

Course information in english

General course information:

Course title:	Highway Engineering I	Course code:	CE05-T01
Credits:	5	Work load (hours):	160
Course level:	Undergraduate <input checked="" type="checkbox"/>	Graduate <input type="checkbox"/>	
Course type:	Mandatory <input checked="" type="checkbox"/>	Selective <input type="checkbox"/>	
Course category:	Basic <input checked="" type="checkbox"/>	Orientation <input type="checkbox"/>	
Semester:	5	Hours per week:	5
Course objectives (capabilities pursued and learning results):			
Highway Geometric Design The students will learn to design highways by giving accent to Road Safety. Emphasis will be given to comprehend the importance of environmental consistency and economic aspects of road construction			
Prerequisites:			
<ul style="list-style-type: none">• Mathematics I and II• Applied Physics• Descriptive Geometry• Technical Drawing techniques			

Instructor's data:

Name:	Nikolaos Eliou
Level:	Professor
Office:	
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Other tutors:	Kaliabetsos G., Scientific Assistant

Specific course information:

Week No.	Course contents	Hours	
		Course attendance	Preparation
1	Design and Construction of Road Projects	4	
2	Design Procedure. Methodology.	4	
3	Design Procedure. Methodology	4	
4	Horizontal Alignment	4	4
5	Vertical Alignment	4	4
6	Super elevation Diagrams	4	2
7	Cross sections	4	2
8	Road Safety by Design (Criteria)	4	1
9	Road widening study	4	1
10	Visibility Study	4	1
11	3D Road Design	4	1
12	Earthworks calculation	4	1
13	Tender Documents	4	1
14	Environmental Aspects relating to Road projects	4	1

Additional hours for:			
Class project	Examinations	Preparation for examinations	Educational visit
60	3	10	2

Suggested literature:
<ul style="list-style-type: none"> • "Richtlinien für die Anlage von Strassen. Elemente der Linienführung" RAS-L-1, 1984. • AASHTO "Geometric Design of Highways and Streets" 2004 • OMOE (National Road Design Guidelines) • HIGHWAY DESIGN, Theory & Practice (A. Apostoleris)

- Highway Design & Construction Henning Natzschka

Teaching method (<i>select and describe if necessary - weight</i>):		
Teaching	<input checked="" type="checkbox"/>	50 %
Seminars	<input type="checkbox"/>%
Demonstrations	<input type="checkbox"/>%
Laboratory	<input checked="" type="checkbox"/>	20 %
Exercises	<input checked="" type="checkbox"/>	20 %
Visits at facilities	<input checked="" type="checkbox"/>	10 %
Other (<i>describe</i>):	<input type="checkbox"/>%
Total		100%

Evaluation method (<i>select</i>)- weight :				
	<u>written</u>	<u>%</u>	<u>Oral</u>	<u>%</u>
Homework	<input type="checkbox"/>		<input type="checkbox"/>	
Class project	<input checked="" type="checkbox"/>	40 %	<input checked="" type="checkbox"/>	20 %
Interim examination	<input type="checkbox"/>		<input type="checkbox"/>	
Final examinations	<input checked="" type="checkbox"/>	40 %	<input type="checkbox"/>	
Other (<i>describe</i>):	<input type="checkbox"/>		<input type="checkbox"/>	