FLORIDA ATLANTIC UNIVERSITY™

Graduate Programs—NEW COURSE PROPOSAL

DEPARTMENT NAME : CIVIL ENGINEERING

COLLEGE OF: ENGINEERING AND COMPUTER SCIENCE

RECOMMENDED COURSE IDENTIFICATION:

PREFIX TTE   **COURSE NUMBER** XXXX   **LAB CODE (L or C)** _____

INSTRUCTIONAL METHOD (V, BB, IC, EC, ETC.):

COMPLETE COURSE TITLE Highway Traffic Characteristics and Measurement

EFFECTIVE DATE (first term course will be offered): __FALL 2007__

CREDITS: 3	LAB/DISCUSSION: N/A	TEXTBOOK INFORMATION: by Roger R. Prassas E. and McShane W.	Traffic Engineering Third Edition
LECTURE: 3	FIELD WORK: N/A	**ISBN:** 0-13-142471-8	

GRADING: REGULAR __X__   PASS/FAIL _____   SATISFACTORY/UNSATISFACTORY _____

COURSE DESCRIPTION, NO MORE THAN 3 LINES: THIS CLASS IS DESIGNED TO PROVIDE THE STUDENT WITH ADVANCED TRAFFIC OPERATION CONCEPTS INCLUDING THE CHARACTERISITCS AND FUNCTIONAL RELATIONSHIPS REGARDING TRAFFIC MODELING, AND TRAVEL DEMAND FORECASTING METHODS. STUDENT WILL BE ABLE TO EVUALUTE TRANSPORTATION SCENARIOS, AND DESIGN SOLUTIONS TO IMPROVE TRAFFIC.

PREREQUISITES: TTE 4005 0R INSTRUCTOR PERMISSION REQ'D ○ Check box to enforce*	COREQUISITES: NONE ○ Check box to enforce*	OTHER REGISTRATION CONTROLS (MAJOR, COLLEGE, LEVEL): ○ Check box to enforce*

MINIMUM QUALIFICATIONS NEEDED TO TEACH THIS COURSE: PHD IN CIVIL ENGINEERING CONCENTRATION IN TRANSPORTATION

Other departments, colleges that might be affected by the new course must be consulted. List entities that have been consulted and attach written comments from each.   None –

EVANGELOS I. KAISAR, PH.D. ASST PROFESSOR, CIVIL ENGINEERING DEPT., ekaisar@fau.edu. 561-297-4084

Faculty Contact, Email, Complete Phone Number

SIGNATURES

SUPPORTING MATERIALS

Approved by:	**Date:**
Department Chair: _(signature)_	11/2/2007
College Curriculum Chair: _(signature)_	11/2/2007
College Dean: _(signature)_	11/2/07
UGPC Chair: _____	
Dean, Graduate Studies _____	

Syllabus—must include course objectives.

Written Consent—required from all departments affected.

Go to: *http://graduate.fau.edu/gpc/* to download this form

* "Enforce" prerequisites or other registration controls adds these restrictions to the course schedule; students whose academic careers do not show these prerequisites or other details will not be able to register. When box is not checked, restrictions show in catalog description only.

Email this form and syllabus to Graduate Studies one week *before* the University Graduate Programs Committee meeting so that materials may be viewed on the UGPC website by committee members prior to the meeting.

Florida Atlantic University
College of Engineering and Computer Science
Department of Civil Engineering

Highway Traffic Characteristics & Measurements

Description: This course is designed to provide the student with advanced traffic operation concepts including the characteristics and functional relathionships regarding traffic modeling, and travel demand forecasting methods. Students will be able to evaluate transportation Scenario, and design solutions to improve traffic operations.

Course Number: TTE XXXX

Course Prerequisites: Transportation Engineering II (TTE 4005) or permission of instructor.

Course Co-requisites: None

Courses that require this course as a direct prerequisite: None

Specialization: Traffic modeling and traffic characteristics.

Special Features: Exposure to theoretical and experimental research in traffic engineering.

Credits: 3

Required Texts: R.Roess, E. Prassas, and W. McShane Traffic Engineering Third Edition Prentice Hall, **ISBN**: 0-13-142471-8.

Recommended Texts: C. Daganzo, "Fundamentals of Transportation and Traffic Operations", Elsevier Wright, P.H. and Ashford. N.J. 1989. "Transportation Engineering –Planning and Design." John Wiley and Sons, Inc.

Course Objectives: The objective of this course is to provide the students with basic and applied knowledge of traffic characteristics, traffic modeling, and travel demand forecasting. Specifically, the students completing this coutrse will be able to:
- Conceptualize, and solve transportation problems
- Analyze and design traffic signals at isolated intersections by identifying the parameters
- needed to perform this analysis
- Analyze and design traffic signals for urban road networks
- Investigate different ideas in traffic control via class room discussion, problem sets and semester long project

Methods of Instruction: Regular Class with some internet activities using Blackboard

Topics: The lecture is based on a sequence of chapters from the textbook and will be supplemented with additional material where necessary including further references and instructor's notes.

  1) Vehicle Dynamics, Time-space Diagrams
  2) Geometric design, Sight distance, Clear Zones
  3) Light Traffic Theory
  4) Traffic dynamic, shockwaves, Car Following
  5) Isolated Intersections, Actuated Control
  6) Probability Theory, Simulation
  7) Networks, Equilibrium Analysis
  8) Traffic Planning and Operations

Schedule for Films/Videos/In-Class Discussions: N/A

Grading Scheme: Homework: 10% (every two weeks)
                         Project: 20%
                         Mid-Term Exam: 40%
                         Final Exam: 30%

Homework, Assisgments and other out of Class Activities: One homework every two weeks

Grading Scale: A (95%-100%), A- (90%-94%), B+ (85%-89%), B (81%-85%), B- (76%-80%), C+ (71%-75%),
                   C (67%-71%), C- (62%-66%), D+ (57%-61%), D (52%-56%), D- (45%-51%), F (below 45%)

Instructor: Dr. Evangelos I. Kaisar
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