



## ChE 102: Introduction to Chemical Engineering

1 credit hour, 1 contact hour lecture, 1 credit hour Engineering

### Instructor

Instructor: Prof. Fahmi Abu Al-Rub

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### Textbooks & References

#### A. Textbook

	Textbook 1
Title	Elementary Principles of Chemical Processes
Author(s)	Felder, R.M., and Rousseau, R.W.
Publisher	John Wiley
Year	2018
Edition	4th edition

#### B. References

1. Solen, K.A. and Harb J.N. (2010). Introduction to Chemical Engineering: Tools for Today and Tomorrow. 5<sup>th</sup> edition. John Wiley & Sons, Inc.
2. David M. Himmelblau & James B. R. (2003). Basic Principles and Calculations in Chemical Engineering. 7<sup>th</sup> edition. Pearson Education.

### Specific Course Information

#### A. Course Catalog:

This course on general Chemical Engineering calculations and principles. It gives students an overview of Chemical Engineering by allowing them to learn about and apply multiple aspects of the field at an introductory level.

#### B. Prerequisites or co-requisites

Chemistry 101

#### C. Required/Elective or Selected Elective

Required

### Objectives and Outcomes\*

This course will introduce the basic concept and fundamentals needed in Chemical Engineering.

CLO1: Learning basic skills needed in engineering calculations such as: unit systems and conversions, data plotting, linearization, and fitting, and the use of significant figures in expressing results (1,3,6)

\* Number in brackets refer to the Program outcomes

CLO2: Understanding the function of chemical process and the role chemical engineering, and the distinction between chemical engineering and chemistry (1,3,6)

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### Contribution of Course to Meeting the Professional Component

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Relationship to Student Outcomes (%)

1	2	3	4	5	6	7
75		10			15	

Relationship to Chemical Engineering Program Objectives

PEO1	PEO2	PEO3	PEO4	PEO5	PEO6
√	-	√	-	-	-

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### Topics Covered

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Week	Topics	Chapters in Text
1-2	Introduction to Chemical Engineering	Chapter 1
3	The Role of Chemical Processing	Chapter 1
4-8	Introduction to Engineering Calculations	Chapter 2
9-15	Describing Physical Quantities	Chapter 3

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### Evaluation

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Assessment Tool	Expected Due Date	Weight
HW, Quizzes, class activities, etc.		40%
Final Exam	According to the University final examination schedule	60 %