Subject Description Form

Subject Code	COMP3121
Subject Title	Social and Collaborative Computing
Credit Value	3
Level	3
Pre-requisite / Co-requisite / Exclusion	
Objectives	The objectives of this subject are to: • provide students with an understanding on the concepts, history, background, and the design principles of social computing; • provide students with an understanding on the behavior of social networks and applications of social computing; • equip students with design and development experience on social network data collection and analysis; • provide students with understanding on social network analysis; and • provide students with special topics of social computing, e.g., privacy, security, business models.
Intended Learning Outcomes	Upon completion of the subject, students will be able to: *Professional/academic knowledge and skills* (a) understand the concepts, background and design principles behind different social networks; (b) understand the behavior of the new social interaction methods and apply social computing to different scenarios in industry and society; (c) design and develop tools for analysis of social network websites; (d) understand the principles and methods used in analyzing social networks; and (e) understand the specific social issues associated with social computing. *Attributes for all-roundedness* (f) solve problems using systematic approaches, both independently and in groups; and (g) learn independently and be able to search for the information required in solving problems.

	Topic
Subject Synopsis/ Indicative Syllabus	**1. Introduction to Social Computing** History, concepts, importance and definitions.
	2. Technology of Social Computing Blogging, collaborative filtering, Internet search, social media and networking, Wikipedia and wikis. The background of the Internet. Web 2.0.
	3. Behavior of Social Computing Motivations and Social psychology. Online credibility. Social impacts. Social roles in online environments. Design and organization of online social websites.
	4. Culture of Social Networks Authoring. Globalization. Social Presence. Virtual communities.
	5. Policies of Social Networks Privacy. Intellectual property. Business models.
	6. Applications of Social Networks Social network marketing. Data trending.
	7. Modeling of Social Networks Social attributes of nodes and networks. Online social network modeling and data collection.
Teaching/ Learning Methodology	During the lectures, students will come across the concepts, methods, and associated issues of social computing. Tutorials in labs will be used to allow students to work on small individual problems which will give them the prerequisite knowledge for the comprehensive problems. Videos such as seminars given by chief architects of social networks (e.g. Facebook) will be used to allow students to have a better understanding of the history and architecture choices behind the social networks. Assessments will consist of assignments and projects. Assignments may be written reports, oral presentations, or programming assignments, which will be designed to give students hands-on experience with social computing issues. There will be midterm and final exams to evaluate comprehensively the concepts absorbed by the students.

Assessment Methods in Alignment with Intended Learning Outcomes	Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed (Please tick as appropriate)						
			a	b	c	d	e	f	g
	Continuous Assessment	**60%**	✓	✓	✓	✓	✓	✓	✓
	Final Examination	**40%**	✓	✓	✓	✓	✓		
	Total	100 %							

Student Study Effort Expected	Class contact:	
	▪ Lectures	39 Hrs.
	▪ Tutorials/Lab	0 Hrs.
	Other student study effort:	
	▪ Assignments, Projects, Reports, Tests	66 Hrs.
	Total student study effort	105 Hrs.

Reading List and References	**Reference Books:**
	1. Golbeck, Jennifer, *Analyzing the Social Web*, Morgan Kaufmann, 2013.
	2. Easley, David and Kleinberg, Jon, *Networks, Crowds, and Markets: Reasoning About a Highly Connected World*, Cambridge University Press, 2010.
	3. Tapscott, Don and Williams, Anthony D., *Wikinomics: How Mass Collaboration Changes Everything*, 2008.
	4. Christakis, N. and Fowler, J., *Connected: The Surprising Power of Our Social Networks and How They Shape Our Lives,* Little, Brown and Company, 2009.
	5. Watts, Duncan*, Six Degrees: The Science of a Connected Age,* W.W. Norton & Company, 2004.
	6. Bell, Gavin, *Building Social Web Applications*, O'Reilly, 2009.
	7. Martin, John L., *Social Structure*, Princeton University Press, 2009.
	8. Hillstrom, Laurie Collier, *Online Social Networks*, Lucent Books, 2010.