

## Projects Guided during 1997-98

### 1. Study Oriented Projects (BITS C323): 2 Students

S.No.	Title of the Project	Date of Commencement	Date of Submission
1.	Thermal Resistance Models in Two-Phase Co-Current Down flow through Packed Bed Columns.	12-08-1997	03-12-1997
2.	Sizing of CO <sub>2</sub> Compressor Inter-Stage Separators in a Fertilizer Industry.	12-08-1997	03-12-1997

### 2. Computer Oriented Projects (BITS C331 & BITSC335): 8 Students

S.No.	Title of the Project	Date of Commencement	Date of Submission
1.	Fault Diagnosis in a System of Heat Exchanger and CSTR using Artificial Neural Networks.	12-08-1997	03-12-1997
2.	Computer-Aided-Design of Compact Heat Exchangers.	12-08-1997	03-12-1997
3.	Design and Simulation of Hydrocracking Reactor.	12-08-1997	03-12-1997
4.	Modeling and Control of Fixed-bed Bio-Reactors.	02-02-1998	30-04-1998
5.	On-line Scheduling and Control System for Batch-process Management.	02-02-1998	30-04-1998
6.	Process Control of Liquid-Liquid-Extraction Column.	02-02-1998	30-04-1998
7.	Applications and Design of Bio-Sensors.	02-02-1998	30-04-1998
8.	Software Package for the Design of Multiple-effect Evaporators.	02-02-1998	30-04-1998

### 3. Lab Oriented Projects (BITS C313): 1 Student

S.No.	Title of the Project	Date of Commencement	Date of Submission
1.	Temperature Control in a Plate-and-Frame Heat Exchanger using Artificial Neural Networks.	12-08-1997	03-12-1997

(Continued.....)

**4. Professional Practice (BITS G619): 2 Students**

S.No.	Title of the Project	Date of Commencement	Date of Submission
1.	Mathematical Methods in Chemical Engineering.	12-08-1997	10-12-1997
2.	Synthesis of Distillation Systems with Energy Integration.	16-01-1998	09-05-1998

**5. Reading Course (BITS C383): 1 Student**

S.No.	Title of the Project	Date of Commencement	Date of Submission
1.	Process Equipment Design (CHE C412).	12-08-1997	03-12-1997

**6. Projects for Computer-Aided-Design Course (EA C342): 5 Students**

S.No.	Title of the Project	Date of Commencement	Date of Submission
1.	Computer Applications in Multi-component Separations.	20-10-1997	05-12-1997
2.	Estimation of Heat Transfer Coefficients in a Trickle Bed Reactor using Radial Basis Functional Networks.	20-10-1997	05-12-1997
3.	Azeotropic Distillation of Multi-component Systems.	20-10-1997	05-12-1997

**7. Projects for Process Plant Simulation Course (CHE G541): 8 Students**

S.No.	Title of the Project	Date of Commencement	Date of Submission
1.	Estimation of Heat Transfer Parameters in a TBR using Differential Evolution & Orthogonal Collocation.	12-08-1997	03-12-1997
2.	Simulated Annealing for Heat Transfer parametric estimation in a Trickle Bed Reactor.	12-08-1997	03-12-1997
3.	Simulation of Ideal Binary Distillation Column.	12-08-1997	03-12-1997
4.	Estimation of Heat transfer Parameters in a TBR using Genetic Algorithms.	12-08-1997	03-12-1997
5.	Counter Propagation Neural Networks for the estimation of $h_w$ and $k_{er}$ in a Trickle Bed	12-08-1997	03-12-1997

	Column.		
6.	Applications of Sequential Simplex Methods.	12-08-1997	03-12-1997
7.	Estimation of flow regime and heat transfer parameters using Artificial Neural Networks.	12-08-1997	03-12-1997
8.	Box Complex method for the estimation of heat transfer parameters for a Trickle Bed Reactor.	12-08-1997	03-12-1997

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

S.No.	Title of the Project	Date of Commencement	Date of Submission
1.	Design of Co-current Upflow Packed-bed Reactors.	07-01-1998	07-05-1998
2.	Penetration Theory for Diffusion with Chemical reaction.	07-01-1998	07-05-1998
3.	Design of Co-current Downflow Fixed-bed Reactors.	07-01-1998	07-05-1998
4.	A report on Three-phase Fluidized Bed Reactors.	07-01-1998	07-05-1998
5.	Design of Counter-current flow Fixed-bed Reactors.	07-01-1998	07-05-1998