

## Projects Guided during 1998-99

### 1. Study Oriented Projects (BITS C323/BITS C324): 3 Students

S.No.	Title of the Project	Date of Commencement	Date of Submission
1.	Mass Transfer Aspects in Trickle Bed Reactors.	01-08-1998	01-12-1998
2.	Thermal Resistance Models for Co-current Upflow in Packed Beds.	01-08-1998	01-12-1998
3.	Process Design and Optimization for a Petro-Chemical Product.	06-01-1999	03-05-1999

### 2. Computer Oriented Projects (BITS C331 & BITSC335): 13 Students

S.No.	Title of the Project	Date of Commencement	Date of Submission
1.	Knowledge based system for Optimal Design of Heat Exchangers.	01-08-1998	02-12-1998
2.	Genetic Algorithms for Heat Transfer Parameters Estimation in Trickle Bed Reactors (TBRs).	01-08-1998	02-12-1998
3.	Expert Systems for Energy Integration.	01-08-1998	02-12-1998
4.	Neural Networks for the Control of a Heat Exchanger.	01-08-1998	02-12-1998
5.	Heat Exchanger Network Synthesis for Distillation Columns.	01-08-1998	02-12-1998
6.	Computer-Aided-Design and Simulation of Bubble Column Reactors.	01-08-1998	02-12-1998
7.	Energy Integration Analysis using Heat Exchanger Networks.	01-08-1998	02-12-1998
8.	Neuro-Fuzzy Control of Temperature in a CSTR.	06-01-1999	30-04-1999
9.	LQR Controller Design for an Open Loop Unstable System.	06-01-1999	30-04-1999
10.	Computer-Aided Numerical Techniques for Transient Heat Conduction.	06-01-1999	30-04-1999
11.	Automated Design of Heat Exchangers Using Artificial Intelligence Based Optimization.	06-01-1999	30-04-1999
12.	Model Reference Adaptive Control of an Open Loop Unstable Process.	06-01-1999	30-04-1999
13.	Simulation of Steady-State Heat Conduction Using Matrix Methods.	06-01-1999	30-04-1999

### 3. Lab Oriented Projects (BITS C313): 2 Students

S.No.	Title of the Project	Date of Commencement	Date of Submission
1.	Distributed Control System for CSTR Control.	01-08-1998	30-11-1998
2.	Studies on Reactive Dyeing from the Environmental View Point.	06-01-1999	30-04-1999

### 4. Special Projects (CHE C491): 1 Student

S.No.	Title of the Project	Date of Commencement	Date of Submission
1.	Process Synthesis and Analysis for the production of HDPE.	06-01-1999	30-04-1999

### 5. Professional Practice (BITS G619): 2 Students

S.No.	Title of the Project	Date of Commencement	Date of Submission
1.	Problem Formulation and Solutions on Heat Exchanger Network Synthesis.	06-01-1999	05-05-1999
2.	Literature Review on Energy Integration Analysis.	06-01-1999	05-05-1999

### 6. Projects for Process Plant Simulation Course (CHE G541): 9 Students

S.No.	Title of the Project	Date of Commencement	Date of Submission
1.	Application of Non-Traditional Optimization Techniques (Genetic Algorithms & Differential Evolution) in Chemical Engg.	10-08-1998	28-11-1998
2.	Fault Detection Using Neural Networks.	10-08-1998	28-11-1998
3.	Fuzzy Neural Networks for Modeling pH in a CSTR.	10-08-1998	28-11-1998
4.	Simulation of Optimization Using Sequential Simplex Method.	10-08-1998	28-11-1998
5.	Modeling of Non-Isothermal CSTR.	10-08-1998	28-11-1998
6.	Modeling of Isothermal Packed Tower with Chemical Reaction.	10-08-1998	28-11-1998
7.	Simulation of Transient Heat Conduction Using Numerical Methods.	10-08-1998	28-11-1998

**7. Projects for Reaction Engineering Course (CHE G641): 10 Students**

<b>S.No.</b>	<b>Title of the Project</b>	<b>Date of Commencement</b>	<b>Date of Submission</b>
1.	Modeling of Low Pressure CVD Reactor.	12-01-1999	28-04-1999
2.	Modeling and Simulation for Chlorination of Rutile Using Fluidized Bed.	12-01-1999	28-04-1999
3.	Design of Bubble Column Reactor.	12-01-1999	28-04-1999
4.	Design of Catalytic Reactors: Sulfur Dioxide Oxidation.	12-01-1999	28-04-1999
5.	Modeling of Fluidized Catalytic Cracking Unit.	12-01-1999	28-04-1999
6.	A Neural Network based Approach to Modeling of a Bio-Reactor.	12-01-1999	28-04-1999

**8. Projects for Computer-Aided-Design Course (EA C342): 1 Student**

<b>S.No.</b>	<b>Title of the Project</b>	<b>Date of Commencement</b>	<b>Date of Submission</b>
1.	Simulation of Transient Heat Conduction Using Implicit Formulation via Nodal Networks.	12-10-1998	05-12-1998