TOROS ÜNİVERSİTESİ

Faculty Of Engıneerıng
Cıvıl Engıneerıng (Englısh)

Course Information

LANDSLIDES					
Code	**Semester**	**Theoretical**	**Practice**	**National Credit**	**ECTS Credit**
		Hour / Week			
CVE222	Spring	3	0	3	3

Prerequisites and co-requisites	none
Language of instruction	Turkish
Type	Elective
Level of Course	Bachelor's
Lecturer	PROF. DR. AZİZ ERTUNÇ
Mode of Delivery	Face to Face
Suggested Subject	none
Professional practise (internship)	None
Objectives of the Course	Understanding the importance of landslides and slope stability studies in engineering geology and geotechnical studies
Contents of the Course	Classification of landslides according to the type and speed of movement and the type of material. Landslides and causes of slope failures. Basic parameters (physical properties) required in slope stability evaluations. Basic parameters (mechanical properties) required in slope stability evaluations. Commonly used failure criteria in rocks and soils. Methods used in slope stability calculations Stability of endless slopes, Limit equilibrium methods and Swedish slice method Bishop and Generalized slice method Manual solution of simple slope stability models Solution of slope stability models with computer programs Sensitivity analysis in stability analysis Stability analysis under dynamic conditions. Stabilization of slopes.

Learning Outcomes of Course

#	Learning Outcomes
1	Gains knowledge regarding the identification of the basic concepts of soil mechanics
2	explanation for elastic and plastic equilibrium state in soils
3	defining the concepts of lateral soil pressure
4	analysis and design of retaining structures
5	defining concepts of bearing capacity
6	identification of slope analyzing methods
7	calculation of bearing capacity of singular piles

Course Syllabus

#	Subjects	Teaching Methods and Technics
1	Classification of landslides by means of the type of motion, velocity and the type of material.	Theory
2	Reasons of landslides and slope failures.	Theory, Problem Session
3	Essential parameters for evaluating slope stability (physical).	Theory, Problem Session
4	Failure criteria commonly used in rock and soils.	Theory, Problem Session
5	Methods used in the calculation of slope stability.	Theory, Problem Session
6	Infinite slope stability.	Theory, Problem Session

7	Limit equilibrium methods and Swedish method of slices.	Theory, Problem Session
8	Midterm	Theory, Problem Session
9	Falls-Slips	Written
10	Flows	Theory, Problem Session
11	Can Landslides Be Helpful?	Theory, Problem Session
12	Stability Analysis	Theory, Problem Session
13	Slope Stability	Theory, Problem Session
14	Investigation of Landslides	Theory, Problem Session
15	Impact of Landslides on Dams	Theory, Problem Session
16	Final Exam	Written

Course Syllabus

#	Material / Resources	Information About Resources	Reference / Recommended Resources
1	Zemin Mekaniği (Birsen Yayınları , Prof. Dr. Kutay ÖZAYDIN)		
2	Zemin Mekaniği Problemleri (Prof. Dr. Vahit KUMBASAR)		

Method of Assessment

#	Weight	Work Type	Work Title
1	40%	Mid-Term Exam	Mid-Term Exam
2	60%	Final Exam	Final Exam

Relationship between Learning Outcomes of Course and Program Outcomes

#	Learning Outcomes	Program Outcomes	Method of Assessment
1	Gains knowledge regarding the identification of the basic concepts of soil mechanics	2	1
2	explanation for elastic and plastic equilibrium state in soils	2	1
3	defining the concepts of lateral soil pressure	2	1
4	analysis and design of retaining structures	2	1
5	defining concepts of bearing capacity	2	1
6	identification of slope analyzing methods	2	1
7	calculation of bearing capacity of singular piles	2	2

PS. The numbers, which are shown in the column Method of Assessment, presents the methods shown in the previous table, titled as Method of Assessment.

Work Load Details

#	Type of Work	Quantity	Time (Hour)	Work Load
1	Course Duration	14	3	42
2	Course Duration Except Class (Preliminary Study, Enhancement)	14	2	28
3	Presentation and Seminar Preparation	0	0	0
4	Web Research, Library and Archival Work	0	0	0
5	Document/Information Listing	0	0	0
6	Workshop	0	0	0
7	Preparation for Midterm Exam	0	0	0
8	Midterm Exam	0	0	0

9	Quiz	0	0	0
10	Homework	0	0	0
11	Midterm Project	0	0	0
12	Midterm Exercise	0	0	0
13	Final Project	4	4	16
14	Final Exercise	0	0	0
15	Preparation for Final Exam	1	4	4
16	Final Exam	0	0	0
				90