



MUTAH UNIVERSITY
Faculty of Engineering
Department of Chemical Engineering



Environmental Engineering Management
Course syllabus

Course Code	Course Name	Credits	Contact Hours
0404586	Environmental Engineering Management	3	Office hours

INSTRUCTOR/COORDINATOR

Name	Rasha A. Hajarat
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Website	

TEXTBOOK

1. Introduction to Environmental Impact Assessment: A Guide to Principles and practice. Bram F. Noble.
2. HANDBOOK OF Chemical Technology and Pollution Control. Martin B. Hocking.
3. Environmental chemistry. Stanley E. Manhan.
4. Nigel Mason and Peter Hughes: Introduction to Environmental Physics: Planet Earth, Life and Climate, Taylor and Francis.
5. Handbook of environmental engineering (applied ecology and environmental management. Frank R. Spellman.
6. Engineering tools for environmental risk management. Eva Fenyvesi, Katalin Gruiz, Tamas Meggyes, and Tamás Meggyes
7. Environmental Engineering. J. Jeffrey Peirce and P. Aarne Vesilind.

Other Supplemental Materials

SPECIFIC COURSE INFORMATION

A. Brief Description of the Content of the Course (Catalog Description)

The Environmental engineering and management looks for solutions to various environmental problems, including wastewater treatment and disposal systems, air pollution, solid and hazardous wastes, waste minimization and life cycle assessment, and environmental impact assessment.

This course aims to apply the fundamentals of chemical engineering in the field of pollution management. The course is divided into three parts. Part 1 includes minimizing waste, assessing the life cycle of the product, clean technology, the relationship between waste reduction and environmental planning, the relationship between the treatment of pollution at the end of the production line and its treatment at the source of its occurrence. Part 2 includes the environmental impact assessment from the beginning of the project through the details of the study and ending with the evaluation of the entire project. Part 3 includes environmental modeling of pollution movement, water quality of rivers and lakes, and water quality at estuaries.

B. Pre-requisites (P) or Co-requisites (C)

(P) Mass transfer 0404437

C. Course Type (Required or Elective)

Elective

SPECIFIC GOALS

A. Specific Outcomes of Instruction

1. Covers environmental assessment, hydrochemistry, entrepreneurship, business planning, and statistics. (SOL 1, 4, 7)
2. Life cycle, environmental policy, environmental impact assessment and eco-design. (SOL 1, 2, 4, 7)
3. Covers sludge, wastes, wastewater treatment, air pollution, environmental technologies, sustainable production and water management. (SOL 1, 2)

B. Student Outcomes Addressed by the Course

1	2	3	4	5	6	7				
x	x		x			x				

BRIEF LIST OF TOPICS TO BE COVERED

List of Topics	No. of Weeks	Contact Hours
Environmental assessment, hydrochemistry, entrepreneurship, business planning, and statistics.	3	3 hrs per week
Sludge, wastes, wastewater treatment.	3	3 hrs per week

Sustainable production and water management.	3	3 hrs per week
Air pollution.	3	3 hrs per week
Environmental technologies	2	3 hrs per week
Environmental impact assessment	2	3 hrs per week
Total	16	

METHODS OF ASSESSMENT

No.	Method of assessment	Week and Date	%
1	First exam	5 th week	20
2	Second exam	10 th week	20
3	Project / assignments		10
4	Final exam	End of Semester	50
	Total		100