

**Faculty of Engineering & Technology**  
**Environmental and Sanitary Engineering**

**Information :**

**Course Code :** SCM 521      **Level :** Undergraduate      **Course Hours :** 3.00- Hours

**Department :** Department of Structural Engineering & Construction Management

**Instructor Information :**

Title	Name	Office hours
Lecturer	Dina Yehia Zakaria Ewais	1
Lecturer	Dina Yehia Zakaria Ewais	1
Assistant Lecturer	SARAH SALAH SAYED HUSSIEN ALI ELSHISHTAWY	
Assistant Lecturer	Nada Mohamed Abd El Hamid Ali Mohamed	

**Area Of Study :**

Upon successful completion of this course, the student should be able to:

- Understand the basic concepts and main principles
- Calculate the values of the essential terms

Regarding primary studies collection works water purification wastewater treatment layout of WWTP

**Description :**

Definitions, Fields of environmental and sanitary engineering, Biosphere and environmental cycles, Issues of environmental pollution, Water supply engineering: Water demands, sources of water supply, collection works, purification works, distribution works, Sanitary drainage: sources of wastewaters, sewerage systems, hydraulic design, network accessories, sewage treatment systems.

**Course outcomes :**

**a. Knowledge and Understanding: :**

- |     |  |
|-----|--|
| 1 - | Describe the main concept of primary studies |
| 2 - | Define the main terms of collection works    |
| 3 - | Explain the principals of layout of WWTP     |

**b. Intellectual Skills: :**

- |     |  |
|-----|--|
| 1 - | Design the elements of primary studies     |
| 2 - | Assess issues of collection works          |
| 3 - | Analyze the system of water purification   |
| 4 - | Analyze the system of wastewater treatment |
| 5 - | Assess issues of layout of WWTP            |

**c. Professional and Practical Skills: :**

- |     |  |
|-----|--|
| 1 - | Apply Code provisions regarding water purification   |
| 2 - | Apply Code provisions regarding wastewater treatment |

3 - Prepare technical reports for layout of WWTP

**d.General and Transferable Skills :**

1 - Work under stress

**Course Topic And Contents :**

Topic	No. of hours	Lecture	Tutorial / Practical
Primary studies	10	6	4
Collection works	15	9	6
Processes of water purification	15	9	6
Principles wastewater treatment	15	9	6
Layout of WWTP	15	9	6

**Teaching And Learning Methodologies :**

Interactive Lec

Discussion

Problem Solving

Report / Present

**Course Assessment :**

Methods of assessment	Relative weight %	Week No	Assess What
Final exam	40.00		
Mid- Exam I, II	30.00		
Quizzes / Assig.	15.00		
Report / Present	15.00		

**Course Notes :**

Handouts by the lecturer

**Recommended books :**

"The Civil Engineering Handbook ", 2nd Edition, Wai-Fah Chen, CRC, 2002