

IZMIR INSTITUTE OF TECHNOLOGY
FACULTY OF SCIENCE
DEPARTMENT OF CHEMISTRY CURRICULUM
 (It will be implemented starting from the 2025-2026 Academic Year)

1st Semester

Course Code	Name of Course	(T+U)	ECTS	Prerequisite/ Corequisite
CHEM100	Chemical Orientation	(1-0) NC	4	
CHEM 101	General Chemistry I	(4-0) 4	5	
CHEM 111	Technical English for Chemistry I	(1-0) 1	4	
CHEM 131	General Chemistry Laboratory I	(0-4) 2	2	Coreq. CHEM 101
ENG 101	Development of Reading and Writing Skills I	(3-0) 3	3	
MATH 141	Basic Calculus I	(3-2) 4	5	
PHYS 101	General Physics I	(4-0) 4	5	
PHYS 111	General Physics Laboratory I	(0-2) 1	2	
	Term Credits	19	30	

2nd Semester

Course Code	Name of Course	(T+U)	ECTS	Prerequisite/ Corequisite
CHEM 102	General Chemistry II	(4-0) 4	5	
CHEM 132	General Chemistry Laboratory II	(0-4) 2	2	Coreq. CHEM 102
CS 102	Basic Computer Science and Programming	(2-2) 3	5	
ENG 102	Development of Reading and Writing Skills II	(3-0) 3	3	
MATH 142	Basic Calculus II	(3-2) 4	6	
PHYS 102	General Physics II	(4-0) 4	5	
PHYS 112	General Physics Laboratory II	(0-2) 1	2	
GCC 101	Career Planning and Development	(2-0)NC	2	
	Term Credits	21	30	

3rd Semester

Course Code	Name of Course	(T+U)	ECTS	Prerequisite/ Corequisite
CHEM 201	Analytical Chemistry I	(3-0) 3	5	CHEM 101, CHEM 102
CHEM 203	Organic Chemistry I	(3-2) 4	5	CHEM 101, CHEM 102
CHEM 205	Mathematics for Chemist	(3-2) 4	5	MATH 141, MATH 142
CHEM 231	Analytical Chemistry Laboratory I	(0-4) 2	4	Coreq. CHEM 201
CHEM 233	Organic Chemistry Laboratory I	(0-4) 2	4	Coreq. CHEM 203

	Non-technical Elective	(3-0) 3	3	
TURK 201	Turkish Language I	(2-0) NC	2	
HIST 201	Principles of Ataturk I	(2-0) NC	2	
	Term Credits	18	30	

4th Semester

Course Code	Name of Course	(T+U)	ECTS	Prerequisite/ Corequisite
CHEM 202	Analytical Chemistry II	(3-0) 3	5	CHEM 101, CHEM 102
CHEM 204	Organic Chemistry II	(3-2) 4	5	CHEM 101, CHEM 102, CHEM 203
CHEM 206	Introduction to Quantum Chemistry	(3-2) 4	5	CHEM 101, CHEM 102
CHEM 232	Analytical Chemistry Laboratory II	(0-4) 2	4	Coreq. CHEM 202
CHEM 234	Organic Chemistry Laboratory II	(0-6) 3	4	Prereq. CHEM 233 Coreq. CHEM 204
	Non-technical Elective	(3-0) 3	3	
TURK 202	Turkish Language I	(2-0) NC	2	
HIST 202	Principles of Ataturk I	(2-0) NC	2	
	Term Credits	19	30	

5th Semester

Course Code	Name of Course	(T+U)	ECTS	Prerequisite/ Corequisite
CHEM 301	Inorganic Chemistry I	(4-0) 4	5	CHEM 101, CHEM 102
CHEM 303	Physical Chemistry I	(4-0) 4	5	CHEM 101, CHEM 102
CHEM 305	Instrumental Analysis I	(3-0) 3	5	CHEM 101, CHEM 102
CHEM 333	Physical Chemistry Laboratory I	(0-4) 2	5	Coreq. CHEM 303
CHEM 335	Instrumental Analysis Laboratory	(0-4) 2	5	Coreq. CHEM 305
	Technical Elective	(3-0) 3	5	
	Term Credits	18	30	

6th Semester

Course Code	Name of Course	(T+U)	ECTS	Prerequisite/ Corequisite
CHEM 302	Inorganic Chemistry II	(4-0) 4	5	CHEM 101, CHEM 102
CHEM 304	Physical Chemistry II	(4-0) 4	5	CHEM 101, CHEM 102
CHEM 306	Instrumental Analysis II	(2-2) 3	5	CHEM 101, CHEM 102
CHEM 332	Inorganic Chemistry Laboratory	(0-4) 2	5	Coreq. CHEM 302
CHEM 334	Physical Chemistry Laboratory II	(0-4) 2	5	Coreq. CHEM 304
	Technical Elective	(3-0) 3	5	

	Term Credits	18	30	
7th Semester				
Course Code	Name of Course	(T+U)	ECTS	Prerequisite/ Corequisite
CHEM 300	Summer Practise	NC	9	
CHEM 411	Biochemistry	(3-0) 3	5	CHEM 101, CHEM 102
	Restricted Elective	(0-6) 3	10	
	Non-technical Elective	(3-0) 3	3	
	Technical Elective	(3-0) 3	5	
	Term Credits	12	32	
8th Semester				
Course Code	Name of Course	(T+U)	ECTS	Prerequisite/ Corequisite
	Restricted Elective	(0-6) 3	10	
	Non-technical Elective	(3-0) 3	3	
	Technical Elective	(3-0) 3	5	
	Technical Elective	(3-0) 3	5	
	Technical Elective	(3-0) 3	5	
	Term Credits	15	28	
	Total Credits	140	240	

Note 1: In the 7th and 8 th semesters, it is mandatory to take only one course from the Restricted Elective Course Group.

Restricted Elective Courses:

CHEM 405 Research Project

CHEM 406 Research Studies

Note 2 : Courses in the Restricted Elective Course Group are not considered Technical Elective.

Not 3: Students who have previously successfully completed the theoretical course from the co-requisite courses do not need to retake the theoretical course in order to take the relevant laboratory course in order to avoid double registration.