

COURSE SPECIFICATION

Minia University
Faculty of Engineering

1- Administrative Information

Course Title : Environmental Engineering

Code : CVE 216

Department(s) offering the course : Civil Eng. Dept.

Program (s) on which the course is given: B.Sc.

Department offering the program (s) : Civil Eng. Dept.

Academic year/level : 2nd year Civil

Semester : 1st semester

Date of specification/revision : 2011

Date of approval by Departmental/Faculty / 1/12/2013

Taught hours (whichever is appropriate):

Lecture: 2hrs/week Tutorial: - hr/week Practical:- hr/week others: Total: 2 hrs/week

2- Overall Aims of the Course

- Introducing basic concepts of environmental science.
- Providing background knowledge about resources and supply works.
- Edifying students regarding Wastewater treatment.

3-Intended Learning Outcomes of the course (ILOs)

a- Knowledge and understanding:

- a₁- Define basic terms of environmental engineering.
- a₂- list different types of water resources and explain water quality aspects
- a₃- Recognize various water collection systems and water distribution works
- a₄- Explain waste water treatment systems

b- Intellectual skills

b₁- Assess water quality for different usages based on chemical, physical and biological characteristics of water.

b₂- Analyze efficiency of water collection systems and distribution works

C-Professional and practical skills

c1-Prepare graphical presentations on case studies for water pollution problems

d- General and transferable skills

d₁- think quietly and positively regarding sustainability concepts

d₂- manage workloads and time effectively

4- Syllabus

| CHAPTERS | CONTENTS |
|-------------|---|
| Chapter (1) | Introduction to environmental science |
| Chapter (2) | Water resources and quality |
| Chapter (3) | Water collection and distribution works |
| Chapter (4) | Waste water treatment |

5-Teaching and Learning Methods

- 5.1- Lectures and tutorial classes are given using marker boards
- 5.2- Tutorial activities using graphical animations
- 5.3- Discussion sessions on real environmental problems
- 5.4- Office meetings.

6- Students Assessment Methods and schedule:

- 6-1 Assessment 1 **Class assignments** 2nd, 3rd, 4th, 6th, 8th, 10th, & 12th weeks (1st term)
- 6-2 Assessment 2 **Written mid-term exam** 7th week (1st term)
- 6-3 Assessment 3 **Class discussions and presentations** during all lectures
- 6-4 Assessment 4 **Written final exam** week (End of 1st term)

7- Weighing of assessments:

| | |
|-----------------------|-------|
| Class assignments | 4% |
| Written mid-term exam | 12% |
| Class discussions | 4 |
| Written final exam | 80% |
| <hr/> | |
| Total | 100 % |

8-List of References

8.1-Course notes:

Course Notes: Lecture notes prepared by the course instructor

8.2-Essential books (textbooks):

Masters, Gilbert M., and Wendell Ela. *Introduction to environmental engineering and science*. Englewood Cliffs, NJ: Prentice Hall, 1991.

8.3-Recommended books:

8-3-1 Davis, Mackenzie Leo, and David A. Cornwell. "Introduction to environmental engineering." (1991).

8-3-2 Lee, Choi Chuck, and Shun Dar Lin. *Handbook of environmental engineering calculations*. New York: McGraw-Hill, 2000.

9-Other Resources/ Facilities required for teaching and learning to achieve the above ILOs .

- 9.1- Computer and data show in the lecture room.
- 9.2- Computer and Internet access for the students.
- 9.3- Many text books available in the departmental library.
- 9.4- Providing laborites and instruments
- 9.5- Class rooms.

9- We certify that all of the information required to deliver this course is contained in the above specification and will be implemented.

Course Coordinator:

Name: Ass. Prof. Abbas

Signature:..... Date: Jan., 2013

Head of Department of: Civil Engineering Department

Name: Prof. Dr. Prof. Dr. Laila Abdel Hafez

Signature:..... Date:.....

Course Curriculum Map

Course title: Environmental Engineering

Code: : CVE 216

Course coordinators: Prof. Dr. Ahmad abdel-haleem

Course Aim: Introducing basic concepts of environmental science. Providing background knowledge about resources and supply works. Edifying students regarding Wastewater treatment

| No. | Intended Learning Outcomes (ILOs) | | | | Topics | Week # | Teaching Methods | Assessment Methods | Evidences |
|-----|-----------------------------------|---------------------|-----------------------------------|---------------------------------|--|--------|---|--|---------------------|
| | Knowledge and understanding | Intellectual skills | Professional and practical skills | General and transferable skills | | | | | |
| 1 | a1 | | | d1 | Introduction to environmental science Water resources and quality | 1-3 | Lectures -and tutorial activities Office meetings | Class assignments, Written mid-term exam - Class discussions and presentations - Written final exam | Course File |
| 2 | A2, a3 | B1, b2 | C1 | d1 d2 | Water collection and distribution works | 4-6 | Lectures -and tutorial activities Discussion – problems-Office meetings. | | Examination paper |
| 3 | a4 | B1, b2 | C2 | d1, d2 | Waste water treatment | 7-11 | Lectures -and tutorial activities Discussion – problems-Office meetings. | | Model Answer. |
| 4 | a4 | | C3 | d1, d2 | Waste water treatment | 12-14 | Lectures -and tutorial activities Discussion – problems-Office meetings. | | Student's projects. |
| | | | | | | | | | Students reports |

Department Head: Prof. Dr. Laila Abdel Hafez

