Department Overview

Department Name: Department of Chemical Engineering
Established: 2010
Programs Offered: Four-year Undergraduate (UG) program
Vision: To become the most sought-after center of excellence, engaged in training and shaping students as professionals for higher education and process industries, both in India and abroad.
Mission: Imparting contemporary technical education and training manpower to create skilled human resource talent to serve and manage the process industries globally, with a sense of responsibility towards society and the environment.

Faculty

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- **Faculty Members:**

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Laboratories & Experiments

Laboratories:

1. **Simulation Lab**
2. **Heat Transfer Lab**
3. **Fluid Mechanics Lab**
4. **Mass Transfer Operations Lab**
5. **Mechanical Unit Operations Lab**
6. **Instrumentation and Process Control Lab**
7. **Energy and Environmental Engineering Lab**
8. **Analytical and Instruments Lab**
9. **Chemical Reaction Engineering Lab**

Process Heat Transfer Laboratory (Experiments):

1. Composite wall
2. Natural convection
3. Forced convection
4. Emissivity Apparatus
5. Pool boiling
6. Thermal conductivity of metal rod
7. Stefan-Boltzmann Apparatus
8. Thermal conductivity of liquids
9. Shell & Tube Heat exchanger

Mechanical Unit Operations Laboratory (Experiments):

1. Jaw crusher
2. Ball mill
3. Batch sedimentation
4. Gyratory sieve shaker
5. Planetary Ball mill
6. Sieve shaker (R-vibrated)
7. Viscometer
8. Compressor
9. Cyclone separator
10. Froth flotation cell
11. Plate and frame filter press

Mass Transfer Operations Laboratory (Experiments):

1. Gas diffusion
2. Simple batch distillation
3. Steam distillation
4. Rotary Dryer
5. Solid-liquid extraction
6. Ion Exchange

7. Packed bed distillation
8. Liquid-liquid extraction
9. Cooling tower
10. Continuous distillation column
11. Absorption column
12. Adsorption column

Instrumentation and Process Control Laboratory (Experiments):

1. Calibration of thermocouples
2. Calibration of differential pressure transmitter
3. Interacting/Non-Interacting Systems
4. Level control trainer
5. Flow control trainer
6. Pressure control trainer
7. Temperature control trainer
8. Study of I/P Converter
9. Flapper Nozzle system
10. Control valve characteristics
11. Process simulator

Fluid Mechanics Laboratory (Experiments):

1. Centrifugal pump apparatus
2. Reynolds apparatus
3. Weirs & Notches
4. Rotameter
5. Venturi meter
6. Orifice meter
7. Frictional losses in pipe

Chemical Reaction Engineering Laboratory (Experiments):

1. Isothermal CSTR
2. Isothermal Batch Reactor
3. RTD Studies in PFR
4. RTD Studies in CSTR
5. CSTRs in series
6. Tubular Reactor
7. Fixed Bed catalysis

Library Books Details

1. **Telugu Academy** - English-Telugu Dictionary
2. **Walter L. Badger & Julist Banchero** - Introduction to Chemical Engineering
3. **K.V. Narayan** - A Text Book of Chemical Engineering Thermodynamics
4. **Adrian Bejan** - Advanced Engineering Thermodynamics
5. **T.J. Chung** - Computational Fluid Dynamics
6. **Lifane Ho Matsuura** - Advanced Membrane Technology and Applications
7. **K.A. Gavhane** - Heat Transfer (In SI Units)
8. **Kiran D. Patil** - Principles and Fundamentals of Mass Transfer Operations-1
9. **K.A. Gavhane** - Chemical Reaction Engineering-2
10. **E.L. Cussler** - Diffusion Mass Transfer in Fluid Systems
11. **J. Mendham et al.** - Text Book of Quantitative Chemical Analysis

12. **G.N. Panday** - A Textbook of Chemical Technology
13. **C.S. Rao** - Environmental Pollution Control Engineering
14. **Richard G. Rice & Duong D. Do** - Applied Mathematics and Modelling for Chemical Engineers
15. **H. Scott Fogler** - Elements of Chemical Reaction Engineering
16. **J.M. Coulson et al.** - Coulson & J.F.R.'s Chemical Engineering
17. **J.F. Richardson et al.** - Coulson & Richardson's Chemical Engineering
18. **J.F. Richardson & D.G. Peacock** - Coulson & Richardson's Chemical Engineering
19. **SANTHOSH K. GUPTA** - Numerical Methods for Engineering
20. **P. Pushpavanam** - Mathematical Methods in Chemical Engineering
21. **P.F. Stanbury et al.** - Principles of Fermentation Technology
22. **M. Gopal Rao & Marshall Sitting** - Outlines of Chemical Technology (Dryden's)
23. **Noel Denevers** - Fluid Mechanics for Chemical Engineers
24. **V.V. Mahajani & S.B. Umarji** - Joshi's Process Equipment Design
25. **Suresh C. Maidargi** - Chemical Process Equipment
26. **Octave Levenspel** - Chemical Reaction Engineering
27. **WELTY WICKS, WILSON RORRER** - Fundamentals of Momentum, Heat, and Mass Transfer
28. **Warren L. McCabe, Julian C. Smith, Peter Harriot** - Unit Operations of Chemical Engineering
29. **Richard H. Pletcher et al.** - Computational Fluid Mechanics and Heat Transfer
30. **Bruce A. Finlay et al.** - Introduction to Chemical Engineering Computing