

COURSE SYLLABUS (2 Page)

Course Number: CEGR 3153
Course Name: Transportation Laboratory

Credits and Contact Hours: 2

Instructor: Venkata Duddu

Textbook: *Title:* Introduction to Traffic Engineering
Authors: Currin
Year: 2001

Other Supplemental Materials: Handouts and Recommended Texts:
Title: Transportation Engineering Planning and Design (4th ed.)
Authors: Wright and Ashford
Year: 1998

Title: A Policy on Geometric Design of Highways and Streets
Authors: AASHTO
Year: 2004

Catalog Description: Design of transportation systems, including highways, airports, pipelines, and mass transit; route layout, geometric design and earthwork calculations; computer-aided system simulation and evaluation. Technical report writing and evaluation of components of written technical communication. One and a half hours of lecture and three hours of laboratory per week.
Most Recently Offered (Day): Spring 2016, Fall 2015, Summer 2015
Most Recently Offered (Evening): Course has not been offered in 3 years

Pre-Requisites/Co-Requisites: CEGR 3161 (Pre- or Corequisite)

Course is: Required (R)

Goals: The objectives of this course are to provide the student with an understanding of fundamentals of street and highway design, layout and design of parking areas, driveways, and airports. Students will also be exposed to roadway design, Park & Ride/Transit Facility, design airport runway and taxiway layout, and traffic impact analysis of a proposed development.

Student Outcomes Addressed:

In this course, students will develop the following Student Outcomes:

- 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 within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
- E. an ability to identify, formulate, and solve engineering problems
- F. an understanding of professional and ethical responsibility
- G. an ability to communicate effectively
- J. a knowledge of contemporary issues
- K. an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice

Course Topics:

Design of Roadway- geometric, earthquake, cross-section design of park and ride/Transit Station, day out of airport runway and taxiway, traffic impact analysis, analyzing intersection software, and traffic engineering studies.