

## KFUPM

**CHEM-537 : POLYMER SYNTHESIS (3-0-3) TERM # 062**

### CATALOG DESCRIPTION :

Types of polymerization reactions. Kinetic and mechanistic studies of addition and condensation polymerizations by ionic, free radical and coordination initiators and catalysts. Ring opening polymerization, stereochemistry of polymerization.

### TEXT BOOK :

Principles of Polymerization, G. Odian, 4<sup>th</sup> Edition, 2004, John Wiley & Sons

**INSTRUCTOR:** Prof. S. A. Ali

Days = SM , Time = 0630PM-0745PM , Building = 4 , Room = 106

CHAPER #	TOPICS	LECTURES
1	Introduction	3 class
2	Step Polymerization	6 classes
3	Radical Chain Polymerization	7 classes
4	Emulsion Polymerization	2 classes
5	Ionic Chain Polymerization	4 classes
6	Chain Copolymerization	4 classes
7	Ring-Opening Polymerization	2 classes
8	Stereochemistry of Polymerization (Coordination Poly, tacticity etc)	2 classes

*First Major exam: Chapter 1-2*

*Second major exam: Chapter 3 & 4*

*Final Exam: Chapetr 5-8 + some general question from the rest*

### GRADE DISTRIBUTIONS

1 st Major	:	25	points
2 <sup>nd</sup> Major	:	25	"
Final	:	40	"
HW	:	10	"

100 points

*Take Home quizzes from chapter end problems:*

**Chapter #1:** 1-2; 1-4; 1-7.

**Chapter #2:** 2-1; 2-2; 2-7; 2-8; 2-9; 2-10; 2-11; 2-12.

**Chapter #3:** 3-4 ; 3-6 ; 3-7 ; 3-9 ; 3-10 ; 3-11 ; 3-15

**Chapter #5** 5-1 ; 5-2 ; 5-13