MET's Institute of Technology, Polytechnic

Department of Computer Engineering

Course Outcomes – 'I' Scheme by MSBTE

Course	Course Code	Course Outcomes
First Semester		
Fundamentals of ICT–C101	C101.1	Use computer system and its peripherals.
	C101.2	Prepare business document using word processing tool.
	C101.3	Interpret data and represent it graphically using spreadsheet.
	C101.4	Prepare professional presentations.
	C101.5	Use different types of web browsers.
Engineering Graphics – C102	C102.1	Draw regular geometrical figures.
	C102.2	Use drawing codes, conventions and symbols as per IS SP-46 in engineering drawing
	C102.3	Draw the views of given object using principles of orthographic projection.
	C102.4	Draw isometric views of given component or from orthographic projections.
	C102.5	Draw free hand sketches of given engineering elements.
	C102.6	Use computer aided drafting approach to create engineering drawings
Workshop Practice - C106	C106.1	Use electrical tools, instruments, devices and equipment for basic level of maintenance of Computer and peripherals.
	C106.2	Identify active and passive electronic components.
	C106.3	Undertake basic level maintenance of a PC.
	C106.4	Use different kinds of printers and scanners.
	C106.5	Identify the layout of wired and wireless LAN environment.
English –C104	C104.1	Formulate grammatically correct sentences.
	C104.2	Summarise comprehension passages
	C104.3	Compose dialogues and paragraphs for different situations.
	C104.4	Use relevant words as per context.
	C104.5	Deliver prepared speeches to express ideas, thoughts and emotions.
Basic Physics & Basic Chemistry –C105	C105.1	Estimate errors in the measurement of physical quantities.
	C105.2	Apply the principles of electricity and magnetism to solve engineering problems.
	C105.3	Use the basic principles of heat and optics in related engineering applications.
	C105.4	Apply the catalysis process in industries.
	C105.5	Use corrosion preventive measures in industry.
	C105.6	Use relevant engineering materials in industry.

Basic Mathematics - C106	C106.1	Apply the concepts of algebra to solve engineering related problems. Developing the vocabulary.
	C106.2	Utilize basic concepts of trigonometry to solve elementary engineering problems.
	C106.3	Solve basic engineering problems under given conditions of straight lines.
	C106.4	To Solve the problems based on measurement of regular closed figures and regular solids
	C106.5	Use basic concepts of statistics to solve engineering related problems.

Course	Course Code	Course Outcomes
Second Semester		
Business Communication Using Computers-C201	C201.1	Communicate effectively by avoiding barriers in various formal and informal.
	C201.2	Communicate skillfully using non-verbal methods of communication.
	C201.3	Give presentations by using audio-visual aids.
	C201.4	Write reports using correct guidelines.
	C201.5	Compose e-mail and formal business letters.
Computer Peripheral and Hardware Maintenance-C202	C202.1	Identify different types of computer systems.
	C202.2	Troubleshoot common motherboard problems
	C202.3	Select processors required for relevant systems.
	C202.4	Partition/format hard disk drives.
	C202.5	Troubleshoot peripherals and networks.
Web page Designing with HTML-C203	C203.1	Use block level formatting tags to present content on web page.
	C203.2	Use text level formatting tags to present content on web page.
	C203.3	Apply hyper linking on web page.
	C203.4	Organize the content using table and frames.
	C203.5	Apply presentation schemes on content using CSS.
	C203.6	Publish websites on Internet or Intranet.
Elements of Electrical Engineering - C204	C204.1	Use principles of magnetic circuits.
	C204.2	Use single phase AC supply for electrical and electronics equipment.
	C204.3	Use three phase AC supply for industrial equipment and machines
	C204.4	Connect transformers and DC motors for specific requirements
	C204.5	Use FHP motors for diversified applications.
	C204.6	Use relevant protective devices/switchgear for different requirements.
Applied Mathematics-C205	C205.1	Calculate the equation of tangent, maxima, minima, radius of curvature by differentiation.
	C205.2	Solve the given problems of integration using suitable methods.
	C205.3	Apply the concept of integration to find area and volume.
	C205.4	Solve the differential equation of first order and first degree using suitable methods.
	C205.5	Apply the concepts of numerical methods in computer programming languages.
Basic Electronics-C206	C206.1	Identify electronic components in electronic circuits.
	C206.2	Use diodes in different applications .
	C206.3	Interpret the working of junction transistor in the electronic circuits.
	C206.4	Interpret the working of unipolar devices in the electronic circuits.
	C206.5	Use sensors and transducers.

Programming in 'C' - C207	C207.1	Develop flowcharts and algorithms to solve problems logically.
	C207.2	Write simple 'C' programs using arithmetic operations.
	C207.3	Develop 'C' programs using control structures.
	C207.4	Develop 'C' programs using arrays and structures.
	C207.5	Develop/Use functions in C programs for modular programming approach.
	C207.6	Develop 'C' programs using pointers.

Course	Course Code	Course Outcomes
Third Semester		
Object Oriented Programming using C++-C301	C301.1	Develop a C++ programs to solve problems using procedure oriented approach.
	C301.2	Develop a C++ programs using classes and objects.
	C301.3	Implement inheritance in C++ program.
	C301.4	Use Polymorphism in C++ program.
	C301.5	Develop a C++ programs to perform file operation.
Data Structures using 'C' - C302	C302.1	Perform basic operations on arrays.
	C302.2	Apply different searching and sorting techniques.
	C302.3	Implement basic operations on stack and queue using array implementation.
	C302.4	Implement basic operations on Linked List.
	C302.5	Implement program to create and traverse tree to solve problems.
Computer Graphics - C303	C303.1	Manipulate visual and geometric information of images.
	C303.2	Implement standard algorithms to draw various graphics objects using C program.
	C303.3	Develop programs for 2-D and 3-D Transformations.
	C303.4	Use projections to visualize objects on view plane.
	C303.5	Implement various clipping algorithms.
	C303.6	Develop programs to create curves using algorithms.
Database Management System - C304	C304.1	Design Normalized Database on Given Data
	C304.2	Create and Manage Database Using Given data
	C304.3	Write PL/SQL code for given database
	C304.4	Apply Triggers on Database also create procedure and function according to given condition.
	C304.5	Apply Security and confidentiality on given Database.
Digital Techniques- C305	C305.1	Use Number System and codes for interpreting working of Digital System.
	C305.2	Use Boolean Expression to realize logic circuit.
	C305.3	Build Simple Combinational circuit.
	C305.4	Build Simple Sequential circuit.
	C305.5	Test Data Converters and PLDs in digital electronics systems.

Course	Course Code	Course Outcomes
Fourth Semester		
GUI Application Development Using VB.Net - C401	C401.1	Use Visual Studio IDE to design application.
	C401.2	Develop GUI Application using Form Controls and its events.
	C401.3	Apply Object Oriented concepts in GUI Application.
	C401.4	Use Data access controls to store data in Database and retrieve it.
	C401.5	Use Data Binding in GUI Application.
Java Programming - C402	C402.1	Develop programs using Object Oriented methodology in Java.
	C402.2	Apply concept of inheritance of code reusability.
	C402.3	Develop programs using multithreading.
	C402.4	Implement Exception Handling.
	C402.5	Develop programs using graphics and applets.
	C402.6	Develop programs for handling I/O and file streams.
Software Engineering - C403	C403.1	Select suitable process model for software development.
	C403.2	Prepare software requirement specifications.
	C403.3	Use software modelling to create data designs.
	C403.4	Estimate size and cost of software product.
	C403.5	Apply project management and quality assurance principles in software development.
Data Communication and Computer Network-C404	C404.1	Analyze the function of data communication and computer network.
	C404.2	Select relevant transmission media and switching technique as per need.
	C404.3	Analyze the transmission errors with respect to IEEE standards.
	C404.4	Configure various networking devices.
	C404.5	Configure TCP IP Services.
Microprocessors - C405	C405.1	Analyze the functional block of 8086 microprocessor.
	C405.2	Write the assembly Language program for given problem.
	C405.3	Use Instructions for different addressing modes.
	C405.4	Develop an assembly language program using assembler.
	C405.5	Develop an assembly language program using procedure, macros and modular programming approach.

Course	Course Code	Course Outcomes
Fifth Semester		
Environmental Studies-C501	C501.1	Develop public awareness about environment.
	C501.2	Select alternative energy Resources for engineering practice.
	C501.3	Conserve. Ecosystem & biodiversity.
	C501.4	Apply techniques to reduce environmental pollution.
	C501.5	Manage social issues and Environmental Ethics as lifelong learning.
Operating System -C502	C502.1	Install Operating System and configure it.
	C502.2	Use operating system tools to perform various functions.
	C502.3	Execute process commands for performing process management operations.
	C502.4	apply scheduling algorithms to calculate turn-around time and average waiting time.
	C502.5	calculate efficiency of different memory management techniques.
	C502.6	Apply file management techniques.
Advanced Java Programming - C503	C503.1	Develop programs using GUI Framework (AWT and Swing).
	C503.2	Handle events of AWT and Swing components.
	C503.3	Develop programs to handle events in Java programming.
	C503.4	Develop java programs using networking concepts.
	C503.5	Develop programs using database.
	C503.6	Develop programs using Servlets.
Software Testing - C504	C504.1	Apply various Software Testing methods.
	C504.2	Prepare Test cases for different types and levels of testing.
	C504.3	Prepare Test plan for an application.
	C504.4	Identify bugs to create defect report of given application.
	C504.5	Test softwares for performance measures using automated testing tools.
Client Side Scripting Language (Elective)- C505	C505.1	Create interactive web pages using program flow control structure.
	C505.2	Implement array and functions in java script.
	C505.3	Create event based web forms using java script.
	C505.4	Use java script for handling cookies.
	C505.5	Create interactive web page using regular expression for validations.
	C505.6	Create menu and navigations in web page
Advanced Computer Network (Elective) - C506	C506.1	Implement Network Layer Protocols.
	C506.2	Configure IPv6 network.
	C506.3	Choose routing protocol in given network situation.
	C506.4	Implement different Transport Layer Protocols.
	C506.5	Configure various Application Layer Protocols.

Advanced Database Management Systems (Elective) - C507	C507.1	Differentiate different database architectures.
	C507.2	Use Object Oriented and Advanced XML queries on Database.
	C507.3	Manipulate data using MongoDB Commands.
	C507.4	Use Data Mining and Data Warehousing concepts.
	C507.5	Use Big Data Concepts.
Industrial Training - C508	C508.1	Communicate effectively (verbal as well as written) the work carried out.
	C508.2	Prepare and present the report of the work carried out.
	C508.3	Exercise time management and safety in the work environment.
	C508.4	Working in a team.
	C508.5	Demonstrate various quality assurance.
	C508.6	Exhibit the work carried out.
Capstone Project Planning - C509	C509.1	Write the problem/task specification in existing systems related to the occupation.
	C509.2	Select, collect and use required information/knowledge to solve the problem/complete the task.
	C509.3	Logically choose relevant possible solution(s).
	C509.4	Consider the ethical issues related to the project (if there are any).
	C509.5	Assess the impact of the project on society (if there are any).
	C509.6	Prepare 'project proposals' with action plan and time duration scientifically before beginning of project.
	C509.7	Communicate effectively and confidently as a member and leader of team.

Course	Course Code	Course Outcomes
		Sixth Semester
Entrepreneurship Development - C601	C601.1	Identify your entrepreneurial traits.
	C601.2	Identify the business opportunities that suits you.
	C601.3	Use the support systems to zero down to your business idea.
	C601.4	develop comprehensive business plans.
	C601.5	Prepare plans to manage the enterprise effectively.
Management– C602	C602.1	Use basic management principles to execute daily activities.
	C602.2	Use principles of planning and organising for accomplishment of tasks.
	C602.3	Use principles of directing and controlling for implementing the plans.
	C602.4	Apply principles of safety management in all activities.
	C602.5	Understand various provisions of industrial acts.
Programming with Python - C603	C603.1	Display message on screen using python script on IDE.
	C603.2	Develop python program to demonstrate use of operators.
	C603.3	Perform operations on data structures in python.
	C603.4	Develop function for given problem.
	C603.5	Design classes for given problem.
	C603.6	Handle exceptions.
Mobile application development - C604	C604.1	Interpret features of Android operating System.
	C604.2	Configure android environment and development tools.
	C604.3	develop rich user Interfaces by using layouts and controls.
	C604.4	Use user interface components for android application development.
	C604.5	Create android application using database.
	C604.6	Publish android applications.
Emerging Trend in Computer and Information Technology - C605	C605.1	Description of Artificial Intelligence, Machine Learning and Deep learning.
	C605.2	Interpret IOT Concepts.
	C605.3	Compare Models of Digital Forensic Investigation.
	C605.4	Description of evidence Handling Procedures.
	C605.5	Description of Ethical Hacking process.
	C605.6	Detecting Network, Operation system and applications vulnerabilities.
Web Based Application Development using PHP - C606	C606.1	Develop programs using control statements.
	C606.2	Perform operations based arrays and graphics.
	C606.3	Develop programs by applying various Object-Oriented Concepts.
	C606.4	Use form controls with validation to collect user's input.
	C606.5	Perform database operations in PHP.

Network and Information Security (Elective) - C607	C607.1	Identify risks related to Computer Security and Information hazard in various situations.
	C607.2	Apply user identification and authentication methods.
	C607.3	Apply cryptographic algorithms and protocols to maintain Computer Security.
	C607.4	Apply measures to prevent attacks on network using firewall.
	C607.5	Maintain secured networks and describe Information Security Compliance Standards.
Data Warehousing and Mining Techniques (Elective) - C608	C608.1	Establish scope and necessity of Data Mining for various applications.
	C608.2	Establish scope and necessity of Data warehouse for various applications.
	C608.3	Use concept of data mining components and techniques in designing data mining systems.
	C608.4	Use data mining tools for different applications.
	C608.5	Apply basic Statistical calculations on Data.
Capstone Project Execution & Report Writing - C609	C609.1	Implement or plan the activity individually and/or as a team.
	C609.2	Select collect and use required information/knowledge to solve the identified problem.
	C609.3	Take the appropriate decision based on collected and analyzed information.
	C609.4	Ensure quality in product.
	C609.5	Incorporate Energy and environment conservation projects.
	C609.6	Consider the ethical issues related to project.
	C609.7	Access the impact of project on society.
	C609.8	Communicate effectively and confidently as a member and leader of a team.
	C609.9	Prepare project report after performing due plagiarism check using appropriate tools.
Emerging Trend in Computer and Information Technology - C605 (Revised in AY:22-23)	C605.1	Describe machine learning and data concepts.
	C605.2	Interpret IOT Concepts.
	C605.3	Describe Block chain technology.
	C605.4	Describe Digital Forensic and Evidence Handling procedures.
	C605.5	Describe Ethical Hacking process.
	C605.6	Detect Network, Operating System, and application vulnerabilities.