



Himachal Institute of Technology

(Approved by AICTE, New Delhi & Affiliated to Himachal Pradesh Technical University, Hamirpur)

Rampur Ghat Road, Paonta Sahib, H.P - 173025

Phone: 01704 208270-71 Fax: 01704 223726

Email ID: hit.himachal@gmail.com, Website: www.hitech.ac.in

Details of the Labs/Workshops/Work stations available

Name of Laboratory	Laboratory Manuals Available	Major Equipment
Analog Electronics Circuit Laboratory	Yes	1. RC Coupled Amplifier
		2. CRO
		3. Function Generator
		4. Common emitter amplifier
		5. UJT kit
		6. Colpitt oscillator
		7. Hartley oscillator
		8. Class C amplifier
		9. Push Pull Amplifier
Basic Electrical Lab	Yes	1. Transformers
		2. DC Machines
		3. Voltmeter & Ammeter
Basic Electrical Laboratory	Yes	1. KCL Kit
		2. KVL kit
		3. RLC equipment
Basic Electronics Engg. Laboratory	Yes	1. Transistor Characteristics Kit
		2. Diode Characteristics Kit
		3. Zener Diode Characteristics
		4. Operational Amplifier kit
Communication System-I Laboratory	Yes	1. Amplitude Modulation
		2. Superhetrodyne Receiver
		3. Frequency Modulator
		4. FM Demodulation
		5. AM Demodulation
Computer Lab	Yes	1. Computer
		2. Printers
		3. UPS



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		4. Window 7 ,XP
		5. Centos Operating System
		6. Microsoft office 2010
		7. Cisco Switches & Routers
		8. LAN Wires

Computer Programming Lab	Yes	1. Computer
		2. Turbo C
		3. JAVA
		4. Visual Basics 10.4
		5. ORACLE 9i
Concrete Laboratory	Yes	1. Standard Consistency Of Cement Using Vicat's Apparatus
		2. Hardness Of Cement By Le-Chatelier's Apparatus
		3. Steve analysis and Blaine's permeability
Control Engineering Laboratory	Yes	1. CRO
		2. Function Generator
Data Structure Laboratory	Yes	1. Computers
		2. Turbo C
Digital Electronics Laboratory	Yes	1. A/C Convertor
		2. 555timer
Digital Electronics Lab	Yes	1. SCR
		2. Thyristers
		3. UJT Oscillator
		4. Half wave & Full Wave Rectifier
		5. RL Load Rectifier
		6. Lamp Load
Electrical Machine-I	Yes	1. Transformers
		2. DC Shunt Motors
		3. DC Shunt Generator
		4. DC series Generator



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		5. Rheostat
		6. Loads
Electrical Machine-II	Yes	1. Induction Motors Single phase
		2. Synchronous Machine
		3. Three phase slip- ring Induction motor
		4. Three phase squirrel cage Induction motor
		5. Oscillograph
Electrical Machines Lab	Yes	1. Single Phase Transformer
		2. Open Single Phase Transformer
		3. Two Phase Transformer
		4. Dc Shunt Generator
Electrical Measurement And Measuring Instrument Lab	Yes	1. Energy Meter
		2. Watt Meter
		3. Volt Meter
		4. Maxwell Bridge
		5. Potentiometer
		6. Kelvin Double Bridge
		7. Energy Meter
		8. Kelvin Bridge
Electronics Design Laboratory	Yes	1. CRO, Electronics Kit
		2. Diodes characteristics Kit
		3. Mode 8 Counter using Jk F/F
		4. Square wave generator using 555 timer
		5. Wein bridge oscillator using 741 IC
		6. Single stage amplifier
Electronics Measurement And Measuring Instrument	Yes	1. LVDT
		2. DC Motor Using Magnetic Pick
		3. R.T.D
		4. Thermocouple
		5. Strain gauge
Electronics Simulation Lab	Yes	1. Simulation Software
		2. Zener diode Kit
		3. Voltage regulator



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		4. Mode 8 up & down Counter
		5. IC 555
Fluid Machinery Lab	Yes	1. Hydraulic Ram
		2. Working Model of Pelton Turbine
		3. Working Model of Kaplan Turbine
		4. Working Model of Francis Turbine
		5. Working of centrifugal pump
		6. Working of reciprocating pump
Fluid Mechanics Lab	Yes	1. Coefficient Of Impact For Vanes
		2. Friction Factor For The Pipes
		3. Venturimeter
		4. Force Vertex Flow
Fluid Mechanics Laboratory	Yes	1. Reynolds Apparatus
		2. Pipe Friction Apparatus
		3. Notch Apparatus
		4. Forced Vortex Flow Apparatus
Heat Power Engineering Lab	Yes	1. Heat Boiler
		2. Steam Turbines
		3. Throttling Calorimeter
		4. Condenser Efficiencies
		5. Bomb Calorimeter
		6. Working model of Impulse and reaction turbine
		7. reciprocating air compressor
		8. Cooling tower apparatus
Heat Transfer Laboratory	Yes	1. Heat Transfer Through natural Conversion
		2. Heat Transfer Through Forced Conversion
		3. Pin fin Apparatus
		4. Emissivity Measuring apparatus
		5. Heat Transfer under parallel and counter flow
		6. Stefan Boltzman Apparatus
Highway Engineering Laboratory	Yes	1. Dorry's Abrasion Test On Aggregates,
		2. Deval Attrition Test On Aggregates,
		3. Penetration Test On Bitumen



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		4. Aggregate impact test
		5. Los Angeles Abrasion test on Aggregates
		6. Flash and Fire point test on Bitumen
I.C. Engine Lab	Yes	1. ORSAT Apparatus
		2. Two Stroke Petrol Engine Test Rig
		3. Two Stroke Diesel Engine Test Rig
		4. Four Stroke Petrol Engine Test Rig
		5. Four Stroke Diesel Engine Test Rig
		6. Balance Sheet Apparatus for Diesel /Petrol Engine
		7. Hydro carbon and CO measuring instrument
		8. Indicated power on multicylinder petrol /Diesel Engine
Manufacturing Practice-I Lab	Yes	1. Surface Grinder/Cylindrical
		2. Indexing Plates
		3. Lathe Machine
		4. Bench wise
		5. Welding apparatus MIG,TIG
		6. OXY Acetylene gas Welding
		7. Grinders
		8. Milling machine
		9. Casting & Molding apparatus and accessories
Mat Lab	Yes	1. Mat Lab Software
Mat Laboratory	Yes	1. RC CKT Simulation
		2. V-I Characteristics
		3. MOSFET
Material Science Lab	Yes	1. Crystal Structure
		2. Micro Structure
		3. Hardening and Tempering
		4. Heat Treated Steels
		5. Thermo-Setting
		6. Bravais Lattices models
Material Science Laboratory	Yes	1. Young's Modulus Apparatus
		2. Curie Temperature Kit



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		3. Dielectric Constant Kit
Measurement And Control Lab	Yes	1. Planimeter
		2. Dead Weight Gauge Tester
		3. Tachometer and stroboscope
		4. Potentiometer
		5. Engine indicator
		6. Stain Gauge apparatus
		7. Pitot tube
		8. Absorption dynamometer
Microprocessor Lab	Yes	1. 8085 Trainer Kit
		2. 8086 Trainer Kit
		3. Brad Board
Relational Data Base Management System Laboratory	Yes	1. Computers And Software
		2. Oracle 9I
Strength Of Material Lab	Yes	1. UTM Machine
		2. Rockwell Hardness Testing machine
		3. Vickers Hardness Testing Machine
		4. Impact Machines
Strength Of Material Laboratory	Yes	1. Torsion Testing Machine
		2. Impact Testing Machine
		3. Rockwell & Brinell Hardness Testing Machine
Structural Analysis Laboratory	Yes	1. Polariscope
		2. Begg's Deformator Set
		3. Portal Frame Apparatus
		4. Two Hinged Arch Apparatus
		5. Three Hinged Arch Apparatus
		6. Pin Jointed truss
		7. Forces in members of redundant frames
Structural Mechanics Lab	Yes	1. Supported Beam
		2. Deflection Beam
		3. Horizontal And Vertical Beam
		4. Plain And Deformed Bars Curved Member Apparatus
		5. Column And Struts Apparatus



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		6. Column Bucking Apparatus
Survey Lab	Yes	1. Transit Theodolite
		2. Wye Level
		3. Reversible Level
		4. Ideograph Pantagraph
		5. Vernier Transistor Theodolite
		6. Auto Level with Stand
Transmission And Distribution Of Electric Power Lab	Yes	1. Power Factor
		2. DC Distribution
		3. Voltage Distribution
		4. Multi-Layer Cables And Single Layer Cable
		5. Voltage Regulator



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STRUCTURE ANALYSIS LAB	1. CONTINUOUS BEAM APPRATUS
	2. ACCESSORIES AS WEIGHTS AND HANGERS
CONCRETE LAB	1. CUBE MOULD 7.06CMX7.06CM SIZE
	2. CUBE MOULD 15 CM X 15 CM SIZE
	3. CYLINDRICAL MOULD 15CM X 30 CM
	4. DRYING OVEN 18" X 18 "
	5. COMPRESSION TESTING MACHINE 100 TON CAP\
	6. LE CHATELIER FLASK
	7. SLUMP TEST APPRATUS
	8. LENGTH GAUGE
	9. THICKNESS GAUGE
AUTOMOBILE ENGINEERING LAB	1. MODEL OF SINGLE PLATE CLUTCH
	2. MODEL OF MULTI PLATE CLUTCH
	3. MODEL OF CONSTANT MESH GEAR BOX
	4. MODEL OF SYNCHRO MESH GEAR BOX
	5. MODEL OF DIFFERENTIAL AND REAR AXLE ASSEMBLY
	6. MODEL OF FRONT WHEEL DRIVE LINE
	7. MODEL OF IGNITION SYSTEM OF I.D.ENGINE
	8. A SMALL BATTERY WITH A CHARGER
	9. MODEL OF RARE SUSPENSION SYSTEM
	10. MODEL OF HYDRAULIC BRAKE
REFRIGERATION & AIR CONTROLING LAB	1. VAPOUR COMPRESSION REFRIGERATION TEST RIG
	2. WATER COOLER TEST RIG
	3. MODEL OF HERMELICALLY SEALED RECIPROCATING COMPRESSOR
	4. COOLING TOWER TEST RIG
	5. MODEL OF ROTARY COMPRESSOR
	6. DEMONSTRATION BOARD OF CONTROLS OF REFRIGERATION & AIR CONDITIONING SYSTEM



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T.V. ENGINEERING LAB	1. BLACK & WHITE T.V. DEMONSTRATOR (WITH 14 CRT)
	2. COLOUR PATTERN GENERATOR (FOR COLOUR/BLACK & WHITE T.V.)
OFC LAB	1. OPTICS FIBER TRAINER KIT
	2. FIBER CABLE ,POWER SUPPLY & PATCH CARDS
DSP LAB	1. MAT LAB
VHDL LAB	1. XILINX SOFTWARE & XILINX TRAINER KIT
DATA COMM. LAB	1. PC'S MODERNS, ROUTER, OFC'S 2. LAN'WIRES
WIRELESS COMM. LAB	1. RF S/G GENERATOR
	2. POER METERS
	3. VECTOR N/W ANALYZER S/M
CAPSA	1. COLASOFT S/W SNIFFER /ANALYZER SOFTWARE
	2. PC'S +ETHERNET
BIOMEDICAL ENGG.	1. ECG
	2. PULSE OXIMETER
	3. EEG
	4. ELECTRONICS
DSP LAB	1. MATLAB
EMD LAB	1. CAM ANALISIS APPARATUS
	2. GOVERNER APPRATUS
	3. MOTORS
	4. GENERATORS