

MASTER OF SCIENCE (COMPUTER SCIENCE)

Program Specific Outcomes

After completing this programme, the students will be able to:

PSO1: Showcase their skillset to apply in the field of IT, academics and other competitive examinations.

PSO2: Comprehend the implementation logic behind the architecture of computers.

PSO3: Apply skills to provide IT based solutions for real world problems through development of software and websites.

PSO4: Contextualize and analyze the problems in hand to work for an IT based solution.

PSO5: Apply principles and techniques from the selective areas to develop special expertise.

Master of Science (Computer Science) Semester – I

COURSE CODE: MCSL-1111 ADVANCED DATA STRUCTURES

Course Outcomes:

After passing this course the student will be able to:

CO1: Design, analyze and implement algorithms and check their performances against specified parameters.

CO2: Understand the necessary mathematical abstraction to solve different data structure problems.

CO3: Devise various algorithms for real world problems involving data structures.

COURSE CODE: MCSL-1112
ADVANCED COMPUTER ARCHITECTURE

Course Outcomes:

After passing this course the student will be able to:

CO1: Have broad knowledge of computer architecture and paradigms of computer system.

CO2: Gain knowledge of parallel computing models and parallel computer structures.

CO3: Understand the concepts of pipelining and multiprocessors.

COURSE CODE: MCSL-1113
NETWORK SECURITY PRACTICES

Course Outcomes:

After passing course the student will be able to:

CO1: Understand basics of cryptography, network security, services, mechanisms and defining various terms as vulnerability, threat and attack.

CO2: Identify and classify particular examples of attacks, differentiating between Symmetrical and Asymmetrical cryptography.

CO3: Have understanding of data integrity, authentication, digital signatures and hash functions.

CO4: Understand various network security concepts as IPSec, Web security, PGP, Email security.

COURSE CODE: MCSL - 1114
DISCRETE STRUCTURES

Course Outcomes:

After passing course the student will be able to:

CO1: Develop the quantitative and mathematical skills required for continuous success in the field of Computer Science.

CO2: Understand and construct simple mathematical proofs of important principles like Pigeonhole principle, Inclusion-Exclusion Principle.

CO3: Get familiarize with data structures like Graphs and Trees.

CO4: Understand the basic and elementary counting techniques, factorials and recurrence relations.

COURSE CODE: MCSL-1115
ARTIFICIAL INTELLIGENCE

Course Outcomes:

After passing course the student will be able to:

CO1: Understand various search strategies used in AI for finding solution to a problem.

CO2: Gain knowledge of propositional and predicate logic.

CO3: Represent planning in AI in different scenarios.

CO4: Understand basics of fuzzy logic, learning in AI and neural network.

MASTER OF SCIENCE (COMPUTER SCIENCE) SEMESTER – II

COURSE CODE: MCSL-2111 THEORY OF COMPUTATION

Course Outcomes:

After passing this course the student will be able to:

CO1: Comprehend regular languages and its properties.

CO2: Define production rules for Context Free Grammar (CFG), Convert CFG into Chomsky and Greibach Normal Form.

CO3: Apply Pumping Lemma to find to identify membership of a language.

CO4: Construct computing machines like Finite Automata, Pushdown Automata, Turing machine, etc.

CO5: Comprehend closure properties associated with formal languages.

COURSE CODE: MCSL-2112 IMAGE PROCESSING

Course Outcomes:

After passing this course the student will be able to:

CO1: Comprehend fundamental concepts of Digital Image Processing like human visual system model, image signal representation, imaging system specification

CO2: Identify basic image processing operations.

CO3: Identify current applications in the field of digital image processing.

CO4: Comprehend various color models and color image processing techniques.

COURSE CODE: MCSL-2113
CORE AND ADVANCED JAVA

Course Outcomes:

After passing this course the student will be able to:

CO1: Comprehend Advanced Programming Concepts using Java programming.

CO2: Apply OOPs concepts to model real world problems for its simplified implementation.

CO3: Identify the utilization of packages, multithreading and Exception handling.

CO4: Demonstrate the concept of Applets, Swings and Events.

COURSE CODE: MCSL – 2114
CLOUD COMPUTING

Course Outcomes:

After passing this course the student will be able to:

CO1: Articulate the main concepts, key technologies, strengths and limitations of Cloud computing.

CO2: Identify the architecture and infrastructure of various Cloud services and deployment models.

CO3: Identify various issues related with Cloud computing and approaches corresponding to the solution of these issues.

CO4: Design prevalent solution corresponding to Cloud computing application.

CO5: Identify and apply new ideas and innovations in the field of Cloud computing.

COURSE CODE: MCSL-2115
DISTRIBUTED DATABASE SYSTEMS

Course Outcomes:

After passing this course the student will be able to:

CO1: Comprehend different kind of distributed databases and involved transparencies.

CO2: Design distributed database by demonstrating the meaning of data fragmentation, various methods of data fragmentation and data allocation strategies.

CO3: Translate global queries into fragment queries by following different equivalence transformation rules for queries.

CO4: Solve query optimization problem.

CO5: Comprehend management of distributed transaction, concurrency control mechanisms and reliability protocols.

CO6: Identify the importance of security in distributed database management system.

Master of Science (Computer Science) Semester – III
(Session 2020-21)

COURSE CODE: MCSL- 3111
DATA MINING AND WAREHOUSING

Course Outcomes:

After passing this course the student will be able to:

CO1: Understand the basic concepts of data mining and data warehousing, need of data mining and difference with ML.

CO2: Study and analyze architecture of data warehouse.

CO3: Know various data mining techniques.

CO4: Have knowledge of various applications, trends and challenges of this field.

COURSE CODE: MCSL-3112
SYSTEM SOFTWARE

Course Outcomes:

After passing this course the student will be able to:

CO1: Study and analyze various components of system software like translators, loaders, interpreters, compilers, assemblers etc.

CO2: Understand different system software like OS, DBMS, text editors etc.

CO3: Target various applications areas of system software.

COURSE CODE: MCSL-3113
ADVANCED WEB TECHNOLOGIES

Course Outcomes:

After passing this course the student will be able to:

CO1: Understand fundamental concepts and theories of web designing using ASP.NET.

CO2: Study and analyze practical uses of different controls of ASP.NET.

CO3: Establish and study dynamic relationship of the language with standard databases.

CO4: Work on other core issues of website like cookies, caching and dependencies.

COURSE CODE: MCSL-3114
DESIGN AND ANALYSIS OF ALGORITHMS

Course Outcomes:

After passing this course the student will be able to:

CO1: find an optimal solution to a practical problem.

CO2: understand various algorithm design techniques and their applications.

CO3: analyse and implement solutions to complex problems like placement of queens on chessboard, Knapsack, travelling salesman etc.

COURSE CODE: MCSL-3115
SOFTWARE TESTING

Course Outcome:

After passing this course the student will be able to:

CO1: study fundamental concepts in software testing

CO2: discuss various software testing issues and solutions in software unit test, integration and system testing.

CO3: expose the advanced software testing topics, such as object-oriented software testing methods.

CO4: discuss about the functional and system testing methods.

MASTER OF SCIENCE (COMPUTER SCIENCE) SEMESTER - IV
COURSE CODE: MCSL-4111
ADVANCED SOFTWARE ENGINEERING

Course Outcomes:

After passing this course the student will be able to:

CO1: Comprehend the process of software project planning and management.

CO2: Demonstrate software Re-use and Re-engineering.

CO3: Exemplify the process of Object Oriented Analysis and Design.

CO4: Comprehend classification and design of Object Oriented Metrics.

COURSE CODE: MCSL-4112
MICROPROCESSOR AND ITS APPLICATIONS

Course Outcomes:

After passing this course the student will be able to:

CO1: Comprehend architecture of 8086 and 8088 microprocessors.

CO2: Demonstrate the working of 8086/8088 microprocessor for minimum and maximum mode.

CO3: Apply instruction set of 8086 microprocessor to perform basic operations.

CO4: Articulate Memory and I/O interfaces of 8086/8088 microprocessor.

CO5: Comprehend interrupts and its service.

COURSE CODE: MCSL-4113
FOUNDATION OF STATISTICAL COMPUTING

Course Outcomes:

After passing this course the student will be able to:

CO1: Comprehend basics of Statistical Computing and role of constructs like control statements, string functions, array, list, etc in R programming.

CO2: Create, operate and manage data frames.

CO3: Apply R programming from a statistical perspective.

CO4: Simulate various descriptive and analytical algorithms using R language.