



*An Education Empowered by Industry...*  
**FABTECH TECHNICAL CAMPUS**  
**COLLEGE OF ENGINEERING & RESEARCH**

(Approved by AICTE, New Delhi; DTE., (M.S.), Mumbai &  
Affiliated to Dr. Babasaheb Ambedkar Technological University, Lonere, Dist.- Raigad )  
NAAC Accredited 'B' Grade ISO 9001 : 2015 Certified Institute  
Pandharpur Road, Gat No. 565/1, Sangola, Taluka:- Sangola, District:- Solapur. - 413 307. P.O. Box No. 04  
Contact No. : 840888657 Website: www.fabtecheducation.com E-mail : ftc.coer@gmail.com

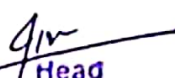
**A.Y.:2019-2020**  
**For Graduation Courses**  
**B. Tech in Civil Engineering**

**A. Program Educational Objectives (PEOs)**

PEO1	Taking pride in their profession and have commitment to highest standards of ethical practices and related technical disciplines.
PEO2	Able to design various structures and systems that is safe, economical and efficient.
PEO3	Capable of using modern tools efficiently in all aspects of professional practices.
PEO4	Dealing successfully with real life civil engineering problems and achieve practical solutions based on a sound science and engineering knowledge.
PEO5	Shall be engage in continuous research, development and exchange of knowledge for professional development.

**B. Program Outcomes (POs)**

PO1	Apply the knowledge of mathematics, basic sciences, and mechanical engineering to the solution of complex engineering problems.
PO2	Identify, formulate, research literature, and analyze complex mechanical engineering problems reaching substantiated conclusions.
PO3	Design solutions for complex engineering problems and design mechanical system components that meet the specified needs.
PO4	Use mechanical engineering research-based knowledge related to interpretation of data and provides valid conclusions.
PO5	Create, select, and apply modern mechanical engineering and IT tools to complex engineering activities with an understanding of the limitations.
PO6	Apply reasoning acquired by the mechanical engineering knowledge to assess societal and safety issues.
PO7	Understand the impact of engineering solutions on the environment, and demonstrate the knowledge for sustainable development.

  
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<b>PO8</b>	Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
<b>PO9</b>	Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
<b>PO10</b>	Communicate effectively on complex engineering activities with the engineering community and with society at large.
<b>PO11</b>	Understand the engineering and management principles and apply these to the multidisciplinary environments.
<b>PO12</b>	Recognize the need for life-long learning in the broadest context of technological change.

**c. Program-Specific Outcomes (PSOs)**

<b>PSO1</b>	Make the students employable in engineering industries.
<b>PSO2</b>	Motivate the students for higher studies and research.
<b>PSO3</b>	Motivate the students for various competitive examinations

  
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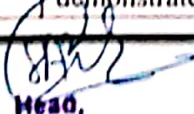
**2019-2020**  
**For Under-Graduation Courses**  
**B.Tech. in Mechanical Engineering**

**A. Program Educational Objectives (PEOs)**

PEO 1	Graduates should excel in engineering positions in industry and other organizations that emphasize design and implementation of engineering systems and devices.
PEO 2	Graduates should excel in best post-graduate engineering institutes, acquiring advanced degrees in engineering and related disciplines.
PEO 3	Alumni should establish a successful career in an engineering-related field and adapt to changing technologies.
PEO 4	Graduates are expected to continue personal development through professional study and self-learning.
PEO 5	Graduates should be good citizens and cultured human beings, with full appreciation of the importance of professional, ethical and societal responsibilities.

**B. Program Outcomes (POs)**

PO 1	Apply the knowledge of mathematics, basic sciences, and mechanical engineering to the solution of complex engineering problems.
PO 2	Identify, formulate, research literature, and analyze complex mechanical engineering problems reaching substantiated conclusions.
PO 3	Design solutions for complex engineering problems and design mechanical system components that meet the specified needs.
PO 4	Use mechanical engineering research-based knowledge related to interpretation of data and provide valid conclusions.
PO 5	Create, select, and apply modern mechanical engineering and IT tools to complex engineering activities with an understanding of the limitations.
PO 6	Apply reasoning acquired by the mechanical engineering knowledge to assess societal and safety issues.
PO 7	Understand the impact of engineering solutions on the environment, and demonstrate the knowledge for sustainable development.

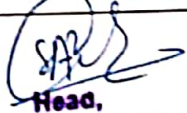
  
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PO 8	Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
PO 9	Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
PO 10	Communicate effectively on complex engineering activities with the engineering community and with society at large.
PO 11	Understand the engineering and management principles and apply these to the multidisciplinary environments.
PO 12	Recognize the need for life-long learning in the broadest context of technological change.

**c. Program-Specific Outcomes (PSOs)**

PSO 1	Make the students employable in engineering industries.
PSO 2	Motivate the students for higher studies and research.

  
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**A.Y.:2019-2020**  
**For Graduation Courses**  
**B. Tech in Electrical Engineering**

**A. Program Educational Objectives (PEOs)**

PEO1	Will exhibit strong technical ability and creativity to formulate alternative solutions to various electrical Engineering problems with available resources.
PEO2	Will demonstrate good interpersonal communication, team spirit and leadership in their profession.
PEO3	Will follow ethical approach and engage themselves in lifelong learning to meet societal needs and global challenges.
PEO4	Will exhibit industry ready abilities and skills.

**B. Program Outcomes (POs)**

PO1	Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
PO2	Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
PO3	Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
PO4	Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
PO5	Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
PO6	The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
PO7	Environment and sustainability: Understand the impact of the professional

  
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	engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
PO8	Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
PO9	Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
PO10	Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
PO11	Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
PO12	Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change

c. Program-Specific Outcomes (PSOs)

PSO 1	Make the students employable in engineering industries.
PSO 2	Motivate the students for higher studies and research.

  
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**For Under-Graduation Courses**  
**B. Tech in Computer Science & Engineering**  
**A.Y. 2019-2020**

**A. Program Educational Objectives (PEOs)**

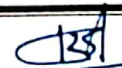
Objective, Identifier	Objectives
PEO1	To provide knowledge of sound mathematical principles underlying various programming concepts.
PEO2	To develop an ability to understand complex issues in the analysis, design, implementation and operation of information systems.
PEO3	To provide knowledge of mechanisms for building large-scale computer-based systems.
PEO4	To develop an ability to provide computer-based solutions to the problems from other disciplines of science and engineering.
PEO5	To impart skills necessary for adapting rapid changes taking place in the field of information and communication technologies.
PEO6	To provide knowledge of ethical issues arising due to deployment of information and communication technologies in the society on large scale.

**B. Program Outcomes (POs)**

Outcome Identifier	Outcomes
PO1	The graduates will possess the knowledge of various discrete mathematical structures, Logic and numerical techniques.
PO2	The graduates will have an ability to apply mathematical formalism of Finite Automata and Probability in modeling and analysis of systems.
PO3	The graduates will have knowledge of core programming paradigms such as database orientation, object orientation, and agent orientation and concepts essential to implement software based system.

  
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PO4	The graduates will have an ability to analyze problem, specify algorithmic solutions to them and to evaluate alternative solutions.
PO5	The graduate will have broad understanding of the impact of a computer based solutions in economic, environmental and social context and will demonstrate use of analytical tools in gathering requirements and distilling relevant information to provide computer based solutions.
PO6	The graduates will demonstrate the ability to build human centric interfaces to computers.
PO7	The graduates will possess the knowledge of advanced and emerging topics in the fields of operating systems, databases and computer networks.
PO8	The graduates will possess skills necessary to communicate design engineering ideas. The skills set include verbal, written and listening skills.
PO9	The graduates will understand ethical issues in providing computer based solutions also they will have an ability and attitude to address the ethical issues.
PO10	The graduates will understand the role of system software such as operating systems, database management systems, compilers, middle-ware and internet protocols in realizing distributed information environment

**A. Program Specific Outcome (PSO)**

<b>Outcome Identifier</b>	<b>Outcomes</b>
PSO1	Ability to understand basics of computer system hardware and peripherals.
PSO2	Ability to install and use open source operating system, application software and use of FLOSS tools.
PSO3	Ability to solve, analyze and provide meaningful insights for data analytic problems.



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**A.Y.:2019-2020**  
**For Under-Graduation Courses**  
**B. Tech in Electronics & Telecommunication  
Engineering**

**A. Program Educational Objectives (PEOs)**

PEO1	To prepare students to give good theoretical background with sound practical knowledge, enable them to analyze and solve Electronics and Telecommunication Engineering problems by applying basic principles of mathematics, science and engineering using modern tools and techniques.
PEO2	To make students to test hardware components and software for offering solution to real life situations.
PEO3	To inculcate students to be sensitive to ethical, societal and environmental issues while pursuing their professional duties.
PEO4	To build strong fundamental knowledge amongst students to pursue higher education and to enhance research and continue professional development in Electronics, Communication and IT industries with attitude for lifelong learning.
PEO5	To nurture students with technical and communication skills in order to be able to function on multidisciplinary fields and make them aware of contemporary issues at national and international levels.
PEO6	To develop students for team-works and managerial skills leading to entrepreneurship and leadership.

**B. Program Outcomes (POs)**

PO1	To apply knowledge of mathematics, science and engineering to the solution of complex engineering problems.
PO2	To identify, formulate, review research literature and analyze complex engineering problems reaching substantiated conclusions using principles of mathematics, natural sciences and engineering sciences.

PO3	To design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal and environmental considerations.
PO4	To use research-based knowledge and research methods including design of experiments, analysis and interpretation of data and synthesis of the information to provide valid conclusions.
PO5	To create, select and apply appropriate techniques, resources and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
PO6	To apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
PO7	To understand the impact of the professional engineering solutions in societal and environmental contexts and demonstrate the knowledge of and need for sustainable development.
PO8	To apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
PO9	To function effectively as an individual and as a member or leader in diverse teams, and in multidisciplinary settings.
PO10	To communicate effectively on complex engineering activities with the engineering community and with society at large such as being able to comprehend and write effective reports and design documentation, make effective presentations and give and receive clear instructions.
PO11	To demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
PO12	To recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

### C. Program-Specific Outcomes (PSOs)

PSO1	Apply basic knowledge related to electronic circuits, embedded & wireless communication systems and signal processing to solve engineering/ societal problems in the field of electronics and telecommunication engineering.
PSO2	recognize and adapt to technical developments and to engage in lifelong learning And develop consciousness for professional, social, legal and ethical Responsibilities.
PSO3	Excellent adaptability to the changing industrial and real world requirements

  
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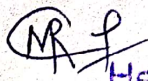
**For Post-Graduation(PG) Courses**  
**M.Tech in Electrical Engineering**  
**Academic Year:2019-2020**

**A. Program Educational Objectives (PEOs)**

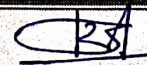
No.	PEO
PEO1	To prepare graduates meet the challenges of modern society through viable engineering solutions
PEO2	To prepare graduates to develop economically viable cutting edge technology for local industry Need.
PEO3	To prepare graduates to inspire next generation graduates as successful engineer/ entrepreneur, scientist and researcher

**B. Program Outcomes (POs)**

PO1	Ability to apply knowledge of science, mathematics, and engineering principles for solving problems
PO2	Ability to identify, formulate and solve electrical power system problems
PO3	Ability to understand and use different software tools in the domain of Power electronics, power system and control system simulations
PO4	Ability to design and conduct experiments and analyze and interpret data
PO5	Ability to coherently work in a multidisciplinary team
PO6	Demonstrate sensitivity towards professional and ethical responsibility.
PO7	Ability to communicate effectively in writing as well as through public speaking
PO8	Demonstrate ability to appreciate and engage in lifelong learning
PO9	Demonstrated knowledge of contemporary issues.
PO10	An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice
PO11	The broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context

  
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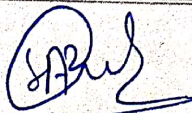
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**Academic Year:2019-2020**

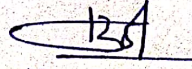
**A. Programme Educational Objectives (PEOs)**

No.	PEO
PEO1	To train students with in depth and advanced knowledge to become professional and capable of identifying, analyzing and solving complex problems in the areas of Heat power engineering.
PEO2	To enable post graduates to carry out innovative and independent research work, disseminate the knowledge in Academia/Industry/Research Organizations to develop systems and processes in the related field.
PEO3	To prepare the students to exhibit a high level of professionalism, integrity, effective communication skills and environmental and social responsibility.
PEO4	To provide an academic environment that gives adequate opportunity to the students to cultivate life-long independent learning ability for their successful professional career.

**B. Program Outcomes (POs)**

PO 1	Acquire, demonstrate and apply advanced knowledge in the area of mechanical engineering.
PO 2	Identify problems in the field of mechanical engineering, formulate them and Solve by using advanced techniques.
PO 3	Conducting dependent research and generate new knowledge for the benefit of community, society Industry and country.
PO 4	Apply various numerical methods, advanced software and engineering tools to model, Analyze and solve mechanical engineering problems.
PO 5	Work effectively in interdisciplinary teams for solving real life problems in the related field.
PO 6	Apply engineering and scientific principles for the effective management of mechanical systems.
PO 7	Effectively communicate through Technical reports, presentations and scientific publications with the engineering community as well as society at large.
PO 8	Demonstrate traits of management in handling engineering projects, related finance, and coordinate with workforce towards achieving goals.
PO 9	Demonstrate high level of professional and intellectual integrity, ethics of research and scholarly standards.

  
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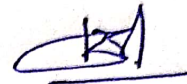
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PO 10	Examine critically the outcomes of one's actions and make Corrective measures subsequently.
PO 11	Demonstrate the ability to work in team in the laboratory in achieving multidisciplinary tasks required for the project.
PO 12	Engage in life-long reflective and independent learning with high level of Enthusiasm and commitment.



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