



## **ISLAMIAH WOMEN'S ARTS AND SCIENCE COLLEGE**

Permanently Affiliated to Thiruvalluvar University  
Recognized by UGC under section 2(f) and 12(B) of UGC Act 1956  
Accredited with "B" Grade by NAAC  
Approved by the Government of Tamil Nadu  
Phone:04174-235266 Email:principaliwc@gmail.com  
www.islamiahwomensartsandsciencecollege.com

---

### **DEPARTMENT OF COMPUTER APPLICATION**

#### **PROGRAM SPECIFIC OUTCOMES (PSOs)**

**PSO 1:** To enable students to apply basic microeconomic, macroeconomic and monetary concepts and theories in real life and decision making.

**PSO 2:** To sensitize students to various economic issues related to Development, Growth, International Economics, Sustainable Development and Environment.

**PSO 3:** To familiarize students to the concepts and theories related to Finance, Investments and Modern Marketing.

**PSO 4:** Evaluate various social and economic problems in the society and develop answer to the problems as global citizens.

**PSO 5:** Enhance skills of analytical and critical thinking to analyze effectiveness of economic policies.

#### **COURSE OUTCOME**

##### **SEMESTER I**

**COURSE: PYTHON PROGRAMMING**

**CREDIT:5**

CO1: Learn the basics of python, Do simple programs on python, Learn how to use an array.

CO2: Develop program using selection statement, Work with Looping and jump statements, Do programs on Loops and jump statements.

CO3: Concept of function, function arguments, Implementing the concept strings in various application, Significance of Modules, Work with functions, Strings and modules.

CO4: Work with List, tuples and dictionary, Write program using list, tuples and dictionary.

CO5: Usage of File handlings in python, Concept of reading and writing files, Do programs using files.

**COURSE: PYTHON LAB**

**CREDIT:4**

CO1: Demonstrate the understanding of syntax and semantics of Python

CO2: Identify the problem and solve using PYTHON programming techniques.

CO3: Identify suitable programming constructs for problem solving.

CO4: Analyze various concepts of PYTHON language to solve the problem in an efficient way.

CO5: Develop a PYTHON program for a given problem and test for its correctness.

**COURSE: FUNDAMENTALS OF INFORMATION TECHNOLOGY**

**CREDIT:2**

CO1: Learn the basics of computer, Construct the structure of the required things in computer, learn how to use it.

CO2: Develop organizational structure using for the devices present currently under input or output unit.

CO3: Concept of storing data in computer using two header namely RAM and ROM with different types of ROM with advancement in storage basis.

CO4: Work with different software, Write program in the software and applications of software.

CO5: Usage of Operating system in information technology which really acts as a interpreter between software and hardware.

**COURSE: STRUCTURED PROGRAMMING LANGUAGE IN C CREDIT:2**

CO1: Remember the program structure of C with its syntax and semantics

CO2: Understand the programming principles in C (data types, operators, branching and looping, arrays, functions, structures, pointers and files)

CO3: Apply the programming principles learnt in real-time problems.

CO4: Analyze the various methods of solving a problem and choose the best method

CO5: Code, debug and test the programs with appropriate test cases.

## **SEMESTER-II**

### **COURSE: OBJECT ORIENTED PROGRAMMING CONCEPTS USING C++ CREDIT:5**

- CO1: Remember the program structure of C with its syntax and semantics
- CO2: Understand the programming principles in C (data types, operators, branching and looping, arrays, functions, structures, pointers and files)
- CO3: Apply the programming principles learnt in realtime problems
- CO4: Analyze the various methods of solving a problem and choose the best method
- CO5: Code, debug and test the programs with appropriate test cases

### **COURSE: OBJECT ORIENTED PROGRAMMING CONCEPTS USING C++LAB CREDIT:5**

- CO1: Remember the program structure of C with its syntax and semantics
- CO2: Understand the programming principles in C (data types, operators, branching and looping, arrays, functions, structures, pointers and files)
- CO3: Apply the programming principles learnt in realtime problems
- CO4: Analyze the various methods of solving a problem and choose the best method
- CO5: Code, debug and test the programs with appropriate test cases.

### **COURSE: INTRODUCTION TO HTML CREDIT:2**

- CO1: Knows the basic concept in HTML Concept of resources in HTML CO2: Knows Design concept. Concept of Meta Data Understand the concept of save the files. Understand the page formatting.
- CO3: Concept of list
- CO4: Creating Links. Know the concept of creating link to email address
- CO5: Concept of adding images Understand the table creation.

### **COURSE: UNDERSTANDING INTERNET CREDIT:2**

- CO1: On completion of this course, students will Internet.
- CO2: Knows the basic concept in internet
- CO3: Know the concept of TCP/IP – Internet Technologies and Protocol
- CO4: Understand the concept of Internet connectivity.
- CO5: Can be able to know about internet networks

## **PSOs, Cos**

### **PROGRAM SPECIFIC OUTCOMES (PSOs)**

PSO1: Able to develop Software and can serve as a Software developer and Programmer.

PSO2: Able to serve as the Software Professional in different IT sectors with enhanced knowledge of Software.

PSO3: Understand the Networking concepts and can serve as a Network Infrastructure Developer.

PSO4: Able to serve as a Database developer and also as DBMS Administrator by thoroughly learning DBMS.

PSO5: Able to serve as the Web Designers/Website Developers by knowing various Web Development Software.

PSO6: Able to present their innovations in more unique way by using Software.

## **COURSE OUTCOME**

### **SEMESTER I**

#### **COURSE: DIGITAL LOGIC AND PROGRAMMING IN C CREDIT: 6**

CO1: Apply the principles of number system, binary codes and Boolean algebra to minimize logic expressions.

CO2: Develop K-maps to minimize and optimize logic functions up to 5 variables.

CO3: Design various Combinational and Sequential Circuits such as encoders, decoders and counters using multiplexers and flip flops.

CO4: Identify the errors during the execution of a program.

CO5: Develop their programming skills.

CO6: Understand operators, expressions and pre-processors.

CO7: Understand arrays, its declaration and uses

**COURSE: PROGRAMMING IN C LAB****CREDIT: 2**

CO1: Design programs using Functions, Pointers, Structures and Union in C Language.

CO2: Design a program using File handling.

CO3: Implement arrays in Sorting and Linear Search of an element.

**COURSE: MATHEMATICAL FOUNDATIONS I CREDIT: 4**

CO1: Understand to simplify and evaluate algebraic expressions.

CO2: Analyze linear equations in one variable.

CO3: Compare linear and non-linear equations using Analytic methods.

CO4: Implement concepts to convert between metric, household and Apothecary Units.

**SEMESTER - II****COURSE: C++ & DATA STRUCTURE****CREDIT: 6**

CO1: Understand The Basic Concepts Of Operators & Expression.

CO2: Create the functions in classes & objects.

CO3: Understand the concept of function overloading.

CO4: Identify all inheritance and file concept.

CO5: Evaluate the data structure & list concept analysis. CO6: Create data type & operations in data structures concept.

CO7: Compare the binary search tree & graph concept of operation.

**COURSE: C++ AND DATA STRUCTURES LAB CREDIT: 2**

CO1: Implement the concept of classes, object, constructor, functions and overloading

CO2: Implement the inheritance and error handling functions

CO3: Implement infix to postfix conversion & binary tree traversals (in-order, pre-order & post order).

**COURSE: MATHEMATICAL FOUNDATIONS II CREDIT: 6**

CO1: Understand Matrix, Skew-Symmetric Matrix

CO2: Understand Cayley-Hamilton theorem

CO3: Analyze definite integrals

CO4: Implement analytical geometry CO5: Understand 3-Dimension

CO6: Compare area and volume using Integration

CO7: Analyze Planes and Straight Lines CO8: Analyze Hermitian and Skew-Hermitian

### **SEMESTER - III**

#### **COURSE: JAVA PROGRAMMING**

**CREDIT: 3**

CO1: Use an integrated development environment to write, compile, run and test simple object oriented java programs.

CO2: Read and make elementary modifications to java programs that solve real-world problems.

CO3: Validate input in a java program.

CO4: Identify and fix defects and common security issues in code.

#### **COURSE: E-COMMERCE**

**CREDIT: 4**

CO1: Understand traditional and electronic business applications

CO2: Analyze network infrastructure For E-Commerce

CO3: Understand network security and Firewalls

CO4: Analyze EDI and its applications

CO5: Understand about Encrypted documents

#### **COURSE: RESOURCE MANAGEMENT TECHNIQUES CREDIT: 4**

CO1: Understand linear programming problem

CO2: Analyze Assignment and transportation problem

CO3: Learn sequencing Model

CO4: Learn replacement Model

CO5: Understand networking analysis

#### **COURSE: JAVA PROGRAMMING LAB**

**CREDIT: 3**

CO1: Implement Package, Inheritance and interfaces

CO2: Analyze Flow, Border and Grid Layouts Validate input in a java program

CO3: Evaluate Dialogs, Menu and Frame

CO4: Implement User defined Exception Handling

**COURSE: FINANCIAL ACCOUNTING**

**CREDIT: 4**

CO1: Understand financial Accounting concept

CO2: Understand the causes of depreciation

CO3: Analyze calculation of bills exchange and trade bills

CO4: Compare single entry and double entry system.

CO5: Understand profit and loss accounting

**COURSE: DESIGN AND ANALYSIS OF ALGORITHM**

**CREDIT: 3**

CO1: Understand the concepts of Algorithm and Analysis.

CO2: Learn various advanced design and analysis techniques such as greedy algorithms, dynamic programming.

CO3: Understand different computational models and various complexity measures.

CO4: Analyze the complexity/ performance of different algorithms.

**COURSE: TRAINING AND DEVELOPMENT**

**CREDIT: 2**

CO1: Understand the training needs and responsibilities of On the job and Off the job training.

CO2: Understand importance of career Planning.

CO3: Understand psychology of the learning process on which training is based. CO4: Analyze the training needs of an organization.

**SEMESTER - IV**

**COURSE: DATABASE MANAGEMENT SYSTEMS**

**CREDIT: 3**

CO1: Understand the basic concepts of Database.

CO2: Analyze different data models.

CO3: Evaluate SQL and PL/SQL concepts

CO4: Implement Procedures, Functions, Triggers and Cursors.

**COURSE: ENTERPRISE RESOURCE PLANNING** **CREDIT: 4**

CO1: Describe about business process under ERP system.

CO2: Understand the system of Industrial Credit Management system

CO3: Define the various function areas

CO4: Understand the concept of human resource

management CO5: Compare and contrast traditional system  
and ERP system

**COURSE: DECISION SUPPORT SYSTEM** **CREDIT: 4**

CO1: Understand the concepts of Decision Support system (DSS) and its  
affecton management.

CO2: Define the purpose of DSS and Data Warehousing.

CO3: Compare data, information and knowledge as they apply to DSS.

CO4: Define and describe the usefulness of the neural network.

CO5: Define and differentiate between the data warehouse, data marts and data mining.

**COURSE: RDBMS LAB** **CREDIT: 3**

CO1: Implement Simple Queries to fetch data from table.

CO2: Evaluate queries used to fetch data from table using aggregate functions and  
setoperations.

CO3: Compare and Contrast Trigger Before and

After CO4: Implement Functions and Procedures in  
PL/SQL.

**COURSE: FINANCIAL ACCOUNTING II** **CREDIT: 6**

CO1: Understand different accounting methods

CO2: Evaluate department and branch account



CO3: Compute partnership account

CO4: Analyze the procedure of dissolution of partnership form

CO5: Understand hire purchase and installation accounts.

**COURSE: COMPUTER ORGANISATION AND ARCHITECTURE**  
**CREDIT: 3**

CO1: Understand the basic computer architecture.

CO2: Compare the different Addressing Modes

CO3: Analyze Direct Memory Access

CO4: Compare and Contrast Memory Management

**COURSE: MANAGEMENT CONCEPTS** **CREDIT: 2**

CO1: Understand the functions and responsibilities of managers.

CO2: Analyze tools and techniques to be used in the performance of the managerial job.

CO3: Analyze and understand the environment of the organization.

CO4: To develop cognizance of the importance of management principles.

**SEMESTER – V**

**COURSE: MOBILE APPLICATIONS DEVELOPMENT** **CREDIT:**  
**3**

CO1: Acquire knowledge of Mobile Applications Development

CO2: Understand Eclipse and Android Studio

CO3: Implement mobile applications development in Emulator

CO4: Understand Mobile databases

CO5: Understand Android Services and Android User Interface

**COURSE: OPERATING SYSTEM** **CREDIT: 3**

CO1: Analyze various operating system services

CO2: Compare and contrast various scheduling algorithm

CO3: Understand memory management techniques

CO4: Implement various file management techniques

**COURSE: DATA COMMUNICATION AND NETWORK CREDIT: 2**

CO1: Understand data communication and prepare them for better computer networking

CO2: Prepare logical and physical network drawings for fairly simple networks, specifying network and link types, plus costs

CO3. Evaluate a java program using javadoc.

**COURSE: MOBILE APPLICATIONS DEVELOPMENT LAB**

**CREDIT: 3**

CO1: Implement Basic Android

Applications CO2: Implement Activity,

Intent, Spinner CO3: Understand Android

Studio and Eclipse

CO4: Implement Progress Bar, Gaming Apps, Alert Dialog

**COURSE: OPERATING SYSTEM LAB**

**CREDIT: 3**

CO1: Implement various scheduling algorithm concept

CO2: Analyze producer consumer problem using semaphore

CO3: Implement memory management techniques

CO4: Implement a program for system calls

**COURSE: DATA MINING**

**CREDIT: 3**

CO1: Understand the concepts of data mining and data models

CO2: Acquire good knowledge of data pre processing.

CO3: Understand the concept of data classification.

CO4: Understand the concept of data cluster analysis.

**COURSE: SOFTWARE ENGINEERING**

**CREDIT: 3**

CO1: Understand Software Engineering

CO2: Analyze different Process Models like Waterfall Model, Evolutionary Process Model

CO3: Explain about the Data Engineering and System Architecture Design

CO4: Compare the Black Box and White Box Testing

CO5: Analyze the Project Management.

**SEMESTER - VI**

**COURSE: CLOUD COMPUTING**

**CREDIT: 5**

CO1: Understand the basic functions, principles and concepts of cloud systems.

CO2: Understand the basic concepts of cloud computing.

CO3: Determine the various services available for developing cloud.

CO4: Troubleshoot the various securities in cloud.

CO5: Evaluate the programming model technique available in cloud. CO6: Acquire sufficient knowledge about the cloud.

**COURSE: OPEN SOURCE PROGRAMMING**

**CREDIT: 4**

CO1: Understand the basic concepts of HTML5&CSS

CO2: Analyze various Linux commands & security models

CO3: Discussion on MYSQL and PHP database connectivity

CO4: Evaluate PHP Controls , structures and arrays

CO5: Implement basic form processing with PHP and MYSQL

**COURSE: ASP.NET LAB**

**CREDIT: 3**

CO1: Implement validation controls.

CO2: Implement Web server controls.

CO3: Implement ADO.NET and how to access database

CO4: Evaluate Ad rotator programs.

**COURSE: OPEN SOURCE PROGRAMMING LAB**

**CREDIT: 3**

CO1: Implement frames & tables in HTML

CO2: Implement various CSS styles and list concept.

CO3: Evaluate basic shell programs

CO4: Implement cookies and session concept

**COURSE: MOBILE COMPUTING**

**CREDIT: 3**

CO1: Acquire Good Knowledge of Wireless Communication to Students.

CO2: Understand Fundamentals of Wireless Communication.

CO3: Analyze Security, Mobility, Scalability and Their Unique Characteristics in WirelessNetwork.

CO4: Apply Knowledge of TCP/IP extension in Mobile computing.

**COURSE: MULTIMEDIA SYSTEMS**

**CREDIT: 3**

CO1: Understand the concept of Multimedia

CO2: Compare different medium like text,audio,video,graphics and animation.

CO3: Analyse Application program interface

CO4: Acquire good knowledge about different Multimedia Software

**COURSE: ASP.NET**

**CREDIT: 3**

CO1: Understand basic concepts of ASP.NET .

CO2: Evaluate different validation controls.

CO3: Analyze Architecture of ADO.net.

CO4: Understand how to access database in web application.