



Army Institute Of Technology (AIT), Dighi Camp, Pune - 15.

Director : 7249250115, Joint Director : 7249250117, Principal : 7249250186

Exch : 7249250183, 7249250184, 7249250185

Website : www.aitpune.com Email : ait@aitpune.edu.in

Recognised by AICTE and DTE Maharashtra and affiliated to Savitribai Phule Pune University

Department of Mechanical Engineering

Laboratories

Thermal Engineering II



Area of Laboratory: 90 sq. m.

Laboratory In-charge:

Dr P M Purohit (Associate Professor)

Lab /Technical Asst: Mr A G Jirgale

Equipment/Hardware: Multi-cylinder petrol engine test rig, Single cylinder diesel engine test rig (Computerized), Reciprocating air compressor, Bomb Calorimeter, Orsat apparatus, Cut-section of multi-cylinder engine

Practicals Conducted: Thermodynamics, Applied Thermodynamics, Energy Engineering

Utilization of Laboratory: Second and Final Year



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SAE-AIT Fabrication Facility



Teams from this club work on All Terrain and Formula type vehicles designed and fabricated by them for SAE BAJA/SUPRA competitions

Club has been active since 2009

Area of Laboratory: 60 sq. m.

Faculty In-charge: Mr Pankaj Dorlikar (Assistant Professor)



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Computer Aided Manufacturing



CNC machine (2-axis) used for manufacturing and demonstration of Computerized Numerical Control in machine tools

Area of Laboratory: 60 sq. m.

Laboratory In-charge: Mr Pankaj Dorlikar (Assistant Professor))

Equipment/Hardware: HMT CNC Lathe

Software: In-built G-code, M-code constructor, Abaqus software, Mastercam X18, MSC University Bundle, Hyperworks 17, Matlab 18, SAM 7.0, Catia V6, Star CCM+, Scilab, Anaconda Navigator (Python)

Practicals Conducted: CAD/CAM and Automation, Workshop Practices and Basic Mechanical Engineering

Utilization of Laboratory: First and Final Year



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Fluid Engineering & Mechatronics Lab



Area of Laboratory: 181 sq. m

Faculty In-charge: Dr J D Patil (Associate Professor)

Lab /Technical Asst: Mr E R Gargote

Equipment/Hardware: Pelton wheel turbine, Francis turbine test rig, Kaplan turbine test rig, Variable speed centrifugal pump test rig, Gear pump test rig, Advanced pneumatic trainer, Impact of jet apparatus, Electrical analog apparatus, Bernoulli's apparatus, Reynolds's apparatus, Pipe friction apparatus, Advanced hydraulic trainer, Advanced Electro-Pneumatic trainer

Software: PLC

Practicals Conducted: Turbo Machinery, Mechatronics, Fluid power control Lab and Fluid Mechanics

Utilization of Laboratory: Second and Final Year



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Heat Transfer and Basic Mechanical Engineering Lab



Area of Laboratory : 80 sq. m

Faculty In-charge : Mr. S M Gaikwad (Assistant Professor)

Lab/Technical Asst: Mr E R Gargote

Equipment/Hardware: Thermal conductivity of insulating power, Parallel flow counter flow heat exchanger, Emmissivity apparatus, Pin fin losing heat in natural convection, Forced convection apparatus, Natural convection apparatus, Critical heat flux apparatus, Heat conduction from composite wall, Thermo couple calibration set up, Stefan Boltzmann apparatus, Thermal conductivity of metal rod apparatus

Practicals Conducted: Heat Transfer, Basic Mechanical Engineering

Utilization of Laboratory: First (All Branches) and Third Year



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TOM DOM Lab



Area of Laboratory : 90 sq. m

Faculty In-charge : Mr. M B Phatangare (Assistant Professor)

Lab/Technical Asst: Mr A G Jirgale

Equipment/Hardware: Test Rig for Determination of Torque Capacity of Dynamometer, Test rig for study of Epicyclic Gear train & to measure transmitted & holding Torque, Wear and Friction Monitoring Setup along with data acquisition system, Motorised Gyroscope, Whirling of Shaft apparatus

Practicals Conducted: Kinematics of Machinery, Theory of Machines, Dynamics of Machinery

Utilization of Laboratory: Second, Third and Final Year



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Thermal Engineering I and Measurement Lab



Area of Laboratory : 89 sq. m

Thermal Engineering

Faculty In-charge : Mr R S Verma (Associate Professor)

Lab/Technical Asst: Mr A G Jirgale

Equipment/Hardware: Mini-ice plant tutor, Air conditioning cycle test rig, Refrigeration cycle test rig

Practicals Conducted: Thermodynamics, Heating Ventilation Air-Conditioning and Refrigeration, Energy Engineering.

Utilization of Laboratory: Second, and Final Year

Measurement Laboratory

Laboratory In-charge: Mr M B Phatangare (Assistant Professor)

Lab /Technical Asst: Mr S H Karande

Equipment (MQC): Tool Maker microscope, Profile Projector, gear rolling tester.

Practical Conducted: Measurement Laboratory, Geometric Dimensioning and Tolerancing Lab.

Utilization of Laboratory: Second and Third Year



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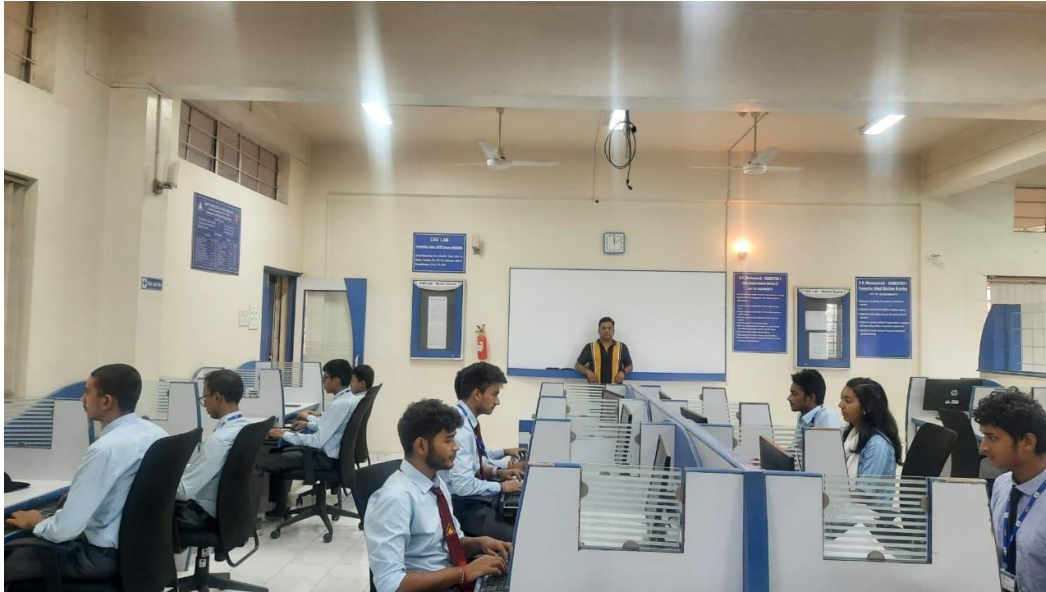
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CAD I & II Lab



Area of Laboratory : 142 sq. m

Faculty In-charge : Mr. A A Ramgude (Assistant Professor)

Lab/Technical Asst: Mr S B Shikare

Equipment (Computers): HP Z220 CMT (i5), HP Pro 3330MT(I5),HP 406 G1 MT Business PC(I7),HP EliteDesk 800G3 TWR(I7), HP 280 G6 MT(I7).

Software: Ansys Rel 14.5, CADIAN Mech site License, Auto cad, Pro/Engineer U Plus, Mastercam X5, MSC University Bundle, Anaconda Navigator (Python)

Practical Conducted: Engineering Graphics, Solid Modelling and Drafting, Computer Aided Engineering, Geometric Dimensioning and Tolerancing Lab.

Utilization of Laboratory: First, Second and Third Year



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Metallurgy and Strength of Materials Lab



Area of Laboratory : 72 sq. m

Metallurgy Lab

Faculty In-charge : Mr V R Kulkarni (Associate Professor and Wksp Suptd)

Lab/Technical Asst: Mr S H Karande

Equipment/Hardware: Rockwell Cum Brinell Hardness Tester, Universal Testing Machine, Pendulum Impact tester, Torsion testing Apparatus

Practical Conducted: Engineering Materials and Metallurgy, Project Based Learning - II

Utilization of Laboratory: Second Year

Strength of Materials Lab

Faculty In-charge: Mr R S Verma (Associate Professor)

Lab/Technical Asst: Mr N V Barathe

Equipment/Hardware: Torsion testing Apparatus, Measurement of Flexural formula Apparatus, Flexural simply supported beam setup, Universal Testing Machine.

Practical Conducted: Solid Mechanics

Utilization of Laboratory: Second Year



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Workshop Machine Shop



Area of Laboratory: 480 sq. m

Faculty In-charge: Mr V R Kulkarni (Associate Professor and Wksp Suptd)

Instructor: Mr B D Sonawane and Mr M T Sankpal

Equipment/Hardware: Lathe Machine, Power Press, Shaping Machine, Radial Drilling Machine, Milling Machine

Practical Conducted: Machine Shop I, Machine Shop II and Machine Shop III.

Utilization of Laboratory: First, Second and Third Year



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Workshop Ancillary Shop



Area of Laboratory : 300 sq. m

Faculty In-charge : Mr V R Kulkarni (Mr V R Kulkarni (Associate Professor and Wksp Suptd)

Instructor: Mr B D Sonawane and Mr M T Sankpal

Equipment/Hardware: Wood Turning Lathe Machine, Surface cum Thickness planer machine, Circular saw, Vertical bend saw

Practical Conducted: Machine Shop I, Machine Shop II and Machine Shop III.

Utilization of Laboratory: First Year, Second Year and Third Year.