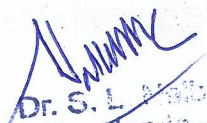


## **B.Tech Programme in Electronics and Telecommunication Engineering**


### **Program Outcomes**

1. **Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
2. **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.
3. **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.
4. **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.
5. **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.
6. **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.
7. **Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
8. **Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
9. **Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
10. **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.
11. **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.
12. **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.

  
Dr. S. L. Walabhai  
Dean (Academic - E & T)  
Dr. Babasaheb Ambedkar Technological University  
Lonere Raigad - 402 103

### **Program Specific Outcomes (PSOs)**

1. 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.
2. Recognize and adapt to technical developments and to engage in lifelong learning and develop consciousness for professional, social, legal and ethical responsibilities.
3. Excellent adaptability to the changing industrial and real world requirement.

  
Dr. S. L. Naibaiwar  
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## **B.Tech Programme in Mechanical Engineering**

### **Program Outcomes**

1. Apply the knowledge of mathematics, basic sciences, and mechanical engineering to the solution of complex engineering problems.
2. Identify, formulate, research literature, and analyze complex mechanical engineering problems reaching substantiated conclusions.
3. Design solutions for complex engineering problems and design mechanical system components that meet the specified needs.
4. Use mechanical engineering research-based knowledge related to interpretation of data and provide valid conclusions.
5. Create, select, and apply modern mechanical engineering and IT tools to complex engineering activities with an understanding of the limitations.
6. Apply reasoning acquired by the mechanical engineering knowledge to assess societal and safety issues.
7. Understand the impact of engineering solutions on the environment, and demonstrate the knowledge for sustainable development.
8. Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
9. Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
10. Communicate effectively on complex engineering activities with the engineering community and with society at large.
11. Understand the engineering and management principles and apply these to the multidisciplinary environments.
12. Recognize the need for life-long learning in the broadest context of technological change.

### **Program-Specific Outcomes (PSOs)**

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

  
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## **B.Tech Programme in Petrochemical Engineering**

### **Program Outcomes:**

1. The graduates will possess the knowledge of various discrete mathematical structures and numerical techniques.
2. The graduate will demonstrate the use of Logic in representing and reasoning knowledge based systems.
3. The graduates will have an ability to apply mathematical formalisms of to analyze the problems.
4. The graduates will have knowledge of design software/s and concepts essential to implement this software/s.
5. The graduates will have an ability to analyze problem, specify most feasible solutions to them and to evaluate alternative solutions.
6. The graduates will have in-depth knowledge of core subjects of Chemical and Petrochemical Engineering.
7. The graduate will have broad understanding of the impact of Chemical and Petrochemical Engineering solutions in economic, environmental and social context.
8. The graduates will demonstrate use of analytical tools in gathering requirements to provide feasible solutions.
9. The graduates will have knowledge of design rules and patterns necessary to formulate concept based solutions.
10. The graduates will demonstrate the ability to build human centric interfaces to design tools.
11. The graduates will possess the knowledge of advanced and emerging topics in the fields of Chemical and Petrochemical Engineering systems.
12. The graduates will posses skills necessary to communicate design engineering ideas. The skills set include verbal, written and listening skills.

### **Program-Specific Outcomes (PSOs)**

1. The graduates will have an ability and attitude to address the ethical issues.
2. The graduates will demonstrate the ability to work and collaborate in heterogeneous teams.
3. The graduates will understand the role of Chemical and Petrochemical Engineering in realizing trouble shooting of operations.

  
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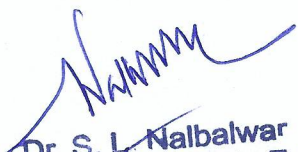
## **B.Tech Programme in Chemical Engineering**

### **Program Outcomes:**

1. The graduates will possess the knowledge of various discrete mathematical structures and numerical techniques.
2. The graduate will demonstrate the use of Logic in representing and reasoning knowledge based systems.
3. The graduates will have an ability to apply mathematical formalisms of to analyze the problems.
4. The graduates will have knowledge of design software and concepts essential to implement these software.
5. The graduates will have an ability to analyze problem, specify most feasible solutions to them and to evaluate alternative solutions.
6. The graduates will have in-depth knowledge of core subjects of Chemical Engineering.
7. The graduate will have broad understanding of the impact of Chemical Engineering solutions in economic, environmental and social context.
8. The graduates will demonstrate use of analytical tools in gathering requirements to provide feasible solutions.
9. The graduates will have knowledge of design rules and patterns necessary to formulate concept based solutions.
10. The graduates will demonstrate the ability to build human centric interfaces to design tools.
11. The graduates will possess skills necessary to communicate design engineering ideas. The skills set include verbal, written and listening skills.
12. The graduates will have an ability and attitude to address the ethical issues.

### **Program-Specific Outcomes (PSOs)**


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

  
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## B.Tech Programme in Electrical Engineering

### Program Outcomes:

1. **Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
2. **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.
3. **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.
4. **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.
5. **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.
6. **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.
7. **Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
8. **Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
9. **Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
10. **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.
11. **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.
12. **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.

  
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## **B.Tech Programme in Civil Engineering**

### **Program Outcomes:**

1. Apply the knowledge of mathematics, basic sciences, and civil engineering to the solution of complex engineering problems.
2. Identify, formulate, research literature, and analyze complex civil engineering problems reaching substantiated conclusions.
3. Design solutions for complex engineering problems and design of civil engineering structures that meet the specified needs.
4. Use civil engineering research-based knowledge related to interpretation of data and provide valid conclusions.
5. Create, select, and apply modern civil engineering and IT tools to complex engineering activities with an understanding of the limitations.
6. Apply reasoning acquired by the civil engineering knowledge to assess societal and safety issues.
7. Understand the impact of engineering solutions on the environment, and demonstrate the knowledge for sustainable development.
8. Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
9. Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
10. Communicate effectively on complex engineering activities with the engineering community and with society at large.
11. Understand the engineering and management principles and apply these to the multidisciplinary environments.
12. Recognize the need for life-long learning in the broadest context of technological change.

### **Program-Specific Outcomes (PSOs)**

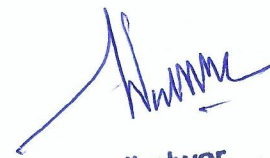
1. Make the students employable in engineering industries.
2. Motivate the students for higher studies and research.
3. Motivate the students for various competitive examinations.

  
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## **B.Tech Programme in Computer Engineering**

### **Program Outcomes:**

1. The graduates will possess the knowledge of various discrete mathematical structures, Logic and numerical techniques.
2. The graduates will have an ability to apply mathematical formalism of Finite Automata and Probability in modeling and analysis of systems.
3. 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.
4. The graduates will have an ability to analyze problem, specify algorithmic solutions to them and to evaluate alternative solutions.
5. 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.
6. The graduates will demonstrate the ability to build human centric interfaces to computers.
7. The graduates will possess the knowledge of advanced and emerging topics in the fields of operating systems, databases and computer networks.
8. The graduates will possess skills necessary to communicate design engineering ideas. The skills set include verbal, written and listening skills.
9. The graduates will understand ethical issues in providing computer based solutions also they will have an ability and attitude to address the ethical issues.
10. 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




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## **B.Tech Programme in Information Technology**

### **Program Outcomes:**

1. An Understanding of IT architecture, software and hardware concepts, functionalities and applications
2. An Ability to design, develop and test computer programs involving various algorithms, methodology and programming languages
3. Competency of business domains and functional processes that employ IT systems and applications
4. Practical use of communication protocols and their applications in the field of Internet and World Wide Web
5. Sound understanding of fundamentals of computer as the central enabling platform for information management in 21st century
6. An Ability to develop, integrate, maintain and innovate software applications deployed in various multi-disciplinary domains
7. Thought leadership to design and implement practical solutions for global industry needs.
8. Acumen to embrace and adopt futuristic IT technological developments
9. Sound knowledge of entrepreneurship traits to succeed
10. Adoption of practices that are ethical ensuring transparency and accountability
11. Capability to provide solutions that are socially empowering and environment friendly
12. Effective communication and collaboration techniques with stakeholders to achieve best results.

  
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