

DELHI TECHNOLOGICAL UNIVERSITY  
Formerly Delhi College of Engineering  
Shahbad Daulatpur Bawana Road DELHI-110042  
**DEPARTMENT OF MECHANICAL ENGINEERING**

**LIST OF EQUIPMENT AVAILABLE**

S.NO.	NAME OF THE LABORATORY	NAME OF THE IMPORTANT EQUIPMENT
1	METAL FORMING LAB	UTM Table Top Tinius Olsen H50KS Hydraulic press (50 + 50 Ton) Wire drawing machine Pedestal grinder Inverted metallurgical microscope Mechanical power press Hydraulic power hacksaw Material testing lab (UTM) Trinocular stereozoom microscope Ericson cupping Machine
2	SAND TESTING LAB	Tubular Furnace 1600°C FSI casting simulation software Chiller
3	METALLURGY LAB	Microhardness Tester Metallurgy belt grinder Jominy end quenching apparatus Micro polishing machine Mounting press Polishing station High temperature oil bath Abrasive cutter Olympus microstructure apparatus Belt grinder Optical brinell hardness tester apparatus Furnace high temperature Computer
4	METAL CUTTING LAB	Vision inspection system Horizontal milling machine Lathe (Harrison) Hydraulic cylindrical grinding machine Radial drilling machine Surface grinder Centre lathe (HMT) Centreless Grinder (HMT) Lathe tool dynamometer Drilling tool dynamometer CNC turning centre
5	DOM/KOM/TRIBOLOGY LAB	Pin on Disk wear measuring machine with data Acquisition system DUCOM Cam analysis machine Dynamic Balancing machine Vibration table Governor apparatus Whirling of shaft apparatus

		Belt & pulley apparatus Hydrodynamic Journal Bearing test rig Thermal imaging camera Motorized epicyclic gear train apparatus Four ball tester Analytical balance FLUID SCAN Lubricant condition monitor (Spectro make) Electronic Spring Tester Dual Channel Vibration analyzer cum Balancer PRUFTECHNIK
6	APPLIED MECHANICS LAB	Electronic Tensometer with accessories Electronic Tensometer without accessories
7	CIM/CAM LAB	FMS consisting of table top CNC milling m/c, accessories & simulation software Kawasaki Robot Scorbot ER 4n Robot Machine Vision DLP Projector
8	CAD LAB	NX software set PC P-IV 2.8 GHz, 128 MB RAM-12 No. PC P-IV 3.2 GHz, 128 MB RAM-5 No. PC P-IV Dual Core-10 No. PC P-IV-CRD-5 No. PC i5-8 No. LASER printer Software Hypermesh Software Abacus Autodesk Inventor software package set Software UGS package CATIA software package set MD ADAMS software MAT LAB software package set Software Tcc plot Solid works software package set
9	FOUNDARY SHOP	Induction Melting Furnace 5kgs (INDUCTOTHERM) Sand Muller Machine Shell Moulding Machine Tilting Furnace
10	CNC SHOP AND WIRE CUT SHOP	6 AXIS Vertically Articulated Robot System CNC Wire Cut machine Friction Stir welding m/c(4T X 15HP) CNC Milling Trainer CNC Lathe Trainer LCD Projector UPS 10 KVa (Single phase)
11	MACHINE SHOP	EDM machine (Spakonix-35A) Milling machine (Horizontal) Milling machine (Vertical) Lathe machines turnmoster-35 Lathe machines (madras) GD-1

		Shaper machines Slip gauge box (made in Japan) Tool and cutter grinder
12	SMITHY AND FORGING SHOP	Induction Heater BP-50 (Bull Power) Electric Grinder High Temperature Furnace Portable Induction Heating Machine Medium Induction Frequency
13	WELDING SHOP	Fume Exhaust system-Qty 3 Spot welding machine (01) Seam welding machine (01) MIG welding machine (01) TIG welding machine (01) Portable welding machine (02)
14	RAC LAB	Test Rig (COP)
15	MATERIAL TESTING(SOM) LAB	UTM 10 Ton Torsion testing machine (digital) Digital Rockwell Hardness Tester Digital Display Spring Testing Tensometer Izod Impact Testing Torsion testing machine Spring Testing Machine
16	INDUSTRIAL ENGINEERING AND SQC LAB	Computer P-IV (No.-30) AMOS Software (05) ARENA Software(30) SPSS Software
17	METROLOGY LAB	Surface roughness Taylor Hobson Tool room microscope Gear test bench Gauge block set Ring Set
18	FITTING SHOP	Surface Grinder
19	FLUID MECHANICS AND HYDRAULICS LAB	Runners and Impellers Impact of Jet Apparatus Pelton Turbine Apparatus Francis Turbine Apparatus Kaplan Turbine Apparatus Centrifugal Pump Apparatus Hydraulic Ram Apparatus Apparatus for Metacentric height Bernoulli's Apparatus Venturi-meter Apparatus Orifice meter Apparatus Apparatus for friction factor V-Notch Apparatus Minor losses Apparatus
20	SHEET METAL SHOP	Sheet Folding Machine Shearing Machine

21	PRECISION MANUFACTURING LAB	Bottom loading furnace Temperature control panel
22	PROJECT SHOP	Pillar type drilling machine Gear holding machine HMT radial drilling machine Universal milling machine Pantograph Capstan lathe machine TRAUB single spindle machine Madras GDI lathe machine HMT H-22 lathe HMT MTR Horizontal hydraulic broaching machine
23	MECHANICAL SCIENCE LAB	Apparatus theorem of Bernoulli Flow over notches apparatus Torsion testing machine Bell crank lever Universal force table Inclined plane apparatus Joint roof truss apparatus Bending moment apparatus Photo voltaic power training kit (solar)
24	TURBO-MACHINERY LAB	Centrifugal blower with motor Cut section model of rotary air compressor Cut Section model of single stage reciprocating air compressor Cut Section model of double stage reciprocating air compressor
25	POWER PLANT ENGINEERING LAB	Boiler steam turbine with condenser and chimney NPTI CBT (Computer Based Training) software (total no. of 8 CD) Wooden table top Lancashire boiler model Wooden table top Benson boiler model Wooden table top Cochran boiler model Wooden table top Babcock and Wilcox boiler model Wooden table top Locomotive boiler model Wooden table top Water tube boiler model Wooden table top Loeffler boiler mode
26	INSTRUMENTATION ESA LAB	Photoelastic polariscope bench type lens Pressure measurement tester Displacement measurement Load measurement Light measurement Temperature tutor Micro controller-based pressure measurement transducer tutor (2) Micro controller-based flow measurement transducer tutor (2) Micro controller-based speed measurement transducer tutor (2)

		Vibrator analyser Mechatronics training kit
27	RESEARCH LAB	Waste cooling oil Biodiesel project (sponsored by department of environment Government of Delhi) Development of biodiesel processor hydrodynamic cavitation (sponsored by department of environment Government of Delhi) Ice slurry generator for refrigeration and air conditioning industry research work
28	WELDING LAB	Submerged arc welding machine Oscilloscope 100 MHz Air plasma cutting machine Pulse TIG welding machine 220 AC/DC Ultrasonic flow detector Two stage air compressor with dryer Synergic MIG welding machine Electromagnetic crack detector Ultrasonic metal welding machine CVT 5 KVA Ultrasonic plastic welding machine
29	AUTO ENGG LAB	Complete vehicle cut section model Working cut section model of fully floating differential rear axle Working cut section model of 4 stroke single cylinder diesel engine Toyota cut section model Lumens digital presenter LCD tablet monitor Pollution testing machine AVL gas analyzer Instrumentation panel for engine
30	I.C ENGINE LAB	Computerised single cylinder 4-stroke, Diesel Engine (VCR) AHA interactive panel/LCD tablet monitor Computerised 4 cylinder, 4 stroke diesel engine test setup Computerised 4 cylinder, 4 stroke petrol engine test setup Ultrasonic processor 150 W Lumans visual presenter desktop Microprocessor controlled Fuel consumption meter Single Tank, Ultrasonic oil mixer AVL DIX 650 Modular diagnostic and Emission System
31	DESIGN CENTRE	Work station Dell 7600 (5 Nos.) Symbols sonatr software 5 user L.S. Dayna software 1 user 3D printer Ansys software 5 users
32	HEAT TRANSFER LAB	Natural convection insulation powder

33	CENTRE OF ADVANCED STUDIES AND RESEARCH IN AUTOMOTIVE ENGINEERING (CASRAE)	<p> Biodiesel Centrifuge Set  Automatic Microprocessor  Controlled calorimeter  Auto Ignition Tester (pensky marten)  Fuel cell Training system  1.2 KW Capacity  High frequency Reciprocating Rig  General Purpose </p> <p> Data Logger  Automatic Titration Workstation  PC-2200 Laser Particle counter including all accessories  Nuclear Magnetic Resonance Analyzer  Spray Tech Analyzer  Single cylinder diesel air cooled engine kirloskar  Computerized four cylinder  Petrol Engine test set up four stroke MPFI 1100 CC  Computerized four cylinder four stroke Diesel Engine test set up with LPG/CNG storage and supply kit  Fuel cell Analyzer  Lube oil Analyzer  Single cylinder diesel air cooled engine with alternator (8 HP)  Remi centrifuge m/c  Fluke 190-202 oscilloscope 200Mhz handheld oscilloscope with inbuilt multimeter  Biodiesel reactor 10 ltrs  Cut section model of maruti car  Cut section model of 4S Diesel engine  Digital density meter  Citizen basic analytical balance (PO No. F.211/1-69/03-04)  Colour measurement tintometer  AVL Digas 4000 light 5 gas analyzer  AVL 437Std. with LED remote control  Two stroke single cylinder engine petrol test rig  Four stroke single cylinder engine diesel test rig  Four stroke single cylinder engine petrol test rig  Humidity &amp; temperature control cabinet  Multimedia LCD projector  Biodiesel reactor cap 100 Ltr  Research engine model 224A  Microprocessor controlled karl fisher moisture titrator  High pressure stirred reactor  1 TPD biodiesel unit  Oxidation stability analyzer of biodiesel  Microprocessor controlled fuel consumption meter  Whirlmatic motor less magnetic stirrer with water bath  Cloud and pour point measurement apparatus  Semi-automatic pensky marten flash point apparatus  Bomb calorimeter digital with safety device and two </p>
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		oxygen cylinder Digital copper strip corrosion test apparatus Automatic TAN/TBN apparatus Automated kinematic viscometer I.R. moisture balance Specific gravity Variable compression ratio engine test set up, single cylinder, 4 stroke diesel (computerized) ION Chromatograph with mobile phase filtration assembly with vacuum pump 0.2 membrane Manual vacuum distillation apparatus Calorimetric and volumetric determination titrator with oven for moisture analysis Resistive load bank with control panel for load test of petrol and diesel engines U tube oscillating apparatus for measuring API gravity Modular diagnostic and emission system AVL DIX 650 Rotary evaporator with complete accessories Cold fitter plugging point (CFFP) CHNO-S elemental analyzer Ultra water purification system Oil extraction unit as per specification Carbon residue determination apparatus Spectroil M/C-W oil analysis spectrometer Gasifier system with 10 KW engine genset Refrigerated circulator Algae photo bioreactor
34	Micro & Nano Scale Thermofluidics Lab	Micro Gear pump Air compressor Inverted Microscope (Biological Microscope) pH meter Magnetic stirrer DI water system with RO and Prefiltration kit Universal DAQ, 16 channels, Universal Input Method Universal scanner logger 16 channels, Universal Input Method. DC Power Supply 01 Channel_30V 5A 220V, 50HZ
35	Production Management Lab	All in One Computers