





	<p style="text-align: center;">Tulsiramji Gaikwad-Patil College of Engineering and Technology Wardha Road, Nagpur-441 108 NAAC Accredited with A+ Grade (An Autonomous Institute Affiliated to RTM Nagpur University, Nagpur)</p>	
<p>Program: M. Tech. in Mechanical Engineering Design</p>		

First Semester-M.Tech MED Course Outcomes (NEP-2020)

MME21101: Advanced Mechanical Drives

Course Code	Course Outcomes
MME21101.1	Learn the Belt drive system design.
MME21101.2	Design the Gear and Gear Box systems.
MME21101.3	Design of Chain drive system
MME21101.4	Describe PIV Drives
MME21101.5	Develop Couplings for various systems.




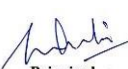
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First Semester-M.Tech MED Course Outcomes (NEP-2020)

MME21102: Mechanics of solid

Course Code	Course Outcomes
MME21102.1	Understand advanced stress/strain correlations.
MME21102.2	Analyse simple mathematical and physical relationships between mechanics and materials.
MME21102.3	Analyse the bending of various types of beams under static loading conditions and compute the shear stress distribution for different cross sections of beams.
MME21102.4	Analyse the torsion for the circular shaft.
MME21102.5	Analyse the deflection of beams and shafts under static loading and stresses in thin walled cylindrical and spherical vessels.




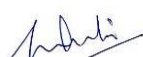
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First Semester-M.Tech MED Course Outcomes (NEP-2020)

MME21103: Mechanical Vibrations

Course Code	Course Outcomes
MME21103.1	Interpret vibration phenomenon and its concept.
MME21103.2	Apply Laplace and Fourier transform methods to find out response of Systems.
MME21103.3	Apply vibration techniques to determine natural frequency of the system for any DOF system.
MME21103.4	Analyze vibration of system using finite element techniques.
MME21103.5	Analyze Frequency response using FFT analyzer.

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Program: M.Tech.coursein Mechanical Engineering Design

First Semester-M.Tech MED Course Outcomes (NEP-2020)
MME21104: Dynamics and Mechanisms Lab

Course Code	Course Outcomes
MME21104.1	Understand various methods of synthesis.
MME21104.2	Apply the concept of planner mechanism to solve engineering problem.
MME21104.3	Analyze Kinematic & synthesis of spatial mechanisms.
MME21104.4	Apply the concept of two degree and multi degree of freedom system for free and forced vibration.
MME21104.5	Analyze natural frequency using matrix iteration method and Holzen's method.

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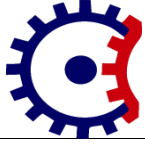
Program: M. Tech. in Mechanical Engineering Design

First Semester-M.Tech MED Course Outcomes (NEP-2020)

MME21105: Program Elective-I: Computer Aided Mechanical Design

Course Code	Course Outcomes
MME21105.1	Apply Basics of CAD to Generate several alternate design options very easily
MME21105.2	Analyze the concept of various curve design.
MME21105.3	Analyze the various modeling Techniques using computer Software.
MME21105.4	Analyze the 1-D elements using FEM technique.
MME21105.5	Analyze mechanical design using optimization techniques.

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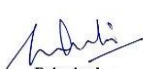


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First Semester-M.Tech MED Course Outcomes (NEP-2020)

MME21106 :Program Elective-I: Reliability, Maintainability & Wear




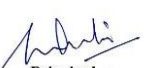
Course Code	Course Outcomes
MME21106.1	Summarize the life of machine and their components and various maintenance processes
MME21106.2	Apply the basic of reliability measures such as MTTF, MTBF, MTTR, availability, failure rate, Bathtub curve etc
MME21106.3	Analyze the defects and failure of different types of maintenance system
MME21106.4	Analyze the reliability and allocation in production system.
MME21106.5	Analyze various maintenance planning and scheduling techniques.

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First Semester-M.Tech MED Course Outcomes (NEP-2020)
MME21110:Program Elective-II: Robotics Drives

Course Code	Course Outcomes
MMED21110.1	Understand the various drives of robotic system.
MMED21110.2	Summarize the application of electric drives in robotic system.
MMED21110.3	Apply pneumatic and hydraulic system in robotic application.
MMED21110.4	Design a robot using appreciates servo systems.
MMED21110.5	Demonstrate the application of various drives.





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First Semester-M.Tech MED Course Outcomes (NEP-2020)

MME21112: Program Elective-II :Additive Manufacturing

Course Code	Course Outcomes
MME21112.1	Estimate the life of machine and their components and various maintenance processes
MME21112.2	Apply the basic of reliability measures such as MTTF, MTBF, MTTR, availability, failure rate, Bathtub curve etc
MME21112.3	Demonstrate the defects and failure analysis and different types of maintenance system
MME21112.4	Analyze the reliability and allocation in production system.
MME21112.5	Analyze various maintenance planning and scheduling techniques.

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