

Course Title-Course Code: IM 351 TRANSPORTATION ENGINEERING							Name of the Programme: Civil Engineering		
Semester	Teaching Methods							Credits	
	Lecture	Recit.	Lab.	Project/Field Study	Homework	Other	Total	Credit	ECTS Credit
1	42	-	-	-	28	28	98	3	4.5
Language	English								
Compulsory / Elective	Compulsory								
Prerequisites	None								
Course Contents	Introduction. Transportation problems. Systematic approach to problem solving. Trends in transportation development, need to professionals, importance of transportation engineer. Transportation modes, geometric design elements of transportation facilities, by concerning land transportation especially, alignment location and land use, cross-section elements, area and volume calculations, design elements for pavement and drainage. Transportation economics, planning and management techniques.								
Course Objectives	Making complex relationships and concepts understandable, developing problem solving ability and philosophy of decision making – impacts on designing facilities, and approaches to programming from planning to operating of facilities.								
Learning Outcomes and Competences	Relationships among transportation, culture, economics, politics and education etc. Transportation engineering approaches to and philosophy for facilities from planning to operating								
Textbook and /or References	Introduction to Transportation Engineering, Banks. Transportation Engineering, Khisty Transportation Engineering and Planning, Papacostas Introduction to Transportation Eng. and Planning, Morlok E.K. Int. to. Transportation Systems, Haefner Lonnie E. Fundamentals of transportation Eng, Hennes R.G..... Highway Eng. Handbook, Woods "A Policy on Geometric Design of Highways and Streets-1994," American Association of State Highway and Transportation Officials (AASHTO).								
Assessment Criteria								If any, mark as (X)	Percent (%)
	Midterm Exams							2	50
	Quizzes							2	5
	Homeworks							5	5

	Projects		
	Term Paper		
	Laboratory Work		
	Other		
	Final Exam	1	40
Instructors	Asst. Prof.Dr. Hikmet BAYIRTEPE		
<b>Week</b>	<b>Subject</b>		
1	Int. To Transportation Engineering.: Relationships, dependancies, impacts, decisions...		
2	Int. To Transportation Engineering.:Problems, solutions, economics, management...		
3	Transportation modes		
4	Sight Distances		
5	Safe Stopping and Passing Sight Distances		
6	Elements of horizontal curves, and staking		
7	Lateral Sight Distance and superelevation on Horizontal Curves		
8	Vertical Curves –general		
9	Design of Crest and Sag types of Vertical Curves		
10	Horizontal and vertical alignment combinations		
11	Cross-sectional elements		
12	Area Calculations		
13	Volume and Mass Curve Calculations		
14	Balance Line and Construction Costs		