



PROPOSAL SCC #99/00- 423

GENERAL EDUCATION CURRICULUM PROPOSAL FORM 1999-2000

NON-GENERAL EDUCATION PROCESS A

*DEADLINES: Deadline dates for 1999/2000 submissions: Regular proposals: October 22, 1999 to be implemented in Fall 2000; Short-Term proposals: December 10, 1999 to be implemented in Fall, 2000; Regular proposals February 18, 2000 to be implemented in Spring 2001; March 24, 2000 for short-term courses to be implemented in Spring 2001

PROPOSAL TITLE: Transportation Planning and Demand Analysis
(0908.463)

SPONSOR(S): CARLOS SUN

DEPARTMENT: CIVIL ENGINEERING

COLLEGE: ENGINEERING

IF LAS CHECK ONE: History/Humanities Math/Science Social/Behavioral Sciences

Check one: Undergraduate Graduate

THE ATTACHED *NON-GEN-ED* PROPOSAL IS BEST DESCRIBED BY THE ITEM(S) CHECKED.

New non-gen-ed course

Short-term non-gen-ed course

Minor curricular changes (fewer than three) to:

- existing non-gen-ed course
- non-gen-ed degree requirements
- major
- minor, specialization, concentration, track certificate program

DEPARTMENT
(Signature indicates approval) *Richard [unclear]* 2/24/00

Dept. Curriculum Chair/Date
[Signature] 2/24/00

Dept. Chairperson/Date

ACADEMIC DEAN

Approved Not Approved Comments:

Dean's Signature/Date *[Signature]* 2/24/01

COLLEGE CURRICULUM COMMITTEE

Date of open hearing (if necessary) 2/2/01 Approved Not Approved

Comments:

Signature of College Chair/Date: [Signature] 2/2/01

UNIVERSITY CURRICULUM COMMITTEE

Date Received/Processed 4/15/01

Comments:

Curriculum Chair Signature [Signature] Date Announced At Senate 5-8-01

EXECUTIVE VICE PRESIDENT/PROVOST

Approved Not Approved If no, reasons are as follows:

Student Credit Hours: _____ Faculty Load Hours: _____ Equalized Credit Hours _____

Official Copy & Approval Sheet Filed (Date): _____ Executive VP/Proved Signature/Date [Signature]

5/15/01

REGISTRAR

Date Approved Course Description Required 5/23/01

Hegis Taxonomy & Course Number Assigned _____

Registrar Signature/Date [Signature]

NOTIFICATION FORWARD

_____ Senate Curriculum Committee Chairperson _____ Academic Dean(s)

_____ Department Chairpersons _____ Registrar _____ Sponsor(s)

Course Proposal:

1. Details:

- a) Course Title: Transportation Planning, Demand, and Data Analysis (2002-2003)
- b) Sponsor: Dr. Carlos Sun & College of Engineering Curriculum Committee
- c) Credit Hours: 3 credit hours
- d) Course Level: Senior
- e) Curricular Effect: Elective for undergraduate civil engineering students
- f) Prerequisites: Senior standing or permission of instructor
- g) Suggested Time/Scale of Implementation: One section during spring semesters
- h) Resources
 - Faculty: Existing faculty can teach this course.
 - Library: No library acquisitions will be required.
 - Equipment: No laboratory equipment will be required.
 - Computers: Computer laboratory access will be required.

2. Rationale:

The proposed course is an elective course for all undergraduate civil engineering students. The inclusion of this course in the civil engineering curricula is consistent with the goals of the original civil engineering curricula which were approved by the University Senate in December 1994 and which were subsequently revised and approved in May 1996 and May 1997.

The course introduces students to the general field of transportation planning including travel demand analysis and data collection methods.

3. Essence of the Course:

a) Objectives:

Upon completion of the course, civil engineering students will be able to understand the transportation planning process including the ability to perform the following tasks:

- Produce travel forecasts including trip generation, trip distribution, mode choice, and route choice components
- Perform urban transportation planning
- Design data collection instruments and applied statistical analysis of transportation data

b) Topical Outline:

The topical outline of the course may vary to some extent depending on the interests of the instructor and the students. Topics to be covered include the following:

- Introduction to transportation planning

- Contemporary issues in planning
- Planning organizations and policy issues
- Data collection and descriptive statistics
- Inferential statistical techniques
- Trip generation using cross classification and multiple regression
- Trip distribution with gravity and fractar models
- Traveler choice behavior modeling using logit models
- Traffic assignment and shortest path algorithms
- Demand elasticities

c) Evaluation and Grading Procedure of Students:

Student grades will be based on individual examinations and individual and group homework.

d) Course Evaluation:

The proposed course will be evaluated based on student evaluations and curriculum review by civil engineering faculty.

4. Results of Consultations:

The proposed course is an additional elective course that supplements the civil engineering curricula and is consistent with the original civil engineering curricula which were approved by the University Senate in December 1994 and which were revised and approved in May 1996 and May 1997.

Catalog Description:

Transportation Planning, Demand, and Data Analysis (0908.XXX)

(Prerequisites: senior standing or permission of the instructor)

The course introduces students to the general field of transportation planning including travel demand analysis and data collection methods. Statistical data collection and analysis methods will be discussed. Examples using the traditional four-step planning process will illustrate common planning procedures. Computer applications are included.