

School: SSCSE		Batch: 2023-2027	
Program: B. Tech.		Current Academic Year: 2025-26	
Branch: CSE		Semester: VI	
1	Course Code	CSCR4202	Course Name: SOCIAL MEDIA ANALYTICS
2	Course Title	SOCIAL MEDIA ANALYTICS	
3	Credits	2	
4	Contact Hours (L-T-P)	2-0-0	
	Course Status	Program Elective	
5	Course Objective	The objective of this course is to teach students how to obtain, monitor, and evaluate digital traces from online social platforms. After finishing the course students will be prepared to approach future industry and academic problems with an understanding of how social media data can help to accomplish goals.	
6	Course Outcomes	Upon successful completion of the course, students will be able to: CO1: <i>Illustrate</i> the basic concepts of social network analysis. CO2: <i>Formulate</i> fundamentals of graphs and networking theory. CO3: <i>Analyze</i> current approaches to social media data and data analytics. CO4: <i>Apply</i> social network analysis to real world problems. CO5: <i>Evaluate</i>, explore, and analyse the uses of common social media analytics tools. CO6: <i>Examine</i> research and analysis that responds to the core ideas, uses tools and skill sets specific to social data analytics.	
7	Course Description	This course provides a thorough introduction to social data analysis, including influence and centrality in social media, information diffusion on networks, topic modeling and sentiment analysis, identifying social bots, and predicting behavior.	
8	Outline syllabus		CO Mapping
	Unit 1	Introduction	CO1
	A	Introduction, History of Social media Social media landscape, Need for SMA; SMA in Small organizations; SMA in large organizations;	CO1
	B	Types of social networks: friend, user-generated, content, affiliation, etc., Sociograms, Sociometric studies	CO1, CO6

	C	Basics of Social Media and Business Models, Basics of Web Search Engines and Digital Advertising., Application of SMA in different areas	CO1, CO6
	Unit 2	Graph and Matrices	CO2
	A	The Adjacency Matrix, Paths and Connectivity, Distance and Breadth-First Search, Network Datasets: An Overview	CO1, CO2
	B	Nodes, ties and influencers, Making connections: Link analysis. Paths	CO1,CO2
	C	Random graphs and network evolution. telephone call graph, Weighted Networks, Hypergraphs	CO1, CO2
	Unit 3	Network fundamentals	
	A	Network structures: equivalence, homophile, clustering, Snowball Sampling, Contact Tracing, And Random Walks,	CO1, CO2
	B	Ego-centered network, dominance hierarchies, Third-Party Records, affiliation network,	CO1,CO2
	C	Citation Networks, Peer-To-Peer Networks, Recommender Networks, Biological Networks, Genetic Regulatory Networks, Neural Networks	CO1, CO2
	Unit 4	Social Network and Modeling	
	A	Social contexts: Affiliation and identity. social capital, structural holes, Structural balance, Predictive modeling, Descriptive modeling: community/anomaly detection	CO3, CO4, CO5,CO6
	B	Diffusion in networks: information cascades, social influence, market experiments, Geospatial social data mining, Privacy in a Networked World, Predicting the future with social media	CO3, CO4, CO5,CO6
	C	Facebook Analytics: Introduction, parameters, demographics. Analysing page audience. Reach and Engagement analysis. Google analytics.	CO3, CO4, CO5,CO6
	Unit 5	Processing, Visualization and Web analytics	
	A	Processing and Visualizing Data, Influence Maximization, Link Prediction, Collective Classification, Applications in Advertising and Game Analytics, Collecting and analysing social media data; visualization and exploration	CO3, CO4, CO5,CO6
	B	Social network and web data and methods, Clickstream analysis, A/B testing, online surveys, Web crawling and Indexing.	CO3, CO4, CO5,CO6

	C	Natural Language Processing Techniques for Micro-text Analysis, Trend: social influences on judgments, opinion spread, sentiment.				CO3, CO4, CO5, CO6
	Mode of examination	Theory				
	Weightage Distribution	CA				ETE
		25%				75%
		Assessment 1 (10)	Assessment 2 (5)	Assignment 1 (5)	Assignment 2 (5)	

CO and PO Mapping

S. No.	Course Outcome	Program Outcomes (PO) & Program Specific Outcomes (PSO)
1.	<i>Illustrate</i> the basic concepts of social network analysis.	PO1, PO2, PO4, PO6, PO8, PO11, PSO1, PSO2, PSO3
2.	<i>Formulate</i> fundamentals of graphs and networking theory.	PO1, PO2, PO3, PO4, PO5, PO6, PO9, PO10, PO11, PSO1, PSO2, PSO3
3.	<i>Analyse</i> current approaches to social media data and data analytics.	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO9, PO11, , PSO1, PSO2, PSO3
4.	<i>Apply</i> social network analysis to real world problems.	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PSO1, PSO2, PSO3
5	<i>Evaluate</i> , explore and analyse the uses of common social media analytics tools.	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO10, PO11, PSO1, PSO2, PSO3
6	<i>Examine</i> research and analysis that responds to the core ideas, uses tools and skill sets specific to social data analytics.	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO11, PSO1, PSO2, PSO3

PO and PSO mapping with level of strength for SOCIAL MEDIA ANALYTICS (Course Code: CSCR4202)

CSCR4 202/ Social Media Analytics	COs	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PSO 1	PSO 2	PSO 3
	CO1	2	1	-	1	-	1	-	2	-	-	1	1	2	1
	CO2	3	1	3	2	1	1	-	-	2	3	2	2	1	2
	CO3	2	3	2	3	3	2	3	-	2	-	2	2	3	1
	CO4	1	3	3	3	3	3	3	3	3	2	3	2	3	3
	CO5	2	3	2	3	3	3	3	2	-	2	3	3	3	2

	CO6	2	2	1	3	3	3	3	3	2	-	2	2	3	3
		2.0	2.2	1.8	2.5	2.2	2.2	2.0	1.7	1.5	1.2	2.2	2.0	2.5	2.0

Average of non-zeros entry in following table (should be auto calculated).

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PS O1	PS O2	PS O3
CSCR42 02/ Social Media Analytics	Engineering Knowledge	Problem Analysis	Design/Development of Solutions	Conduct Investigations of Complex Problems	Engineering Tool Usage	The Engineer and The World	Ethics	Individual and Collaborative Team	Communication	Project Management and Finance	Life-Long Learning	Familiarity and practical proficiency	Understand, analyze and develop	Apply standard Software
	2.0	2.2	1.8	2.5	2.2	2.2	2.0	1.7	1.5	1.2	2.2	2.0	2.5	2.0

Strength of Correlation:

1. Addressed to *Slight* (Low=1) **extent**
2. Addressed to *Moderate* (Medium=2) **extent**
3. Addressed to *Substantial* (High=3) **extent**

