**PURDUE UNIVERSITY**
REQUEST FOR ADDITION, EXPIRATION, OR REVISION OF AN UNDERGRADUATE COURSE
(10000-40000 LEVEL)

**DEPARTMENT:** Engineering

**EFFECTIVE SESSION:** Fall 2015

**INSTRUCTIONS:** Please check the items below which describe the purpose of this request.

- [ ] 1. New course with supporting documents
- [ ] 2. Add existing course offered at another campus
- [ ] 3. Expiration of a course
- [ ] 4. Change in course number
- [ ] 5. Change in course title
- [ ] 6. Change in course credit/typ
- [ ] 7. Change in course attributes (department head signature only)
- [ ] 8. Change in instructional hours
- [ ] 9. Change in course description
- [ ] 10. Change in course requisites
- [ ] 11. Change in semesters offered (department head signature only)
- [ ] 12. Transfer from one department to another

**PROPOSED:**
- Subject Abbreviation: CE
- Course Number: 2XXX
- Long Title: Introduction to Transportation Policy, Planning, and Implementation

**EXISTING:**
- Subject Abbreviation: 
- Course Number: 
- Long Title: 

**TERMS OFFERED:**
- Summer
- Fall
- Spring

**CAMPUS(ES) INVOLVED:**
- Calumet
- Ft. Wayne
- Indianapolis

**CREDIT TYPE:**

<table>
<thead>
<tr>
<th>1. Fixed Credit Cr. Hrs.</th>
<th>3</th>
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<td>2. Variable Credit Range:</td>
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**COURSE ATTRIBUTES:**

- 1. Pass/Not Pass Only
- 2. Satisfactory/Unsatisfactory Only
- 3. Repeatable
- 4. Credit by Examination
- 5. Special Fees
- 6. Registration Approval Type
- 7. Variable Title
- 8. Honors
- 9. Full Time Privilege
- 10. Off Campus Experience

**COURSE DESCRIPTION (INCLUDE REQUIREMENTS/RESTRICTIONS):**

This class is an introduction to transportation policy and planning in urban areas. The course will cover the history of urban transportation planning, local and federal regulations and policies, funding issues, transportation planning and environmental issues, transportation data sources and surveys, fundamentals of travel demand and network modeling, and contemporary issues. MA 15300 and ENG W13100

**Pre-requisites:** MA 15300 and ENG W13100

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**Cross-Listed Courses:**

**Columnar Department Head**

**Columnar School Dean**

**Fort Wayne Department Head**

**Fort Wayne School Dean**

**Indianapolis Department Head**

**Indianapolis School Dean**

**North Central Department Head**

**North Central Chancellor**

**West Lafayette Department Head**

**West Lafayette College/School Dean**

**West Lafayette Registrar**
Technical Elective & General Education Course

CE 2xxx - Introduction to Transportation Policy, Planning, and Implementation

Offered each fall

Catalog Data

Class: 3. Credits: 3.
This class is an introduction to transportation policy and planning in urban areas. The course will cover the history of urban transportation planning, local and federal regulations and policies, funding issues, transportation planning and environmental issues, transportation data sources and surveys, fundamentals of travel demand and network modeling, and contemporary issues.

Prerequisites

MA 15300 and ENG W13100

Required Textbook


References


Course Objectives

Student will understand and apply basic concepts and methods of urban transportation planning in the US. Student will learn methods of designing, conducting and administering surveys to provide the data required for transportation planning. In addition students will learn project development and financing, regulations and policies, environmental issues, land use travel demand modeling, and contemporary issues related to transportation planning.

Schedule:

Two 75-minute classes per week.

Lecture Topics

1. Federal legislation and planning regulations. 4 classes
2. Highway finance. 2 classes
3. Environmental concerns and air quality conformity. 4 classes
4. Land use and transportation interaction. 2 classes
5. Project development. 4 classes
6. Data collection and use of survey information 2 classes
2. Travel demand forecasting models of trip generation, trip distribution, mode choice, and trip assignment. 6 classes
8. Emerging issues and information technologies for transportation planning. 4 classes
8. Quizzes/Exams 3 classes

Course Outcomes

Upon completion of the course, students will be able to:

3.1. Interpret information that has been presented in mathematical form (e.g. with functions, equations, graphs, diagrams, tables, words, geometric figures).

3.2. Represent information/data in mathematical form as appropriate (e.g. with functions, equations, graphs, diagrams, tables, words, geometric figures).

3.3. Demonstrate skill in carrying out mathematical (e.g. algebraic, geometric, logical, statistical) procedures flexibly, accurately, and efficiently to solve problems.

3.5. Communicate which assumptions have been made in the solution process.

4.4. Apply basic observational, quantitative, or technological methods to gather data and generate evidence-based conclusions.

4.6. Locate reliable sources of scientific evidence to construct arguments related to real-world issues.

5.1. Demonstrate knowledge of major concepts, theoretical perspectives, empirical patterns, or historical contexts within a given social or behavioral domain.

5.4. Evaluate evidence supporting conclusions about the behavior of individuals, groups, institutions, or organizations.