

DERS PROGRAMI

YEAR ONE																					
1st Term						2nd Term															
Code	Course Name	T	P	L	C	ECTS	Prerequisite	Code	Course Name	T	P	L	C	ECTS	Prerequisite						
PHYS101	Physics I*	3	0	2	4	6		PHYS102	Physics II*	3	0	2	4	6							
MATH101	Calculus I*	3	2	0	4	6		MATH102	Calculus II*	3	2	0	4	6							
CHEM101	General Chemistry I*	3	0	2	4	6		CHEM102	General Chemistry II*	3	0	2	4	6							
CHE105	Computer Aided Engineering Graphics*	2	0	2	3	4		CHE102	Introduction to Chemical Engineering	3	0	0	3	4							
RFSC109	Positive Psychology and Communication	3	0	0	3	5		MBG154	General Biology*	2	0	2	3	4							
RCUL103	University Culture I*	0	2	0	1	4		RCUL104	University Culture II*	0	2	0	1	4							
TURK103	Turkish Language I	2	0	0	2	2		TURK104	Turkish Language II	2	0	0	2	2							
Total Credits						16	4	6	21	33	Total Credits						16	4	6	21	32
YEAR TWO																					
3rd Term						4th Term															
Code	Course Name	T	P	L	C	ECTS	Prerequisite	Code	Course Name	T	P	L	C	ECTS	Prerequisite						
CHE201	Mass and Energy Balances	3	2	0	4	5		CHE204	Chemical Engineering Thermodynamics*	2	2	0	3	5							
CHE221	Introduction to Programming for Chemical	2	0	2	3	4		CHE206	Fluid Mechanics and Applications	3	0	0	3	5							
CHEM203	Physical Chemistry	3	0	0	3	4		CHE292	Summer Practice I**	0	0	0	0	5							
MATH203	Differential Equations	2	2	0	3	5		CHEM104	Organic Chemistry*	3	0	2	4	6							
RFRE104	Entrepreneurship and Project Culture	2	0	0	2	3		MATH204	Statistics	3	0	0	3	5							
ATA103	Principles of Atatürk and History of Turkish	2	0	0	2	2		ATA104	Principles of Atatürk and History of Turkish	2	0	0	2	2							
ENG103	English I	2	0	0	2	2		ENG104	English II	2	0	0	2	2							
XXXXX	Social Elective I	3	0	0	3	5		Total Credits						15	2	2	17	30			
Total Credits						19	4	2	22	30	Total Credits						15	2	2	17	30
YEAR THREE																					
5th Term						6th Term															
Code	Course Name	T	P	L	C	ECTS	Prerequisite	Code	Course Name	T	P	L	C	ECTS	Prerequisite						
CHE301	Heat Transfer	3	0	0	3	5		CHE310	Mass Transfer	3	0	0	3	5							
CHE307	Chemical Reaction Engineering-I*	2	2	0	3	5		CHE312	Chemical Reaction Engineering-II*	2	2	0	3	5							
IE211	Engineering Economics	3	0	0	3	4		CHE332	Chemical Engineering Laboratory I*	1	0	4	3	4							
CHEXXX	Departmental Elective I (Project Based)	3	0	0	3	5		CHE392	Summer Practice II**	0	0	0	0	5							
XXXXXX	Social Elective II	3	0	0	3	5		CHEXXX	Departmental Elective II (Project Based)	3	0	0	3	5							
XXXXXX	Field Elective I	3	0	0	3	5		XXXXXX	Social Elective III	3	0	0	3	5							
Total Credits						17	2	0	18	29	Total Credits						12	2	4	15	29
YEAR FOUR																					
7th Term						8th Term															
Code	Course Name	T	P	L	C	ECTS	Prerequisite	Code	Course Name	T	P	L	C	ECTS	Prerequisite						
CHE491	Graduation Project*	2	2	0	3	5		CHE492	Graduation Thesis*	1	8	0	5	5	CHE491						
CHE403	Chemical Process Control	3	0	0	3	5		CHEXXX	Departmental Elective V	3	0	0	3	5							
CHE431	Chemical Engineering Laboratory II*	1	0	4	3	4		CHEXXX	Departmental Elective VI	3	0	0	3	5							
CHE421	Mathematical Modeling for Chemical	3	0	0	3	5		XXXXXX	Field Elective II	3	0	0	3	5							
CHEXXX	Departmental Elective III	3	0	0	3	5		XXXXXX	Field Elective III	3	0	0	3	5							
CHEXXX	Departmental Elective IV	3	0	0	3	5		OHS404	Occupational Health and Safety	4	0	0	4	4							
Total Credits						15	2	4	18	29	Total Credits						17	8	0	21	29

2024-2025	Total Course Credits for Graduation	153
	Total Theoretical Hours	127
	Total Applied Course hours	28
	Total Laboratory Hours	24
	Total Course ECTS for Graduation	241
	Total Elective Courses ECTS	60
	Elective Course Ratio	25%

* These courses are under the Applied Course status.
 ** These courses are under the Internship Course status.

Elective Course Pool															
Code	Departmental Elective Courses	T	P	L	C	ECTS	Prerequisite	Elective Foreign Languages						Prerequisite	
CHE213	Physical Chemistry Laboratory	0	0	4	3	5		ARB123	Arabic I	3	0	0	3	5	
CHE202	Organic Chemistry - II	3	0	0	3	5	CHEM104	ARB124	Arabic II	3	0	0	3	5	ARB123
CHE303	Introduction to Nanotechnology	3	0	0	3	5		CHN123	Chinese I	3	0	0	3	5	
CHE305	Sustainable and Renewable Energy	3	0	0	3	5		CHN124	Chinese II	3	0	0	3	5	CHN123
CHE306	Fermentation Technology	3	0	0	3	5		ESP123	Spanish I	3	0	0	3	5	
CHE308	Data Mining in Chemical Engineering	3	0	0	3	5		ESP124	Spanish II	3	0	0	3	5	ESP123
CHE311	Transport Phenomena in Chemical	3	0	0	3	5		FRN123	French I	3	0	0	3	5	
CHE313	Structural Biology	3	0	0	3	5		FRN124	French II	3	0	0	3	5	FRN123
CHE314	Separation Processes	3	0	0	3	5		GER123	German I	3	0	0	3	5	
CHE321	Fundamentals of Biochemistry	3	0	0	3	5		GER124	German II	3	0	0	3	5	GER123
CHE323	Introduction to Biological Science - II	3	0	0	3	5		RSN123	Russian I	3	0	0	3	5	
CHE325	Nanostructured Materials	3	0	0	3	5		RSN124	Russian II	3	0	0	3	5	RSN123
CHE405	Biotechnology and Special Applications	3	0	0	3	5		JAP123	Japanese I	3	0	0	3	5	
CHE406	Bioinformatics for Engineers	3	0	0	3	5		JAP124	Japanese II	3	0	0	3	5	JAP123
CHE408	Special Topics in Chemical Engineering	3	0	0	3	5		ITA123	Italian I	3	0	0	3	5	
CHE409	Principles and Practice of Drug Development	3	0	0	3	5		ITA124	Italian II	3	0	0	3	5	ITA123
CHE414	Drug Design	3	0	0	3	5		For Field Elective courses, any departmental elective course having appropriate credits from other departments of Faculty of Engineering and Natural Sciences can be elected.							
CHE416	Protein Engineering for Chemical Engineers	3	0	0	3	5									
CHE433	Chemical Engineering Design - I	3	0	0	3	5									
CHE434	Chemical Engineering Design - II	3	0	0	3	5	CHE433								
CHE446	Material Science and Engineering	3	0	0	3	5									
CHE447	Catalysis and Catalytic Processes	3	0	0	3	5									
CHE448	Instrumental Analysis	3	0	0	3	5									
CHE449	Engineering Thermodynamics	3	0	0	3	5	CHE204								
CHE450	Energy Management	3	0	0	3	5									
CHE451	Water Treatment Technology	3	0	0	3	5									
CHE453	Chemical Technology	3	0	0	3	5		For Social Elective courses any course having appropriate credits from other faculties can be elected.							
CHE455	Gas Purification Technology	3	0	0	3	5									
CHE457	Recycling Technology	3	0	0	3	5									
CHE461	Petroleum Refinery Engineering	3	0	0	3	5									
CHE462	Natural Gas Engineering	3	0	0	3	5									
CHE463	Petrochemical Technology	3	0	0	3	5									
CHE465	Photocatalysis	3	0	0	3	5									
CHE471	Polymer Technology	3	0	0	3	5									
CHE480	Chemistry and Manufacture of Cement	3	0	0	3	5									
CHE481	Paint Technology	3	0	0	3	5									
CHE482	Membrane Processes	3	0	0	3	5		Important notes to be taken into consideration before registrations							
CHE483	Microreaction Engineering	3	0	0	3	5									
CHE484	Chemical Engineering Mathematics	3	0	0	3	5									