



Semester – VII

Unique Course Number: CSC701

Course Name: Digital Signal & Image Processing

Unique CO Number	Course Outcome (CO) Statement
	Students will be able to,
CSC7011	Apply the concept of DT Signal and DT Systems.
CSC7012	Classify and analyze discrete time signals and systems
CSC7013	Implement Digital Signal Transform techniques DFT and FFT.
CSC7014	Use the enhancement techniques for digital Image Processing
CSC7015	Differentiate between the advantages and disadvantages of different edge detection techniques
CSC7016	Develop small projects of 1-D and 2-D Digital Signal Processing.

Unique Course Number: CSC702

Course Name: Mobile Communication & Computing

Unique CO Number	Course Outcome (CO) Statement
	Students will be able to,
CSC7021	Identify basic concepts and principles in mobile communication & computing, cellular architecture
CSC7022	Describe the components and functioning of mobile networking.
CSC7023	Classify variety of security techniques in mobile network.
CSC7024	Analyze the concepts of WLAN
CSC7025	Describe and apply the concepts of mobility management
CSC7026	Describe Long Term Evolution (LTE) architecture and its interfaces.

Unique Course Number: CSC703

Course Name: Artificial Intelligence & Soft Computing

Unique CO Number	Course Outcome (CO) Statement
	Students will be able to,
CSC7031	Identify the various characteristics of Artificial Intelligence and Soft Computing techniques.
CSC7032	Choose an appropriate problem solving method for an agent to find a sequence of actions to reach the goal state.
CSC7033	Analyse the strength and weakness of AI approaches to knowledge representation, reasoning and planning
CSC7034	Construct supervised and unsupervised ANN for real world applications.
CSC7035	Design fuzzy controller system.
CSC7036	Apply Hybrid approach for expert system design.

Unique Course Number: CSDLO7031

Course Name: Advance System Security & Digital Forensics

Unique CO Number	Course Outcome (CO) Statement
	Students will be able to,
CSDLO70311	Understand cyber attacks and apply access control policies and control mechanisms.
CSDLO70312	Identify malicious code and targeted malicious code
CSDLO70313	Detect and counter threats to web applications
CSDLO70314	Understand the vulnerabilities of Wi-Fi networks and explore different measures to secure wireless protocols, WLAN and VPN networks
CSDLO70315	Understand the ethical and legal issues associated with cyber crimes and be able to mitigate impact of crimes with suitable policies
CSDLO70316	Use different forensic tools to acquire and duplicate data from compromised systems and analyse the same



Unique Course Number: CSDLO7032

Course Name: Big Data Analytics

Unique CO Number	Course Outcome (CO) Statement
	Students will be able to,
CSDLO70321	To provide an overview of an exciting growing field of big data analytics.
CSDLO70322	To introduce programming skills to build simple solutions using big data technologies such as MapReduce and scripting for NoSQL, and the ability to write parallel algorithms for multiprocessor execution.
CSDLO70323	To teach the fundamental techniques and principles in achieving big data analytics with scalability and streaming capability.
CSDLO70324	To enable students to have skills that will help them to solve complex real-world problems in for decision support.
CSDLO70325	To provide an indication of the current research approaches that is likely to provide a basis for tomorrow's solutions.

Unique Course Number: ILO7013

Course Name: Management Information Systems

Unique CO Number	Course Outcome (CO) Statement
	Students will be able to,
ILO7013	Explain how information systems Transform Business
ILO7013	Identify the impact information systems have on an organization
ILO7013	Describe IT infrastructure and its components and its current trends
ILO7013	Understand the principal tools and technologies for accessing information from databases to improve business performance and decision making
ILO7013	Identify the types of systems used for enterprise-wide knowledge management and how they provide value for businesses

Unique Course Number: ILO7015

Course Name: Operation Research

Unique CO Number	Course Outcome (CO) Statement
	Students will be able to,
ILO70151	Understand the theoretical workings of the simplex method, the relationship between a linear program and its dual, including strong duality and complementary slackness.
ILO70152	Perform sensitivity analysis to determine the direction and magnitude of change of a model's optimal solution as the data change.
ILO70153	Solve specialized linear programming problems like the transportation and assignment problems, solve network models like the shortest path, minimum spanning tree, and maximum flow problems.
ILO70154	Understand the applications of integer programming and a queuing model and compute important performance measures

Unique Course Number: CSL701

Course Name: Digital Signal & Image Processing Lab

Unique CO Number	Course Outcome (CO) Statement
	Students will be able to,
CSL7011	Sample and reconstruct the signal
CSL7012	Implement and apply operations like Convolution, Correlation, DFT and FFT on DT signals
CSL7013	Implement spatial domain Image enhancement techniques.
CSL7014	Implement Edge detection techniques using first order derivative filters.



Unique Course Number: CSL702

Course Name: Mobile App. Development. Tech. Lab

Unique CO Number	Course Outcome (CO) Statement
	Students will be able to,
CSL7021	To develop and demonstrate mobile application using various tools
CSL7022	To articulate the knowledge of GSM,CDMA & Bluetooth technologies and demonstrate it.
CSL7023	Students will be able to carry out simulation of frequency reuse, hidden terminal problem.
CSL7024	To develop security algorithm for mobile communication network
CSL7025	To demonstrate simulation and compare the performance of wireless LAN
CSL7026	To implement and demonstrate mobile node discovery and route maintains.

Unique Course Number: CSL703

Course Name: Artificial Intelligence & Soft Computing Lab

Unique CO Number	Course Outcome (CO) Statement
	Students will be able to,
CSL7031	To realize the basic techniques to build intelligent systems
CSL7032	To create knowledge base and apply appropriate search techniques used in problem solving.
CSL7033	Apply the supervised/unsupervised learning algorithm.
CSL7034	Design fuzzy controller system.

Unique Course Number:CSL704A

Course Name: Computational Lab-I DF

Unique CO Number	Course Outcome (CO) Statement
	Students will be able to,
CSL704A1	Analyze static code and program vulnerabilities using open source tools.
CSL704A2	Explore and analyze network vulnerabilities using open source tools.
CSL704A3	Explore and analyze different security tools to detect web application and browser vulnerabilities.
CSL704A4	Explore and analyze different tools to secure wireless networks and routers, and mobile devices and perform penetration testing, and analyze its impact.
CSL704A5	Understand and implement AAA using RADIUS and TACACS.
CSL704A6	Explore various forensics tools in Kali Linux and use them to acquire, duplicate and analyze data and recover deleted data.

Unique Course Number:CSL704B

Course Name: Computational Lab-I (BDA)

Unique CO Number	Course Outcome (CO) Statement
	Students will be able to,
CSL704B1	Identify the key issues in big data management and its associated applications for business decisions and strategy.
CSL704B2	Develop problem solving and critical thinking skills in fundamental enabling techniques like Hadoop, Mapreduce
CSL704B3	Apply NoSQL architectural patterns in big data analytics to create, manage, store, query various forms of Big Data
CSL704B4	Analyze and apply data mining techniques in various applications of Big Data.
CSL704B5	Adapt adequate perspectives of big data analytics in various applications
CSL704B6	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: CSP705****Course Name: Major Project 1**

Unique CO Number	Course Outcome (CO) Statement
	Students will be able to,
CSL7051	Identify the current state of research on a topic and Determine methodologies used in the past studies of the same or similar topics
CSL7052	Identify the community that shall benefit through the engineering problem and the impact of solutions in societal and environmental context for sustainable development
CSL7053	Comply to the standard norms of Engineering practices
CSL7054	Formulate the problem statement with objectives and scope, Design different modules of the system
CSL7055	Demonstrate project management principles during project work
CSL7056	Demonstrate the written and oral presentation of the work done effectively