

**CE 668/ PLN 668 Urban Public Transportation Systems  
Fall 2002 Course Syllabus**

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| Catalog Description: | (3) CDT. Development, operation, management, financing, evaluation and travel demand estimation for urban public transportation systems.  |
| Course Objectives:   | Student should obtain an understanding of the planning, management, and operations of urban public transportation systems. Students should understand the history of public transportation and some of the current challenges and opportunities for public transit in the US. The student should understand characteristics of transit demand, management, and planning. To assist in quantifying these characteristics, students should be able to apply common techniques to plan, design, and evaluate the demand for and quality of public transit service. Upon completion, students should be prepared to work in the field of public transit and to conduct research in advanced topics.   |
| Instructor:          | Dr. Mark Hickman<br>Civil Engineering Building Room 214B, Phone 626-9420<br>E-mail: <a href="mailto:mhickman@engr.arizona.edu">mhickman@engr.arizona.edu</a><br>Office hours: Tuesday and Thursday 3:15-5 pm; other times by appointment  |
| Class Hours:         | Tuesday and Thursday 2:00-3:15 pm, ECON 305<br>The course will also be 100% web-delivered (see below).  |
| Textbook:            | Course notes and electronic reserves. Some reading material will be available at the library through electronic reserves ( <a href="http://ereserves.library.arizona.edu">http://ereserves.library.arizona.edu</a> ). Other readings will be distributed on CD. Web modules will be available at the WebCT site (see below).  |
| Grading System:      | 20% Homeworks, 20% Exam 1, 20% Exam 2, 20% Final Exam<br>A semester project will also be required of students (20% of total grade)<br>A = above 90%; B = 80 to 89%; C = 70 to 79%; D = 60 to 69%; E = below 60%.  |
| Course Requirements: | The course includes two examinations during the semester and a comprehensive final examination. About 8 homework assignments (combination problems and essays) are also required during the semester. Homework and solutions will be posted on the WebCT site. Each homework will be graded out of 20 points. Late homework will have the following penalties: up to 1 class late: 5 points; up to 1 week late: 10 points; after 1 week: no credit.<br><br>Students will complete an additional project or research paper during the semester. Selection of the project or research topic should be in consultation with the instructor. Specific guidelines for the project will be given during the first week of class and posted on the WebCT site (see below). |
| Homework Policy:     | Copying another person's work, <i>without attribution, including copying of any part or the whole of computer files or material from the Internet</i> , is considered plagiarism. It will be prosecuted as a violation of the University of Arizona Student Code of Conduct, in accordance with the Code of Academic Integrity. This code is published on-line at <a href="http://w3.arizona.edu/~studpubs/policies/cacaint.htm">http://w3.arizona.edu/~studpubs/policies/cacaint.htm</a> . The instructor assumes that students are familiar with the University's Code of Conduct and the Code of Academic Integrity. It is the student's responsibility to be familiar with these policies.  |

WebCT: To complement the in-class instruction, additional course material will be published on the World Wide Web. We will be using a computer tool called WebCT. You can access WebCT directly using Student Link, under this course name in your schedule. During the first week of class, you will receive instruction on the WebCT site ([webct.arizona.edu](http://webct.arizona.edu)).

Within WebCT, we will be using the following tools:

- Topical content modules within the course
- Assignments
- Threaded discussions on course topics
- On-line “self tests” to assess understanding of course material

The threaded discussions and “self tests” on WebCT will not be formally graded. Their use is encouraged, with the intent of providing another tool to help you learn the course material.

Video: Students enrolled in the web-only version of the class (Section 2) will receive additional video material from class lectures.

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### Course Outline

1. History of public transportation in the US
2. Transit demand: characteristics and estimation
3. Transit technology and service concepts

#### **Exam 1, tentatively October 10**

4. Service design and planning methods
5. Operations: characteristics and management
6. Performance monitoring and management

#### **Exam 2, tentatively November 14**

7. Costs and financing
8. Transit in urban transportation planning

#### **Final Exam, Tuesday, December 17, 2-4 pm**