

Course Description Form

1. Course Name:	
Sanitary Engineering II	
2. Course Code:	
CIV32204	
3. Semester / Year:	
Second/ Third	
4. Description Preparation Date:	
1 September 2025	
5. Available Attendance Forms:	
Class	
6. Number of Credit Hours (Total) / Number of Units (Total)	
4/4	
7. Course administrator's name (mention all, if more than one name)	
Aya Luay Khalil aya.luay@muc.edu.iq	
8. Course Objectives	
Course Objectives	Graduation of civil engineers qualified to work in their various fields of specialization: 1. Providing the student with the necessary skills and mechanisms to deal with the latest developments in scientific and technical progress in their field of specialization. 2. Special care for outstanding students and enabling them to put forward their ideas. 3. Providing the student with high skill and the ability to solve problems and teamwork. 4. - Instilling the spirit of diligence and perseverance and encouraging them to create and innovate.
9. Teaching and Learning Strategies	
Strategy	Introduce students to definition of foundation design. • Self-regulated learning (i.e., planning, monitoring and evaluating one's own learning process in the classwork / Class team work). • Practice testing (short question answers and exams). • Self-explanation (i.e., explaining to oneself how new information is related to old information or explain steps taken when solving a problem or a task).

11. Course Structure

Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
1.	4	Introduction	Wastewater Treatment Plant	Theoretical	Several Ways (Exams + Assignments)
2.	4	Sewerage – General considerations	Wastewater Treatment Plant	Theoretical+ laboratory	Several Ways (Exams + Assignments)
3.	4	Amount of storm sewage	Wastewater Treatment Plant	Theoretical+ laboratory	Several Ways (Exams + Assignments)
4.	4	Flow in sewers	Wastewater Treatment Plant	Theoretical+ laboratory	Several Ways (Exams + Assignments)
5.	4	Characteristics of sewage and sewage disposal	Wastewater Treatment Plant	Theoretical+ laboratory	Several Ways (Exams + Assignments)
6.	4	Effects of stream discharge	Wastewater Treatment Plant	Theoretical+ laboratory	Several Ways (Exams + Assignments)
7.	4	factors in self purification	Wastewater Treatment Plant	Theoretical+ laboratory	Several Ways (Exams + Assignments)
8.	4	The oxygen sag curve and the critical deficit	Wastewater Treatment Plant	Theoretical+ laboratory	Several Ways (Exams + Assignments)
9.	4	Preliminary treatment systems	Wastewater Treatment Plant	Theoretical+ laboratory	Several Ways (Exams + Assignments)
10.	4	Primary treatment systems	Wastewater Treatment Plant	Theoretical+ laboratory	Several Ways (Exams + Assignments)
11.	4	Secondary treatment (attached growth processes)	Wastewater Treatment Plant	Theoretical+ laboratory	Several Ways (Exams + Assignments)
12.	4	Trickling filters	Wastewater Treatment Plant	Theoretical+ laboratory	Several Ways (Exams + Assignments)
13.	4	rotating biological contactors	Wastewater Treatment Plant	Theoretical+ laboratory	Several Ways (Exams + Assignments)
14.	4	(Suspended growth processes), activated sludge and oxidation ponds	Wastewater Treatment Plant	Theoretical+ laboratory	Several Ways (Exams + Assignments)
15.	4	Sludge treatment	Wastewater Treatment Plant	Theoretical+ laboratory	Several Ways (Exams + Assignments)

11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports etc

1. Course cumulative:
 - a. Assignments: 5
 - b. Quizzes: 5
 - c. Midterm Exams: 15
 - d. Reports and Laboratory activities: 15
 - e. Practical Exam: 10
2. Final Exam: 50

1. Learning and Teaching Resources

Required textbooks (curricular books, if any)	
Main references (sources)	Water Supply and Treatment, Steel and McGhee, sixth edition, McGraw-Hill, 1991.
Recommended books and references (scientific journals, reports...)	Water Works Engineering, Qasim et. al., prentice-Hall, 2000.
Electronic References, Websites	