

COURSE PROFILE

Course Name & No.:	Unit operation ChE – 435
Credit Hours & Term	3 : 1 & 5 Fall and Spring
Prerequisites:	ChE – 334 Separation Processes. ChE - 332 Heat Transfer ChE - 331 Momentum Transfer
Instructor :	Dr. AbdulRahim Al-Zahrani
Time & Room # :	9 :30 – 11 Sunday (Lecture) 2:30 – 5:30 T (Lab.). Bldg. 45, Room 150.
Textbook:	Laboratory Manual: ChE 435 Unit Operations Laboratory Manual. King AbdulAziz University, Jeddah.
References:	Course texts for ChE –334, ChE-333, ChE - 332. Experimental Methods for Engineers by Holman J.P. (1989)
Goals	<ol style="list-style-type: none">1. To reinforce the student’s understanding of momentum, heat and mass transfer, which he was exposed to in transfer operations, heat transfer, separation processes.2. To develop a student’s ability to apply standard methods for conducting experimental analysis.3. To train the student on how to write a technical report containing their findings on each experiment.
Grade Distribution	Written reports (10). (50%) Special topic (written report and presentation). (10%) Written exams (midterm and final). (40%)

Faculty of Engineering
Chemical & Materials Eng. Dept.

ChE 435 Unit Operation

Spring 2004

Course Outline

Topics:

Important of ancillary and presentation techniques.	(2 week)
Data collection, analysis and presentation techniques.	(2 weeks)
Gas diffusion	(1 week)
Liquid diffusion	(1 week)
Tracer responses analysis	(1 week)
Sedimentation	(1 week)
Drying	(1 week)
Double pipe heat exchanger	(1 week)
Liquid – liquid extraction	(1 week)
Binary distillation using plate and packed column.	(2 weeks)
Tracer response analysis	(1 week)
Solids' size reduction and analysis	(1 week)