

The department has adequate and very well equipped laboratories to meet curriculum requirement. All the laboratories are upgraded with new advanced equipments. The details are as below:

Heat Transfer Laboratory

1. Shell and Tube Heat Exchanger
2. Parallel and Counter Flow Double Pipe Heat Exchanger
3. Film wise and Drop wise Condensation Apparatus
4. Lagged Pipe Apparatus
5. Heat Transfer from Pin Fin Apparatus
6. Heat Transfer in Natural Convection Experimental Setup
7. Heat Transfer in Forced Convection Experimental Setup
8. Stefan Boltzmann Apparatus
9. Thermal Conductivity of Metal Rod Experimental Setup
10. Finned Tube Heat Exchanger



Mass Transfer Laboratory

1. Distillation with total Reflux
2. Absorption of CO_2
3. Solid Liquid Extraction
4. Steam Distillation
5. York Scheible Column
6. Wetted Wall Column
7. Ion Exchange
8. Adsorption Column
9. Batch Distillation
10. Humidification and Dehumidification
11. Bubble cap Distillation Column



Chemical Reaction Engineering

1. Continuous Stirred Tank Reactor (CSTR)
2. Plug Flow Reactor (PFR).
3. Three CSTR in Series
4. Packed Bed Reactors (PBRs)
5. CSTR-PFR in Series
6. Autoclave
7. Industrial Microwave (for synthesis)
8. Residence time distribution in PBR
9. Flocculator



Process Dynamics & Instrumentation Control

1. Pressure Control Trainer
2. Ratio and Cascade Control System Trainer
3. Temperature Controller
4. Bimetallic Thermometer
5. On-Off Controller
6. U-Tube Manometer
7. Thermocouple



Mechanical Operation Laboratory

1. Fluidized Bed
2. Cyclone Separator
3. Jaw Crusher
4. Ball Mill
5. Plate and Frame Filter Press.
6. Stokes Law Apparatus
7. Sieve Shaker
8. Redwood Viscometer



Software Laboratory

1. ANSYS Fluent (CFD)
2. CHEMKIN
3. CHEMCAD
4. MATLAB and FEMLAB
5. TK SOLVER
6. AUTOCAD 2002
7. ORIGIN LAB-15

