

8. Curriculum of the Courses (Latest)-

1st semester

1. Transform calculus and Fourier series
2. Engineering Thermodynamics
3. Mechanics of Materials
4. Computer-Aided Machine Drawing
5. Engineering Science Course-1
6. Mini project -1
7. Employability Skills Enhancement Programme – 1 (ESEP 1)
8. International Certification Course on Current Trends - 1
9. SU Value Added Course - 3
10. NSS / Yoga
2. Applied Thermodynamics
3. Fluid Mechanics
4. Advanced Manufacturing Processes
5. Engineering Science Course-2
6. MOOC – 1
7. Employability Skills Enhancement Programme – 2 (ESEP 2)
8. International Certification Course on Current Trends - 2
9. SU Value Added Course – 4
10. Cultural Activities / Sports

2nd semester

- 1, Numerical Techniques and Integral Transforms
2. Applied Thermodynamics
3. Fluid Mechanics
4. Advanced Manufacturing Process
5. Engineering Science Course- 2
- 6 .MOOC - 1
7. Employability Skills Enhancement Programme - 2(ESEP 2)
8. International Certification Course on Current Trends - 2
9. SU Value added Course - 4
10. Cultural Activites or sports

3rd semester 4th semester

1. Machine Design
2. Turbo Machines
3. Simulation of Kinematic Mechanisms
4. Finite Element Analysis
5. Profession Elective-1
6. Mini project – 2
7. Employability Skills Enhancement Programme – 3 (ESEP 3)
8. International Certification Course on Current Trends - 3
9. Arts and Social Connect

10. SU VALUE ADDED COURSE

4th semester

1. Numerical Techniques & Integral Transforms
2. Applied Thermodynamics
3. Fluid Mechanics
4. Advanced Manufacturing Processes
5. Engineering Science Course-2
6. MOOC – 1
7. Employability Skills Enhancement Programme – 2 (ESEP 2)
8. International Certification Course on Current Trends - 2
9. SU Value Added Course – 4
10. Cultural Activities / Sports

5th semester

1. Machine Design
2. Turbo Machines
3. Simulation of Kinematic Mechanisms
4. Finite Element Analysis
5. Profession Elective-1
6. Mini project – 2
7. Employability Skills Enhancement Programme – 3 (ESEP 3)
8. International Certification Course on Current Trends - 3
9. Arts and Social Connect
10. SU VALUE ADDED COURSE

6th semester

1. Additive Manufacturing
2. Heat & Mass Transfer
3. Automation in Manufacturing Industry 4.0
4. Profession Elective-2
5. Open Elective-1
6. MOOC - 2
7. Employability Skills Enhancement Programme – 4 (ESEP 4)
8. International Certification Course on Current Trends - 4
9. Social Media Ethics
10. SU VALUE ADDED COURSE

7th semester

1. Introduction to Robotics
2. Control Engineering
3. Profession Elective-3
4. Profession Elective-4
5. Open Elective-2
6. Major Project Phase 1
7. ESEP: Patent Filing & IPR

8. Social Internship

8th semester

1. Technical Seminar
2. Internship
3. Project and Paper Publication

9. Highlights of the Course-

Mechanical engineering is a comprehensive field that covers various areas of study and offers a wide range of opportunities. Here are some of the key highlights of a mechanical engineering course:

1. **Fundamental Engineering Principles:** Mechanical engineering courses provide a strong foundation in core engineering principles such as mathematics, physics, and materials science. These fundamentals are essential for understanding the behavior of mechanical systems and designing effective solutions.
2. **Mechanics and Design:** Mechanical engineering focuses on the analysis, design, and optimization of mechanical systems and components. Students learn about statics, dynamics, fluid mechanics, thermodynamics, and heat transfer. They gain knowledge of how forces, motion, and energy interact within machines and structures.
3. **Computer-Aided Design and Simulation:** Mechanical engineering programs often incorporate computer-aided design (CAD) software, which allows students to create and visualize 3D models of components and systems. Simulation tools enable students to analyze and optimize designs, predict performance, and simulate real-world scenarios.
4. **Manufacturing and Production:** Mechanical engineers need to understand various manufacturing processes, including machining, casting, welding, and additive manufacturing (3D printing). Courses may cover topics such as process planning, quality control, and production management to ensure efficient and cost-effective manufacturing.
5. **Robotics and Automation:** With the increasing integration of robotics and automation in industries, mechanical engineers play a vital role in designing and developing robotic systems. Courses in robotics cover topics like kinematics, control systems, sensors, and programming, preparing students for careers in robotic engineering and automation.
6. **Energy and Sustainability:** Mechanical engineers contribute to energy-related fields by designing energy systems, renewable energy technologies, and energy-efficient processes. Courses often cover topics such as thermodynamics, power generation, and sustainable engineering, focusing on developing environmentally friendly and sustainable solutions.
7. **Professional Skills:** In addition to technical knowledge, mechanical engineering programs emphasize the development of professional skills. These include communication skills, teamwork, project management, and an understanding of ethical considerations. These skills are crucial for success in the workplace and in collaborating with multidisciplinary teams.
8. **Industry Exposure:** Many mechanical engineering programs incorporate hands-on projects, internships, or co-op experiences to provide students with practical industry exposure. These opportunities allow students to apply their theoretical knowledge to real-world engineering challenges and gain valuable industry experience.