Course Code	PCA20G04T	Course Name	SOCIAL NETWORK ANALYSIS	Course Category	G	Generic Elective Course	L	T	P	C
							3	0	0	3

Pre-requisite Courses	Nil	Co-requisite Courses	Nil	Progressive Courses	Nil
Course Offering Department	Career Guidance and Development	Data Book / Codes/Standards	Nil		

Course Learning Rationale (CLR):	The purpose of learning this course is to,	Learning	Program Learning Outcomes (PLO)

		1	2	3	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
CLR-1 :	Familiarize the Concept of semantic web and its related applications	Level of Thinking (Bloom)	Expected Proficiency (%)	Expected Attainment (%)	Disciplinary Knowledge	Critical Thinking	Problem Solving	Analytical Reasoning	Research Skills	Team Work	Scientific Reasoning	Reflective Thinking	Self-Directed Learning	Multicultural Competence	Ethical Reasoning	Community Engagement	ICT Skills	Leadership Skills	Life Long Learning
CLR-2 :	Understand Modeling and aggregating of social network data																		
CLR-3 :	Examine the extraction and mining of social network communities																		
CLR-4 :	Understanding and predicting human behavior for social communities and Acquire Visualizing social networks with matrix-based representations																		
Course Learning Outcomes (CLO):	*To facilitate access to funding for long-term investment needs*																		
CLO-1 :	To understand the concept of semantic web and related applications	*3*	*80*	*70*	*L*	*H*	*H*	*H*	*H*	*M*	-	*H*	*M*	*H*	-	*H*	*H*	-	*M*
CLO-2 :	To learn knowledge representation using ontology	*3*	*85*	*75*	*M*	*M*	*H*	*H*	*H*	-	-	*M*	*M*	*M*	-	*H*	*M*	-	*L*
CLO-3 :	To understand human behavior in social web and related communities	*3*	*75*	*70*	*M*	*M*	*H*	*H*	*H*	-	-	*M*	*M*	*L*	-	*H*	*M*	-	*H*
CLO-4 :	To learn visualization of social networks	*3*	*85*	*80*	*L*	*L*	*H*	*H*	*H*	*M*	-	*M*	*L*	*H*	*M*	*H*	*M*	-	-

Duration (Hour)		*9*	*9*	*9*	*9*	*9*
S-1	SLO-1	*Introduction to Semantic Web*	*Ontology and their role in the Semantic Web*	*Introduction to Social Network Communities*	*Understanding and predicting human behavior for social communities*	*Visualization of Social Network*
	SLO-2	*Limitations of current Web*	*Roles of Ontology*	*Extracting evolution of Web Community from a Series of Web Archive*	*Explanation with example*	*Example*
S-2	SLO-1	*Development of Semantic Web*	*Ontology-based knowledge Representation*	*Definition of Community*	*User data management*	*Graph theory*

	SLO-2	*Emergence of the Social Web*	*Explanation of Diagram*	*Examples for Community*	*Inference and Distribution*	*Centrality*
S-3	SLO-1	*Social Network analysis*	*Ontology languages for the Semantic Web*	*Detecting communities in social networks*	*Enabling new human experiences*	*Clustering*
	SLO-2	*Components*	*Resource Description Framework*	*Examples for Detection of Communities*	*Reality mining*	*Node-Edge Diagrams*
S-4	SLO-1	*Development of Social Network Analysis*	*Web Ontology Language*	*Methods for community detection and mining*	*Context*	*Matrix representation*
	SLO-2	*Key concepts and measures in network analysis*	*Examples*	*Methods explanation with example*	*Awareness*	*Example for Matrix Representation*
S-5	SLO-1	*Electronic sources for network analysis*	*Modeling and aggregating social network data*	*Applications of community mining algorithms*	*Privacy in online social networks*	*Visualizing online social networks,*
	SLO-2	*Examples*		*Algorithms*	*Trust in online environment*	*Matrix-based representations*
S-6	SLO-1	*Electronic discussion networks*	*State-of-the-art in network data representation*	*Tools for detecting communities social network infrastructures and communities*	*Trust models based on subjective logic*	*Matrix and Node*
	SLO-2	*Explanation of Diagram*	*Ontological representation of social individuals*	*Examples for various tools*	*Trust model example*	*Link Diagrams*
S-7	SLO-1	*Blogs and online communities*	*Ontological representation of social relationships*	*Decentralized online social networks*	*Trust network analysis*	*Hybrid representations*
	SLO-2	*Examples*	*Examples*	*Example*	*Trust transitivity analysis*	*Applications*
S-8	SLO-1	*Web-based networks*	*Aggregating*	*Dynamic social network communities*	*Combining trust and reputation*	*Cover networks*
	SLO-2	*Examples with diagrams*	*Reasoning with social network data*	*Dynamic social network communities*	*Explanation of Formula*	*Community welfare*
S-9	SLO-1	*Applications of Social Network Analysis*	*Advanced representations*	*Relational characterization of dynamic social network communities.*	*Trust derivation based on trust comparisons*	*Collaboration networks*
	SLO-2	*Examples*	*Examples for Representations*	*Examples*	*Attack spectrum and countermeasures.*	*Co-Citation networks*

Learning Resources	1. Peter Mika, “Social Networks and the Semantic Web”, First Edition, Springer 2007. 2. Borko Furht, “Handbook of Social Network Technologies and Applications”, 1st Edition, Springer, 2010.	4. Dion Goh and Schubert Foo, “Social information Retrieval Systems: Emerging Technologies and Applications for Searching the Web Effectively”, IGI Global Snippet, 2008.

	3. Guandong Xu,Yanchun Zhang and Lin Li, “Web Mining and Social Networking – Techniques and applications”, First Edition Springer, 2011	5. Max Chevalier, Christine Julien and Chantal Soulé-Dupuy, “Collaborative and Social Information Retrieval and Access: Techniques for Improved user Modelling”, IGI Global Snippet, 2009. 6. John G Breslin, Alexander Passant and Stefan Decker, “The Social Semantic Web”, Springer, 2009.

Learning Assessment											
Level	Bloom's Level of Thinking	Continuous Learning Assessment (50% weightage)								Final Examination (50% weightage)	
		CLA – 1 (10%)		CLA – 2 (10%)		CLA – 3 (20%)		CLA – 4 (10%) #			
		Theory	Practice	Theory	Practice	Theory	Practice	Theory	Practice	Theory	Practice
Level 1	Remember	40%	-	30%	-	30%	-	30%	-	30%	-
	Understand										
Level 2	Apply	40%	-	40%	-	40%	-	40%	-	40%	-
	Analyze										
Level 3	Evaluate	20%	-	30%	-	30%	-	30%	-	30%	-
	Create										
	Total	100 %		100 %		100 %		100 %		100 %	

CLA – 4 can be from any combination of these: Assignments, Seminars, Tech Talks, Mini-Projects, Case-Studies, Self-Study, MOOCs, Certifications, Conf. Paper etc.,

Course Designers		
Experts from Industry	Experts from Higher Technical Institutions	Internal Experts
Mr.G.Muruganandam, Group Project Manager, HCL Technologies, Chennai	Dr.S.Gopinathan, Professor, University of Madras, Chennai	*Mrs.J.Shobana, SRMIST*
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