post-Merger Integration. In Cary L. Cooper and Sydney Finkelstein (Eds), Advances in Mergers and Acquisitions, Vol. 10. (pp. 161-176). Oxford, UK: JAI Press.
- Frantz, Terrill L. (2011) Social Networks in Malaysia. In George A. Barnett (ed.) Encyclopedia of Social Networks (2011), vol. 2, 520-521. SAGE Publishing.
- Frantz, Terrill L. & Carley, Kathleen. M. (2009). Computationally Modeling the Effect of Organizational Complexity on Post-merger Integration. In Cary L. Cooper and Sydney Finkelstein (Eds), Advances in Mergers and Acquisitions, Vol. 8. (pp. 79-101). Oxford, UK: JAI Press.

- Frantz, Terrill L. (2012). Advancing Complementary and Alternative Medicine through Social Network Analysis and Agent-Based Modeling. Research in Complementary Medicine / Forschende Komplementarmedizin, 19(S1), 36-41.
- Frantz, Terrill L., Cataldo, Marcelo, & Carley, Kathleen M. (2010). Robustness of centrality measures under uncertainty: Examining the role of network topology. Computational and Mathematical Organization Theory, 15(4), 303-328.
- Frantz, Terrill L. & Carley, Kathleen M. (2009). Harvesting Ego-Network Data from Facebook: Using the CEMAP Facebook Profile in ORA. Carnegie Mellon University, School of Computer Science (SCS), Institute for Software Research (ISR), Center for Computational Analysis of Social and Organizational Systems (CASOS) - Technical Report CMU-ISR-09-102
- Frantz, Terrill L., McCulloh, Ian, & Carley, Kathleen M. (2008). Estimating the Reliability of Top-Actor Identification. Network Science Report journal, The Network Science journal, 2.
- Frantz, Terrill L. & Carley, Kathleen M. (2009). CEMAP: General Usage Guide Frantz. Carnegie Mellon University, School of Computer Science (SCS), Institute for Software Research (ISR), Center for Computational Analysis of Social and Organizational Systems (CASOS) - Technical Report CMU-ISR-09-116.
- MAJ Ian McCulloh, MAJ Benjamin Ring, LTC John Graham, Terrill Frantz, Kathleen M. Carley, Joseph Psotka (2008). IkeNet 2: Social Network Analysis of e-mail in the Eisenhower Leadership Development Program, Year 2. United States Army Research Institute for the Behavioral and Social Sciences, U.S. Military Academy, West Point, NY, USA Technical report
- Frantz, Terrill L. & Carley, Kathleen M. (2008). Transforming raw-email data into social-network information. In Christopher C. Yang, Hsinchun Chen, Michael Chau, Kuiyu Chang, Sheau-Dong Lang, Patrick S. Chen, Raymond Hsieh, Daniel Zeng, Fei-Yue Wang, Kathleen Carley, Wenji Mao, and Justin Zhan (Eds.) (2008). 'Intelligence and Security Informatics Workshops, PAISI, PACCF and SOCO 2008' Springer, Lecture Notes in Computer Science, No. 5075. Pacific Asia Workshop on Intelligence and Security Informatics (PAISI 2008). Workshop on Social Computing (SOCO 2008); pre-conference workshop for IEEE ISI-2008), Grand Formosa Regent Hotel , Taipei, Taiwan, 17 June 2008 Springer Books
- Frantz, Terrill L., & Carley, Kathleen M. (2005). Treemaps as a Tool for Social Network Analysis. Carnegie Mellon University, School of Computer Science (SCS), Institute for Software Research International (ISRI), Center for Computational Analysis of Social and Organizational Systems (CASOS) - Technical Report CMU-ISRI-05-118.
- Diesner, Jana, Frantz, Terrill L., & Carley, Kathleen M. (2005). Communication Networks from the Enron Email Corpus: "It's Always About the People. Enron is no Different". Computational and Mathematical Organization Theory, 11, 201-228.
- Frantz, Terrill L., & Carley, Kathleen M. (2005). A Formal Characterization of Cellular Networks. Carnegie Mellon University, School of Computer Science (SCS), Institute for Software Research (ISR), Center for Computational Analysis of Social and Organizational Systems (CASOS) - Technical Report CMU-ISRI-05-109.
- Frantz, Terrill L., & Carley, Kathleen M. (2005). Relating Network Topology to the Robustness of Centrality Measures. Carnegie Mellon University, School of Computer Science (SCS), Institute for Software Research International (ISRI), Center for Computational Analysis of Social and Organizational Systems (CASOS) - Technical Report CMU-ISRI-05-117.
- Frantz, Terrill L., & Carley, Kathleen M.(2005). An Automated Methodology for Conducting a Social Network Study of a University Faculty. Carnegie Mellon University, School of Computer Science (SCS), Institute for Software Research International (ISRI), Center for Computational Analysis of Social and Organizational Systems (CASOS) - Technical Report CMU-ISRI-05-106.

2. Learning Outcomes

2.1 Intended Learning Outcomes

Course Unit Learning Outcomes

Unit	Unit Title (sub-topics)	**Outcomes** *At the completion of the unit, the student should be able to:*
1	**Introduction to Course & Networks**	a) describe the course logistics and student success factors b) execute ORA on their laptop; c) load and save data, and visualize data in ORA; d) identify their project-group members; e) recognize the relevance of human relationships in organizations; f) describe a relational network and its representation; g) recognize and compute ego-based centrality measures; and, h) recognize graph-level measures.

2	**Groups and Meta-Networks**	a) identify and describe common network topologies b) create data-reports and randomized-network data in ORA c) identify sub-groups within a network d) construct a meta-network dataset e) recognize the application of weighted ties.
3	**Organizational Modelling & Dynamics**	a) describe the PCANS model of an organization; b) use selected advanced features of ORA visualizer; c) describe the notion of diffusion & information flow; and, d) recognize structural holes in a network.
4	**Managing the Network & Organization**	a) understand some notions of organizational risk; b) execute a micro-simulation in ORA; c) describe some important social forces in organizations; d) presents some specific management options for resolving relationship problems; and e) understand likely performance-hindering issues in an organizational merger.
5	**Managing the Complexity**	a) understand likely performance-hindering issues in an organizational merger and other organizational conflicts & situations
6	**Applied Organizational Management**	a) applied ideas to analysis organizational situations b) develop specific interventions for moving an organizations closer to its aims

Associated PHBS Program Outcomes

Learning Goals	Objectives	Assessment
1. Our graduates will be effective communicators.	1.1. Our students will produce quality business and research-oriented documents.	Y
	1.2. Students are able to professionally present their ideas and also logically explain and defend their argument.	Y
2. Our graduates will be skilled in team work and leadership.	2.1. Students will be able to lead and participate in group for projects, discussion, and presentation.	Y
	2.2. Students will be able to apply leadership theories and related skills.	Y
3. Our graduates will be trained in ethics.	3.1. In a case setting, students will use appropriate techniques to analyse business problems and identify the ethical aspects, provide a solution and defend it.	Y
	3.2. Our students will practice ethics in the duration of the program.	Y
4. Our graduates will have a global perspective.	4.1. Students will have an international exposure.	Y
5. Our graduates will be skilled in problem-solving and critical thinking.	5.1. Our students will have a good understanding of fundamental theories in their fields.	Y
	5.2. Our students will be prepared to face problems in various business settings and find solutions.	Y
	5.3. Our students will demonstrate competency in critical thinking.	Y

2.2 Assessment/Grading Details

Assessment Task	Course-Grade Weight
Group Project (30-minute Oral Presentation Only)	10%
Midterm Exam (Units 1-4)	40%
Final Exam (Comprehensive)	50%
Total	100%

Exams: (The midway and comprehensive exams are closed-book. Exam content is derived from in-class lectures, course readings and materials, and student-project presentations.

Project: Group membership [~4-5 students in each group] should be self-organized early in the module. Each group shall select one of the subjects listed below. The group should plan to prepare a 30-minute oral presentation to be presented during a class meeting scheduled during the final sessions of the course [roughly, the last two-three weeks of the module]. The specific presentation date will be arranged during the second week of the course.

At least one-week prior to the group's scheduled project presentation: (a) the group should submit a complete draft of the presentation PowerPoint file to the professor; (b) the group should then meet with the professor outside of the classroom for one-hour to discuss the project plans and their progress. The group leader should arrange the specific time to meet with the professor; all group members are expected to attend this pre-presentation review meeting.

The presentation should tell the story of the selected dataset chosen for the project and present tactical activities for positioning the organization to accomplish its idealized objectives.

After the classroom presentation, the group's Powerpoint file and the video-tape of the oral presentation will be posted online under the course website for self-viewing.

Project grading criteria [subject to change; same value for all presentation-group members]:

- Presentation professionalism
- Utilized material learned in class
- Equality in group members' contribution
- Overall presentation effectiveness
- Degree to which held the audience interest
- Audience engagement level
- Content relevance; appropriate level of detail and factual support
- Presenter understands the material they present
- Critical and comprehensive thinking is an essential aspect of this project and will be a significant part of the project evaluation process.

2.3 Academic Honesty and Plagiarism

It is important for a student's effort and credit to be recognized through class assessment. Credits earned for a student work due to efforts done by others are clearly unfair. Deliberate dishonesty is considered academic misconducts, which include plagiarism; cheating on assignments or examinations; engaging in unauthorized collaboration on academic work; taking, acquiring, or using test materials without faculty permission; submitting false or incomplete records of academic achievement; acting alone or in cooperation with another to falsify records or to obtain dishonestly grades, honors, awards, or professional endorsement; or altering, forging, or misusing a University academic record; or fabricating or falsifying of data, research procedures, or data analysis.

All assessments are subject to academic misconduct check. Misconduct check may include reproducing the assessment, providing a copy to another member of faculty, and/or

communicate a copy of this assignment to the PHBS Discipline Committee. A suspected plagiarized document/assignment submitted to a plagiarism checking service may be kept in its database for future reference purpose.

Where violation is suspected, penalties will be implemented. The penalties for academic misconduct may include: deduction of honour points, a mark of zero on the assessment, a fail grade for the whole course, and reference of the matter to the Peking University Registrar.

For more information of plagiarism, please refer to *PHBS Student Handbook*.

3. Topics, Teaching and Assessment Schedule

Unit	Unit Title (sub-topics)	Class Meeting Dates
1	**Introduction to Course & Networks**	See course website for exact dates, including exam dates
2	**Groups and Meta-Networks**	
3	**Organizational Modelling & Dynamics**	
	Midterm Exam	
4	**Managing the Network & Organization**	
5	**Managing the Complexity**	
6	**Applied Organizational Management**	
	Final Exam	

[*] *Group project* presentations will be delivered during regularly scheduled class meetings approximately at a time scheduled in advance during the final three weeks of the module.

4. Important Miscellaneous

The course website: (listed above) is the primary communications vehicle for outside-of-class communications and course documentation. The student is expected to routinely check the site for information and class-related announcements— perhaps daily. Instructions on using the website will be provided on the first day of class.

Video Recording: All class lectures will be video-recorded and posted online after the class meeting.