College of Engineering

Department of Civil Engineering

CE 599 Special Topics in Transportation

Credit and Contact hours	3 / 3 (Lectures), 0 (Tutorials), 0 (Laboratory)
Required, or Elective	Required
Course Description	This course covers a wide range of topics of current interest in planning, design, construction, operation, maintenance and / or management of transportation systems. The specific subject will be selected based on the need, student interest and faculty expertise.
Prerequisites or Co-requisites	None
Course Learning Outcomes	Students completing this course successfully will be able to:

Course Learning Outcomes (CLOs)	*Related Student Outcomes (SO)*
CLO1. Illustrate practical transportation engineering problems and analyze them to develop solutions. S1	**SO2**
CLO2. Apply the new advancements and technologies in real-life problems related to transportation engineering. S1	**SO2**
CLO3. Use advanced engineering techniques, modern tools, and systems necessary for advanced transportation engineering problems. S1	**SO2**
CLO4. Evaluate the new advancements and technologies in transportation engineering, and predict its applicability in real-life. S3	**SO4**
CLO5. Discuss recent research developments in transportation Engineering and identify any gaps of needed future research. V2	**SO7**

Student Outcomes related to this Course

SO 2 Provide solutions for complex and real-life engineering problems through critical thinking and the use of modern engineering tools, and identify their impact on social, global, cultural, environmental, safety, and economic factors.

SO4 Criticize and discuss scientific research reports /papers related to Civil Engineering issues with a high level of ethics proficiency and communication skills, independently, or as a teamwork.

SO 7 Effectively manage, individually or in groups, specialized tasks and activities in coursework, projects, assignments, and research work with a high level of autonomy and responsibility.

Topics Covered	**List of Topics**	**Related CLOs**
	1. Introduction to Transportation Systems	**CLO 1,2,4,5**
	2. Transportation Planning and Policy	**CLO 1,4**
	3. Transportation Infrastructure and Design	**CLO 1,3**
	4. Operations and Management of Transport	**CLO 2,3**
	5. Technology and Innovation in Transportation	**CLO 2,4**
	6. Social, Economic, and Environmental Impacts	**CLO 4,5**
Textbook(s) and Other Required Material	• Dependent on the selected topic.	
Grading System	Project progress report -Part one	2.5%
	Project progress report -Part Two	2.5%
	Term paper	15%
	Mid-term exam	20%
	Project – Final report and oral presentation	20%
	Final Exam	40%
Instructors	Appointed Faculty	
Date of Review	November, 2024	

Introduction to Transportation Systems

Transportation Planning and Policy

Transportation Infrastructure and Design

Operations and Management of Transport

Technology and Innovation in Transportation

Social, Economic, and Environmental Impacts