City University of Hong Kong
Course Syllabus

offered by Department of Media and Communication
with effect from Semester A 2017/18

Part I Course Overview

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: *(Course Code and Title)*	Nil
Precursors: *(Course Code and Title)*	Nil
Equivalent Courses: *(Course Code and Title)*	Nil
Exclusive Courses: *(Course Code and Title)*	Nil

Part II Course Details

1. Abstract

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.

2. Course Intended Learning Outcomes (CILOs)

(CILOs state what the student is expected to be able to do at the end of the course according to a given standard of performance.)

No.	CILOs	Weighting (if applicable)	Discovery-enriched curriculum related learning outcomes (please tick where appropriate)		
			A1	*A2*	*A3*
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%	✓	✓	✓
		100%			

A1: Attitude
Develop an attitude of discovery/innovation/creativity, as demonstrated by students possessing a strong sense of curiosity, asking questions actively, challenging assumptions or engaging in inquiry together with teachers.

A2: Ability
Develop the ability/skill needed to discover/innovate/create, as demonstrated by students possessing critical thinking skills to assess ideas, acquiring research skills, synthesizing knowledge across disciplines or applying academic knowledge to self-life problems.

A3: *Accomplishments*
Demonstrate accomplishment of discovery/innovation/creativity through producing /constructing creative works/new artefacts, effective solutions to real-life problems or new processes.

3. Teaching and Learning Activities (TLAs)

(TLAs designed to facilitate students' achievement of the CILOs.)

TLA	Brief Description	CILO No.				Hours/week (if applicable)
		1	2	3	4	
Demonstration lectures	The instructor will present key concepts, theories, methods, tools, and application cases of social networks.	✓				2 hours/week x 10 weeks
Hands-on Labs	Students develop and practice network research skills and software tools for social network analysis.		✓			2 hours/week x 3 weeks
Class Discussions	Students will engage in debates on and exploration of the issues in social network analysis.			✓		1 hour/week x 8 weeks
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

4. Assessment Tasks/Activities (ATs)

(ATs are designed to assess how well the students achieve the CILOs.)

Assessment Tasks/Activities	CILO No.				Weighting	Remarks
	1	2	3	4		
Continuous Assessment: 100%						
Discussions and Quizzes	✓				30%	
Hands-on Exercises		✓			20%	
Research Paper			✓		40%	
Class Presentation				✓	10%	
Examination: NA						
					100%	

5. Assessment Rubrics

(Grading of student achievements is based on student performance in assessment tasks/activities with the following rubrics.)

Assessment Task	Criterion	Excellent (A+, A, A-)	Good (B+, B, B-)	Fair (C+, C, C-)	Marginal (D)	Failure (F)
1. Discussions and Quizzes	Focusing on key conceptual, empirical, and application issues of social network analysis based on readings, lectures, and other assignments	High	Significant	Moderate	Basic	Not even reaching marginal levels
2. Hands-on Exercises	Collecting social network data from various online data sources, performing network analysis of the collected data, and visualizing the analysis results	High	Significant	Moderate	Basic	Not even reaching marginal levels
3. 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	High	Significant	Moderate	Basic	Not even reaching marginal levels

	spelling, syntax, and grammatical structure of the paper					
4. Class Presentation	Each student (group) is expected to present a research proposal and findings to the class	High	Significant	Moderate	Basic	Not even reaching marginal levels

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 Other Information (more details can be provided separately in the teaching plan)

1. Keyword Syllabus

(An indication of the key topics of the course.)

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

2. Reading List

2.1 Compulsory Readings

(Compulsory readings can include books, book chapters, or journal/magazine articles. There are also collections of e-books, e-journals available from the CityU Library.)

1.	David Easley and Jon Kleinberg (2010). *Networks, crowds, and markets: Reasoning about a highly connected world*. Cambridge University Press.
2.	John Scott (2009). *Social network analysis: A handbook, 2nd edition*. Sage Publications.
3.	Stanley Wasserman and Katherine Faust (1995). *Social network analysis: Methods and applications*. Cambridge University Press.
4.	Peter R. Monge and Noshir S. Contractor (2003). *Theories of communication networks*. Oxford University Press.
5.	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.
6.	Albert-László Barabási (2003). *Linked: How everything is connected to everything else and what it means for business, science, and everyday life*. Plumb Books.
7.	Albert-László Barabási (2010). *Bursts: The hidden pattern behind everything we do*. Dutton Books.

2.2 Additional Readings

(Additional references for students to learn to expand their knowledge about the subject.)

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