



AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title		Advanced Polymer Chemistry							
Course Code		KİM541		Course Level		Second Cycle (Master's Degree)			
ECTS Credit	6	Workload	150 (<i>Hours</i>)	Theory	3	Practice	0	Laboratory	0
Objectives of the Course		This course aims to teach the students the principles of polymer chemistry.							
Course Content		Basic concepts related with polymers, thermal properties of polymers, crystal structure of polymers, molecular weights of polymers, types of copolymers, classifications of polymers							
Work Placement		N/A							
Planned Learning Activities and Teaching Methods				Explanation (Presentation), Discussion, Problem Solving					
Name of Lecturer(s)		Prof. Ömer Barış ÜZÜM							

Assessment Methods and Criteria

Method	Quantity	Percentage (%)
Midterm Examination	1	20
Final Examination	1	60
Assignment	4	20

Recommended or Required Reading

1	Polimer Kimyası, Prof. Dr. Mehmet SAÇAK
2	Polimer Kimyası, Prof. Dr. Bahattin BAYSAL
3	Introduction to Polymer Chemistry, Raymond B. SEYMOUR

Week	Weekly Detailed Course Contents	
1	Theoretical	Introduction and basic concepts. History. Definition and milestones of Biochemistry. General approach to biomolecules.
2	Theoretical	Historical development
3	Theoretical	Synthesis of polymers
4	Theoretical	Naming of polymers
5	Theoretical	Stereochemistry of polymers
6	Theoretical	Thermal behaviors, glassy tempetarure
7	Theoretical	Crystal structure and solubility of polymers
8	Intermediate Exam	Midterm Exam
9	Theoretical	Molecular weight concept of polymers
10	Theoretical	Step-reaction polymerization.
11	Theoretical	Radical chain-reaction polymerization
12	Theoretical	Ionic polymerization
13	Theoretical	Special polymerization reactions
14	Theoretical	Copolymerization
15	Theoretical	Intermediates of polymer production
16	Final Exam	Final Exam

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	0	3	42
Assignment	4	0	8	32
Reading	1	0	37	37
Quiz	1	3	3	6
Midterm Examination	1	12	2	14



Final Examination	1	16	3	19
Total Workload (Hours)				150
[Total Workload (Hours) / 25*] = ECTS				6
*25 hour workload is accepted as 1 ECTS				

Learning Outcomes

1	to be able to identify the basic concepts related with polymers
2	to be able to define the thermal properties of polymers
3	to be able to analyse the crystal structure of polymers
4	to be able to recognize the molecular weights of polymers
5	to be able to define the types of copolymers
6	to be able to classify the polymers

Programme Outcomes (Chemistry Master)

1	To be able to gain proficiency in depths and analysis by statistical methods in the same or a related area depending on the undergraduate competence,.
2	To be able to use the knowledge of his/her field and the skills to solve problems and/or applications in interdisciplinary research.
3	To be able to adopt to evaluate the information and skill his/her field by critical approach.
4	To be able to evaluate the effect of important persons, case and fact on his/her field applications.
5	To be able to gain the ability to discuss write and orally present to a group of literate listener.
6	To be able to communicate orally and written in a foreign language at least at European language B2 level.
7	To be able to use computer programs related to his/her field and have skills for informatics communication.
8	To be able to be careful in protecting social, scientific and cultural ethics in collection data, application and presentation.
9	To be able to develop strategic, political and application plans in his/her field and may evaluate the outcomes in quality periods.

Contribution of Learning Outcomes to Programme Outcomes 1:Very Low, 2:Low, 3:Medium, 4:High, 5:Very High

	L1	L2	L3	L4	L5	L6
P1	5	5	5	5	5	5
P2	5	4	5		3	3
P3	5	4	5		3	3
P4	5	4	4		3	3
P5	5	3	5		3	3
P6	5	3				
P8				4		
P9	4	4				

