



Semester – V

Unique Course Number: CSC501

Course Name: Theoretical Computer Science

Unique CO Number	Course Outcome (CO) Statement
	Students will be able to,
CSC5011	Describe fundamentals of grammars, languages and Machines.
CSC5012	Express the understanding of decidability and undecidability.
CSC5013	Develop Regular grammar, Context free grammars while recognizing the strings and tokens.
CSC5014	Develop Regular Expression for a given language and show the equivalence of languages described by finite automata and regular expressions.
CSC5015	Construct different machines like Finite Automata, Pushdown Automata and Turing Machines to recognize the given language and prove the equivalence between them.
CSC5016	Identify applications and limitations of some computational models and possible methods of proving them.

Unique Course Number: CSC502

Course Name: Software Engineering

Unique CO Number	Course Outcome (CO) Statement
	Students will be able to,
CSC5021	Describe basic knowledge of software engineering via software development process models.
CSC5022	Identify requirements, analyze and prepare models.
CSC5023	Plan, schedule and track the progress of the projects.
CSC5024	Design to help development of the software projects.
CSC5025	Apply testing principles on software project and describe the maintenance procedure.
CSC5026	Identify risks; manage the change to assure quality in software projects.

Unique Course Number: CSC503

Course Name: Computer Network

Unique CO Number	Course Outcome (CO) Statement
	Students will be able to,
CSC5031	Explain basic concepts of Computer Networks and compare OSI model with TCP/IP model.
CSC5032	Illustrate various types of transmission media and demonstrate the communication at the physical layer.
CSC5033	Understand various protocols used in the Data link layer and Concepts of error detection and correction.
CSC5034	Design a network using IP addressing and Analyze various routing algorithms and protocols at Network layer.
CSC5035	Analyze transport layer protocols and congestion control algorithms.
CSC5036	Explain the purpose of various protocols at Application layer

Unique Course Number: CSC504

Course Name: Data Warehousing & Mining

Unique CO Number	Course Outcome (CO) Statement
	Students will be able to,
CSC5041	Understand data warehouse fundamentals and design data warehouse with dimensional modelling and apply OLAP operations
CSC5042	Understand data mining principles and perform Data preprocessing and Visualization.
CSC5043	Identify appropriate data mining algorithms to solve real world problems
CSC5044	Compare and evaluate different data mining techniques like classification, prediction, clustering and association rule mining
CSC5045	Describe complex information and social networks with respect to web mining.



Unique Course Number: CSDLO5011

Course Name: Probabilistic Graphical Models

Unique CO Number	Course Outcome (CO) Statement
	Students will be able to,
CSDLO50111	Discuss the basic concept of Probabilistic Graphical Modeling.
CSDLO50112	Model and extract inference from Bayesian Network using directed graph and local probabilistic model.
CSDLO50113	Model and extract inference from Markov network and hidden Markov model
CSDLO50114	Perform learning and take actions and decisions using probabilistic graphical models
CSDLO50115	Represent real world problems using graphical models, design inference algorithms, and learn the structure of the graphical model from data.
CSDLO50116	Design real life applications using probabilistic graphical models.

Unique Course Number: CSDLO5012

Course Name: Internet Programming

Unique CO Number	Course Outcome (CO) Statement
	Students will be able to,
CSDLO50121	Implement interactive web page(s) using HTML, CSS. and Java Script.
CSDLO50122	Demonstrate Server Side Scripting and database connectivity using JDBC.
CSDLO50123	Demonstrate Rich Internet Application using Ajax.
CSDLO50124	Demonstrate and differentiate various Web Extensions.
CSDLO50125	Demonstrate web application using Reactive Js

Unique Course Number: CSL501

Course Name: Software Engineering Lab

Unique CO Number	Course Outcome (CO) Statement
	Students will be able to,
CSL5011	Define problem statements and apply process model for software projects
CSL5012	Schedule, plan and estimate cost with risk identification of the software project
CSL5013	Classify requirements by user types and use tools to develop diagrams of analysis
CSL5014	Design singleton pattern for a case study
CSL5015	Test software project case using tool
CSL5016	Demonstrate software change and version management

Unique Course Number: CSL502

Course Name: Computer Network Lab

Unique CO Number	Course Outcome (CO) Statement
	Students will be able to,
CSL5021	Identify type of cables and understand connection using crimping tool,
CSL5022	Setup networking environment in Linux to understand Network commands and use of various tools such as wireshark, Nmap, iptables
CSL5023	Perform various server configurations in Linux
CSL5024	Setup a Network using Cisco packet tracer and implement static routing.
CSL5025	Design client server model using socket programming
CSL5026	Use of Cisco packet tracer to design VPN and explore networking algorithms.

Unique Course Number: CSL503

Course Name: Data Warehousing & Mining Lab

Unique CO Number	Course Outcome (CO) Statement
	Students will be able to,
CSL5031	Design data warehouse and perform various OLAP operations.
CSL5032	Implement data mining algorithm like classification.
CSL5033	Implement clustering algorithm on a given set of data sample.
CSL5034	Implement association rule mining and web mining algorithms.

**Unique Course Number: CSL504****Course Name: Professional Comm. & Ethics II**

Unique CO Number	Course Outcome (CO) Statement
	Students will be able to,
CSL5041	Plan and prepare effective business /technical documents which will in turn provide solid foundation for their managerial roles.
CSL5042	Strategize their personal and professional skills to build a professional image and meet the demands of the industry.
CSL5043	Emerge successful in group discussions, meetings and result - oriented agreeable solutions in group communication situations
CSL5044	Deliver persuasive and professional presentations
CSL5045	Deliver creative thinking and interpersonal skills required for effective professional communication.
CSL5046	Apply codes of ethical codes, personal integrity and normal of organizational behavior

Unique Course Number: CSM501**Course Name: Mini Project – 2 A**

Unique CO Number	Course Outcome (CO) Statement
	Students will be able to,
CSM5011	Acquire practical knowledge within the chosen area of technology for societal/research/innovation/entrepreneurship project development.
CSM5012	Identify, analyze, formulate and solve the problem with a comprehensive and systematic approach by applying engineering knowledge.
CSM5013	Contribute as an individual or in a team in development of technical projects.
CSM5014	Develop effective communication skills for presentation of project related activities.