

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	Computer Applications	Data Book / Codes/Standards	Nil		

Course Learning Rationale (CLR):	The purpose of learning this course is to,	Learning	Program Learning Outcomes (PLO)
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CLR-1 :	Familiarize the Concept of semantic web and its related applications	1	2	3	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
CLR-2 :	Understand Modeling and aggregating of social network data	Level of Thinking	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-3 :	Examine the extraction and mining of social network communities				L	H	H	H	H	M	-	H	M	H	-	H	H	-	M
CLR-4 :	Understanding and predicting human behavior for social communities and Acquire Visualizing social networks with matrix-based representations				M	M	H	H	H	-	-	M	M	M	-	H	M	-	L
					M	M	H	H	H	-	-	M	M	L	-	H	M	-	H

Course Learning Outcomes (CLO):	To facilitate access to funding for long-term investment needs	Level of Thinking	Expected Proficiency (%)	Expected Attainment (%)	L	L	H	H	H	M	-	M	L	H	M	H	M	-	-
CLO-1 :	To understand the concept of semantic web and related applications	3	80	70															
CLO-2 :	To learn knowledge representation using ontology	3	85	75															
CLO-3 :	To understand human behavior in social web and related communities	3	75	70															
CLO-4 :	To learn visualization of social networks	3	85	80															

Duration (Hour)	9	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	<ol style="list-style-type: none"> 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. 3. Guandong Xu, Yanchun Zhang and Lin Li, "Web Mining and Social Networking – Techniques and applications", First Edition Springer, 2011 	<ol style="list-style-type: none"> 4. Dion Goh and Schubert Foo, "Social information Retrieval Systems: Emerging Technologies and Applications for Searching the Web Effectively", IGI Global Snippet, 2008. 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
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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
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