



FACULTY OF ENGINEERING
DEPARTMENT OF CHEMICAL ENGINEERING

INTRODUCTION TO CHEMICAL ENGINEERING CEN 101

Assoc.Prof.Dr. Hakan KAYI

ANKARA UNIVERSITY, FACULTY OF ENGINEERING CHEMICAL ENGINEERING DEPARTMENT UNDERGRADUATE CURRICULUM

FIRST SEMESTER

<u>CODE</u>	<u>COURSE NAME</u>	<u>ECTS CREDIT</u>
MTH0101	Calculus I	7
PHY0103	Physics I	7
CHM105	General Chemistry I	4
CHM123	General Chem.Lab.	1
CEN135	Technical Drawing	4
CEN101	Intro. to Chem. Eng.	1
OUL 101	Orientation to Univ. Life	0
ENG 101	English 1	2
TUR101	Turkish Language 1	1
HIS101	History 1	1
ART107	Painting	2 (Gen.Soc.Elect.)
ART109	Music	2
ART111	Sculpture	2

SECOND SEMESTER

<u>CODE</u>	<u>COURSE NAME</u>	<u>ECTS CREDIT</u>
MTH0102	Calculus II	7
PHY0104	Physics II	7
PHY0152	Gen. Phys. Lab.	2
CHM106	General Chemistry II	4
CEN138	Comp. Prog.	6
ENG 102	English II	2
TUR102	Turkish Language 1	1
HIS102	History 1	1

THIRD SEMESTER

	<u>CODE</u>	<u>COURSE NAME</u>	<u>ECTS CREDIT</u>
1	MTH0211	DIFFERENTIAL EQUATIONS	5
2	CHM221	ANALYTICAL CHEMISTRY	4
3	CHM275	ANALYTICAL CHEMISTRY LABORATORY	3
4	CEN205	MASS AND ENERGY BALANCES	6
5	CEN207	PHYSICAL CHEMISTRY	5
6	STA249	PROBABILITY AND STATISTICS	5
7	ENG201	ADVANCED READING AND COMMUNICATION TECHNICS I	2
Total			30

FOURTH SEMESTER

	<u>CODE</u>	<u>COURSE NAME</u>	<u>ECTS CREDIT</u>
1	CHM224	ORGANIC CHEMISTRY	3
2	CEN202	THERMODYNAMICS	5
3	CEN212	FLUID MECHANICS	5
4	CEN236	NUMERICAL METHODS	4
5	CEN262	ENGINEERING ECONOMICS	4
6	CEN266	MATERIALS SCIENCE	4
7	ENG202	ADVANCED READING AND COMMUNICATION TECHNICIS II	2
8	B3 FORM	Out of CEN Program, Social Elective Courses /KMUPDSOSSEC	3
Total			30

B3 Form

1	ENS220	BUSINESS MANAGEMENT	3
2	ENS260	ARCHAEOLOGY	3
3	ENS264	HUMAN RESOURCES PLANNING	3
4	ENS360	PUBLIC RELATIONS	3
5	ENS470	ENGINEERING ETHICS	3

FIFTH SEMESTER

<u>CODE</u>	<u>COURSE NAME</u>	<u>ECTS CREDIT</u>
1	CHM377 ORGANIC CHEMISTRY LABORATORY	3
2	CEN309 ENGINEERING THERMODYNAMICS	5
3	CEN311 HEAT TRANSFER	5
4	CEN313 MASS TRANSFER	5
5	CEN333 OCCUPATIONAL HEALTH AND SAFETY I	1
6	CEN353 CHEMICAL ENGINEERING LABORATORY I	5
7	CEN381 PROFESSIONAL ENGLISH I	1
8	B1 FORM CEN Elective Courses /KMUMESSEC	5
Total		30

B1 Form

1	CEN321 BIOCHEMICAL REACTIONS	5
2	CEN331 PROCESS SIMULATION PROGRAMS	5
3	CEN345 NEW MATERIALS	5
4	CEN347 INTRODUCTION TO NANOTECHNOLOGY	5
5	CEN349 BIOMATERIALS	5
6	CEN361 ADSORPTION BY POROUS SOLIDS	5
7	CEN367 ENGINEERING MECHANICS AND STRENGTH OF MATERIALS	5
8	CEN371 ENVIROMENTAL IMPACT ASSESMENT	5
9	CEN373 INDUSTRIAL SAFETY	5

SIXTH SEMESTER

<u>CODE</u>	<u>COURSE NAME</u>	<u>ECTS CREDIT</u>	
1	CEN306	CHEMICAL REACTION ENGINEERING	5
2	CEN314	SEPARATION PROCESSES	5
3	CEN332	MATHEMATICAL MODELLING	4
4	CEN334	OCCUPATIONAL HEALTH AND SAFETY II	1
5	CEN354	CHEMICAL ENGINEERING LABORATORY II	4
6	CEN382	PROFESSIONAL ENGLISH II	1
7	B1 FORMU	CEN Elective Courses /KMUMESSEC	5
8	B1 FORMU	CEN Elective Courses /KMUMESSEC	5
Total			30

1	CEN330	SOLID WASTE RECYCLING	5
2	CEN336	PRODUCTION PLANNING	5
3	CEN338	INTRODUCTION TO DYNAMIC SIMULATION	5
4	CEN342	OPTIMIZATION	5
5	CEN364	PROCESS ECONOMICS	5
6	CEN370	QUALITY AND ENVIRONMENTAL MANAGEMENT SYSTEMS	5
7	CEN372	ENVIRONMENTAL POLLUTION AND CONTROL	5

SEVENTH SEMESTER

	<u>CODE</u>	<u>COURSE NAME</u>	<u>ECTS CREDIT</u>
1	CEN407	PROCESS DYNAMICS AND CONTROL	3
2	CEN417	PROCESS DESIGN	6
3	CEN455	CHEMICAL ENGINEERING LABORATORY III	4
4	CEN479	PROJECT MANAGEMENT	2
5	B1 FORM	CEN Elective Courses / KMUMESSEC	5
6	B1 FORM	CEN Elective Courses / KMUMESSEC	5
7	B1 FORM	CEN Elective Courses / KMUMESSEC	5
Total			30

1	CEN413	REACTOR DESIGN	5
2	CEN419	UNIT PROCESSES	5
3	CEN421	FUNDAMENTALS OF BIOCHEMICAL ENGINEERING	5
4	CEN423	ENZYME ENGINEERING	5
5	CEN425	DRUG DELIVERY SYSTEMS	5
6	CEN427	BIOSEPARATIONS	5
7	CEN429	CHEMICAL TECHNOLOGIES	5
8	CEN431	PROCESS CONTROL APPLICATIONS	5
9	CEN437	MEASUREMENT AND CONTROL TECHNIQUES	5
10	CEN439	CONTROL IN FOOD PROCESSING	5
11	CEN443	PLANT ANALYSIS I	5
12	CEN445	PLASTIC AND FIBER TECHNOLOGY	5
13	CEN447	PETROLEUM TECHNOLOGY	5
14	CEN449	FAT AND OIL TECHNOLOGY	5
15	CEN461	FUEL AND COMBUSTION TECHNOLOGY	5
16	CEN463	ULTRASOUND IN ADVANCED TECHNOLOGIES	5
17	CEN465	NEW TECHNOLOGIES	5
18	CEN467	ENERGY TECHNOLOGY	5
19	CEN469	PLANT ANALYSIS II	5
20	CEN471	MEASUREMENT OF FLUE GAS EMISSIONS	5
21	CEN473	BIOLOGICAL CLEANING OF INDUSTRIAL WASTEWATERS	5
22	CEN475	INNOVATION AND MANAGING INNOVATION	5
23	CEN489	GRADUATION THESIS	5

EIGHT SEMESTER

1	CEN400	INDUSTRIAL TRAINING	30
Total			30

ERASMUS STUDENT EXCHANGE PROGRAM

Our Erasmus Agreements

IRLCARLOW01, Carlow	Ireland
REIMS01, Reims Champagne	France
E ALCAL H01, Alcala	Spain
BOLOGNA01, Bologna	Italy
S STOCKHO04, K.T. Hongskolan	Sweden
D CLAUSTH01, Clausthal	Germany