MANIPAL INSTITUTE OF TECHNOLOGY
MANIPAL
(A constituent unit of MAHE, Manipal)

COURSE PLAN

Department	:	Computer Science and Engineering
Course Name & code	:	Social Network Analysis & CSE 4012
Semester & branch	:	VII Semester & Computer Science and Engineering
Name of the faculty	:	Ms.Musica Supriya, Mr.Prashanth Nayak
No of contact hours/week:	:	

L	T	P	C
3	0	0	3

ASSESSMENT PLAN

Course Outcomes (COs)

	At the end of this course, the student should be able to:	No. of Contact Hours	Marks
CO1:	Understand and visualize the basic concepts of network structure and representation of Social Network Analysis	5	14
CO2:	Analyze the Social Network structure and its visualize them in the form of layouts	9	25
CO3:	Apply the Social Network Concepts in solving problems related to social, personal, business and international levels	9	25
CO4:	Understand and Implement the algorithm for discovering communities in Social Networks	7	19
CO5:	Understand the algorithm and models for social influence analysis	6	17
	Total	36	100

Components	Quizzes	Sessional Tests	End Semester/ Make-up Examination
Duration	20 to 30 minutes	60 minutes	180 minutes
Weightage	20 % (4 X 5 marks)	30 % (2 X 15 Marks)	50 % (1 X 50 Marks)
Typology of Questions	Understanding/ Comprehension; Application; Analysis; Synthesis; Evaluation	Knowledge/ Recall; Understanding/ Comprehension; Application	Understanding/ Comprehension; Application; Analysis; Synthesis; Evaluation
Pattern	Answer one randomly selected question from the problem sheet (Students can refer their class notes)	MCQ: 10 questions (0.5 marks) Short Answers: 5 questions (2 marks)	Answer all 5 full questions of 10 marks each. Each question may have 2 to 3 parts of 3/4/5/6/7 marks
Schedule	4, 7, 10, and 13th week of academic calendar	Calendared activity	Calendared activity
Topics Covered	Quiz 1 (L 01-09 & T 0-0) **(CO1,2)**	Test 1 (L 00-15 & T 0-0) **(CO1,2,3)**	Comprehensive examination covering full syllabus. Students are expected to answer all questions **(CO1-5)**
	Quiz 2 (L **10-17** & T 0-0) **(CO2,3)**		
	Quiz 3 (L 18-23 & T 0-0) **(CO3)**	Test 2 (L 16-30 & T 0-0) **(CO2,3,4)**	
	Quiz 4 (L 24-31 & T 0-0) **(CO4,5)**		

Course Plan

L. No./ T. No.	Topics	Course Outcome Addressed
L0	Introduction	CO1
L1	History and Analysis of to Social Web	CO1
L2	Tools used and Websites disscussed	CO1
L3	Basics of Network Structure	CO1
L4	Representing Network	CO1
L5	Basic Network structures and properties	CO1
L6	Describing Nodes and Edges	CO2
L7	Degree distribution	CO2
L8	Density	CO2
L9	Connectivity, Centralization	CO2
L10	Small Worlds	CO2
L11	Random Layouts and Circular Layouts	CO2

L12	Grid Layout, forced directed layout, Yifan hu layout	CO2
L13	Harel - Koren fast multi-scale layout	CO2
L14	Visualizing network features	CO2
L15	The role of Tie Strength	CO3
L16	Measuring Tie Strength	CO3
L17	Tie Strength and Network Structure	CO3
L18	Tie Strength and Network Propagation	CO3
L19	Link Prediction	CO3
L20	Computing Score	CO3
L21	Entity Resolution	CO3
L22	Link Predication: Case study - Friend Recommendation	CO3
L23	Case study - Finding Duplicate Accounts	CO3
L24	Introduction to Community Discovery	CO4
L25	Communities in Context, Quality Functions	CO4
L26	The Kernighan - Lin algorithm	CO4
L27	Agglomerative/Divisive Algorithms	CO4
L28	Spectral Algorithms	CO4
L29	Multi Level Graph partitioning	CO4
L30	Markov Clustering, Other Approaches	CO4
L31	Introduction to Social Influence	CO5
L32	Influence related statistics, Social Similarity and Influence	CO5
L33	Homophily, Existential Test for Social Influence	CO5
L34	Influence and Actions	CO5
L35	Influence and Interactions	CO5
L36	Influence Maximization in Viral Marketing and Other Applications	CO5

References:

1.	Jennifer Goldbeck, "Analyzing the Social Web", Morgan Kaufmann Publications, 2013.
2.	Charu C. Aggarwal, "Social Network Data Analytics", Springer Publications, 2011.
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6.	Click or tap here to enter text.
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Submitted by: Ms.Musica Supriya

(Signature of the faculty)

Date: 28-07-2018

Approved by: Dr. Ashalatha Nayak

(Signature of HOD)

Date: 28-07-2018

FACULTY MEMBERS TEACHING THE COURSE (IF MULTIPLE SECTIONS EXIST):

FACULTY	SECTION	FACULTY	SECTION
Mr.Prashanth Nayak	Group 1		
Ms.Musica Supriya	Group 2		
