

**OSMANIYE KORKUT ATA UNIVERSITY**  
**Institute of Science and Technology**  
**Department of Chemical Engineering**  
**Graduate Courses**

**Total number of credits and ECTS credits required to obtain a Master's degree.**

Course		Hours		Description		
Code	Name	Theoretical	Application	Credits	ECTS	Type
ChE 501/I/III	Specialization Field Course	4	0	0	12	Required
ChE 502/II/IV	Specialization Field Course	4	0	0	12	Required
ChE 503	Master Thesis	0	0	0	24	Required
ChE 504	Master Thesis	0	0	0	24	Required
ChE 505	Scientific Research Methods and Publication Ethics	3	0	3	6	Required
ChE 506	Graduate Seminar	0	0	0	6	Required
ChE 507	Applied Mathematics in Chemical Engineering	3	0	3	6	Required
ChE 5XX	Elective Course	3	0	3	6	Elective
ChE 5XX	Elective Course	3	0	3	6	Elective
ChE 5XX	Elective Course	3	0	3	6	Elective
ChE 5XX	Elective Course	3	0	3	6	Elective
ChE 5XX	Elective Course	3	0	3	6	Elective
<b>Total</b>		<b>29</b>	<b>0</b>	<b>21</b>	<b>120</b>	

Note: Master Thesis course will be taken in the third semester.

**Required/Elective Courses for Fall Semester**

Course		Hours		Description		
Code	Name	Theoretical	Application	Credits	ECTS	Type
ChE 501 I/III	Specialization Field Course	4	0	0	12	Required
ChE 503	Master Thesis	0	0	0	24	Required
ChE 505	Scientific Research Methods and Publication Ethics	3	0	3	6	Required
ChE 507	Applied Mathematics in Chemical Engineering	3	0	3	6	Required
ChE 509	Transport Phenomena in Chemical Engineering	3	0	3	6	Elective
ChE 511	Advanced Chemical Reaction Engineering	3	0	3	6	Elective
ChE 513	Advanced Process Dynamics and Control	3	0	3	6	Elective
ChE 515	Advanced Separation Operations	3	0	3	6	Elective
ChE 517	Advanced Chemical Engineering Heat Transfer	3	0	3	6	Elective
ChE 519	Advanced Chemical Engineering Thermodynamics	3	0	3	6	Elective
ChE 521	Advanced Fluid Mechanics	3	0	3	6	Elective
ChE 523	Nanotechnology and its Applications	3	0	3	6	Elective
ChE 525	Biotechnology and Enzyme Kinetics	3	0	3	6	Elective
ChE 527	Electrochemistry Engineering	3	0	3	6	Elective

ChE 529	Chemical Process Economics and Design	3	0	3	6	Elective
ChE 531	Polymer Synthesis and Characterization	3	0	3	6	Elective
ChE 533	Colloid and Interfacial Science	3	0	3	6	Elective
ChE 535	Water and Wastewater Treatment	3	0	3	6	Elective
ChE 537	Production of Composite Materials	3	0	3	6	Elective
ChE 539	Adsorption and Adsorption Processes	3	0	3	6	Elective
ChE 541	Hydrogen Technology	3	0	3	6	Elective

### Required/Elective Courses for Spring Semester

Course		Hours		Description		
Code	Name	Theoretical	Application	Credits	ECTS	Type
ChE 502 /II/IV	Specialization Field Course	4	0	0	12	Required
ChE 504	Master Thesis	0	0	0	24	Required
ChE 506	Graduate Seminar	0	0	0	6	Required
ChE 505	Scientific Research Methods and Publication Ethics	3	0	3	6	Required
ChE 507	Applied Mathematics in Chemical Engineering	3	0	3	6	Required
ChE 508	Supercritical Fluids	3	0	3	6	Elective
ChE 510	Statistical Thermodynamics	3	0	3	6	Elective
ChE 512	Biochemical Production Technologies	3	0	3	6	Elective
ChE 514	Advanced Momentum and Mass Transfer	3	0	3	6	Elective
ChE 516	Convective Heat Transfer	3	0	3	6	Elective
ChE 518	Colloidal Suspension Rheology	3	0	3	6	Elective
ChE 520	Fuel Cells and Fuel Processors	3	0	3	6	Elective
ChE 522	Conductive Polymers	3	0	3	6	Elective
ChE 524	Plastic Technology	3	0	3	6	Elective
ChE 526	Boron Chemistry and Technology	3	0	3	6	Elective
ChE 528	Air Pollution Control	3	0	3	6	Elective
ChE 530	Process Modeling, Optimization and Simulation	3	0	3	6	Elective
ChE 532	Electrochemical Energy Systems	3	0	3	6	Elective
ChE 534	Membrane Technology	3	0	3	6	Elective
ChE 536	Radioactive Waste Management	3	0	3	6	Elective
ChE 538	Nuclear Technology	3	0	3	6	Elective
ChE 540	Heterogeneous Catalysis and Catalytic Processes	3	0	3	6	Elective