

Department of Chemical Engineering

Course Syllabus

Course Code & Number	CHE 201																						
Course Title	Principles of Chemical Engineering																						
Credit & Contact Hours	3 Credits; 3 Lectures, 0 Laboratories (3-0-3)																						
Instructor	Dr. Mohammad Anwar Parvez																						
Office Location	Room# 2303																						
Instructor's Office Phone	00966 13 720 5175																						
Instructor's Email	maparvez@uhb.edu.sa	Homepage link	https://www.uhb.edu.sa/Pages/MemberDetails.aspx?Param=college&Ref=29&Member=440																				
Prerequisites	CHEM 102																						
Course Description	The basic principles and techniques used for calculations of material balances in chemical engineering processes are introduced. Material balance for reactive and nonreactive processes is discussed. Simple chemical engineering processes and complex systems including recycle are covered. Study the behavior of ideal and real gases.																						
Course Objectives	<ul style="list-style-type: none"> i. To introduce the students about concepts of Units and dimensions, Ideal and non-ideal behavior of gases ii. To familiarize them with Fundamental concepts in Chemical Engineering iii. To develop expertise to analyze and solve material balance problems in processing units for various systems iv. To develop expertise in analysis of ideal and real gas behavior 																						
Required Textbook	<p>Textbook: Felder Richard M., Rousseau Ronald W. and Bullard Lisa G. "Elementary Principles of Chemical Processes" 3rdEdn. John Willey & Sons.</p> <p>Reference Book: David M. Himmelblau, James B. Riggs, Basic Principles and Calculations in Chemical Engineering, 8th Edition, Prentice Hall, 2012 (ISBN-13: 978-0132346603)</p>																						
Grading Scheme	<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th>Assessments</th> <th>Assessments Task</th> <th>Week due</th> <th>Proportion of Final Mark (%)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Quizzes</td> <td>fortnightly</td> <td>15</td> </tr> <tr> <td>2</td> <td>Home-works</td> <td>fortnightly</td> <td>15</td> </tr> <tr> <td>3</td> <td>Midterm exam</td> <td>6</td> <td>30</td> </tr> <tr> <td>4</td> <td>Final exam</td> <td>13</td> <td>40</td> </tr> </tbody> </table>			Assessments	Assessments Task	Week due	Proportion of Final Mark (%)	1	Quizzes	fortnightly	15	2	Home-works	fortnightly	15	3	Midterm exam	6	30	4	Final exam	13	40
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<p>Course Learning Outcomes & Mapped So's</p>	<ul style="list-style-type: none"> ➤ Able to apply unit conversions for primary and secondary dimensions (SO 1) ➤ Able to perform material balance and energy balance calculations(SO 1) ➤ Able to apply component balance to non-reactive and reactive processes with or without recycle, purge and by-pass streams(SO 1) ➤ Able to analyze behavior of ideal and real gases for pure and mixed gases(SO 1) 																			
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