

Focus: Polymeric and Biological Materials

University Courses Shown in Green  
 Required Courses shown in Bold  
 Must take track courses in red bold

FIRST YEAR									
First Semester					Second Semester				
	SU	ECTS			SU	ECTS			
IF 100	3	5	Computational Approaches to Problem Solvi	AL 102	3	5	Academic Literacies		
MATH 101	3	6	Calculus I	MATH 102	3	6	Calculus II		
NS 101	4	6	Science of Nature I	NS 102	4	6	Science of Nature II		
SPS 101	3	6	Humanity and Society I	SPS 102	3	6	Humanity and Society II		
TLL 101	2	3	Turkish Language and Literature I	TLL 102	2	3	Turkish Language and Literature II		
HIST 191	2	3	Principles of Atatürk and the History of the T	HIST 192	2	3	Principles of Atatürk and the History of the Tur		
CIP 101	0	1	Civic Involvement Projects I						
<b>Total Credit</b>					<b>Total Credit</b>				
17					17				
30					29				
SECOND YEAR									
Third Semester					Fourth Semester				
	SU	ECTS			SU	ECTS			
PROJ 201	1	1	Undergraduate Project Course	MATH 202	3	6	Differential Equations		
ENS 205	3	6	Introduction to Materials Science	MAT 204	3	6	Electrical, Optical and Magnetic Proper		
ENS 202	3	6	Thermodynamics	NS 218	3	6	Fundamentals of Nanoscience		
MATH 201 / 203	3	6	Linear Algebra / Introduction to Probability	ENS 209	3	6	Introduction to Computer Aided Drafting and S		
NS 207	4	6	Organic Chemistry	MAT 206	3	6	Kinetics of Materials		
Elective	3/4	6/7							
<b>Total Credit</b>					<b>Total Credit</b>				
17/18					15				
31/32					30				
THIRD YEAR									
Fifth Semester					Sixth Semester				
	SU	ECTS			SU	ECTS			
MAT 312	4	7	Materials Characterization	HUM 20X	3	5	Major Works		
MAT 314	3	5	Mechanical Properties of Materials	MAT 306	3	5	Computational Techniques for Materials at the		
MATH 201 / 203	3	6	Linear Algebra / Introduction to Probability	MAT 307	3	6	Composite Materials		
MAT 305	3	5	Polymer Engineering: Fundamentals	MAT 302	4	7	Polymer Synthesis		
Elective	3/4	6/7		Elective	3/4	6/7			
<b>Total Credit</b>					<b>Total Credit</b>				
16/17					16/17				
29/30					28/30				
PROJ 395	0	5	Internship Project						
FOURTH YEAR									
Seventh Semester					Eight Semester				
	SU	ECTS			SU	ECTS			
SPS 303	3	5	Law and Ethics	ENS 492	3	5	Graduation Project (Implementation)		
ENS 491	1	2	Graduation Project (Design)	MAT 406	3	5	Nanoengineered Systems Fabrication		
MAT 408	3	5	Introduction to Ceramics	MAT 402	3	6	Elective Polymer Engineering: Processing and A		
MAT 404	3	5	Polymer Physics	Elective	3/4	6/7			
Elective	3	5/6		Elective	3/4	6/7			
Elective	3/4	6/7							
<b>Total Credit</b>					<b>Total Credit</b>				
16/17					15/17				
28/31					27/30				

Recommended electives:

BIO 321	Biochemistry I	4	7
BIO 466	Biophysics: Molecules and Systems	3	5
ENS 222	Biological Circuits and Molecular Machin	3	6
MAT 401	Surface Science	3	6
MAT 416	Biomaterials Science and Biocompatibilit	3	5
MAT 307	Composite Materials	3	6

(at least two to complete track)