



**“EMPOWERMENT THROUGH TECHNOLOGICAL EXCELLENCE”
GENBA SOPANRAO MOZE TRUST’S**

GENBA SOPANRAO MOZE COLLEGE OF ENGINEERING

(Recognized by AICTE, New Delhi; Approved by Govt. of Maharashtra; Affiliated to Pune University)

25/1/3, Balewadi, Pune – 411045. Ph: 020-27390500

Website: www.gsmozecoe.co.in Email: gsmoze@yahoo.co.in

Department of Computer Engineering

Course Outcomes

SE	Computer
Course Code	Subject: Sem-I
210241	Discrete Mathematics student will be able to– <ul style="list-style-type: none">● Solve real world problems logically using appropriate set, function, and relation models and interpret the associated operations and terminologies in context.● Analyze and synthesize the real world problems using discrete mathematics.
210242	Digital Electronics and Logic Design student will be able to– <ul style="list-style-type: none">● Realize and simplify Boolean Algebraic assignments for designing digital circuits using K-Maps.● Design and implement Sequential and Combinational digital circuits as per the specifications.● Apply the knowledge to appropriate IC as per the design specifications.● Design simple digital systems using VHDL.● Develop a simple embedded system for simple real world application.

210243	<p>Data Structures and Algorithms</p> <p>student will be able to–</p> <ul style="list-style-type: none"> ● To discriminate the usage of various structures in approaching the problem solution. ● To design the algorithms to solve the programming problems. ● To use effective and efficient data structures in solving various Computer Engineering domain problems. ● To analyze the problems to apply suitable algorithms and data structure. ● To use appropriate algorithmic strategy for better efficiency.
210244	<p>Computer Organization and Architecture</p> <p>student will be able to–</p> <ul style="list-style-type: none"> ● Demonstrate computer architecture concepts related to design of modern processors, memories and I/Os. ● Analyze the principles of computer architecture using examples drawn from commercially available computers. ● Evaluate various design alternatives in processor organization.
210245	<p>Object Oriented Programming</p> <p>student will be able to–</p> <ul style="list-style-type: none"> ● Analyze the strengths of object oriented programming ● Design and apply OOP principles for effective programming ● Develop programming application using object oriented programming language C++ ● Percept the utility and applicability of OOP.
Sem-II	Sem-II
207003	<p>Engineering Mathematics III</p> <p>student will be able to–</p> <ul style="list-style-type: none"> ● Solve higher order linear differential equation using appropriate techniques for modeling and analyzing electrical circuits. ● Solve problems related to Fourier transform, Z-Transform and applications to Signal and Image processing.

	<ul style="list-style-type: none"> ● Apply statistical methods like correlation, regression analysis and probability theory for analysis and prediction of a given data as applied to machine intelligence. ● Perform vector differentiation and integration to analyze the vector fields and apply to compute line, surface and volume integrals. ● Analyze conformal mappings, transformations and perform contour integration of complex functions required in Image processing, Digital filters and Computer graphics.
210251	<p>Computer Graphics</p> <p>student will be able to–</p> <ul style="list-style-type: none"> ● Apply mathematics and logic to develop Computer programs for elementary graphic operations ● Develop scientific and strategic approach to solve complex problems in the domain of Computer Graphics ● Develop the competency to understand the concepts related to Computer Vision and Virtual reality ● Apply the logic to develop animation and gaming programs.
210252	<p>Advanced Data Structures</p> <p>student will be able to–</p> <ul style="list-style-type: none"> ● To apply appropriate advanced data structure and efficient algorithms to approach the problems of various domains. ● To design the algorithms to solve the programming problems. ● To use effective and efficient data structures in solving various Computer Engineering domain problems. ● To analyze the algorithmic solutions for resource requirements and optimization ● To use appropriate modern tools to understand and analyze the functionalities confined to the data structure usage.
210253	<p>Microprocessor</p> <p>student will be able to–</p> <ul style="list-style-type: none"> ● To apply assembly language programming to develop small real life embedded applications.

	<ul style="list-style-type: none"> ● To understand the architecture of the advanced processor thoroughly to use the resources for programming ● To understand the higher processor architectures descended from 80386 architecture
210254	<p>Principles of Programming Languages</p> <p>student will be able to–</p> <ul style="list-style-type: none"> ● To analyze the strengths and weaknesses of programming languages for effective and efficient program development. ● To inculcate the principles underlying the programming languages enabling to learn new programming languages. ● To grasp different programming paradigms ● To use the programming paradigms effectively in application development.

TE	
Course Code	Subject: Sem-I
310241	<p>Theory of Computation</p> <p>student will be able to–</p> <ul style="list-style-type: none"> ● Able to design deterministic Turing machine for all inputs and all outputs ● Able to subdivide problem space based on input subdivision using constraints ● Able to apply linguistic theory
310242	<p>Database Management Systems (DBMS)</p> <p>student will be able to–</p> <ul style="list-style-type: none"> • Develop the ability to handle databases of varying complexities • Use advanced database Programming concepts
310243	<p>Software Engineering and Project Management</p> <p>student will be able to–</p> <ul style="list-style-type: none"> <input type="checkbox"/> Decide on a process model for a developing a software project

	<ul style="list-style-type: none"> <input type="checkbox"/> Classify software applications and Identify unique features of various domains <input type="checkbox"/> Design test cases of a software system. <input type="checkbox"/> Understand basics of IT Project management. <input type="checkbox"/> Plan, schedule and execute a project considering the risk management. <input type="checkbox"/> Apply quality attributes in software development life cycle.
<p>310244</p>	<p>Information Systems & Engineering Economics</p> <p>student will be able to–</p> <ul style="list-style-type: none"> ● Understand the need, usage and importance of an Information System to an organization. ● Understand the activities that are undertaken while managing, designing, planning, implementation, and deployment of computerized information systems in an organization. ● Further the student would be aware of various Information System solutions like ERP, CRM, Data warehouses and the issues in successful implementation of these technology solutions in any organizations ● Outline the past history, present position and expected performance of a company engaged in engineering practice or in the computer industry. Perform and evaluate present worth, future worth and annual worth analysis on one of more economic alternatives. ● Be able to carry out and evaluate benefit/cost, life cycle and breakeven analysis on one or more economic alternatives.
<p>310245</p>	<p>Computer Networks</p> <p>student will be able to–</p> <ul style="list-style-type: none"> <input type="checkbox"/> Analyze the requirements for a given organizational structure to select the most appropriate networking architecture, topologies, transmission mediums, and technologies <input type="checkbox"/> Demonstrate design issues, flow control and error control <input type="checkbox"/> Analyze data flow between TCP/IP model using Application, Transport and Network Layer Protocols. <input type="checkbox"/> Illustrate applications of Computer Network capabilities, selection and usage for various sectors of user community. <input type="checkbox"/> Illustrate Client-Server architectures and prototypes by the means of correct standards and technology. Demonstrate different routing and

	switching algorithms.
Sem-II	Sem-II
310250	<p>Design & Analysis of Algorithms</p> <p>student will be able to–</p> <ul style="list-style-type: none"> ● Formulate the problem ● Analyze the asymptotic performance of algorithms ● Decide and apply algorithmic strategies to solve given problem ● Find optimal solution by applying various methods
310251	<p>Systems Programming & Operating System</p> <ul style="list-style-type: none"> ● Analyze and synthesize system software ● Use tools like LEX & YACC. ● Implement operating system functions
310252	<p>Embedded Systems & Internet of Things</p> <p>student will be able to–</p> <ul style="list-style-type: none"> ● Implement an architectural design for IoT for specified requirement ● Solve the given societal challenge using IoT ● Choose between available technologies and devices for stated IoT challenge.
310253	<p>Software Modeling and Design</p> <p>student will be able to–</p> <ul style="list-style-type: none"> ● Analyze the problem statement (SRS) and choose proper design technique for designing web-based/ desktop application ● Design and analyze an application using UML modeling as fundamental tool ● Apply design patterns to understand reusability in OO design Decide and apply appropriate modern tool for designing and modeling ● Decide and apply appropriate modern testing tool for testing web-based/desktop application
310254	Web Technology

	<p>student will be able to–</p> <p>Analyze given assignments to select sustainable web development and design methodology .</p> <p>Develop web based applications using suitable client side and server side web technologies.</p> <p>Develop solutions to complex problems using appropriate methods, technologies, frameworks, web services and content management Course Contents.</p>
--	---

BE	
Course Code	Subject:Sem-I
410241	<p>High Performance Computing</p> <p>student will be able to–</p> <ul style="list-style-type: none"> ● Describe different parallel architectures, inter-connect networks, programming models

	<ul style="list-style-type: none"> ● Develop an efficient parallel algorithm to solve given problem ● Analyze and measure performance of modern parallel computing systems Build the logic to parallelize the programming task
410242	<p>Artificial Intelligence and Robotics</p> <p>student will be able to–</p> <ul style="list-style-type: none"> ● Identify and apply suitable Intelligent agents for various AI applications Design smart system using different informed search / uninformed search or heuristic approaches. ● Identify knowledge associated and represent it by ontological engineering to plan a strategy to solve a given problem. ● Apply the suitable algorithms to solve AI problems
410243	<p>Data Analytics</p> <p>student will be able to–</p> <ul style="list-style-type: none"> ● To write case studies in Business Analytic and Intelligence using mathematical models. ● To present a survey on applications for Business Analytic and Intelligence. ● To write problem solutions for multi-core or distributed, concurrent/Parallel environments
410244(C):	<p>Ele-I-Pervasive and Ubiquitous Computing</p> <p>student will be able to</p> <ul style="list-style-type: none"> <input type="checkbox"/> To understand the characteristics and principles of Pervasive computing <input type="checkbox"/> To introduce to the enabling technologies of pervasive computing <input type="checkbox"/> To understand the basic issues and performance requirements of pervasive computing applications <input type="checkbox"/> To learn the trends of pervasive computing
410245(B):	<p>Ele-II-Software Testing and Quality Assurance</p> <p>student will be able to–</p> <ul style="list-style-type: none"> ● Describe fundamental concepts in software testing such as manual testing, automation testing and software quality assurance. ● Design and develop project test plan, design test cases, test data, and conduct test operations

	<ul style="list-style-type: none"> ● Apply recent automation tool for various software testing for testing software ● Apply different approaches of quality management, assurance, and quality standard to software system ● Apply and analyze effectiveness Software Quality Tools
Sem-II	Sem-II
410250	<p>Machine Learning</p> <p>student will be able to–</p> <ul style="list-style-type: none"> ● Distinguish different learning based applications ● Apply different preprocessing methods to prepare training data sets for machine learning. ● Design and implement supervised and unsupervised machine learning algorithms. ● Implement different learning models ● Learn Meta classifiers and deep learning concepts
410251	<p>Information and Cyber Security</p> <p>student will be able to–</p> <ul style="list-style-type: none"> ● Gauge the security protections and limitations provided by today's technology. ● Identify information security and cyber security threats. ● Analyze threats in order to protect or defend it in cyberspace from cyber-attacks. ● Build appropriate security solutions against cyber-attacks.
410252(C)	<p>Ele-III- Embedded and RTOS</p> <p>student will be able to-</p> <ul style="list-style-type: none"> <input type="checkbox"/> Recognize and classify embedded and real-time systems <input type="checkbox"/> Explain communication bus protocols used for embedded and real-time systems <input type="checkbox"/> Classify and exemplify scheduling algorithms <input type="checkbox"/> Apply software development process to a given RTOS application <input type="checkbox"/> Design a given RTOS based application
410253(C):	Ele-IV-Cloud Computing

	<p>student will be able to–</p>
--	---------------------------------

- To install cloud computing environments.
- To develop any one type of cloud
- To explore future trends of cloud computing