

City University of Hong Kong

Information on a Course
offered by Department of Media and Communication
with effect from Semester A in 2014 / 2015

Part I

Course Title:	Social Network Analysis for Communication
Course Code:	COM5506
Course Duration:	One semester
Credit Units:	3
Level:	P5
Medium of Instruction:	English
Medium of Assessment:	English
Prerequisites:	None
Precursors:	None
Equivalent Courses:	None
Exclusive Courses:	None

Part II

Course Aims

The course aims to help students develop “networking perspectives” that views entities of communication processes (e.g., communicators, audiences, media organizations, information messages, news events, regulatory agencies, etc.) as “network nodes” interconnected through direct or indirect, formal and informal, explicit or hidden ways. The course covers basic theories and research methods of social network analysis, with a variety of applications for communication purposes. Specific topics include human interactions over online friendship networks (e.g., Facebook, Google+, etc.), information diffusion through microblogging websites (e.g., Twitter, Weibo, etc.), cross-national flow of media content (news, entertainment, advertising, etc.), word of mouth and viral marketing, contagious models for health communication, and etc. Through individual exercises, group projects, class discussions, and other activities, students will learn how to design social network analysis studies, how to collect, integrate, analyse, and visualize social network data, and how to apply networking perspectives to solve real life issues in communication context.

Course Intended Learning Outcomes (CILOs)

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

No.	CILOs	Weighting (if applicable)
1.	To describe and explain basic theoretical concepts and research methods of social and complex networks	30%
2.	To collect, analyse, interpret, and visualize social network data for real life problems	25%
3.	To apply theoretical perspectives and methodological approaches in social, business, or engineering contexts	25%
4.	To present research findings and case studies in professional quality and style	20%

Teaching and Learning Activities (TLAs)

(Indicative of likely activities and tasks designed to facilitate students' achievement of the CILOs. Final details will be provided to students in their first week of attendance in this course)

CILO No.	TLAs	Hours/week (if applicable)
1	Demonstration lectures: the instructor will present key concepts, theories, methods, tools, and application cases of social networks.	2 hours/week x 10 weeks
2	Hands-on Labs: students develop and practice network research skills and software tools for social network analysis.	2 hours/week x 3 weeks
3	Class Discussions: students will engage in debates on and exploration of the issues in social network analysis.	1 hour/week x 8 weeks
4	Group Work: students work together to analyze research data and case studies that they have collected and present their findings in a collaboratively written report and in an oral presentation.	1 hour/week x 5 weeks

Assessment Tasks/Activities

(Indicative of likely activities and tasks designed to assess how well the students achieve the CILOs. Final details will be provided to students in their first week of attendance in this course)

CILO No.	Type of Assessment Tasks/Activities	Weighting (if applicable)	Remarks
1	Discussions and Quizzes	30%	
2	Hands-on Exercises	20%	
3	Research Paper	40%	
4	Class Presentation	10%	

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Grading of Student Achievement:

Refer to Grading of Courses in the Academic Regulations for Taught Postgraduate Degrees.

Letter Grade	Grading criteria in relation to CILOs
A+ A A-	Demonstrate ability to accurately describe all key theories of social networks, profound understanding of the measurement and analyses of social network methods, well-articulated interpretation of social network data, and creative application of knowledge to practical issues in media, business or technological contexts.
B+ B B-	Demonstrate ability to clearly describe key theories of social networks, solid understanding of the measurement and analyses of social network methods, elaborated interpretation of social network data, and sound application of knowledge to practical issues in media, business or technological contexts.
C+ C C-	Demonstrate ability to adequately describe key theories of social networks, basic understanding of the measurement and analyses of social network methods, appropriate interpretation of social network data, and reasonable application of knowledge to practical issues in media, business or technological contexts.
D	Limited evidence of knowledge of the relevant theories of social networks; lack of basic understanding of the measurement and analyses of social network methods; poor application of knowledge to practical issues in media, business or technological contexts.
F	Failure to show knowledge of the subject matter.

Class assignments and Presentation (example as follows):

- Discussions and quizzes: focusing on key conceptual, empirical, and application issues of social network analysis based on readings, lectures, and other assignments.
- Hands-on exercises: collecting social network data from various online data sources, performing network analysis of the collected data, and visualizing the analysis results
- Research paper: based on individual or group research project on an approved topic using appropriate methods(s), following the appropriate academic style and requirements, with attention paid to the quality of writing, including the spelling, syntax, and grammatical structure of the paper.
- Class presentation: Each student (group) is expected to present a research proposal and findings to the class.

Specific grading criteria for selected assessment tasks/activities are as follows (example as follows):

Research paper and presentation:

- Quality of the ideas – originality, significance, etc.
- Appropriateness, logical coherence and clarity of the arguments and hypotheses
- Appropriateness of research method and clear description
Appropriateness of the analysis and the presentations of the results
- Thought-provoking discussions of the research findings and the significance of the study
- Format, style, writing and length of paper
- Presentational skills

Weighting of the different criteria and other details will be announced on the course website.

Part III

Keyword Syllabus

Social networks, social media, social computing, big data, Web 2.0, user generated content, crowdsourcing, collective wisdom, online communities, information cascading, news diffusion, computational entertainment, computational advertising, user recommendations, word of mouth, viral marketing, complex networks, small world networks, scale free networks, power-law distribution, human dynamics, semantic networks, epidemic networks, health communication, social collaboration

Tentative Weekly Topics:

- 1 Introduction to networking perspectives
- 2 Graph theory and social networks
- 3 Social structure, social context, and social networks
- 4 Collection and integration of social network data
- 5 Analysis of social network properties
- 6 Visualization of social networks
- 7 Friendship networks
- 8 News/information networks
- 9 Entertainment networks
- 10 Viral Marketing networks
- 11 Social collaborative networks
- 12 Epidemic networks for health communication
- 13 Social networks in the future

Recommended Reading

Text(s)

David Easley and Jon Kleinberg (2010). *Networks, crowds, and markets: Reasoning about a highly connected world*. Cambridge University Press.

John Scott (2009). *Social network analysis: A handbook, 2nd edition*. Sage Publications.

Stanley Wasserman and Katherine Faust (1995). *Social network analysis: Methods and applications*. Cambridge University Press.

Peter R. Monge and Noshir S. Contractor (2003). *Theories of communication networks*. Oxford University Press.

Robert L. Cross and Andrew Parker (2004). *The hidden power of social networks: understanding how work really gets done in organizations*. Harvard Business School Press and Oxford University Press.

Albert-László Barabási (2003). *Linked: How everything is connected to everything else and what it means for business, science, and everyday life*. Plumb Books.

Albert-László Barabási (2010). *Bursts: The hidden pattern behind everything we do*. Dutton Books.

Online Resources

- Web Mining Lab, Department of Media and Communication, City University of Hong Kong (<http://weblab.com.cityu.edu.hk>)
- Centre for Chaos and Complex Networks, Department of Electronic Engineering, City University of Hong Kong (<http://www.ee.cityu.edu.hk/~cccn/>)
- International Networks for Social Network Analysis (<http://www.insna.org>)
- NetWiki, University of North Carolina (<http://netwiki.amath.unc.edu/Main/HomePage>)
- Huddle – Social Networking for Business (<http://webappsdepot.vitorneves.com/2009/09/01/huddle-social-networking-for-busines/>)
- Social Media Lab, Dalhousie University (<http://socialmedialab.ca/>)
- Stanford Network Analysis Project (SNAP), Stanford University (<http://snap.stanford.edu/>)
- Quandl (an open source database for social and business research) (www.quandl.com)
- WeiboReach, Peking University (www.weiboreach.com)
- Data Driven Journalism, European Journalism Centre (<http://datadrivenjournalism.net>)