

INSTRUCTOR	Dr. Evangelos I. Kaisar Class Time: 8:00 – 9:20 MW Office Hours: 1:00 – 2:30 MW Telephone: 561-297-4084, E-mail: ekaisar@fau.edu	
CATALOG DESCRIPTION	Transportation Engineering I 3 credits (Required) Prerequisites: Strength of Materials	
	Introduction to transportation engineering, including planning, permitting, and environmental considerations; design calculations; scheduling; and estimating; presentation skills necessary for the proper development of transportation improvements.	
TEXTBOOK & OTHER REQUIREMENTS	<ul style="list-style-type: none"> • John D. Fricker, and Robert K. Whitford. <i>Fundamentals of Transportation Engineering A Multimodal Systems Approach</i>. Prentice-Hall .Inc • Handouts provided by instructor • Blackboard registration 	
TOPICS	<ol style="list-style-type: none"> 1. Introduction to Transportation Engineering/History of transportation 2. Transportation Modes 3. Traffic Flow: Theory and Analysis 4. Highway Design 5. Highway Design for Performance 6. Queuing and Simulation 7. Planning and Evaluation 8. Safety on the Highway 9. Design of Intersection 10. Highway Design for Safety 11. Freight Transportation/Intermodalism 	
COURSE OBJECTIVES	<ol style="list-style-type: none"> I. Give undergraduate students exposure to, and working familiarity with the fundamentals of transportation engineering and problem solving. II. To introduce the theoretical concepts that underpins highway and traffic engineering. III. Give the students the experience of collaborating in project teams while working on course projects(s) and enhancing their written and oral communication skills.. 	
COURSE OUTCOMES & RELATIONSHIP TO ABET OUTCOMES A–K	<ol style="list-style-type: none"> 1. Ability to understand the components of the transportation system. (a, b, c, e, f, h, k) 2. Understand the functional relationships that govern vehicular flow. (a, b, e, f, h, j) 3. Ability to understand the concepts of highway design, and understand to perform capacity analysis under interrupted flow conditions (a, b, e, g, i) 4. Understand the urban transportation planning (a, b, c, f, i, k) 5. Basic understanding of the freight transportation principles (a, e, i, j) 6. Experience working with their peers in project teams to deal with semi-real world scale projects (a, b, c, d, f, g, h, i, k) 	
CONTRIBUTION TO PROGRAM CURRICULUM	Fundamentals of geometric design, traffic flow characteristics, level of service, and simulation to prepare students for the follow-up course in Transportation Engineering II, in accordance with Program Outcome 1, 5, 6, 7.	
	Outcome 1: An understanding of professional and ethical responsibility.	H
	Outcome 2: A working knowledge of fundamentals, engineering tools, and experimental methodologies.	H
	Outcome 3: An understanding of the social, economic, and political contexts in which engineers must function.	L

RELATIONSHIP TO PROGRAM OUTCOMES	Outcome 4: An ability to plan and execute an engineering design to meet an identified need.	H
	Outcome 5: An ability to function on multi-disciplinary teams.	H
	Outcome 6: An ability to communicate effectively.	H
	Outcome 7: Graduates will have a proficiency in the following areas of civil engineering: (a) structural engineering, (b) transportation engineering, (c) geotechnical engineering, and (d) water resources/environmental engineering.	H
	Outcome 8: Graduates will have an appreciation for the role of civil engineering in infrastructure planning and sustainability, including hazard mitigation.	M
	Outcome 9: Graduates will be successful in finding professional employment and/or pursuing further academic studies.	M
APPROACH	The class meets for two 50-minute lectures per week plus two 60-minute lecture/lab session per week. Homework assignments are given bi-weekly. There are quizzes given randomly, class project and two exams.	
EVALUATION METHODS	The course grade is based on the following components: <div style="margin-left: 40px;"> Class Participation/Quizzes 10% Assignments 10% Exams(Midterm-Final) 60% Class Project 20% </div>	
COURSE POLICY	<ol style="list-style-type: none"> 1. Cell phones and beepers should have the ringers turned off as a courtesy to the instructor and your fellow classmates. 2. Attendance to class is required. You are expected to attend and participate in all class sessions. Final grades will be reduced by one letter for every three (3) unexcused absences (as determined by the instructor). 3. Exams will be given only at the scheduled times and places. No make-ups, except in documented emergencies. Minute papers are given randomly throughout the semester. No one is exempt from the final examination. 4. You are expected to complete the assigned reading prior to the date indicated on the class schedule, to do all assignments, and to participate fully in group projects. Homework and other assignments are due at the beginning of class on the date indicated on the assignment sheet. Late assignments are not accepted. 5. Consultation with your classmates on assignments is expected and encouraged; however what you turn in must be your own work. Representing the work of others as your own is unethical and may result in sanctions (see below). The instructor's duty is to pursue any reasonable allegation, taking action where appropriate, as described in www.fau.edu/ug-cat/academic.htm#irregular and the Florida Administrative Code. Please be advised that the copying of material from the internet or any other written material is considered plagiarism and is also a breach of the Honor Code. 	
UNIVERSITY POLICY	Pertinent University instructional policies may be found on the FAU web site at http://www.fau.edu/academic/provost/facbook.htm#teaching . It is your responsibility to be familiar with them. A paper copy of the most pertinent of these policies is available from Jessica Meith in EG 214. In compliance with the Americans with Disabilities Act, students who require special accommodations, due to a disability, to properly execute coursework must register with the Office for Students with Disabilities (OSD) located in Boca, SU 133, (561) 297-3880, or in Davie, MD I (954) 236-1222, and follow all OSD procedures	