School of Engineering and Technology

Ambi, Talegaon, Pune

B.Tech (Mechanical) Program for Academic Year 2020-21
Batch 2020-2024

Subject Basket

D Y Patil University, Ambi, Pune
School of Engineering and Technology
Department of Mechanical Engineering
Subject Basket for B.Tech. (Mechanical)

Courses in First Year Engineering	Courses in Second Year Engineering	Courses in Third Year Engineering
Semester I	**Semester III**	**Semester V**
Engineering Mathematics-I	Engineering Mathematics-III	Heat Transfer
Engineering Physics / Engineering Chemistry	Manufacturing Processes	Design of Machine Elements
Engineering Graphics	Thermodynamics	Humanities I
Basic Electrical Engineering	Strength of Materials	Mechatronics
Basic Workshop Practices - I	Engineering Materials	Dynamics of Machinary
Induction	Essence of Indian Traditional Knowledge	*Automation Studio/ Arduino
	*Autocad /Solidworks	
Semester II	**Semester IV**	**Semester VI**
Engineering Mathematics-II	Applied Thermodynamics	Mechanical System Design
Engineering Physics / Engineering Chemistry	Fluid Mechanics and Machines	**Open Elective-I**
Engineering Mechanics	Kinematics and Theory of Machines	**Technical Elective-I**
C PROGRAMMING	Soft Skills	**Track Elective-I**
English for Engineers	Metrology and Quality Control	**Track Elective-II**
Basic Workshop Practices - II	Instrumentation and Control	Mini project-1
Environmental Studies	Catia / Creo	Matlab/Ansys

Third Year Electives Semester VI		
Open Elective-I	**Technical Elective-I**	**Track Elective-I**
Project Management	Numerical Methods & Optimization	Robot Motion Planning
Entrepreneurship and Start-ups	AI in Manufacturing	Product Design and Development
Cyber and Data Laws	Finite Element Analysis	Refrigeration and Psychometry
Essentials of Industrial Computing	Additive Manufacturing	**Track Elective-II**
NGO Management	Piping System Design	Design of Pump blower and compressor
		Product Planning Strategy Marketing
		Air Conditioning Technology

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Courses in Final Year Technology
Semester VII
Track Elective-III
Track Elective-IV
Open Elective-II
Technical Elective-II
CAD/CAM &Automation
Mini Project-2
Abaqus/Mastercam
Semester VIII
Project stage or Internship

Final Year Electives Semester VII		
Open Elective-II	**Technical Elective-II**	**Track Elective-III**
Industrial Psychology	Industry 4.0	AI for Robotics
Business Econ. and Financial Planning	Design for Manufacturing and Assembly	Reverse Engineering
Disaster Management	Advanced Optimization Techniques	Power Electronics and Drives
Intellectual Property Rights	Nanotechnology and Surface Engineering (AICTE)	**Track Elective-IV**
Basic German, French	Electric vehicle Technology	Autotronics and Vehicle Intelligence
	Bio-Medical Devices	Cryogenics
	Multimedia Communication	Tribology in design
	Research Methodology	

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Specialization Electives(Semester VI and Semester VII)		
CAD-CAM	**Robotics**	**Thermal Engineering**
Track Elective-I	**Track Elective-I**	**Track Elective-I**
Computer Aided Design	Robot Motion Planning	Refrigeration and Air Conditioning
Product Design and Development	Programming for Robotics	Power Plant Engineering
Computer Aided Production	Power Electronics and Drives	Energy Conservation and Mgmt
Track Elective-II	**Track Elective-II**	**Track Elective-II**
Design of Pump blower compressor	Robot Modelling Simulation	Performance assessment of Mech. Syst.
Product Planning	AI for Robotics	Turbomachines
AI for Robotics	Robotics Based Industrial Automation	Design of Pump blower compressor
Track Elective-III	**Track Elective-III**	**Track Elective-III**
Advanced Tool Design	Embedded System Design	CFD
Computer Aided Process Planning	Modern Robotics	Gas Turbine Propulsion
Design for Manufacturing and Assembly	MEMS	Heat Exch System Design
Track Elective-IV	**Track Elective-IV**	**Track Elective-IV**
Rapid prototyping and Tooling	Autotronics and Vehicle Intelligence	Advanced HVAC
Flexible Manufacturing System	Robotics Engineering and Applications	Cryogenics
Manufacturing System Simulation & Design	Robot Manipulators Dynamics and Control	Hydraulics and Pneumatics