

## GTÜ Kimya Mühendisliği Lisans Ders Programı

1. Yıl Güz Dönemi							1. Yıl Bahar Dönemi						
Kod	Ders	ECTS	T	U	L	Türü	Kod	Ders	ECTS	T	U	L	Türü
MATH 101	Calculus I	7	4	2	0	TB	MATH 102	Calculus II	7	4	2	0	TB
PHYS 121	Physics I	6	4	0	0	TB	PHYS 122	Physics II	6	4	0	0	TB
PHYS 151	Physics Laboratory I	1	0	0	2	TB	PHYS 152	Physics Laboratory II	1	0	0	2	TB
CHEM 101	General Chemistry I	5	3	0	0	TB	CHEM 102	General Chemistry II	5	3	0	0	TB
CHEM 113	General Chemistry Laboratory I	1	0	0	2	TB	CHEM 114	General Chemistry Laboratory II	1	0	0	2	TB
ENGL 111	Business English	2	2	0	0	SOS	ENGL 112	Academic English	2	2	0	0	SOS
INF 100	Introduction to Computer Systems	3	2	0	2	TB	CED 101	Introduction to Chemical Engineering	4	2	0	0	MT
SSTR 101	Principles of Atatürk and the History of Turkish Revolution I	2	2	0	0	SOS	SSTR 102	Principles of Atatürk and the History of Turkish Revolution II	2	2	0	0	SOS
TUR 101	Turkish I	2	2	0	0	SOS	TUR 102	Turkish II	2	2	0	0	SOS
MUH 401	Occupational Health and Safety I	1	1	0	0	SOS							
<b>Dönem Toplamı</b>		<b>30</b>	<b>20</b>	<b>2</b>	<b>6</b>		<b>Dönem Toplamı</b>		<b>30</b>	<b>19</b>	<b>2</b>	<b>4</b>	
2. Yıl Güz Dönemi							2. Yıl Bahar Dönemi						
Kod	Ders	ECTS	T	U	L	Türü	Kod	Ders	ECTS	T	U	L	Türü
MATH 215	Differential Equations	5	2	2	0	TB	MATH 214	Numerical Methods	5	3	0	0	TB
CED 201	Chemical Engineering Calculations	5	2	2	0	MT	CED 202	Physical Chemistry for Chemical Engineers	6	3	2	0	MT
CED 221	Fluid Mechanics	6	3	0	0	MT	CED 212	Mass Transfer	6	3	0	0	MT
CED 231	Chemical Engineering Thermodynamics	6	2	2	0	MT	INF 101	Introduction to Computing	4	2	0	2	TB
CHEM 106	Organic Chemistry	5	3	0	0	TB	ENG 260	Engineering Economics	5	3	0	0	TM
	Non-Technical Elective I	3	3	0	0	SOS		Non-Technical Elective II	3	3	0	0	SOS
<b>Dönem Toplamı</b>		<b>30</b>	<b>15</b>	<b>6</b>	<b>0</b>		MUH 402	Occupational Health and Safety II	1	1	0	0	SOS
<b>Dönem Toplamı</b>		<b>30</b>	<b>18</b>	<b>2</b>	<b>2</b>		<b>Dönem Toplamı</b>		<b>30</b>	<b>18</b>	<b>2</b>	<b>2</b>	
3. Yıl Güz Dönemi							3. Yıl Bahar Dönemi						
Kod	Ders	ECTS	T	U	L	Türü	Kod	Ders	ECTS	T	U	L	Türü
CED 311	Chemical Technologies	6	3	0	0	MT	CED 302	Chemical Process Control	6	3	0	0	MT
CED 321	Chemical Reaction Engineering	6	3	0	0	MT	CED 312	Separation Processes	6	4	0	0	MT
CED 341	Heat Transfer	6	3	0	0	MT	CED 332	Chemical Reactor Design	6	3	0	0	MT
ENG 360	Applied Statistics for Engineers	5	3	0	0	TM	CED 342	Chemical Process Design	7	3	2	0	MT
	Technical Elective I	4	3	0	0	MT/TM/TB	CED 322	Chemical Engineering Laboratory I	5	0	0	4	MT
	Free Elective	2	2	0	0	SOS							
MUH 300	Summer Practice I	1	0	1	0	MT	<b>Dönem Toplamı</b>		<b>30</b>	<b>13</b>	<b>2</b>	<b>4</b>	
<b>Dönem Toplamı</b>		<b>30</b>	<b>17</b>	<b>1</b>	<b>0</b>		<b>Dönem Toplamı</b>		<b>30</b>	<b>13</b>	<b>2</b>	<b>4</b>	
4. Yıl Güz Dönemi							4. Yıl Bahar Dönemi						
Kod	Ders	ECTS	T	U	L	Türü	Kod	Ders	ECTS	T	U	L	Türü
CED 491	Graduation Project I	6	0	4	0	MT	CED 492	Graduation Project II	6	0	4	0	MT
CED 411	Chemical Process Design Project	7	3	2	0	MT		Department Elective II	5	3	0	0	MT
CED 431	Materials Science for Chemical Engineers	6	3	0	0	MT		Department Elective III	5	3	0	0	MT
	Department Elective I	5	3	0	0	MT		Department Elective IV	5	3	0	0	MT
CED 421	Chemical Engineering Laboratory II	5	0	0	4	MT		Department Elective V	5	3	0	0	MT
MUH 400	Summer Practice II	1	0	1	0	MT		Technical Elective II	4	3	0	0	MT/TM/TB
<b>Dönem Toplamı</b>		<b>30</b>	<b>9</b>	<b>7</b>	<b>4</b>		<b>Dönem Toplamı</b>		<b>30</b>	<b>15</b>	<b>4</b>	<b>0</b>	

## AKREDİTASYON ve UYGUNLUK

<b>ECTS</b>	<b>T</b>	<b>U</b>	<b>L</b>
240	126	26	20

### Akreditasyon Ölçütleri ile Uyum Göstergeleri

Toplam ECTS	240	
Seçmeli derslerin ağırlığı	17	%
Matematik ve Temel Bilim derslerinin ağırlığı	26	%
Tasarım derslerinin ağırlığı	50	%

### Ön koşullar:

MATH 101 dersi MATH 102 dersinin ön koşuludur.

CED 321 dersi CED 332 dersinin ön koşuludur (DD ile geçmiş olmak).

CED 342 dersi CED 411 dersinin ön koşuludur (DD ile geçmiş olmak).

### Notlar:

TB - Temel Bilim

TM - Temel Mühendislik

MT - Mühendislik Tasarım

SOS - Sosyal İçerikli YÖK Dersleri

## SEÇMELİ DERSLER

### Bölüm Seçmeli (5 adet)

Ders Kodu	Dersin Adı	ECTS	T	U	L	Türü	
CED 452	Superhydrophobic and Superhydrophilic Coatings	5	3	0	0	MT	Bahar
CED 454	Drop Evaporation and Practical Applications	5	3	0	0	MT	Bahar
CED 456	Battery Technologies	5	3	0	0	MT	Bahar
CED 458	Materials for Energy Applications	5	3	0	0	MT	Bahar
CED 460	Micro and Nano Technologies	5	3	0	0	MT	Bahar
CED 462	Industrial Electrochemical Technologies	5	3	0	0	MT	Bahar
CED 464	Quality, Environment and Safety	5	3	0	0	MT	Bahar
CED 451	Mathematical Modeling in Chemical Engineering	5	3	0	0	MT	Güz
CED 466	Energy Technologies	5	3	0	0	MT	Bahar
CED 453	Food Chemistry and Technology	5	3	0	0	MT	Güz

### Teknik Seçmeli (2 adet)

Ders Kodu	Dersin Adı	ECTS	T	U	L	Türü
CED 211	Fundamentals of Mechanics & Electric	4	3	0	0	MT
CHEM 410	Instrumental Analysis	4	3	0	0	MT
ME 103	Computer Aided Drawing	4	2	0	2	MT
MATH 116	Linear Algebra	5	3	0	0	MT

### Teknik Olmayan Seçmeli (2 adet)

Ders Kodu	Dersin Adı	AKTS	T	U	L	Türü
ENG 250	Economics	3	3	0	0	SOS
FL 481	Basic Russian I	3	3	0	0	SOS
BUS 451	Introduction to Business	3	2	0	0	SOS
ENG 451	Entrepreneurship	3	2	0	0	SOS
ENG 460	Introduction to Photography	3	2	0	0	SOS
BUS 405	Personnel Selection and Placement	4	3	0	0	SOS
BUS 441	The European Union: Institutions and Policy Making	4	3	0	0	SOS

### Serbest Seçmeli (1 adet)

Ders Kodu	Dersin Adı	AKTS	T	U	L	Türü
PES 120	Sport For All	2	2	0	0	SOS
PES 130	Nature Sports	2	2	0	0	SOS
PES 150	Tennis I	2	2	0	0	SOS
PES 151	Tennis II	2	2	0	0	SOS
PES 160	Swimming I	2	2	0	0	SOS
PES 161	Swimming II	2	2	0	0	SOS
PES 180	Basketball I	2	2	0	0	SOS
PES 181	Basketball II	2	2	0	0	SOS

## DÖNÜŞÜM TABLOSU

### Cıkarılan Dersler:

Kod	Ders	ECTS	T	U	L	Türü	Dönem
CED 301	Inorganic Technologies	3	3	0	0	MT	Güz
CED 311	Unit Operations I	5	3	0	0	MT	Güz
CED 312	Unit Operations II	4	3	0	0	MT	Bahar
CED 331	Chemical Engineering Economy	3	3	0	0	MT	Güz
CED 342	Organic Technologies	3	3	0	0	MT	Bahar
CED XXX	Department Elective Courses	4	3	0	0	MT	Güz
CED XXX	Department Elective Courses	4	3	0	0	MT	Bahar
CED XXX	Department Elective Courses	4	3	0	0	MT	Bahar
CED XXX	Department Elective Courses	4	3	0	0	MT	Bahar
CED XXX	Department Elective Courses	4	3	0	0	MT	Bahar
CHEM 293	Organic Chemistry Laboratory I	3	0	0	3	MT	Bahar
CHEM 295	Physical Chemistry Laboratory	3	0	0	3	MT	Bahar
CHEM 310	Instrumental Analysis	4	3	0	0	MT	Güz
CHEM 390	Instrumental Analysis Laboratory	3	0	0	3	MT	Bahar
	Non-Technical Elective Course	3	3	0	0	SOS	Güz
	Non-Technical Elective Course	3	3	0	0	SOS	Güz
	Non-Technical Elective Course	3	3	0	0	SOS	Bahar

### Eklenen Dersler:

Kod	Ders	ECTS	T	U	L	Türü	Dönem
CED 311	Chemical Technologies	6	3	0	0	MT	Güz
CED 312	Separation Processes	6	4	0	0	MT	Bahar
ENG 260	Engineering Economics	5	3	0	0	TM	Bahar
ENG 360	Applied Statistics for Engineers	5	3	0	0	TM	Güz
CED 431	Materials Science for Chemical Engineers	6	3	0	0	MT	Güz
	Technical Elective I	4	3	0	0	MT/TM/TB	Güz
	Technical Elective II	4	3	0	0	MT/TM/TB	Bahar
	Free Elective	2	2	0	0	SOS	Güz

**Kod, Ad, AKTS, Tür veya Ders Saati Değişenler:**

Eski Hali							Yeni Hali (*)						
Kod	Ders	ECTS	T	U	L	Türü	Kod	Ders	ECTS	T	U	L	Türü
CED 201	Chemical Engineering Calculations (Stoichiometry)	4	2	2	0	MT	CED 201	<b>Chemical Engineering Calculations</b>	<b>5</b>	2	2	0	MT
CED 221	Fluid Mechanics	5	3	0	0	MT	CED 221	Fluid Mechanics	<b>6</b>	3	0	0	MT
CED 231	Engineering Thermodynamics	4	3	0	0	MT	CED 231	<b>Chemical Engineering Thermodynamics</b>	<b>6</b>	2	2	0	MT
CED 202	Physical Chemistry	3	3	0	0	MT	CED 202	<b>Physical Chemistry for Chemical Engineers</b>	<b>6</b>	3	2	0	MT
CED 212	Mass Transfer	5	3	0	0	MT	CED 212	Mass Transfer	<b>6</b>	3	0	0	MT
CED 321	Chemical Reaction Engineering	5	3	0	0	MT	CED 321	Chemical Reaction Engineering	<b>6</b>	3	0	0	MT
CED 341	Heat Transfer	5	3	0	0	MT	CED 341	Heat Transfer	<b>6</b>	3	0	0	MT
CED 302	Process Control	3	3	0	0	MT	CED 302	<b>Chemical Process Control</b>	<b>6</b>	3	0	0	MT
CED 332	Chemical Reactor Design	4	3	0	0	MT	CED 332	Chemical Reactor Design	<b>6</b>	3	0	0	MT
CED 322	Chemical Engineering Laboratory I	5	0	0	6	MT	CED 322	Chemical Engineering Laboratory I	5	0	0	<b>4</b>	MT
CED 401	Process Design	4	3	2	0	MT	<b>CED 342</b>	<b>Chemical Process Design</b>	<b>7</b>	3	2	0	MT
CED 421	Chemical Engineering Laboratory II	5	0	0	6	MT	CED 421	Chemical Engineering Laboratory II	5	0	0	<b>4</b>	MT
CED 411	Process Design Project	4	3	2	0	MT	CED 411	<b>Chemical Process Design Project</b>	<b>7</b>	3	2	0	MT
CED 211	Fundamentals of Mechanics & Electric	3	2	2	0	Zorunlu	CED 211	Fundamentals of Mechanics & Electric	<b>4</b>	<b>3</b>	<b>0</b>	0	<b>Seçmeli</b>

(\*) Değişiklikler koyu olarak kırmızı renk ile belirtilmiştir.

**Değişen Dersler:**

Eski Ders								Yeni Ders (*)							
Kod	Ders	ECTS	T	U	L	Türü	Dönem	Kod	Ders	ECTS	T	U	L	Türü	Dönem
CHEM 203	Organic Chemistry I	6	4	2	0	MT	<b>Güz</b>	CHEM 106	Organic Chemistry	5	3	0	0	TB	<b>Güz</b>