



**MANNAR THIRUMALAI NAICKER COLLEGE (Autonomous)**  
(An Autonomous Institution Affiliated to Madurai Kamaraj University)  
(Accredited with “A” Grade by NAAC)  
Pasumalai, Madurai -625004

**V & VI SEMESTER - COURSE OUTCOMES**  
**SCIENCE**

**B.Sc., COMPUTER SCIENCE**

**18UCSC51    COMPUTER NETWORKS**

**COURSE OUTCOMES:**

**On the successful completion of the course, learners should be able to**

**CO1:** Explain about building blocks of Computer Networks, components and transmission media.

**CO2:** Demonstrate the functionalities and protocols in the layers of ISO/OSI network model.

**CO3:** Make use of data link layer protocols in Error detection and correction

**CO4:** Classify the routing protocols and analyze how to assign the IP addresses for the given network

**CO5:** Justify how digital signatures are used to provide authentication

**18UCSC52    RELATIONAL DATABASE MANAGEMENT SYSTEM**

**COURSE OUTCOMES**

**On successful completion of the course, the learners should be able to**

**CO1:** Explain the structure and model of the relational database system.

**CO2:** Make a study of SQL and Relational database design.

**CO3:** Analyze different information about the organization requiring an electronic database and translate them to user requirements.

**CO4:** Interpret knowledge in transaction processing with relational database design.

**CO5:** Create and populate a RDBMS for a real life application, with constraints, keys using SQL.

**18UCSCP5**

**RELATIONAL DATABASE MANAGEMENT LAB**

**Course Outcomes:**

**On successful completion of the course, the learners should be able to:**

**CO1:** Write the basic database language commands to create simple database.

**CO2:** Apply PL/SQL for processing database.

**CO3:** Analyze the database using queries to retrieve records.

**CO4:** Evaluate the importance of queries and procedures to create real world applications.

**CO5:** Develop solutions using database concepts for real time requirements.

**18UCSE51**

**OPERATING SYSTEM**

**Course Outcomes**

**On successful completion of the course, the learners will be able to**

**CO1:** Define Operating System, its components and Goals, basic concepts, structure and functions of operating systems

**CO2:** Explain the mutual exclusion primitives, semaphores and concurrent programming.

**CO3:** Implement processor scheduling, deadlock prevention and avoidance for a given scenario.

**CO4:** Compare contiguous vs noncontiguous memory allocation and fixed and variable partition multiprogramming

**CO5:** Analyze the necessity of Disk Scheduling and various file systems.

**18UCSE52**

**DATA MINING**

**Course Outcomes:**

**On successful completion of the course, the learners should be able to,**

**CO1:** Know the data mining principles, techniques and discover the knowledge imbibed in the

high dimensional system.

**CO2:** Study algorithms for finding the hidden interesting patterns in data in real life.

**CO3:** Expose the students to the concepts of Data warehousing Architecture, implementation and analyze the various models.

**CO4:** Prepare evaluation criteria for classification methods and clustering

**CO5:** Study the overview of Web mining, Text mining and Big Data Mining Tools and develop

application tools

**18UCSE53**

### **SYSTEM SOFTWARE**

**Course Outcomes:**

**On successful completion of the course, the learners should be able to:**

**CO1:** Describe the various machine architectures and explain the function of assemblers, loader and linkers, Macroprocessors, Compilers and DBMS

**CO2:** Make use of the features of dependent and independent software

**CO3:** Focus the algorithm and data structures of assemblers, loader, compilers

**CO4:** Interpret the code using analysis and optimization techniques

**CO5:** Imagine an editor that use high level source code and parse the data

**18UCSE54**

### **CRYPTOGRAPHY AND NETWORK SECURITY**

**Course Outcomes:**

**On successful completion of the course, the learners should be able to:**

**CO1:** Understand the concept of Symmetric key and Asymmetric key cryptography

**CO2:** Apply the symmetric-key ciphers and asymmetric key ciphers to encrypt data

**CO3:** Analyze the different crypto systems in asymmetric key cryptography for data authentications

**CO4:** Evaluate the various digital signature schemes to check the user authentication

**CO5:** Compose secure data exchange between sender and receiver by using message integrity and message authentication

**18UCSE55**

### **ARTIFICIAL INTELLIGENCE**

**COURSE OUTCOMES**

**On Successful Completion of this Course, the learners are able to**

- CO1** Describe the concept of Artificial Intelligence.
- CO2** Analyze the search techniques and knowledge representation.
- CO3** Demonstrate knowledge of the building blocks of AI as presented in terms of intelligent agents.
- CO4** Acquire knowledge to solve problems in areas ranging from optimization problems to text analytics.
- CO5** Learn the purpose of heuristic search techniques and design AI machine and enveloping applications for real world problems.

**18UCSE56**

### **INTERNET OF THINGS**

#### **Course Outcomes:**

**On Successful Completion of this Course, the learners should be able to**

**CO1:** Describe and explain about IoT, Physical and Logical design of IoT, IoT levels, domain

specific IoTs

**CO2:** Determine physical and logical design of IoT

**CO3:** Compare Physical and Logical IoT, different levels and domain specific IoTs

**CO4:** Conclude the importance of IoT, Physical and Logical IoT, IoT levels, domain specific IoTs

**CO5:** Design and develop Physical and Logical IoT, IoT deployment templates

**18UCSSP5**

### **LINUX LAB**

#### **Course Outcomes:**

**On successful completion of this Lab the student will be able to**

**CO1:** Know the student setup users and groups, Configure user defaults, logins and user profiles.

**CO2:** Effectively use the UNIX/Linux system to accomplish typical personal, office, technical, and software development tasks.

**CO3:** Identify and use UNIX/Linux utilities to create and manage simple file processing operations, organize directory structures with appropriate security, and develop shell scripts to perform more complex tasks.

18UCSC61

## **C# AND.NET PROGRAMMING**

### **COURSE OUTCOMES**

**On successful completion of this course, the learners should be able to**

**CO1** Represent the insights of the Internet programming

**CO2** Demonstrate design and implement complete application over the web

**CO3** ConnectMS.NET framework developed by Microsoft.

**CO4** Evaluate the usage of recent platforms like C#, XML, and ASP.Net which is used in the development of web applications

**CO5** Defend the deployment and the security in the .NET framework.

18UCSCP6

## **C# AND.NET PROGRAMMING LAB**

### **Course Outcomes:**

**On successful completion of the course, the learners should be able to:**

**CO1:** How to use C# and Visual Studio 2010 to build .NET Framework applications

**CO2:** Explain the purpose of the .NET Framework.

**CO3:** Apply the syntax of basic C# programming constructs.

**CO4:** Modify the given type of value to another type using boxing and unboxing techniques.

**CO5:** Conclude and call methods in a C# application using catch, handle and throw exceptions.

18UCSPR1

## **PROJECT AND VIVA – VOCE**

### **Course Outcomes**

**CO1** The Project Lab is one that involves practical work for understanding and solving problems in the field of computing.

**CO2** Students will select individually Commercial or Technical Project based on Application Development Technologies.

**CO3** With the known technologies they can develop the software

**18UCSE61****SOFTWARE ENGINEERING****Course Outcomes:**

**On successful completion of the course, the learners should be able to:**

**CO1:** Explain about software engineering life cycle and process model in software development.

**CO2:** Prepare the SRS, Design document, Project plan of a given software system.

**CO3:** Apply Project Management and Requirement analysis, Principles to S/W project development.

**CO4:** Analyze the cost estimate and problem complexity using various estimation techniques

**CO5:** Assess SQA in software project through various testing strategies with quality management.

**18UCSE62****SOFTWARE PROJECT MANAGEMENT****COURSE OUTCOMES:**

**On successful completion of this course, the learners should be able to:**

**CO1:** Define the methods used to evaluate and select projects for investment of funds.

**CO2:** Elaborate knowledge on the principles and techniques of software project management.

**CO3:** Prepare organization behavior and general management techniques used for project.

**CO4:** Organize test case design and types of testing.

**CO5:** Evaluate the levels of testing.

**18UCSE63****MOBILE COMPUTING****Course Outcomes:**

**On successful completion of the course, students will be able to**

**CO1:** Describe the Architecture, Application and Services of Mobile Computing.

**CO2:** Build an Application Based on the User Requirements.

**CO3:** Select Appropriate Framework for Developing Applications based on the Problem Requirements.

**CO4:** Explains the importance of Emerging Technologies, GPRS, CDMA and 3G, Security

Issues.

**CO5:** Design and Develop Mobile Applications for Societal and Environmental IT Problems.

## **18UCSE64                      CLOUD COMPUTING**

### **Course Outcomes**

**On successful completion of this course, the learners should be able to**

**CO1:** Define Cloud Computing and its types

**CO2:** Explain the architecture of cloud computing

**CO3:** Make use of Virtualization Techniques

**CO4:** Analyze the different Google applications

**CO5:** Propose the various applications in the Cloud

## **18UCSE65                      BIOMETRICS**

### **Course Objective:**

On successful completion of this course, the learners should be able to,

**CO1:** Relate the security infrastructure in the industry and generally in information sensitive environments.

**CO2:** Show the brief functioning of biometric system.

**CO3:** Describe the different types of biometric and their accuracy.

**CO4:** Analyze the awareness of privacy issues for end users and for students.

**CO5:** Develop the likelihood that biometric technologies, when deployed, will be as protective of personal and informational privacy as possible.

## **18UCSE66                      NEURAL NETWORKS**

### **Course Outcomes:**

**On successful completion of the course, the learners should be able to:**

**CO1:** Know the basics of biological Neural Network and its types.

**CO2:** Attain the capability to apply the algorithms and techniques of neural network in real life

problem domains

**CO3:** Categorize the different types of neural networks and its architecture.

**CO4:** Predict human behavior in social web and related communities.

**CO5:** Construct solution for fuzzy network and Patterns Recognition Applications

**18UCSSP6**

**PYTHON PROGRAMMING LAB**

**COURSE OUTCOMES:**

**On successful completion of the course, the learners should be able to**

**CO1** Recall the basics of declaration of variables, statements and expressions

**CO2** Develop the program using branching and looping statements

**CO3** Interpret the logic into code using Recursion, Function and Module

**CO4** Examine the logical skill of python program using exception

**CO5** Create a new modules and interfaces implementing the concept of each vowel