Department: Civil Engineering

Course Number: 581

Course Title: Transportation Engineering II

Designation: Graduate; Technical Elective – UG

Catalog Description: Advanced topics in transportation engineering and management with emphasis on intermodal facilities; physical design and traffic management; measures of system effectiveness and performance; environmental and social impacts; Intelligent Transportation System (ITS) technologies; applications of remote sensing and spatial technologies and GIS; economic evaluation of alternatives; computer modeling and simulation. (3)

Pre-Requisite: CE481 or consent of instructor
Professional Component:

(Highlight those apply)

- differential and integral calculus
- probability
- statistics
- chemistry
- calculus-based physics
- structure
- water resources and environmental engineering
- geotechnical engineering
- transportation and construction management
- laboratory experiment
- critically analyze and interpret data
- design
- professional practice issues
- professional licensure and continuing education

Outcomes:

(Highlight those apply)

(a) an ability to apply knowledge of mathematics, science, and engineering
(b) an ability to design and conduct experiments, as well as to analyze and interpret data
(c) an ability to design a system, component, or process to meet desired needs
(d) an ability to function on multi-disciplinary teams
(e) an ability to identify, formulate, and solve engineering problems
(f) an understanding of professional and ethical responsibility
(g) an ability to communicate effectively
(h) the broad education necessary to understand the impact of engineering solutions in a global and societal context
(i) a recognition of the need for, and an ability to engage in life-long learning
(j) a knowledge of contemporary issues
(k) an ability to use the techniques, skills and modern engineering tools necessary for engineering practice

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