



Semester – VII

Unique Course Number: CSC701

Course Name: Machine Learning

Unique CO Number	Students will be able to,	Course Outcome (CO) Statement
CSC7011	Acquire basic concepts and techniques for developing machine learning models.	
CSC7012	Select machine learning techniques suitable for a given problem based on different evaluation metrics.	
CSC7013	Demonstrate ensemble technique to combine predictions from different models.	
CSC7014	Apply different regression and classification techniques for solving prediction problem	
CSC7015	Utilize various machine learning algorithms for clustering of given data.	
CSC7016	Apply dimensionality reduction techniques to optimize the performance of machine learning algorithms.	

Unique Course Number: CSC702

Course Name: Big Data Analytics

Unique CO Number	Students will be able to,	Course Outcome (CO) Statement
CSC7021	Identify the key issues in big data management and its associated applications for business decisions and strategy	
CSC7022	Develop problem solving and critical thinking skills in fundamental enabling techniques like Hadoop, Mapreduce	
CSC7023	Apply NoSQL architectural patterns in big data analytics to create, manage, store, and query various forms of Big Data	
CSC7024	Analyze and apply data mining techniques in various applications of Big Data.	
CSC7025	Adapt adequate perspectives of big data analytics in various applications	
CSC7026	Design business models and solve complex real-world problems in various applications like recommender systems, social media applications, health and medical systems, etc	

Unique Course Number: CSDC7013

Course Name: Natural Language Processing

Unique CO Number	Students will be able to,	Course Outcome (CO) Statement
CSDC70131	Understand broadly the field of natural language processing.	
CSDC70132	Understand capabilities and limitations of current natural language technologies.	
CSDC70133	Model linguistic phenomena with formal grammars.	
CSDC70134	Design, implement and test algorithms for NLP problems.	
CSDC70135	Understand the mathematical and linguistic foundations underlying approaches to the various areas in NLP.	
CSDC70136	Apply NLP techniques to design real world NLP applications such as machine translation, text categorization, text summarization, information extraction...etc.	

Unique Course Number: CSDC7021

Course Name: Augmented and Virtual Reality

Unique CO Number	Students will be able to,	Course Outcome (CO) Statement
CSDC70211	Describe how VR system work and list the application of VR	
CSDC70212	Elaborate/ Demonstrate Geometric presentation of a virtual world and its operation	
CSDC70213	Explain the concept of motion and tracking in VR systems.	
CSDC70214	Describe the hardware that enables VR systems to be built.	
CSDC70215	Describe how the AR system will work and analyze the hardware requirement of AR.	
CSDC70216	Analyze and understand the working of various state-of-the-art AR devices.	



Unique Course Number: CSDC7022

Course Name: Block Chain

Unique CO Number	Students will be able to,	Course Outcome (CO) Statement
CSDC70221	Describe Blockchain concepts	
CSDC70222	Discuss Cryptocurrencies and consensus protocols in Bitcoin Blockchain	
CSDC70223	Describe and apply the concepts of smart contracts for an applications	
CSDC70224	Discuss a public blockchain using Ethereum	
CSDC70225	Discuss a private blockchain using Hyperledger	
CSDC70226	Discuss different tools and applications of Blockchain	

Unique Course Number: ILO7013

Course Name: Management Information System

Unique CO Number	Students will be able to,	Course Outcome (CO) Statement
ILO70131	Explain the importance of information systems and the impact of information technology on an organization to transform business.	
ILO70132	Identify the principal tools and technologies for storing and accessing information in an organization to improve business performance and decision making.	
ILO70133	Describe ethical issues related to information technology, potential threat to the privacy of the data and control measures that organizations can use to protect their information resources.	
ILO70134	Identify current and emerging technologies and apply them to today's businesses.	
ILO70135	Describe use of the Internet and World Wide Web to provide a global platform for e-business, business mobility and communications, collaboration, and cloud computing.	
ILO70136	Explain the types of support that information systems can provide for each functional area of the organization.	

Unique Course Number: ILO7016

Course Name: Cyber Security and Laws

Unique CO Number	Students will be able to,	Course Outcome (CO) Statement
ILO70161	Understand the concept of cybercrime and cyber offences	
ILO70162	Identify and classify cybercrimes to estimate their impact on society and mitigate the risk involved	
ILO70163	Understand the various tools used by cyber criminals.	
ILO70164	Identify and interpret the various aspects of Cyber laws	
ILO70165	Apply and Interpret the Indian IT Act 2008 and its latest amendments.	
ILO70166	Apply Information Security Standards compliance during software design and development.	

Unique Course Number: CSL701

Course Name: Machine Learning Lab

Unique CO Number	Students will be able to,	Course Outcome (CO) Statement
CSL7011	Implement regression analysis for given problem	
CSL7012	Implement various classification techniques to a given dataset.	
CSL7013	Implement clustering techniques to group given data.	
CSL7014	Implement ensemble techniques to combine predictions from different models.	
CSL7015	Implement dimension reduction technique	
CSL7016	Implement an appropriate machine learning model for the given problem.	



Unique Course Number: CSL702 Course Name: Big Data Analytics Lab

Unique CO Number	Course Outcome (CO) Statement
	Students will be able to,
CSL7021	Execute basics commands of Hadoop Ecosystem technologies (HDFS, Sqoop, HIVE).
CSL7022	Implement map reduce over different algebraic operations.
CSL7023	Execute NoSQL commands for storing, managing, creating structured and unstructured types of data.
CSL7024	Implement data mining techniques over datasets and perform analysis using tools.
CSL7025	Summarize various case studies in the field of Big data.
CSL7026	Design a solution for existing problem and design using any of the studied Big data technology.

Unique Course Number: CSDL7013 Course Name: Natural Language Processing Lab

Unique CO Number	Course Outcome (CO) Statement
	Students will be able to,
CSDL70131	Implement various methods of text preprocessing
CSDL70132	implement computational models for morphological word analysis
CSDL70133	Implement probabilistic language model using N Grams
CSDL70134	Find part of speech tags of a given natural language sentence
CSDL70135	Extract fragments from a given natural language sentence
CSDL70136	Apply NLP techniques to design real world NLP applications such as machine translation, text categorization, text summarization, information extraction...etc

Unique Course Number: CSDL7021 Course Name: Augmented and Virtual Reality Lab

Unique CO Number	Course Outcome (CO) Statement
	Students will be able to,
CSDL70211	Illustrate/ Setup VR development environment.
CSDL70212	Use HTC Vive/ Google Cardboard/ Google Daydream and Samsung gear VR.
CSDL70213	Develop VR scene and place object
CSDL70214	Demonstrate concept of Augmented reality

Unique Course Number: CSDL7022 Course Name: Block Chain Lab

Unique CO Number	Course Outcome (CO) Statement
	Students will be able to,
CSDL70221	Demonstrate Blockchain concept and crypto currency Wallet.
CSDL70222	Design Smart Contract using Solidity.
CSDL70223	Demonstrate Public blockchain using Ethereum.
CSDL70224	Discuss Private blockchain concept.
CSDL70225	Discuss applications and emerging platform of Blockchain.
CSDL70226	Demonstrate the concept of Blockchain in real world application.

Unique Course Number: CSP701 Course Name: Major Project - I

Unique CO Number	Course Outcome (CO) Statement
	Students will be able to,
CSP7011	Identify the current state of research on a topic and Determine methodologies used in the past studies of the same or similar topics
CSP7012	Identify the community that shall benefit through the engineering problem and the impact of solutions in societal and environmental context for sustainable development
CSP7013	Comply to the standard norms of Engineering practices
CSP7014	Formulate the problem statement with objectives and scope, Design different modules of the system
CSP7015	Demonstrate project management principles during project work
CSP7016	Demonstrate the written and oral presentation of the work done effectively