



Program : Computer Engineering	
Final Year : Semester - VII	
Course Code: CSC701	
Course Name: Machine Learning	
CSC701.1	To acquire fundamental knowledge of developing machine learning models.
CSC701.2	To select, apply and evaluate an appropriate machine learning model for the given application.
CSC701.3	To demonstrate ensemble techniques to combine predictions from different models.
CSC701.4	To demonstrate the dimensionality reduction techniques.
Course Code: CSC702	
Course Name: Big Data Analytics	
CSC702.1	Understand the building blocks of Big Data Analytics.
CSC702.2	Apply fundamental enabling techniques like Hadoop and MapReduce in solving real world problems.
CSC702.3	Understand different NoSQL systems and how it handles big data.
CSC702.4	Apply advanced techniques for emerging applications like stream analytics.
CSC702.5	Achieve adequate perspectives of big data analytics in various applications like recommender systems, social media applications, etc.
CSC702.6	Apply statistical computing techniques and graphics for analyzing big data.
Course Code: CSDC7011	
Course Name: Machine Vision	
CSDC7011.1	Elaborate the components of Machine Vision Application.
CSDC7011.2	Perform image, video preprocessing operations.
CSDC7011.3	Explain various transformations, interpolation.
CSDC7011.4	Elaborate motion tracking in video.
CSDC7011.5	Analyze and implement appropriate filtering techniques for a given problem.
CSDC7011.6	Develop applications based on machine vision.



Program : Computer Engineering

Final Year : Semester - VII

Course Code: CSDC7013

Course Name: Natural Language Processing

CSDC7013.1	To describe the field of natural language processing.
CSDC7013.2	To design language model for word level analysis for text processing.
CSDC7013.3	To design various POS tagging techniques and parsers.
CSDC7013.4	To design, implement and test algorithms for semantic and pragmatic analysis.
CSDC7013.5	To formulate the discourse segmentation and anaphora resolution.
CSDC7013.6	To apply NLP techniques to design real world NLP applications.

Course Code: CSDC7022

Course Name: Blockchain Technologies

CSDC7022.1	Explain blockchain concepts.
CSDC7022.2	Apply cryptographic hash required for blockchain.
CSDC7022.3	Apply the concepts of smart contracts for an application.
CSDC7022.4	Design a public blockchain using Ethereum.
CSDC7022.5	Design a private blockchain using Hyperledger.
CSDC7022.6	Use different types of tools for blockchain applications.

Course Code: ILO7013

Course Name: Management Information System

ILO7013.1	Explain how information systems Transform Business.
ILO7013.2	Identify the impact information systems have on an organization.
ILO7013.3	Describe IT infrastructure and its components and its current trends.
ILO7013.4	Understand the principal tools and technologies for accessing information from databases to improve business performance and decision making.
ILO7013.5	Identify the types of systems used for enterprise-wide knowledge management and how they provide value for businesses.



Program : Computer Engineering	
Final Year : Semester - VII	
Course Code: ILO7016 Course Name: Cyber Security and Laws	
ILO7016.1	Understand the concept of cybercrime and its effect on the outside world.
ILO7016.2	Interpret and apply IT law in various legal issues.
ILO7016.3	Distinguish different aspects of cyber law.
ILO7016.4	Apply Information Security Standards compliance during software design and development.
Course Code: ILO7017 Course Name: Disaster Management & Mitigation Measures	
ILO7017.1	Get to know natural as well as manmade disaster and their extent and possible effects on the economy.
ILO7017.2	Plan of national importance structures based upon the previous history.
ILO7017.3	Get acquainted with government policies, acts and various organizational structure associated with an emergency.
ILO7017.4	Get to know the simple do's and don'ts in such extreme events and act accordingly.
Course Code: CSL70011 Course Name: Machine Learning Lab	
CSL70011.1	To implement an appropriate machine learning model for the given application.
CSL70011.2	To implement ensemble techniques to combine predictions from different models.
CSL70011.3	To implement the dimensionality reduction techniques.
Course Code: CSL7012 Course Name: Big Data Analytics Lab	
CSL7012.1	To interpret business models and scientific computing paradigms, and apply software tools for big data analytics.
CSL7012.2	To implement algorithms that uses Map Reduce to apply on structured and unstructured data.
CSL7012.3	To perform hands-on NoSql databases such as Cassandra, HadoopHbase, MongoDB, etc.
CSL7012.4	To implement various data streams algorithms.
CSL7012.5	To develop and analyze the social network graphs with data visualization techniques.



Program : Computer Engineering	
Final Year : Semester - VII	
Course Code: CSDL7011 Course Name: Machine Vision Lab	
CSDL7011.1	To read image and video file, perform different processing.
CSDL7011.2	To do edge detection, depth estimation.
CSDL7011.3	To choose appropriate algo for segmentation.
CSDL7011.4	To implement object detection technique.
Course Code: CSDL7013 Course Name: Natural Language Processing Lab	
CSDL7013.1	Apply various text processing techniques.
CSDL7013.2	Design language model for word level analysis.
CSDL7013.3	Model linguistic phenomena with formal grammar.
CSDL7013.4	Design, implement and analyze NLP algorithms.
CSDL7013.5	To apply NLP techniques to design real world NLP applications such as machine translation, sentiment analysis, text summarization, information extraction, Question Answering system etc.
CSDL7013.6	Implement proper experimental methodology for training and evaluating empirical NLP systems.
Course Code: CSDL7022 Course Name: Blockchain Lab	
CSDL7022.1	Creating Cryptographic hash using merkle tree.
CSDL7022.2	Design Smart Contract using Solidity.
CSDL7022.3	Implementing ethereum blockchain using Geth.
CSDL7022.4	Demonstrate the concept of blockchain in real world application.
Course Code: CSP701 Course Name: Major Project 1	
CSP701.1	To develop the understanding of the problem domain through extensive review of literature.
CSP701.2	To Identify and analyze the problem in detail to define its scope with problem specific data.
CSP701.3	To know various techniques to be implemented for the selected problem and related technical skills through feasibility analysis.
CSP701.4	To design solutions for real-time problems that will positively impact society and Environment.
CSP701.5	To develop clarity of presentation based on communication, teamwork and leadership skills.
CSP701.6	To inculcate professional and ethical behavior.



Program : Computer Engineering	
Final Year : Semester - VIII	
Course Code: CSC801	
Course Name: Distributed Computing	
CSC801.1	Demonstrate knowledge of the basic elements and concepts related to distributed system technologies.
CSC801.2	Illustrate the middleware technologies that support distributed applications such as RPC, RMI and Object based middleware.
CSC801.3	Analyze the various techniques used for clock synchronization and mutual exclusion.
CSC801.4	Demonstrate the concepts of Resource and Process management and synchronization algorithms.
CSC801.5	Demonstrate the concepts of Consistency and Replication Management.
CSC801.6	Apply the knowledge of Distributed File System to analyze various file systems like NFS, AFS and the experience in building large-scale distributed applications.
Course Code: CSDC8012	
Course Name: Digital Forensics	
CSDC8012 .1	Discuss the phases of Digital Forensics and methodology to handle the computer security incident.
CSDC8012 .2	Describe the process of collection, analysis and recovery of the digital evidence.
CSDC8012 .3	Explore various tools to analyze malwares and acquire images of RAM/hard drives.
CSDC8012 .4	Acquire adequate perspectives of digital forensic investigation in mobile devices.
CSDC8012 .5	Analyze the source and content authentication of emails and browsers.
CSDC8012.6	Produce unambiguous investigation reports which offer valid conclusions.
Course Code: CSDC8013	
Course Name: Applied Data Science	
CSDC8013.1	To gain fundamental knowledge of Data science process.
CSDC8013.2	To apply data exploration and visualisation techniques.
CSDC8013.3	To apply anomaly detection techniques.
CSDC8013.4	To gain indepth understanding of time series forecasting.
CSDC8013.5	Apply different methodologies and evaluation strategies.
CSDC8013.6	To apply data science techniques to real world applications.



Program : Computer Engineering	
Final Year : Semester - VIII	
Course Code: CSDC8023	
Course Name: Social media Analytics	
CSDC8023.1	Understand the concept of Social media.
CSDC8023.2	Understand the concept of social media Analytics and its significance.
CSDC8023.3	Learners will be able to analyze the effectiveness of social media.
CSDC8023.4	Learners will be able to use different Social media analytics tools effectively and efficiently.
CSDC8023.5	Learners will be able to use different effective Visualization techniques to represent social media analytics.
CSDC8023.6	Acquire the fundamental perspectives and hands-on skills needed to work with social media data.
Course Code: ILO8021	
Course Name: Project Management	
ILO8021.1	Apply selection criteria and select an appropriate project from different options.
ILO8021.2	Write work break down structure for a project and develop a schedule based on it.
ILO8021.3	Identify opportunities and threats to the project and decide an approach to deal with them strategically.
ILO8021.4	Use Earned value technique and determine & predict status of the project.
ILO8021.5	Capture lessons learned during project phases and document them for future reference.
Course Code: ILO8028	
Course Name: Digital Business Management	
ILO8028.1	Identify drivers of digital business.
ILO8028.2	Illustrate various approaches and techniques for E-business and management.
ILO8028.3	Prepare E-business plan.
Course Code: CSL801	
Course Name: Distributed Computing Lab	
CSL801.1	Develop test and debug using Message-Oriented Communication or RPC/RMI based client-server programs.
CSL801.2	Implement techniques for clock synchronization.
CSL801.3	Implement techniques for Election Algorithms.
CSL801.4	Demonstrate mutual exclusion algorithms and deadlock handling.
CSL801.5	Implement techniques of resource and process management.
CSL801.6	Describe the concepts of distributed File Systems with some case studies.



Program : Computer Engineering	
Final Year : Semester - VIII	
Course Code: CSDL8022	
Course Name: Digital Forensics Lab	
CSDL8022.1	Explore various forensics tools and use them to acquire, duplicate and analyze data and recover deleted data.
CSDL8022.2	Implement penetration testing using forensics tools.
CSDL8022.3	Explore various forensics tools and use them to acquire and analyze live and static data.
CSDL8022.4	Verification of source and content authentication of emails and browsers.
CSDL8022.5	Demonstrate Timeline Report Analysis using forensics tools.
CSDL8022.6	Discuss real time crime forensics investigations scenarios.
Course Code: CSDL8023	
Course Name: Social Media Analytics Lab	
CSDL8023.1	Understand characteristics and types of social media networks.
CSDL8023.2	Use social media analytics tools for business.
CSDL8023.3	Collect, monitor, store and track social media data.
CSDL8023.4	Analyze and visualize social media data from multiple platforms.
CSDL8023.5	Design and develop content and structure based social media analytics models.
CSDL8023.6	Design and implement social media analytics applications for business.
Course Code: CSP801	
Course Name: Major Project 2	
CSP801.1	Implement solutions for the selected problem by applying technical and professional skills.
CSP801.2	Analyze impact of solutions in societal and environmental context for sustainable development.
CSP801.3	Collaborate best practices along with effective use of modern tools.
CSP801.4	Develop proficiency in oral and written communication with effective leadership and teamwork.
CSP801.5	Nurture professional and ethical behavior.
CSP801.6	Gain expertise that helps in building lifelong learning experience.