



T.R.
İSTANBUL UNIVERSITY
FACULTY OF FORESTRY
CURRICULUM FORM
Syllabus



Number :
Department : FORESTRY ENGINEERING, UNDERGRADUATE PROGRAM,(FORMAL EDUCATION)
Academic Year : 2012 - 2013

Date : 06.04.2015

Course Name :		TORRENT AND AVALANCHE CONTROL				Course Code : ER0M13005	
Semester	Theory	Practice	Lab	Credit	ECTS	Course Language	Course Type
6	2	0	0	2	3	Turkish	Required
Admission Requirements :		Koşul Mevcut Değil					
Compulsory Attendance :		Theory	Practice	Lab			
		70 %	0 %	0 %			
Course Teacher(s) :		Prof. Dr. HÜSEYİN EMRULLAH ÇELİK					
Course Content :		Formation of torrents, stream dynamics, technique and biotechnique structures in torrent control, formation of avalanches, active and passive counter measures for avalanches					
Course Learning Outcomes :		- Knows the formation of torrents and duties of forest engineer on torrent control.- Understands the desagregation, mass movements, erosion and sedimentation and their results on mountainous lands - Identifies the regime types, flow types and processes affecting longitudinal profiles of streams.- Comprehends major torrent control systems.- Knows sections and characteristics of torrent watersheds.- Understands improvement and control works on torrent watersheds.- Analysis the stabilization methods and structures of torrend beds.- Specifies the precautions to be taken on alluvial cones.- Evaluates the measures to be taken on slopes of the watersheds.- Comprehends the types and formation the avalanches.- Knows the measures to be applied active and passive methods against avalanches.					
Teaching and Learning Methods :		Presentation, conference, discussion.					
Continuous Improvement in the Context of the courses (questionnaires, interviews, and so on.) Front Shown Measurement and Evaluation Tools and Objectives :		Annual questionnaire, interviews with students, following to similar national and international course's content					
Contribution of Learning Outcomes on Program Competency :		Learning outcomes on program competency contribute well.					
Assessment System		Number		Contribution (%)			
Assignments		0		0			
Presentation		0		0			
Mid-term Examinations (including time for preparation)		0		0			
Project		0		0			
Clinical Practice		0		0			
Laboratory		0		0			
Field Work		0		0			
Other Applications		0		0			
Quiz		0		0			
Term Paper/ Project		0		0			
Portfolio Study		0		0			
Reports		0		0			
Learning Diary		0		0			

Thesis/ Project	0	0
Seminar	0	0
Other	0	0
Final Exam	0	0
Total	0	0
The Weight of the In-Term Assignments in the Final Grade	0	0
The Weight of the End of Term Exam in the Final Grade	0	0
Total	0	0

Continuous Improvement in the Context of the courses (questionnaires, interviews, and so on.) Front Shown Measurement and Evaluation Tools and Objectives :	Annual questionnaire, interviews with students, following to similar national and international course's content	
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ECTS

Activities	Number	Time	Credit Workload
Class Hours	14	2	28
Working Hours out of Class	14	1	14
Assignments	0	0	0
Presentation	0	0	0
Mid-term Examinations (including time for preparation)	8	1	8
Project	0	0	0
Clinical Practice	0	0	0
Laboratory	0	0	0
Field Work	0	0	0
Other Applications	0	0	0
Final Examinations (including preparatory year)	8	2	16
Quiz	0	0	0
Term Paper/ Project	0	0	0
Portfolio Study	0	0	0
Reports	0	0	0
Learning Diary	0	0	0
Thesis/ Project	0	0	0
Seminar	0	0	0
Other	0	0	0
Total Workload			66
Total Workload / 25			2,64
ECTS Credit of Course			3

Weekly Course Contents

Week	Theoretical Topics
1	Basic knowledge
2	Problems to be solved in mountain watersheds
3	Stream dynamics
4	Origine of the torrents, major torrent control systems, improvement and control works on torrential watersheds
5	Streambed stabilization
6	Protection against streambank erosion
7	Measures to be taken on alluvial cones
8	Mass stabilization on slopes of torrent watersheds
9	Measures to be taken against gully erosion
10	Soil stabilization on slopes of torrent watersheds
11	Cultural measures
12	Avalanche types, formation of avalanches, active protection
13	Passive protection from avalanches

14	Complementary topics: Effects of vegetation on slope stabilization, construction material used in torrent control, structures protecting streambanks
Week	Practice Topics
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	

Relationship of Proficiency Program with Course Learning Outcomes

No	Program Competencies	Point
1	Adequate knowledge in mathematics, science and forest engineering subjects pertaining to the relevant discipline; ability to use theoretical and applied information in these areas to model and solve engineering problems.	4
2	Ability to identify, formulate, and solve complex problems in forest engineering; ability to select and apply proper analysis and modeling methods for this purpose.	4
3	Ability to design a complex system, process, device or product under realistic constraints and conditions, in such a way as to meet the desired result; ability to apply modern design methods for this purpose.	4
4	Ability to devise, select, and use modern techniques and tools needed for engineering practice; ability to employ information technologies effectively.	4
5	Ability to design and conduct experiments, gather data, analyze and interpret results for investigating engineering problems.	4
6	Ability to find knowledge and searching reference for this purpose, Ability to use databases and other references.	4
7	Ability to work efficiently in intra-disciplinary and multi-disciplinary teams; ability to work individually.	4
8	Ability to communicate effectively in Turkish, both orally and in writing; knowledge of a minimum of one foreign language.	4
9	Recognition of the need for lifelong learning; ability to access information, to follow developments in science and technology, and to continue to educate him/herself.	4
10	Awareness of professional and ethical responsibility.	4
11	Information about business life practices such as project management, risk management, and change management; awareness of entrepreneurship, innovation, and sustainable development.	4
12	Knowledge about contemporary issues and the global and societal effects of engineering practices on health, environment, and safety; awareness of the legal consequences of engineering solutions.	4
<i>Contribution Level: 1 low, 5 high.</i>		
Contribution of Learning Outcomes on Program Competency :	Learning outcomes on program competency contribute well.	

Last updated on : 08.05.2013