



The Hashemite University
Faculty of Engineering
Civil Engineering Program
Course Syllabus



Course Title:	Special Topics in Civil Engineering	Course Number:	110401595
Department:	Civil Engineering	Designation:	Elective
Prerequisite(s):	110401336		
Instructor:	Samer Rababah	Instructor's Office:	E 3008
Instructor's e-mail:	srabah@hu.edu.jo		
Office Hours:	S,T,Th (11-12 am), M,W (10-11) or by appointment		
Time:	S,T,Th (12-1 pm)	Class Room:	E2003

Course description: Study principles of slope stability analysis, evaluate stability of earth slopes. Analyses and mitigation of slope failures. Review of fundamentals, lateral earth pressure, retaining walls, sheet-pile walls, cantilever sheet-pile walls, anchored sheet-pile walls, braced-excavation, reinforced earth, Mechanically Stabilized earth walls.

Textbook(s): None

Other required material: -Course notes and other references posted on the Moodle Web site.

Topics covered:

Major Topics Covered:

Topics	No. of Weeks	Contact hours*
Principles, definitions, triggering mechanisms and processes of slope failures,	6	6
Slope stability analysis by limit equilibrium method,	6	6
Slope stabilization, repair and preliminary design.	9	9
Earth pressures and retaining structures: at-rest earth pressures, Rankine active and passive pressures	6	6
Overview of retaining structures, modes of instability, and design of retaining structures.	9	9
Complete the design of retaining structures using appropriate design methods, factors of safety, earth pressure diagrams and field verification methods.	9	9
Total	15	45

Class schedule:

3 class sessions each week; 50 minutes each

Grading Plan:

First Exam (25 Points) (08/11 /2017)
 Second Exam (25 Points) (13/12/2017)
 Final Exam (40 Points) Will be announced by the registrar
 Others (10 Points)



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General Notes:

Students are expected to attend **EVERY CLASS SESSION** and they are responsible for all material, announcements, schedule changes, etc., discussed in class. The university policy regarding the attendance will be strictly adhered to.

Disruptive behaviors, including talking, arriving late to class, using unauthorized electronic devices during class, etc. is not permitted. After warning, if the disruption continues, you will be asked to leave the classroom.

No Make up exams.

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	H (60)
(d)	an ability to function on multidisciplinary teams	
(e)	an ability to identify, formulate, and solve engineering problems	M(35)
(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.	L (5)
H=High, M= Medium, L=Low		

Prepared by: Samer Rababah

Date: 21/09/2017