



The Hashemite University
Faculty of Engineering
Civil Engineering Program
Course Syllabus



Course Title:	Solid waste management	Course Number:	110401556
Designation:	Elective	Prerequisite(s):	110401455
Instructor:	Prof. Ahmed N Bdour	Instructor's e-mail:	bdour@hu.edu.jo
Office Hours:	Refer to posted time table		
Class schedule:	3 hours per week		

Course Description (catalog): Waste disposal and recycling are now major concerns of government, environmental bodies, local authorities and industry, and there is a pressing urgency for society to reduce its waste and for experts to find solutions for managing the growing environmental problems. Waste management course is a public awareness course and it designed to offer accessible, practical and sustainable waste and resource management skills. The course not only helps to increase understanding of how and why waste should be managed efficiently, but offers advice and guidance that will save money and aid regulatory compliance

Textbook(s) and/or Other Supplementary Materials: Handbook of Solid Waste Management, George Tchobanoglous, Frank Kreith(2002). 2nd edition, McGraw-Hill.

Supplementary1: Tchobanoglous, G., Theisen, H., & Vigil, S.A.: "Integrated Solid Waste Management" Engineering principles and Management Issues, McGraw/Hill,

Major Topics Covered:

Topic	No. of Weeks	Contact hours*
Municipal Solid Waste Management: An Introduction.	1	3
Generation and Characteristics of Waste.	2	6
Waste Collection, Storage and Transport.	2	6
Waste Disposal.	2	6
Waste Processing Techniques.	1	3
Source Reduction, Product Recovery and Recycling.	2	6
Recovery of Biological Conversion Products: Composts and Biogas.	2	6
Incineration and Energy Recovery.	1	3
Hazardous Waste: Management and Treatment.	1	3
Integrated Waste Management (IWM).	1	3
Total	15	45

*Contact hours include: lectures and exams.

Specific Outcomes of Instruction (Course Learning Outcomes):

After completing the course, the student will be able to:

1. Identify how components of solid waste management infrastructure systems can minimize the above effects (**Outcome e**)
2. Identify the implications of the production, resource management and environmental impact of solid waste management(**Outcome e**)
3. Recognize the significance of recycling, reuse and reclamation of solid wastes(**Outcome c**).
4. To be Qualify integrate technical solid waste management options and imposed environmental legislation and guidance to develop legal and safe solutionsconduct design issues related to storms, flows and storm sewer (**Outcome c**).



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Student Outcomes (SO) Addressed by the Course:

#	Outcome Description	Contribution
General Engineering Student Outcomes		
(a)	an ability to apply knowledge of mathematics, science, and engineering	
(b)	an ability to design and conduct experiments, as well as to analyze and interpret data	
(c)	an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability	L
(d)	an ability to function on multidisciplinary teams	
(e)	an ability to identify, formulate, and solve engineering problems	H
(f)	an understanding of professional and ethical responsibility	
(g)	an ability to communicate effectively	
(h)	the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context	
(i)	a recognition of the need for, and an ability to engage in life-long learning	
(j)	a knowledge of contemporary issues	
(k)	an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.	
H= High, M= Medium, L= Low		

Grading Plan:

1st Exam	30 Points	
2nd Exam	30 Points	
Final Exam	40 Points	Will be announced by the registrar

General Notes: HU attendance rules will be applied.

Prepared by: Prof. Ahmed N Bdour

Date: 23/4/2018