

Course Code	18CSE394T	Course Name	BUSINESS INTELLIGENCE AND ANALYTICS	Course Category	E	Professional Elective	L	T	P	C
							3	0	0	3

Pre-requisite Courses	Nil	Co-requisite Courses	Nil	Progressive Courses	Nil
Course Offering Department	CSE	Data Book / Codes/Standards	Nil		

Course Objectives:	The purpose of learning this course is to:	Learning	Program Outcomes (PO)
1	Familiarize with Business Intelligence, Analytics and Decision Support Systems	1	1
2	Make a decision based on the technologies for Decision making	2	2
3	Familiarize with predictive modeling techniques and sentiment analysis techniques	3	3
4	Gain knowledge on mathematical modeling of Decision Support Systems	4	4
5	Understand Expert Systems	5	5
Course Outcomes (CO):	At the end of this course, learners will be able to:	Level of Thinking (Bloom)	Expected Proficiency (%)
CO-1 :	Express knowledge on Business Intelligence, Analytics and Decision Support Systems	2	80
CO-2 :	Design and implement a Decision using the components of Decision Support Systems	3	75
CO-3 :	Apply predictive modeling techniques on sentiment and speech analysis	3	85
CO-4 :	Determine various technologies for mathematical modeling of Decision Support Systems	3	80
CO-5 :	Devise and acquire knowledge on expert systems	3	75

Duration (hour)	9	9	9	9	9
S-1	SLO-1 Information Systems Support for Decision Making	Decision Making:	Basic Concepts of Neural Networks	Decision Support Systems modeling	Automated Decision Systems
	SLO-2	Introduction and Definitions	Developing Neural Network	Structure of mathematical models for decision support	The Artificial Intelligence field
S-2	SLO-1 An Early Framework for Computerized Decision Support	Phases of the Decision	Based Systems	Decision making under certainty	Basic concepts of Expert Systems
	SLO-2	Making Process	Illuminating the Black Box of ANN with Sensitivity	Uncertainty and Risk	
S-3	SLO-1 The Concept of Decision Support Systems	The Intelligence Phase	Support Vector Machines	Decision modeling with spreadsheets	Applications of Expert Systems
	SLO-2		A Process		
S-4	SLO-1 A Framework for Business Intelligence	Design Phase	Based Approach to the Use of SVM	Mathematical programming optimization	Structure of Expert Systems
	SLO-2		Nearest Neighbor Method for Prediction		
S-5	SLO-1 Business Analytics Overview	Choice Phase	Sentiment Analysis Overview	Decision analysis-introduction	Knowledge Engineering
	SLO-2				
S-6	SLO-1 Brief Introduction to Big Data Analytics	Implementation Phase	Sentiment Analysis Applications	Decision tables	Development of Expert Systems
	SLO-2				
S-7	SLO-1 Clickstream Analysis	Decision Support Systems Capabilities	Sentiment Analysis Process	Decision Trees	Location based Analytics
	SLO-2				
S-8	SLO-1 Clickstream Analysis	Decision Support Systems Classification	Sentiment Analysis	Multi-criteria decision making	Cloud Computing
	SLO-2				
S-9	SLO-1 Competitive Intelligence Analysis	Decision Support Systems Components	Speech Analytics	Pairwise comparisons	Business Intelligence
	SLO-2				

Learning Resources	1. Ramesh Sharda, Dursun Delen, Efraim Turban, J.E. Aronson, Ting-Peng Liang, David King, "Business Intelligence and Analytics: System for Decision Support", 10 th Edition, Pearson Global Edition, 2013.	
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Learning Assessment											
	Bloom's Level of Thinking	Continuous Learning Assessment (50% weightage)								Final Examination (50% weightage)	
		CLA – 1 (10%)		CLA – 2 (15%)		CLA – 3 (15%)		CLA – 4 (10%)		Theory	Practice
		Theory	Practice	Theory	Practice	Theory	Practice	Theory	Practice		
Level 1	Remember	20%	-	15%	-	15%	-	15%	-	15%	-
Level 2	Understand	20%	-	15%	-	15%	-	15%	-	20%	-
Level 3	Apply	45%	-	40%	-	40%	-	20%	-	30%	-
Level 4	Analyze	15%	-	15%	-	15%	-	25%	-	20%	-
Level 5	Evaluate	-	-	15%	-	15%	-	25%	-	15%	-
Level 6	Create	-	-	-	-	-	-	-	-	-	-
	Total	100 %		100 %	100 %	100 %	100 %	100 %		20%	

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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