Course Number: CIVL 5500/6500  
Course Title: Traffic Engineering Analysis  
Credit Hours: 3 lecture hours  
Prerequisites: CIVL 3510, or departmental approval  
Corequisites: None

Textbook:
  Note: Portions of Chapters 4, 6, 9, and 10 only.

Additional Readings and Resources:


Course Description for Bulletin:

Capacity analysis of rural and suburban highways, two-lane highways, freeways, weaving sections, ramps, and intersections. Note: Additional material to be covered includes traffic control devices and traffic engineering studies.

Course Objectives:

Learn about history and organization of the MUTCD, develop an understanding of signs and pavement markings, gain in-depth knowledge on traffic engineering studies and practices, including speed studies, volume studies, signal studies, travel time and delay studies, and residential traffic management. Learn about history and organization of the HCM, gain in-depth knowledge of highway capacity analyses for freeways, multilane highways, two-lane highways, and intersections.

General Policies:

There will be two in-class exams; there may be occasional unannounced in-class assignments. Homework will be assigned regularly throughout the semester and collected for grading. Homework assignments will be designed to prepare students for exams and otherwise contribute to understanding of the course material.
Course Content:

Part 1: Traffic Control and Engineering Studies
1. Traffic Signs
2. Pavement Markings
3. Speed Studies
4. Volume Studies
5. Signal Studies
6. Traffic Calming
7. Highway Safety
8. Temporary Traffic Control

Part 2: Highway Capacity Analyses
1. Signalized Intersections
2. Unsignalized Intersections
3. Freeways
4. Multilane Highways
5. Two-Lane Highways

Course Evaluation:

Grading (5500):

Homework (20%)
Exam 1 - Traffic Engineering Studies (25%)
Exam 2 - Highway Capacity Analysis (25%)
Group Project (30%)

Grading (6500):

Homework (15%)
Exam 1 - Traffic Engineering Studies (20%)
Exam 2 - Highway Capacity Analysis (20%)
Individual Project (15%)
Group Project (30%)

Note: Dates of exams, report due dates, and presentations will be announced at least two weeks in advance. The standard ten-point grading scale will be used.

Accommodations for Students with Disabilities:

Relevant university policy regarding accessibility to the course material and facilities applies to this course. Students requiring accommodations pursuant to the policy should notify and meet with the instructor during the first week of classes to ensure that any necessary accommodations can be made.
Information for Fall 2016 Term:

Class Time/Place: 2:00 pm – 3:15 pm, Tuesday and Thursday
111 Harbert Engineering Center and 216 Harbert Engineering Center

Instructor: Rod E. Turochy
Phone: 844-6271
E-mail: rodturochy@auburn.edu

Office Hours: 9:00 – 11:00 am, Monday and Wednesday, and by appointment
223 Harbert Engineering Center

Class Website: http://www.eng.auburn.edu/users/rturochy/civl6500

Procedural Rules:

1. General: Students are responsible for assigned reading and participating in class discussion. During class, and most importantly during exams, cellular telephones must be turned off or otherwise made silent.

2. Reading: It is the student’s responsibility to keep pace with class instruction and the attached course outline. Students are responsible for reading the assigned material. Comprehension and the ability to ask questions are increased if the student reads the material prior to class.

3. Homework: Problems will be assigned in class and posted on the class website. Homework problems will be due at the beginning of class on dates specified. Late homework will be accepted until the beginning of the next class period at a 50% reduction in grade. Homework solutions will be posted, and selected problems will be discussed in class. Additionally, each student will present a transportation news item (approximately 5 minutes) on a specified day during the semester.

4. News item: Each student will report on a traffic engineering news item on an assigned date, at the beginning of class, during the semester. This assignment will consist of a 3-5 minute summary and commentary on the news item in which the relevance of the item will be discussed.

5. Exams: There will be two exams during the term; only the textbook and designated class handouts will be allowed as aids on these exams. Requests for adjustments or reconsideration of any exam grade must be made within one week of the date the exam is returned.

6. Make-up exams: Make-up exams are only allowed according to university policy or as allowed by the instructor. These exams will be different than regularly scheduled exams. Arrangements must be made in advance except in extenuating circumstances.