JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY ANANTAPUR
(Established by Govt. of A.P., ACT No.30 of 2008)
ANANTHAPURAMU – 515 002 (A.P) INDIA

MASTER OF COMPUTER APPLICATIONS

Course Code	SOCIAL MEDIA ANALYSIS		L	T	P	C
21F00401b			3	0	0	3
		Semester		**IV**		

Course Objectives:
- To inspire the students with interest, excitement, and urge to learn the subject of Social network
- analysis .
- To understand the fundamental concepts of Social network analysis .
- To introduce the purpose of learning important aspects in Social network analysis .

Course Outcomes (CO): Student will be able to
- explain basic concepts and theories of network analysis in the social sciences, and understand how these concepts and theories can help explain different actors' micro behaviours as wellasmacro outcomes;
- critically examine the ways in which networks can contribute to the explanation of social, political, economic and cultural phenomena;
- use statistical software to visualize networks and analyse their properties, connecting these to network concepts and theories;
- explain principles underlying statistical models for social networks;
- use software to implement statistical models of social networks to analyse network formation and evolution;
- use software to simulate the dynamics of networks based on social network models.

UNIT - I		Lecture Hrs:10

Introduction to Web - Limitations of current Web – Development ofSemantic Web – Emergence of the Social Web - Network analysis -Development of Social Network Analysis - Key concepts andmeasures in network analysis - Electronic sources for network

analysis -Electronic discussion networks, Blogs and onlinecommunities, Web-based networks - Applications of SocialNetwork Analysis

UNIT - II		Lecture Hrs:10

Ontology and their role in the Semantic Web - Ontology-basedKnowledge Representation - Ontology languages for the SemanticWeb -RDF and OWL - Modelling and aggregating social networkdata – State-of-the-art in network data representation, Ontologicalrepresentation of social individuals - Ontological representation ofsocial relationships, Aggregating and reasoning with social networkdata, Advanced Representations

UNIT - III		Lecture Hrs:10

Extracting evolution of Web Community from a Series of WebArchive - Detecting Communities in Social Networks - Definition ofCommunity - Evaluating Communities -–Methods for CommunityDetection & Mining -Applications of Community Mining Algorithms- Tools for Detecting Communities Social Network Infrastructuresand Communities-Applications - Case Studies - Real Time SentimentAnalysis, Stock Market Predictions

UNIT - IV		Lecture Hrs:9

Understanding and Predicting Human Behavior for SocialCommunities - User Data Management, Inference and Distribution- Enabling New Human Experiences - Reality Mining - Context-Awareness - Privacy in Online Social Networks

UNIT - V		Lecture Hrs:9

Trust in Online Environment - Trust Models Based on SubjectiveLogic - Trust Network Analysis - Trust Transitivity Analysis -Combining Trust and Reputation - Trust Derivation Based on TrustComparisons - Attack Spectrum and Countermeasures

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Textbooks: 1. Charu C. Aggarwal, "Social Network Data Analytics", Springer, 2011. 2. GuandongXu ,Yanchun Zhang and Lin Li, "Web Mining and Social Networking Techniques and applications", Springer, first edition, 2011.
Reference Books: 1. Peter Mika, "Social networks and the Semantic Web", Springer, first edition 2007. 2. BorkoFurht, "Handbook of Social Network Technologies and Applications", Springer, first edition, 2010. 3. Dion Goh and Schubert Foo, "Social information retrieval systems: emerging technologies and applications for searching the Web effectively", IGI Global snippet, 2008. 133 4. Max Chevalier, Christine Julien and Chantal Soulé-Dupuy, "Collaborative and social information retrieval and access: techniques for improved user modelling", IGI Global snippet, 2004 .
Online Learning Resources: 1. www.utdallas.edu 2. ibook.ics.uci.edu 3. www.ebmtools.org