

## Construction & Building Engineering Courses (CB)

Environmental Engineering Courses Group

### **CB 532 – Environmental & Sanitary Engineering**

#### COURSE INFORMATION

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Course Title: Environmental & Sanitary Engineering

Code: CB 532

Hours: Lecture – 2 Hrs.                      Tutorial – 2 Hrs.                      Credit –3.

Prerequisite: CB 382

#### GRADING

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Class Performance/Attendance: 10%

Midterm # 1/Assignments – (7<sup>th</sup> Week): 30%

Midterm # 2/Assignments – (12<sup>th</sup> Week): 20%

Final Exam: 40%

#### COURSE DESCRIPTION

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Sources of pollution, water quality management, waste-water treatment, industrial wastes, types and disposal, solid waste management, collection and disposal, hazardous wastes.

#### TEXT BOOK

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Water & Wastewater Engineering: Design, Principles & Practice by Mackenzie L. Davis. Publisher: McGRAW-HILL, NY, USA, 2011.

#### REFERENCE BOOKS

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Waste water Engineering, Collection and Pumping of Waste water by Metcalf and Eddy, Inc., Publisher: McGraw-Hill Co., New York, 1981.

#### COURSE AIM

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The course aims at introducing the student to the main sources of pollution, the water quality management and wastewater treatment and disposal systems.

## APPENDIX A-156

### SPECIFIC OUTCOMES OF INSTRUCTION

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- The student should be aware with types of pollutants and understand the procedures and special considerations for the treatment of each one.
- The student should be able to understand the effect of pollution on water and soil, the means of solid wastewater management, collection, processing and disposal.

### COURSE OUTLINE

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*Week Number 1:* Environmental systems and sustainable development

*Week Number 2-3:* Pollution: sources, effects and control

*Week Number 4:* Water quality management

*Week Number 5:* Ground water and wells classifications

*Week Number 6-7:* Surface water collection, treatment and distribution

*Week Number 8:* Wastewater properties and biochemical cycle

*Week Number 9-10:* Sewerage systems classification and design

*Week Number 11:* Preliminary wastewater treatment

*Week Number 12:* Primary wastewater treatment

*Week Number 13:* Biological wastewater treatment

*Week Number 14-15:* Wastewater and sludge disposal

*Week Number 16:* Final Exam.

### COURSE COORDINATOR AND DEMAND

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*Course Coordinator:* Dr. Ola Daa El Monayeri.

*Course Demand:* *Required*