ecture			T 1 . N 41	Course Code:IM 352 DESIGN OF ATION STRUCTURES				
			Teaching Methods					
,	Recit.	Lab.	Project/Field Study	Homework	Other	Total	Credit	ECTS Credit
2	28	-	28	28	-	126	3	5
English								
Compulsory								
None								
Introduction. Facilities and functions of Land Transportation. Design elements, Criteria and controls.SSD and PSD, Zero line, simple, combined and reverse curves. Transition distance and superelevation, transition curves, cubic parabola, lemniscate and Euler's spiral, crosssection elements, area, volume, mass curve and balance lines. Types and features of pavements, material properties of the layers of pavement, pavement design using AASHTO, Surface and subsurface drainage structures and their designs								
exploring, evaluating of strategies for operation, maintenance and economic life or life cycle, and providing all necessary information for decision making processes and desion maker. Preparation and defense of an application project on a land transportation mode.								
A Policy ate High S DOT - Chisty, Cransporta Coadside uideline ansporta istainabi eometricighway loute Surnalysis, K. t. to. Tra	handics his/he on Georemway and FHWA J. Transpation Engite and the Design Engineer Engineer wey and Manneriansportate	aps. Every control of the control of	n existing facility very student deproject define Design of Highway Design Engineering In the Project and Planning In the Project AASHTO, 1996 of 279. In and Planning In the Project ARSHTO, 1996 of 279. In and Planning In the Project ARSHTO, 1996 of 279. In and Planning In the Project ARSHTO, 1996 of 279. In and Planning In the Project ARSHTO, 1996 of 279. In an and Key Service Architecture and Research Architecture and Interest Arch	lity having in esigns, finish d formerly a lays and Streets-s (AASHTO). In Manual," Constant of the constant o	nadequa nes, sub nd havi 1994,"A - "Flexib onnectic on, Prenti Prevedo n Channe Prevedo d Press, on - Scho ng, Wrig way Engi ion Eng	mits, p ing 1-1. merican bility in H ut DOT, ce Hall, buros, Pre- elization buros, Pre- elization buros, Pre- lization buros, Pre- lization buros, Pre- lization and Pla of transp	Association In the property of	ncies and ng. on of Design," 1, 1993 1, 1993 2,993. c rlok Eng,
of the second of	roducements de reverbic par lume, aterial ASHT esign a plorin e or libocesse ploct consultation produce requirements produced establishment es	roduction. Farments, Criter d reverse curbic parabola, lume, mass caterial proper ASHTO, Surfacesign and appploring, evaluate or life cycle occesses and depict on a landowledge or landow	roduction. Facilities and design and application ploring, evaluating everses and design application of the ploring everses and design application and transport of the Highway and Design alysis, Mannering Fred X. To Transport of T	come roduction. Facilities and function ements, Criteria and controls.SSD depends of the layers of planterial properties of the layers of passing and application of land transploring, evaluating of strategies for or life cycle, and providing all recesses and desion maker. Preparagiect on a land transportation mode and land transportation mode of the layers of passing and application of land transploring, evaluating of strategies for or life cycle, and providing all recesses and desion maker. Preparagiect on a land transportation mode and land transportation mode and land transportation mode and land transportation mode and land transportation facilities of an existing facilities of the land passing of Highway and Transportation Official DOT - FHWA, 1997"Highway Desinisty, CJ, Transportation Engineering and Planning or lands and Planning or la	compulsory come roduction. Facilities and functions of Land Trements, Criteria and controls.SSD and PSD, Zend reverse curves. Transition distance and superbic parabola, lemniscate and Euler's spiral, credume, mass curve and balance lines. Types and atterial properties of the layers of pavement, parabolary and application of land transportation far ploring, evaluating of strategies for operation, and consider on a land transportation maker. Preparation and despict on a land transportation mode. The properties of an existing facility having in some handicaps. Every student designs, finish fences his/her own project defined formerly a policy on Geometric Design of Highways and Streetste Highway and Transportation Officials (AASHTO). DOT - FHWA, 1997"Highway Design Manual," Construction Engineering and Planning - Papcostas and padside Design Guide," AASHTO, 1996"Intersection in the construction Engineering and Planning - Papcostas and padside Design Guide," AASHTO, 1996"Intersection in the construction Engineering and Planning - Papcostas and padside Design Guide," AASHTO, 1996"Intersection in the construction Engineering and Planning - Papcostas and padside Design Projects for Highways - An Introduction to Engineering, Oglesby C.NHighway Engineering the Survey and Design Meyer F.CPrinciples of Highway Engineering, Oglesby C.NHighway Engineering and Planning Fred LIntroduction to Transportation. The total Transportation Systems, Haefner Lonnie EFundantilli E.J	Compulsory Troduction. Facilities and functions of Land Transport and the control of the contro	Compulsory Tonce Toncouction. Facilities and functions of Land Transportation. It is ments, Criteria and controls. SSD and PSD, Zero line, simpled reverse curves. Transition distance and superelevation, trasportation, trasportation, trasportation, mass curve and balance lines. Types and features of paterial properties of the layers of pavement, pavement design ASHTO, Surface and subsurface drainage structures and their sign and application of land transportation facilities, developloring, evaluating of strategies for operation, maintenance are or life cycle, and providing all necessary information for deposesses and desion maker. Preparation and defense of an application of a land transportation mode. Towledge or background to planning, design of a new facility requirements of an existing facility having inadequancies, assome handicaps. Every student designs, finishes, submits, prefences his/her own project defined formerly and having 1-1. Policy on Geometric Design of Highways and Streets-1994, "American te Highway and Transportation Officials (AASHTO) "Flexibility in Floot" - FHWA, 1997 "Highway Design Manual," Connecticut DOT, risty, CJ, Transportation Engineering An Introduction, Prentice Hall, insportation Engineering and Planning - Papcostas and Prevedouros, Prestainability and Cities - Newman and Kenworthy, Island Press, 1999 ometric Design Guide," AASHTO, 1996"Intersection Channelization ideline," NCHRP Report 279. Insportation Engineering and Planning - Papcostas and Prevedouros, Prestainability and Cities - Newman and Kenworthy, Island Press, 1999 ometric Design Projects for Highways - An Introduction - Schoon, J. G. ghway Engineering, Oglesby C.N -Highway Engineering, Wright P.W and the Survey and Design Meyer F.C - Principles of Highway Engineering alysis, Mannering Fred LIntroduction to Transportation Eng. and Plantill E.J To. Transportation Systems, Haefner Lonnie EFundamentals of transpontilli E.J	Compulsory me roduction. Facilities and functions of Land Transportation. Design ments, Criteria and controls.SSD and PSD, Zero line, simple, comb dreverse curves. Transition distance and superelevation, transition of bic parabola, lemniscate and Euler's spiral, crosssection elements, as lume, mass curve and balance lines. Types and features of pavement tetrial properties of the layers of pavement, pavement design using ASHTO, Surface and subsurface drainage structures and their design: sign and application of land transportation facilities, developing, ploring, evaluating of strategies for operation, maintenance and ecore or life cycle, and providing all necessary information for decision poecesses and desion maker. Preparation and defense of an application object on a land transportation mode. Towledge or background to planning, design of a new facility or mederal requirements of an existing facility having inadequancies, inefficies some handicaps. Every student designs, finishes, submits, presents a fences his/her own project defined formerly and having 1-1.5 km lones of the Highway and Transportation Officials (AASHTO) "Flexibility in Highway DOT - FHWA, 1997"Highway Design Manual," Connecticut DOT, 1999 histy, CJ, Transportation Engineering An Introduction, Prentice Hall, 1990. Insportation Engineering and Planning Papcostas and Prevedouros, Prentice Hall padside Design Guide," AASHTO, 1996"Intersection Channelization Design ideline," NCHRP Report 279. Insportation Engineering and Planning Papcostas and Prevedouros, Prentice Hall stainability and Cities Newman and Kenworthy, Island Press, 1999 Insportation Engineering and Planning Papcostas and Prevedouros, Prentice Hall stainability and Cities Newman and Kenworthy, Island Press, 1999 Insportation Engineering and Planning Papcostas and Prevedouros, Prentice Hall stainability and Cities Newman and Kenworthy, Island Press, 1999 Insportation Engineering and Planning Papcostas and Prevedouros, Prentice Hall stai

Assessment Criteria		If any, mark as (X)	Percent (%)				
	Midterm Exams	2	50				
	Quizzes	2	10				
	Homeworks	-	-				
	Projects	1	20				
	Term Paper	-	-				
	Laboratory Work	-	-				
	Other	-	-				
	Final Exam	1	20				
Instructors	Asst. Prof.Dr. Hikmet BAYIRTEF	E PE					
Week	Subject						
1	Transportation Engineering –general						
2	Transportation planning, economics and traffic engineering –general						
3	Elements and facilities of land transportation						
4	Zero line and alignment studies						
5	Transition curves-I						
6	Transition curves-II						
7	Cross-section elements and their design						
8	Area, Volume and Mass curve						
9	Balance line and construction costs						
10	Pavement Design (Flexible)						
11	Pavement Design (Rigid)						
12	Design of drainage structures (Surface)						
13	Design of drainage structures (Subsurface)						
14	Construction, maintenance, rehabilitation and operation programming	i sarety and					