

## Projects Guided during 2001-2002

### 1. Study Oriented Projects (BITS C323/BITS C324): 4 Students

S.No.	Title of the Project	Date of Commencement	Date of Submission
1.	Design Considerations for Bio-mass Gasification.	01-08-2001	28-11-2001
2.	Low Cost Adsorbents for Waste Water Treatment.	01-08-2001	28-11-2001
3.	Optimal Design of Gas Transmission Network using Differential Evolution.	01-08-2001	28-11-2001
4.	Analysis, Control, and Preventive Measures for Chemical and Biological Pollutants.	07-01-2002	03-05-2002

### 2. Computer Projects (BITS C331 & BITSC335): 16 Students

S.No.	Title of the Project	Date of Commencement	Date of Submission
1.	Process Design Decisions for a Chemical Plant.	01-08-2001	28-11-2001
2.	Fault Diagnosis Using Artificial Neural Networks.	01-08-2001	28-11-2001
3.	Computer-Aided-Design of Azeotropic Distillation.	01-08-2001	28-11-2001
4.	Non-Traditional Optimization Techniques for Complex Reactor Networks.	01-08-2001	28-11-2001
5.	Modeling & Simulation of Methanol Synthesis.	01-08-2001	28-11-2001
6.	Process Synthesis & Analysis of a Petrochemical Process.	01-08-2001	28-11-2001
7.	Modeling & Simulation of Ammonia Synthesis Reactor.	01-08-2001	28-11-2001
8.	Synthesis of Cost Optimal HENS Using Differential Evolution.	01-08-2001	28-11-2001
9.	Simulation of Heat Exchanger Networks Using Pinch Technology.	01-08-2001	28-11-2001
10.	Selection of Optimal Separation Scheme Using Evolutionary Computation.	07-01-2002	29-04-2002
11.	Neural Networks for Modeling of Chemical Process Synthesis.	07-01-2002	29-04-2002
12.	Differential Evolution Strategies for Optimal Design and Operation of Distillation Columns.	07-01-2002	29-04-2002

13.	Differential Evolution for Optimization of Pressure Swing Adsorption.	07-01-2002	29-04-2002
14.	Computer-Aided-Design of Bio-mass Gasifiers.	07-01-2002	29-04-2002
15.	Mathematical Modeling and Computer Simulations of Polymer Processing and Rheology of Polymer Melts.	07-01-2002	29-04-2002
16.	Optimal Design of Multi-Crude Piping Systems Using Differential Evolution.	07-01-2002	29-04-2002

### 3. Special Projects (CHE C491/ET C491): 4 Students

S.No.	Title of the Project	Date of Commencement	Date of Submission
1.	Artificial Neural Networks for Process Modeling.	01-08-2001	28-11-2001
2.	Economic Analysis for Profitability Measures in Chemical Industries.	01-08-2001	28-11-2001
3.	Waste Impact Analysis.	07-01-2002	29-04-2002
4.	Online Scheduling and Control in Manufacturing Industry.	07-01-2002	29-04-2002

### 4. Projects for Process Plant Simulation Course (CHE G541): 18 Students

S.No.	Title of the Project	Date of Commencement	Date of Submission
1.	Modeling & Simulation of High Pressure Steam Boiler.	01-08-2001	29-11-2001
2.	Modeling & Simulation of Urea Synthesis Reactor.	01-08-2001	29-11-2001
3.	Optimization of Batch Distillation Processes Using Simulated Annealing & Genetic Algorithm.	01-08-2001	29-11-2001
4.	Heat Exchanger Networks Using Pinch Technology.	01-08-2001	29-11-2001
5.	Optimization of Sulfuric Acid Plant Using Genetic Algorithm.	01-08-2001	29-11-2001
6.	Modeling & Simulation of Bubbling Bed Reactor.	01-08-2001	29-11-2001
7.	Dynamic Simulation of Distillation Column.	01-08-2001	29-11-2001
8.	Optimization of Ammonia Synthesis Reactor Using Genetic Algorithm.	01-08-2001	29-11-2001
9.	Design of Downdraft Bio-mass Gasifier.	01-08-2001	29-11-2001

### 5. Projects for Reaction Engineering Course (CHE G641): 16 Students

<b>S.No.</b>	<b>Title of the Project</b>	<b>Date of Commencement</b>	<b>Date of Submission</b>
1.	Study of Polymer Electrolyte Membrane.	07-01-2002	29-04-2002
2.	Production of Hydrogen.	07-01-2002	29-04-2002
3.	Automobiles using Fuel Cells.	07-01-2002	29-04-2002
4.	Carbon Nanotubes for Hydrogen Storage.	07-01-2002	29-04-2002
5.	Liquid Hydrogen Storage in Vehicles.	07-01-2002	29-04-2002
6.	Thermal Flow Multiplicity in Packed Bed Reactors.	07-01-2002	29-04-2002
7.	Hydrogen from Water Splitting.	07-01-2002	29-04-2002
8.	Sono-Chemical Reactors.	07-01-2002	29-04-2002
9.	Trickle Bed Reactors.	07-01-2002	29-04-2002