



#### PROGRAM OUTCOMES ANDCOURSE OUTCOMES

#### **Program Outcomes**

#### 1. Engineering Knowledge

Ability to apply knowledge of discrete mathematics, automata theory and computer engineering principles to solve engineering problems.

#### 2. Problem Analysis

Ability to synthesize problem statement, interpret the relevant data structure and formulate optimal solution by deciding effective algorithm design technique.

#### 3. Design/Development of Solutions

Ability to design a system architecture, by applying software engineering paradigms that meet the specified needs with appropriate consideration.

#### 4. Conduct investigations of complex problems

Ability to interpret the complex problem and resolve it by using

#### 5. Modern usage tools

Ability to model and simulate various complex computational activities by using modern engineering and IT tools.

#### 6. The engineer and society

Ability to apply reasoning in domain specific knowledge to meet the consequent responsibilities relevant to the professional engineering practice.

#### 7. Environment and sustainability

Ability to demonstrate the sustainable engineering solutions in the context of society and environment



#### 8. Ethics

Ability to apply the principle of professional ethics to computational practices.

#### 9. Individual and team work

Ability to represent effectively multi-disciplinary settings of diverse team.

#### **10.Communication**

Ability to communicate effectively with stakeholders to deal with technical and non-technical documentation and demonstration.

#### 11.Project management and finance

Ability to be conversant with and use modern project management techniques by developing the skills to become good project team members and managers

#### **12.Lifelong learning**

Ability to identify the need for training and research to engage in self-determined long –life-learning in the context of technical revolutions

#### **Program Specific Outcomes (Min. 3)**

#### Graduate will be able to

- 1. Write efficient computer programs in various programming languages and the programs are correct, efficient and well documented.
- 2. Design the solutions utilizing a computer system which includes defining problem statement, specifying the design as well as testing and documenting the solution.
- 3. Analyze and discuss the professional, legal, security and social issues and responsibilities.

Shree Warana Vibhag Shikshan Mandal's



Tatyasaheb Kore Institute of Engineering and Technology Warananagar, Panhala, Kolhapur. 416113





Subjects:

- **1. Applied Mathematics**
- 2. Discrete Mathematics & Structures
- **3. Data Structures**
- 4. Computer Networks I
- 5. Microprocessors
- 6. C programming
- 7. Soft Skills





#### COURSE OUTCOMES:

## **Applied Mathematics**

Upon successful completion of this course, the student will be able to:

1. Describe the statistical data numerically by using Lines of regression and Curve fittings.

2. Solve basic problems in probability theory, including problems involving the binomial, Poisson, and normal distributions.

3. Calculate numerical Integration.

4. Define fuzzy sets using linguistic words and represent these sets by membership functions, convexity, Normality, support, etc.

5. Solve examples on the principle in performing fuzzy number arithmetic operations such as Addition, Multiplication & fuzzy equation.

6. Solve assignment problems by using different techniques of operation research.





## COURSE OUTCOMES:

## **Discrete Mathematics & Structures**

Upon successful completion of this course, the student will be able to -

1. Apply logic concepts in designing a program.

2. Illustrate basic set concepts & apply operations on set.

3. Minimize the Boolean Function.

4. Apply basic concepts of probability to solve real world problem.

5. Represent data structures using graph concepts.

6. Design abstract machine, detect deadlocks.





#### COURSE OUTCOMES:

## **Data Structures**

Upon successful completion of this course, the student will be able to -

- 1. Understand basic primary and derived data types.
- 2. Analyze and differentiate different algorithms based on their time and space complexity.
- 3. Identify the appropriate data structure for specific application.

4. Design and analyze programming problem statements.

5. Chose appropriate sorting and searching algorithms.

6. Outline the solution to the given software problem with appropriate data structure.





COURSE OUTCOMES:

## **Computer Networks - I**

Upon successful completion of this course, the student will be able to -

- 1. Demonstrate concepts of Computer Networks.
- 2. Explain OSI and TCP/IP layered architecture
- 3. Implement network and data link layer.
- 4. Demonstrate TCP protocol in detail.

5. To analyze the protocol structure using network analyzing tools.

6. apply the principals of socket programming in the networks.





COURSE OUTCOMES:

## Microprocessors

Upon successful completion of this course, the student will be able to -

1. Describe the Architecture of 8085 microprocessors and microcontroller

2. Classify the 8086 Assembly Instructions set and use in Assembly language Programs

3.Explain Programming models of 8086 microprocessors

4. Classify the 8086 Assembly Instructions set and use in Assembly language Programs

5. Understand the higher processor architecture

6. Understand the need for other Microprocessors





#### COURSE OUTCOMES:

# **C** programming

Upon successful completion of this course, the student will be able to -

1. Articulate the principles of procedure oriented problem solving and programming.

2. Explain programming fundamentals including statements, control flow and recursion.

3. Able to formulate problems and implement algorithms in C.

4. Analyze and use data structures to solve the complex problem statements.

5. Demonstrate file operations using file handling concepts through developing applications.

6. Outline the essential features and elements of the C programming language.





COURSE OUTCOMES:

## Soft Skills

Upon successful completion of this course, the student will be able to -

- 1. Deliver ideas clearly,& effectively with confidence.
- 2. Identify and analyze problems in various situation and make justifiable evaluation.
- 3. Build good rapport, interact, and work effectively with others
- 4. Work efficiently in multidisciplinary environment using team building skills.
- 5. Identify domain specific job opportunities.
- 6. Demonstrate clear briefing and active listening skills

Shree Warana Vibhag Shikshan Mandal's



Tatyasaheb Kore Institute of Engineering and Technology Warananagar, Panhala, Kolhapur. 416113





Subjects:

- 1. Automata Theory
- 2. Computer Networks II
- 3. Computer Organization and Architecture
- 4. Operating Systems I
- **5. Software Engineering**
- 6. Object Oriented Programming
- 7. Mini Project
- 8. Environmental Studies





COURSE OUTCOMES:

## Automata Theory

Upon successful completion of this course, the student will be able to -

- 1. Classify machines by their power to recognize languages.
- 2. Understand basic concepts of Regular Language and Regular Expressions
- 3. Select appropriate abstract machine to recognize given formal language.
- 4. Generate complex languages by applying Union, Intersection, Complement, Concatenation and Kleene \* operations on simple languages.
- 5. Apply parsing concepts for syntax analysis.
- 6. Be familiar with thinking analytically and intuitively for problem solving situations in related areas of theory in computer science.





COURSE OUTCOMES:

# **Computer Networks – II**

Upon successful completion of this course, the student will be able to -

1. Program the client server model using sockets

2. Understand and apply next generation protocol and addressing model

3. Elaborate the fundamentals of Domain Name Systems

4. Apply the concepts of Remote login and FTP in network applications

5. Learn fundamentals of web, HTTP and e-mail communication protocols.

6. Understand multimedia streaming and relevant protocols.





## COURSE OUTCOMES:

# **Computer Organization and Architecture**

Upon successful completion of this course, the student will be able to –

1. Recapitulate the history of computer system and the basic concepts of computer architecture and organization.

2. Understand the concept of I/O organization.

3. Apply the different algorithms to perform arithmetic operations.

4. Articulate the design issues in the development of processor.

5. Conceptualize instruction level parallelism.

6. Understand the concept of memory techniques.





COURSE OUTCOMES:

## **Operating Systems – I**

Upon successful completion of this course, the student will be able to –

- 1. Define role and existence of Operating Systems in computer system.
- 2. Create new processes by using system calls and able to demonstrate process scheduling algorithms.
- 3. Handle and allocate resources properly to an applications depending upon scheduling policies.
- 4. Apply semaphore to real time problems to avoid mutual exclusion problems
- 5. Manage memory efficiently during execution of a process.
- 6. Organize files in memory by different organization methods and able to handle I/O devices properly.





COURSE OUTCOMES:

## **Software Engineering**

Upon successful completion of this course, the student will be able to –

1.Comprehend systematic methodologies of SDLC(Software Development Life Cycle)
2.Discriminate competing and feasible system requirements indicating correct real world problem scope and prepare stepwise system conceptual model using stakeholder analysis and requirement validation.

- 3. Prepare SRS document for a project
- 4. Apply software design and development techniques

5. Develop a quality software project through effective team-building, planning, scheduling and risk

6. Understand testing methods at each phase of SDLC





COURSE OUTCOMES:

# **Object Oriented Programming**

After the completion of this course, a successful student will be able to do the following-

1. Use the characteristics of an object-oriented programming language in a program.

2. Use the basic object-oriented design principles in computer problem solving.

3. Use the basic principles of software engineering in managing complex software project.

4. Program with advanced features of the C++ programming language.

5. Develop programs in the LINUX programming environment.





COURSE OUTCOMES:

# Mini Project

Upon successful completion of this course, the student will be able to –

- 1. Test and validate the conformance of the developed prototype against the original requirements of the problem
- 2. Identify, analyze, formulate and handle programming projects with a comprehensive and systematic approach.
- 3. Work as a responsible member and possibly a leader of a team in developing software solutions.
- 4. Learn about and go through the software development cycle with emphasis on different processes, requirement and implementation phases.
- 5. Self-learn new tools, algorithms, and/or techniques that contribute to the software solution of the project.
- 6. Generate alternative solutions, compare them and select the optimum one.





COURSE OUTCOMES:

# **Environmental Studies**

Upon successful completion of this course, the student will be able –

1. To develop ability to protect the environment through ecofriendly lifestyle.

2. To give knowledge of natural resource conservation.

3. To make able to implement sustainable technologies for environmental restoration

4. To understand environmental related problems, social issues and suggest solution.

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Subjects:

- **1.** Computer Graphics
- 2. System Programming
- **3. Object Oriented Modeling and Design**
- 4. Computer Algorithms
- **5. Network Technologies**
- 6. Programming Lab III
- 7. Business English





## COURSE OUTCOMES:

# **Computer Graphics**

- Student will be able to apply basic principles of 2D and 3D computer graphics in graphical problem solving.
- 2. Student will be able to design the algorithms for rasterization and clipping.
- 3. Student will be able to apply modelling and rendering techniques to design 3D interactive graphics.
- 4. Develop skill to generate computer graphics animation software.
- 5. Create interactive graphics application in C++ using one or more graphics programming interfaces.
- 6. Students will be able to fitting curves and surfaces.





#### COURSE OUTCOMES:

## **System Programming**

- 1. Student will be able to identify the role of system programs and application programs.
- 2. Student will be able to understand the basics of system programs like editors, compiler, assembler, linker, loader, interpreter and debugger.
- 3. To understand how linker and loader create an executable program from an object module created by assembler and compiler.
- 4. Students able to Describe the various concepts of assemblers and macro processors.
- 5. Students able to understand the various phases of compiler and compare its working with assembler.
- 6. Students will be able to create graphical user interfaces for basic programs and learn about terminal input/output through the termios libraries"





## COURSE OUTCOMES:

# **Object Oriented Modeling and Design**

- 1. Use basic object oriented concepts such as objects, classes, inheritance, encapsulation etc.
- 2. Apply object-oriented approach which differs from the traditional approach to systems analysis and design.
- 3. Construct various UML models such as object model, dynamic model, and functional model using the appropriate notations.
- 4. Combine the three models object model, dynamic model, and functional model to obtain operations on classes.
- 5. Design algorithms to implement operations and associations to relate the classes.
- 6. Package the classes and associations into modules.





## COURSE OUTCOMES:

# **Computer Algorithms**

After completion of course student will be able to

- 1. Apply, analyze and design the algorithms with efficient space and time complexity using different algorithm design techniques.
- 2. Analyze the expected performance of a particular algorithm in a particular context.
- 3. Able to use the current techniques and skills necessary for analyzing and designing programs (algorithms) with complexity.
- 4. Utilize mathematical techniques to analyze the efficiency of an algorithm and demonstrate that the algorithm is correct that it does in fact what it is claimed to do.
- 5. Vary familiar algorithms, and devise new ones, to cope with unfamiliar contexts.
- 6. Describe the classes P, NP & NP-complete and prove that a certain problem is NP-Complete.





## COURSE OUTCOMES:

# **Network Technologies**

- 1. Student will be able to identify the importance of the different network technologies.
- 2. Student will be able to apply the knowledge of different cellular component and technologies.
- 3. Student will be able to illustrate the IEEE networking standards.
- 4. Student will be able describe and summarize the existing technology of TCP, MAC protocols and their technical feasibility.
- 5. Student will be able to analyze the performance and design issues of wired/wireless network by using suitable tools.
- 6. Student will be able to deal their ability to think, analyze and apply wireless security services and sensor network.





#### COURSE OUTCOMES:

# **Programming Lab – III**

- 1. Students will be able to articulate the principle of object oriented problem solving & programming.
- 2. Students will be able to illustrate code reusability, security and abstraction using inheritance, package and interface.
- 3. Students will be able to develop reliable and user friendly applications using exception handling and file handling.
- 4. Students will be able to create GUI using AWT & SWING package.
- 5. Students will be able to apply network programming & multithreading concepts
- 6. Students will be able to use JDBC & collection framework.





## COURSE OUTCOMES:

# **Business English**

- 1. Students will gain confidence in speaking English in work situations.
- 2. Students will use a range of business terms and vocabulary.
- 3. Students will become more fluent to analyze, discuss and express business concepts and ideas.
- 4. Students will develop reading comprehension of authentic business texts.
- 5. Students will recognize and use a wide range of business text types.
- 6. Students will be able to effectively prepare and write customer business letters.

Shree Warana Vibhag Shikshan Mandal's



Tatyasaheb Kore Institute of Engineering and Technology Warananagar, Panhala, Kolhapur. 416113



# COURSE OUTCOMES T. E. CSE (Sem-II)

## **Subjects:**

- **1.** Compiler Construction
- 2. Operating System II
- 3. Database Engineering
- 4. Storage Networks
- **5. Information Security**
- 6. Programming Lab IV
- 7. Domain Specific Mini-Project





#### COURSE OUTCOMES:

# **Compiler Construction**

- 1. Students will be able to get practical knowledge about structure of compiler.
- 2. Students will be able to Learn context free grammars, compiler parsing techniques, construction of abstract syntax trees, symbol tables, and actual code generation.
- 3. Students will be able to obtain thorough coverage of the basic issues in code optimization techniques.
- 4. Introduce the major concepts in areas of language translation and compiler design.
- 5. Students will be able to identify and apply error detection and correction methods
- 6. Develop an awareness of the function and complexity of modern compilers





#### COURSE OUTCOMES:

## **Operating System – II**

- 1. Students get the knowledge of different data structures used for creating unix file system.
- 2. Students illustrates the different file system data structures when system calls are executed.
- 3. Students comprehend the low level algorithm for implementing file system.
- 4. Students demonstrate how to create process and execute another task.
- 5. Students illustrate and show the signal mechanism and able to execute a task when signal is caught.
- 6. Students get knowledge to implement process communication using semaphore, shared memory and messages and implementation of device drivers.





## COURSE OUTCOMES:

## **Database Engineering**

- 1. Understand fundamentals of database management systems
- 2. Represent logical design of database using E-R Diagram.
- 3. Analyze & construct good database design.
- 4. Apply SQL queries to design & manage the database.
- 5. Understand possible database failures and will implement appropriate recovery techniques.
- 6. Understand transactions, concurrency and apply to database system.





## COURSE OUTCOMES:

## **Storage Networks**

- 1. Students will illustrate different data storage components /devices.
- 2. Students will analyze necessity for storage area networks.
- 3. Students will demonstrate use of network attached storage in data center environment.
- 4. Student will demonstrate knowledge of RTO(Recovery time option) & RPO (Recovery point objective)
- 5. Student will analyze state of art of backup/recovery & virtualization technologies
- 6. Student will describe the different role in providing disaster recovery and business continuity capabilities.





## COURSE OUTCOMES:

# **Information Security**

- 1. Apply modular arithmetic and fundamental properties of finite field to cryptographic techniques.
- 2. Describe basic concepts and algorithms of cryptography ,including encryption/decryption, hash function , digital signature.
- 3. Make assessment on network, web security of cryptographic functions and evaluate their strength.
- 4. Student will acquire knowledge in security issues, services, goals and mechanism.
- 5. Identify and classify system security threats and develop a security model to prevent, detect and recover from attacks.
- 6. Student will develop code to implement a cryptographic algorithm or write an analysis report on any existing security product.





## COURSE OUTCOMES:

## **Programming Lab – IV**

- 1. Students will be able to illustrate .NET architecture, common language runtime, garbage collection & assemblies.
- 2. Students will be able to articulate principles object oriented problem solving and programming.
- 3. Students will be able to define behavior of primitive data type, object reference, arrays and operator overloading
- 4. Students will be able to illustrate code reusability, security, & abstraction using inheritance, exception handling and interface.
- 5. Students will be able to display proficiency in C# by building console based & windows form based applications in the .NET framework.
- 6. Students will be able to apply network programming and multithreading concepts in .NET





## COURSE OUTCOMES:

## **Domain Specific Mini-Project**

- 1. Students will be able to use engineering approach to solve domain specific real time problem.
- 2. Students will be able to use the appropriate and new modern technologies while developing project.
- 3. Students will be able to execute the skills of team building and team work.
- 4. Students will be able to adopt professional practices during development and documentation of the project.
- 5. Students will be able to apply the knowledge of mathematical, operational and computer science gained by study, experience and practices.
- 6. Students will be able to develop economically effective use of information to the benefits of human kind.

Shree Warana Vibhag Shikshan Mandal's



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Subjects:

- **1. Advanced Computer Architecture**
- 2. Distributed Systems
- **3. Advanced Database Systems**
- 4. Elective I
- 5. Web Technologies I
- 6. Project I
  - **Elective** –I
  - A. Soft Computing
  - **B.** Mobile Applications
  - **C. Adhoc Wireless Networks**





## COURSE OUTCOMES:

## **Advanced Computer Architecture**

- 1. Describe the relevance between basic architecture and advanced computer architecture.
- 2. Differentiate among the various processors architectural characteristics.
- 3. Identify the significance of parallelism available at different level in both uniprocessor and multiprocessor architectures.
- 4. Investigate modern design structures of pipelined, array and multiprocessor systems.
- 5. Analyze the performance trade-offs in computer architecture design.
- 6. Apply knowledge of processor design to improve the performance in algorithms and software system.





## COURSE OUTCOMES:

# **Distributed Systems**

- 1. Use of key protocols that support the Internet
- 2. Common programming interfaces for network communication
- 3. Have a detailed knowledge of the TCP/UDP Socket
- 4. Create applications using techniques such as multiplexing, forking, multithreading
- 5. Apply knowledge of Unix/Linux operating systems to build robust client and server software for this environment
- 6. Learn advanced programming techniques such as Broadcasting, Multicasting





## COURSE OUTCOMES:

## **Advanced Database Systems**

- 1. To learn Basics of design of databases
- 2. To acquire knowledge on parallel and distributed databases and its applications.
- 3. To study the usage and applications of Object Oriented database.
- 4. To Understand and perform common database administration tasks, such as database
- 5. To understand the usage of advanced data models.
- 6. Illustrate and analyze Distributed Query processing techniques in Parallel/Distributed Databases/Multi-Databases.





#### COURSE OUTCOMES:

## **Elective – I Mobile Applications**

- 1. Student will be able to develop problem solving abilities using Mobile Applications
- 2. Student will be able to Utilize rapid prototyping techniques to design and develop sophisticated mobile interfaces.
- 3. Student will be able to write a survey on tools and architectures for Mobile Applications.
- 4. Student will be able to Describe the components and structure of a mobile development framework and patterns to the development of a mobile software application.
- 5. Student will be able to Apply a mobile development framework to the development of a mobile application.
- 6. Student will be able to Address the limitations and challenges of working in a mobile environment and thus utilize the opportunities for commercial and/or social benefit.





## COURSE OUTCOMES:

## **Elective – I Adhoc Wireless Networks**

- 1. Understand need for ad hoc networks.
- 2. Explain the constraints of physical layer that affect the design and performance of ad hoc network.
- 3. Understand why protocols required for wired network may not work for wired network at MAC, Network and Transport Layer.
- 4. Explain the operations and performance of various MAC layer protocols, unicast routing protocols and transport layer protocols proposed for ad hoc networks.
- 5. Understand security issues and QoS requirements





## COURSE OUTCOMES:

# Web Technologies – I

- 1. Student will be able to design Web application using HTML
- 2. Student will be able to analyze and choose the web technology requirements based on the problem statement.
- 3. Student will be able to apply the knowledge of XML and its technologies in real time applications.
- 4. Student will able to validate the XML File.
- 5. Students will be able to design and deploy platform independent web applications using servlet.
- 6. Students will be able to design and deploy platform independent web applications using jsp.





#### COURSE OUTCOMES:

# Project – I

- 1. Student should be able to plan, analyze and design a project.
- 2. Use of software engineering principles and apply them for software design.
- 3. Learn to work as a team and inculcate team management skills.
- 4. Able to learn about different artifacts produced during software development.
- 5. Analyze and apply new emerging technologies in development of the project.
- 6. Students should be able to diagnose their own learning needs, formulate goals and strategies to seek knowledge from multiple sources.

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Subjects:

- **1. Data Analytics**
- 2. Project Management
- **3. Real-time Operating System**
- 4. Elective II
- 5. Web Technologies II
- 6. Project II
- 7. Community Services
  - **Elective** –**II**
  - **A. Internet of Things**
  - **B.** Software Testing and Quality Assurance
  - **C. Introduction to Mainframes**





#### COURSE OUTCOMES:

# **Data Analytics**

- 1. Understand and Use Business Intelligence and Decision support systems for decision making
- 2. Design, implement, populate and query data warehouses for big data.
- 3. Demonstrate the mathematical models for decision making, Data mining & Data exploration.
- 4. Interpret and predict the data using different data mining tasks.
- 5. Analyze and Synthesize and apply different data mining algorithms.
- 6. Use and Integrate Hadoop Ecosystem and R for big data analysis





## COURSE OUTCOMES:

## **Project Management**

- 1. Students should be able to understand the process of project management and its application in delivering successful IT projects.
- 2. Students should be able to describe an overall framework for project integration management and project execution.
- 3. Students should able to Explain a concept of project to develop the scope of work, provide accurate cost estimates and to plan the various activities.
- 4. Students should able to Identify the human resource, other resources required for a project and to produce a work plan and resource schedule.
- 5. Students should able to Compare different types of Quality project and follow the stages needed to negotiate an appropriate contract. Tools for maintaining quality
- 6. Students should able to Understand risk management analysis techniques that identify the factors that put a project at risk and to quantify the likely effect of risk on project timescales





## COURSE OUTCOMES:

## **Real-time Operating System**

- 1. Student will able to prepare and compile challenges between operating system fundamentals to real time system.
- 2. Student will able to identify practical framework for software engineers to design and implement real time system.
- 3. Student will able to combine and integrate with computer architecture and organization, operating system, software engineering, programming language, and compiler theory for design real time software.
- 4. Student will able to describe and interpret real time kernel services like scheduling intertask communication and memory management.
- 5. Student will able to understand different performance measures for real time O.S.
- 6. Student will able to demonstrate using RTLinux tools and techniques for to build a real time multitasking system.





COURSE OUTCOMES:

Elective – II

## **Internet of Things**

Upon successful completion of above course students will be able to,

- 1. Explain the definition and usage of the term "The Internet of Things" in global contexts.
- 2. Understand where the IoT concept fits within the broader ICT industry and possible future trends.
- 3. Differentiate between the levels of the IoT stack and be familiar with the key technologies and protocols employed at each layer of the stack.
- 4. Understand the legal / governing implications and international regulation for organization and stakeholders during the development of IoT working models.
- 5. Understand the wireless technologies such as RFID and WSN to support variety of IoT applications
- 6. Use the knowledge and skills acquired during the course to build and test a complete working IoT system involving prototyping, programming and data analysis.





#### COURSE OUTCOMES:

# Elective – II

## **Software Testing and Quality Assurance**

- 1. Study fundamentals of software testing and quality assurance
- 2. Understand the fundamentals of software verification , write software testing documents, and test cases.
- 3. Expose the advanced software testing topics, such as object-oriented testing, Regression Testing ,Web application testing issues, challenges, and solutions.
- 4. Study and illustrate measurement and internal quality measurement of attributes.
- 5. Understand and evaluate metrics and models used in software testing.
- 6. Study Automation testing and apply it to web application testing





COURSE OUTCOMES:

**Elective – II** 

## **Introduction to Mainframes**

- 1. Students are able to compresence and analyze the different hardware components of mainframe technology.
- 2. Role of the mainframe in infrastructure of medium and large IT organizations.
- 3. Learn the JCL, COBOL and DB2 as best practices for designing applications in mainframe systems.
- 4. Understand the importance of legacy system.
- 5. Understanding of different components of mainframe technology
- 6. Students are able to comprehend the database(DB2) utility tools and its relation with mainframe application.





#### COURSE OUTCOMES:

## Web Technologies – II

- 1. Student will be able to Design Web Pages using different Web Technologies.
- 2. Student will be able to perform client and Server side validation.
- 3. Student will be able to develop web application using Asp.net.
- 4. Student will be able to Perform different Database operations using Asp.net.
- 5. Student will be able to develop web application using PHP.
- 6. Student will be able to Perform different Database operations using PHP.





## COURSE OUTCOMES:

## **Project-II**

- 1. Student should be able to plan, analyze and design a project.
- 2. Use of software engineering principles and apply them for software design
- 3. Learn to work as a team and inculcate team management skills.
- 4. Able to learn about different artifacts produced during software development.
- 5. Analyze and apply new emerging technologies in development of the project.
- 6. Students should be able to diagnose their own learning needs, formulate goals and strategies to seek knowledge from multiple sources.





## COURSE OUTCOMES

# **Community Services**

- 1. Student will be able to create awareness about the use of computer technologies in normal day to day life.
- 2. Student will be able to demonstrate the e-services provided by the public sector to the society.
- 3. Student will be able to understand the social responsibilities and role played by the technology in modern democratic society.
- 4. Student will be able to create an awareness of rules and regulations about to the RTI in society.
- 5. Student will be able toto demonstrate use of various schemes announced by central / state government of India.
- 6. Student will be able to enhance the analytical, informational and problem solving abilities of the individuals in the society