CHEM 441 Syllabus

Course Code	Course Name	Credits	Prerequisite(S)	Classification
CHEM 441	Physical Chemistry of Polymers	2	CHEM 334	**Elective** Course

Course Description	Classification and properties of Polymers- polymer kinetics- Polymeric solutions and criteria of polymer solubility, Apparent, Mechanism and Thermal properties- Molecular weight measurements, analysis and test of polymers.
Class Scheduling	Classes are held 2 times/week each for 50 minutes.
Textbook	Carraher's Polymer Chemistry, Ninth Edition, 2013, Charles E. Carraher Jr. P. C. Hiemenz & T.P. Lodge, "Polymer Chemistry", 2nd Edition, CRC Press, 2007.
Course Coordinator	Dr. Soad Alsheheri

Relationship to SOs

1	2	3	4	5	6
X		X			X

CLOs

By the end of this course student will be able to:

CLO1: Define macromolecules by knowing their introduction, definition and properties (SO1)

CLO2: Explain crystalline and amorphous nature of macromolecules by studying concept of crystallinity. (SO1)

CLO3: Classify polymers according to the structure of it. (SO3)

CLO4: Analyze different types of polymerization reactions. (SO3)

CLO5: Illustrate the basic idea about the kinetics (rate, order, molecularity, etc. (SO3)

CLO6: Illustrate self-learning and teamwork skills. (SO6)

Contents

List of Topics	No. of Weeks
Classification of polymers	2
Main properties of polymers	2
Preparation of polymers	2
Kinetics of polymers & Application of polymers	4
Polymer solution & Conducting polymer & Analysis and test of	5