CIVE 303: INFRASTRUCTURE AND TRANSPORTATION SYSTEMS (SP 09)
MWF 9:00-9:50AM, CLARK A 202 (Jan 20-May 10)

Instructor:
Prof. Suren Chen, P.E.
Department of Civil and Environmental Engineering
Colorado State University, Fort Collins, CO 80523
A207-J Engineering Blvd., tel: 970-491-7722, fax: 970-491-7727
Email: Suren.chen@colostate.edu

Office hour: MWF 2:00-3:00PM – A207J Engineering Blvd.

Textbook:

Other material will be made available via RamCT or by reference to other websites.

Course prerequisite
Completion of CE freshman and sophomore core courses, basic knowledge of engineering computing, spreadsheets, AutoCad, surveying, introduction to engineering profession, and engineering report preparation, including use of software.

Objective:
This core course covers planning, design, and construction of transportation infrastructures; engineering economics; and engineering survey basics. Emphasis is on transportation systems, including bridges and highways. Specific topics are: review of surveying and mapping, road geometry and introduction to GIS; project planning, development, design, and construction; engineering economics and project management.

Assignments & homework:
Each homework will be assigned on or before Wednesday and will be due in the beginning of the next Wednesday class. No late homework will be accepted after the due time except for legitimate reasons which are acceptable to the instructor. These reasons typically include: university business duty which cause direct time conflicts, serious healthy condition or family emergency (all with written proof or statement), etc.
Topics:

PART1. Introduction of Infrastructure and Survey Basics (Week 1-2)
a. Introduction of Course (WK1)
b. Infrastructure Basics (WK1)
c. Survey Basics (Wk2-3)

PART2. Transportation Infrastructure and Highway Engineering (Week 4-12)
a. Introduction of Transportation Infrastructure (WK4)
b. Highway Engineering (WK4-7) ---* WK9 is spring break.
c. Transportation Engineering Basics, Safety, ITS (Wk 8-10)
d. Bridge Design, Construction and Management (WK 11-12)
e. Transportation infrastructure system – A new field (WK 13)

a. Engineering economics (WK13)
b. Project management (WK14-15)
c. Emerging technology and future challenges (WK 16)

Grade:
Homework/project reports 25%
Mid-term exams 50%
Final exam 25%

A=90-100
B=80-89
C=70-80
D=60-69
F=<60
Plus and minus grades may be used.

Makeup exam policy:
1. For people who can not attend regular exams due to university business duty, serious healthy condition or family emergency (all with written proof or statement), a makeup exam may be arranged AFTER the regular exam. All requests should be made at least 3 days before the exam except for emergencies. NO exception will be made without a legitimate reason and a timely arrangement. There are NO make-ups for pop-up quizzes.

Academic integrity:
Academic dishonesty is a serious problem. University rules including academic penalty and further investigation by the university authorities will be strictly enforced in this course. Please review student handbook for details. You are encouraged to work with others, but you should fully understand the work you turned in and are sure any work you have turned in is your own.

Usually only the textbook and notes (including handouts) are allowed to be used to finish your homework. Exams and quizzes are closed to any book and notes. Any use of solution books or old homework/exams from previous years in the homework, quizzes or exams is strictly prohibited and will be regarded as cheating.