

Pillai HOC College of Engineering and Technology, Rasayani

Department of Information technology

Class/Sem: SE/III

Course Name: AM-III

The students will be able to:

Course Code	Course Outcome Statements
ITC301.1	Understand the concept of set theory, pigeonhole principle with their applications.
ITC301.2	Become familiar with functions, relations.
ITC301.3	Use basic knowledge of Laplace Transform with their properties.
ITC301.4	Apply the knowledge of Inverse Laplace transform to solve ordinary differential equations.
ITC301.5	Use fundamental knowledge of complex variable to identify an analytic. Harmonic functions and orthogonal trajectories applications of these to approximation and mapping problems.
ITC301.6	Identify permutations and combinations and use these concepts in probability theory.

The students will be able to:

Course Code	Course Outcome Statements
ITC302.1	Understand the concepts of various components to design stable analog circuits.
ITC302.2	Represent numbers and perform arithmetic operations.
ITC302.3	Minimize the Boolean expression using Boolean algebra and design it using logic gates.
ITC302.4	Analyze and design combinational circuit.
ITC302.5	Design and develop sequential circuit.
ITC302.6	Translate real world problems into digital logic formulations using VHDL.

The students will be able to:

Course Code	Course Outcome Statements
ITC303.1	Select appropriate data structures as applied to specified problem definition
ITC303.2	Implement operations like searching, insertion, and deletion, traversing mechanism etc. on various data structures.
ITC303.3	Implement Linear and Non-Linear data structures.
ITC303.4	Implement appropriate sorting/searching technique for given problem.
ITC303.5	Design advance data structure using Non-Linear data structure.
ITC303.6	Determine and analyze the complexity of given Algorithms.

The students will be able to:

Course Code	Course Outcome Statements
ITC304.1	Explain the features of database management systems and Relational database.
ITC304.2	Design conceptual models of a database using ER modelling for real life applications and also construct queries in Relational Algebra.
ITC304.3	Create and populate a RDBMS for a real life application, with constraints and keys, using SQL.
ITC304.4	Retrieve any type of information from a data base by formulating complex queries in SQL.
ITC304.5	Analyze the existing design of a database schema and apply concepts of normalization to design an optimal database.
ITC304.6	Build indexing mechanisms for efficient retrieval of information from a database.

The students will be able to:

Course Code	Course Outcome Statements
ITC305.1	Understand the basic principles and techniques used in analog and digital communications.
ITC305.2	Evaluate the influence of noise and use of Fourier transform in analog and digital communication system.
ITC305.3	Characterize the working of amplitude and frequency-modulated analog communications systems using appropriate mathematics and block diagrams.
ITC305.4	Analyze various pulse modulation and demodulation systems and its working principle.
ITC305.5	Characterize the working of digitally-modulated communications systems using appropriate mathematics and block.
ITC305.6	Understand the propagation and its types.

Pillai HOC College of Engineering and Technology, Rasayani

Department of Information Technology

Class/Sem: SE /IV

Course Name: AM-IV

The students will be able to:

Course Code	Course Outcome Statements
ITC401.1	Understand the concept of elements of Number theory with their properties.
ITC401.2	Understand the concept of congruence, Chinese remainder theorem.
ITC401.3	Apply the concept of random variables, probability distributions for solving problems.
ITC401.4	Apply the knowledge of sampling theory for testing of hypothesis by using various tests.
ITC401.5	Understand the structure of graphs and groups with their applications.
ITC401.6	Understand the basic properties of algebraic systems defined by Lattices.

The students will be able to:

Course Code	Course Outcome Statements
ITC402.1	Understand the working of different networks and they will be able to choose appropriate network, operating system and media for the effective communication of the data.
ITC402.2	Understand principles of network design and the performance issues of network.
ITC402.3	Study and implement different network industry standards such as OSI & TCP models, different protocols of routing and congestion control.
ITC402.4	Familiar and able to work with network tools & able to apply the techniques for the betterment of society.
ITC402.5	Detect and correct the errors in transmission of data using different network techniques.
ITC402.6	Explain the types of transmission media with real time application.

The students will be able to:

Course Code	Course Outcome Statements
ITC403.1	Describe the important computer system resources and the role of operating system in their management policies and algorithms.
ITC403.2	Understand the process management policies and scheduling of processes by CPU.
ITC403.3	Evaluate the requirement for process synchronization and coordination handled by operating system.
ITC403.4	Describe and analyze the memory management and its allocation policies.
ITC403.5	Identify, use and evaluate the storage management policies with respect to different storage management technologies.
ITC403.6	Identify the need to create the special purpose operating system.

The students will be able to:

Course Code	Course Outcome Statements
ITC404.1	Describe basic organization of computer and architecture 8086 microprocessor.
ITC404.2	Implement assembly language program for given task for 8086 microprocessor.
ITC404.3	Demonstrate control unit operations and conceptualize instruction level parallelism.
ITC404.4	Demonstrate and perform computer arithmetic operations on integer and real numbers.
ITC404.5	Categorise memory organization and explain the function of each element of memory hierarchy.
ITC404.6	Identify, and compare different methods for computer I/O mechanisms.

The students will be able to:

Course Code	Course Outcome Statements
ITC405.1	Understand the concepts & fundamentals of Grammars and Languages.
ITC405.2	Formalize mathematical models of basic machines, deterministic and non deterministic machines and pushdown machines.
ITC405.3	Use the pumping lemma and closure properties to prove that some problems cannot be solved by particular machines
ITC405.4	Develop understanding of different types of Turing machines and their use.
ITC405.5	Understand the concept of Undesirability.
ITC405.6	Compare, understand and analyze different languages, grammar, automata and machines and appreciate their power and convert automata to programs and functions.

Mahatma Education Society's
Pillai HOC College of Engineering and Technology, Rasayani
Department of Information Technology

Class/Sem: TE /V

Course Name: CGVR

The students will be able to:

Course Code Course Outcome Statements

ITC501.1 Understand basic concepts of computer graphics.

ITC501.2 Acquire knowledge about drawing basic shapes such as lines, circle, ellipse, and polygon.

ITC501.3 Understand algorithms to scan convert the basic geometrical primitives, transformations, Area filling, clipping.

ITC501.4 Understand how to apply the basic transformation and composite transformation.

ITC501.5 Synthesize different illumination model and rendering.

ITC501.6 Understand the fundamentals of animation, Virtual reality, the related technologies, and shall be able to describe applications of Virtual Reality.

The students will be able to:

Course Code Course Outcome Statements

ITC502.1 Understand basic knowledge, functions and services of Operating system as system software.

ITC502.2 Design functions and services and learn various algorithms.

ITC502.3 Analyze, study and implementation of resource control, scheduling, I/O and file management.

ITC502.4 Solve the deadlock problems and apply various techniques.

ITC502.5 Identify the role of process synchronisation towards increasing throughput of the system.

ITC502.6 Recognize the various data structures used by different OS like Windows XP, Linux and Unix.

The students will be able to:

Course Code Course Outcome Statements

- ITC503.1 Understand the basic internal architecture of microcontroller systems.
- ITC503.2 Acquire knowledge about microcontroller embedded processors and their applications.
- ITC503.3 Write assembly language programs for microcontroller for given specification.
- ITC503.4 Understand the basic architectural fundamentals of ARM7 processor.
- ITC503.5 Understand the working of real time operating systems & real time embedded systems.
- ITC503.6 Design conceptual embedded system.

The students will be able to:

Course Code Course Outcome Statements

ITC504.1 Construct complex queries using SQL to retrieve and manipulate information in a database.

ITC504.2 Design and implement full-fledged real life applications integrated with database systems.

ITC504.3 Clearly understand how databases are actually stored and accessed; How transaction ACID properties are maintained and how a database recovers from failures.

ITC504.4 Apply security controls to avoid any type of security incidents on vital database systems.

ITC504.5 Design advanced data systems using Object based systems or Distributing databases for better resource management.

ITC504.6 Understand the importance of enterprise data and be able to organize data to perform analysis on the data and take strategic decisions.

The students will be able to:

Course Code Course Outcome Statements

ITC505.1 Understand the knowledge of Open Source Technology and Open Source Software with his License.

ITC505.2 Analyze the Linux Environment.

ITC505.3 Understand the File system in Linux. Understanding Boot process and related files in Linux.

ITC505.4 Installation process, working on Linux and configuration of various web servers.

ITC505.5 Understand and analyze the Shell Programming.

ITC505.6 Understand Android programming language and implement projects of Android application.

Mahatma Education Society's
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Class/Sem: TE /VI

Course Name: SE

The students will be able to:

Course Code Course Outcome Statements

ITC601.1 To learn development life cycle models, practice, process of software and also how to develop SRS.

ITC601.2 To learn core design strategies, concepts, principles, patterns and UML for software development .

ITC601.3 To learn various testing techniques for entire system or unit of a system and understand complexity of system.

ITC601.4 To formulate and configure software project from developers and customers bench.

ITC601.5 To evaluate and understand factors and principles of quality by stake holder's point of view.

ITC601.6 Understand the constraints of software projects use techniques to estimate, review, verify reengineer software process or product.

The students will be able to:

Course Code Course Outcome Statements

ITC602.1 Learn the core concept of distributed system that will help them to solve the complex problem.

ITC602.2 Gain a clear understanding of fundamental principles of Distributed Systems along with design and implementation.

ITC602.3 Understand the message communication, remote procedure call and Remote method invocation along with group communication.

ITC602.4 Gain sufficient knowledge to design a distributed system that fulfils requirements with regards to key distributed system properties.

ITC602.5 Emphasis on developing applications using current distributed computing technologies like EJB, CORBA and.NET.

ITC602.6 Develop/design distributed system/applications for an enterprise using SOA.

The students will be able to:

Course Code Course Outcome Statements

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| ITC603.1 | Understand the needs of Computer Security. |
| ITC603.2 | Conceptualize and understand different authentication methods |
| ITC603.3 | Understand and Analyze the basic working of security system |
| ITC603.4 | Understand the different software security issues. |
| ITC603.5 | Understand and synthesis the network security attacks and its security protocol |
| ITC603.6 | Analysis and synthesis the various issues related to program and web security. |

The students will be able to:

Course Code Course Outcome Statements

ITC604.1 Understand the importance of data mining and the principles of business intelligence.

ITC604.2 Prepare the data needed for data mining algorithms in terms of attributes and class inputs, training, validating, and testing files.

ITC604.3 Implement the appropriate data mining methods like classification, clustering or association mining on large data sets.

ITC604.4 Define and apply metrics to measure the performance of various data mining algorithms.

ITC604.5 Apply the appropriate data mining technique, interpret and visualize the results and provide decision support.

ITC604.6 Apply BI tools to solve practical problems.

The students will be able to:

Course Code Course Outcome Statements

ITC605.1 Understand search engine and different keyword generation.

ITC605.2 Enable students to determine SEO objective and develop SEO plan prior to site development

ITC605.3 Design responsive web application using CSS3 selector, transformation and evaluate different animation effect using CSS3.

ITC605.4 Understand different mash up technology.

ITC605.5 Learn Rich Internet Technology, JSON, REST.

ITC605.6 Design responsive web application using HTML 5 and media query.

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Class/Sem: BE /VII

Course Name: SPM

The students will be able to:

Course Code Course Outcome Statements

BEITC701.1 To understand project environment get familiarise with attributes, characteristics, principles and risk involved in project management

BEITC701.2 Learn how to plan the activities, conceptualise and initialise an IT project.

BEITC701.3 Learn project techniques of implementing, monitoring, controlling, tracking, scheduling, delivering, and budgeting to achieve objective and competency in software projects.

BEITC701.4 To use PMBOK guidelines share the best practices, tools for quality and risk related to project management.

BEITC701.5 Learn ethics in the project, understand how to manage multicultural projects.

BEITC701.6 To co-ordinate, communicate, manage, evaluate, audit the progress of the project skilfully, also how to effectively close out a project contract

The students will be able to:

Course Code Course Outcome Statements

BEITC702.1 Articulate the main concepts, key technologies, strengths, limitations and possible applications of cloud computing.

BEITC702.2 Understand the deployment model and service model of cloud computing

BEITC702.3 Analyze core issues of cloud computing such as security, privacy and interoperability.

BEITC702.4 Explain the virtualization techniques used in cloud computing.

BEITC702.5 Compare various cloud computing providers/ Software.

BEITC702.6 Handle Open Source Cloud Implementation and Administration.

The students will be able to:

Course Code Course Outcome Statements

BEITC703.1 Develop a basic understanding of the building blocks of AI presented in terms of intelligent agents.

BEITC703.2 Choose an appropriate problem-solving method and knowledge-representation scheme.

BEITC703.3 Develop an ability to analyze and formalize the problem as a state space search, different planning methods and select the appropriate search method to achieve goal.

BEITC703.4 Apply their own logic for the given problem statement and evaluate different logics along with its reasoning.

BEITC703.5 Acquiring knowledge of how environment can become uncertain and what is the probability of uncertainty.

BEITC703.6 Develop/demonstrate/ build simple intelligent systems using different AI techniques.

The students will be able to:

Course Code Course Outcome Statements

BEITC704.1 Understand the new trends in mobile/wireless communications networks to solve the mobile/communication problems.

BEITC704.2 Understand the characteristics of mobile/wireless communication channels.

BEITC704.3 Understand the multiple radio access techniques and concept of cellular telephone.

BEITC704.4 Understand the multiuser detection techniques and functionality of wireless technology.

BEITC704.5 Understand various wireless networks and their technologies.

BEITC704.6 Understand types of attacks, need of securities and economies in wireless systems.

The students will be able to:

Course Code Course Outcome Statements

BEITC705.1 Understand nature of E-Commerce and E-business involving the process of it, technical aspects, its impact and potentials and technologies of E-commerce and E-Business from business and enterprise point of view.

BEITC705.2 Analyse and interpret the technological, user, network requirements for developing the various modules of E-Commerce/Business site.

BEITC705.3 Apply the knowledge gained and modern engineering tools in their application domain.

BEITC705.4 Create and design E-Commerce and E-Business website applications for it, also they will be able to apply various design principles for applications.

BEITC705.5 Learn the key aspects, business strategies required for development of E-Commerce and E-Business application.

BEITC705.6 Work effectively as a team to propose IT enabled solutions to organizational level problems.

The students will be able to:

Course Code Course Outcome Statements

BEITC705.1 Analyze and explain various technologies involved to support multimedia application development.

BEITC705.2 Achieve an in-depth understanding of the impact of multimedia, the range of media types and tools to support their digital conversion and manipulation

BEITC705.3 Understand and evaluate the process of development of Multimedia systems

BEITC705.4 Produce Multimedia Presentation and interactive web page design.

BEITC705.5 Develop multimedia systems as per industry standards and frameworks.

BEITC705.6 Solve multimedia project development problems and capable to lead a multimedia development project, also to market their multimedia products.

Mahatma Education Society's
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Class/Sem: BE /VIII

Course Name: SNMR

The students will be able to:

Course Code Course Outcome Statements

BEITC801.1 Understand storage area network(intelligent storage system data protection, RAID technology etc)

BEITC801.2 Understand the design and implementation of storage network management and retrieval.

BEITC801.3 Evaluate storage architectures, including storage subsystems, SAN, NAS, and IP-SAN, also define backup, recovery.

BEITC801.4 Define information retrieval in storage network and identify different storage virtualization technologies.

BEITC801.5 Understand advanced storage technologies like NAS,FC SAN and ISCSI SAN etc.

BEITC801.6 Understand and build Storage networks and its backup and recovery techniques.

The students will be able to:

Course Code Course Outcome Statements

BEITC802.1 Understand the key issues in big data management and its associated applications in intelligent business and scientific computing.

BEITC802.2 Acquire fundamental enabling techniques and scalable algorithms like Hadoop, Map Reduce and NO SQL in big data analytics.

BEITC802.3 Interpret business models and scientific computing paradigms, and apply software tools for big data analytics.

BEITC802.4 Achieve adequate perspectives of big data analytics in various applications like recommender systems, social media applications etc.

BEITC802.5 Apply the data mining models and techniques to solve complex real-world problems for decision support in data mining.

BEITC802.6 Apply fundamental techniques and principles in achieving big data analytics with scalability and streaming capability.

The students will be able to:

Course Code Course Outcome Statements

BEITC803.1 Understand the meaning of simulation and its importance in business, Science, Engineering, Industry and services.

BEITC803.2 Formulate and build valid models as well as modelling skills

BEITC803.3 Analyze events inter arrival time, arrival process, queuing Strategies, Resources and disposal of entities.

BEITC803.4 Perform a simulation using spreadsheets as well as simulation language/package to solve the real world problems

BEITC803.5 Analyze and fit the collected data to different distributions.

BEITC803.6 Understand the meaning of simulation and its importance in business, Science, Engineering, Industry and services.

The students will be able to:

Course Code Course Outcome Statements

BEITC804.1 Understand the importance of software Quality and apply software testing techniques for information systems development

BEITC804.2 Generate test cases from software requirements using various test processes for continuous quality improvement.

BEITC804.3 Apply software testing techniques in commercial environments and assess the adequacy of test suites using control flow, data flow, and program mutation.

BEITC804.4 Identify the inputs and deliverables of the testing process and work together as a team in preparing a report.

BEITC804.5 Use industry-standard testing tools

BEITC804.6 Test the software product thoroughly and capable to lead a software testing activity for a project, and successfully deliver the quality product.