**PBIC Bicycle and Pedestrian Transportation Short Series**

**INSTRUCTOR INFORMATION**

The Short Series is designed to supplement an existing undergraduate engineering course, but some of the materials may be relevant for courses in planning, public health, public policy, etc. We encourage instructors to tailor these materials for different courses.

**Materials**

*Lectures*

Three, 50-minute lectures (in the form of PowerPoint presentations) may be used individually or sequentially as part of a 3-credit hour semester:

1. Planning for Pedestrians and Bicyclists
2. Pedestrian and Bicycle Facility Design
3. Pedestrian and Bicycle Data and Performance

Each lecture includes speaker notes, additional examples, references, and further reading. The speaker notes explain the purpose of the slide and offer additional content that may be discussed along with the text/images displayed on each slide.

*Assignments*

There are four assignments that students may work on as part of the Short Series:

1. Walkability Assessment/Audit – Students select an audit tool and then walk an approximately half-mile route that is selected by the instructor. Students are asked to consider various elements that affect the walkability of an area. This could be started as an in-class, small group assignment. The audit may be assigned at any point during the Short Series, but we recommend using it toward the beginning.
2. Assessing Level of Service – Students are asked to calculate level of service for a hypothetical bicycle facility and then consider changes to various inputs. This could be a small group assignment or an individual take-home assignment. We strongly recommend teaching Class 3 (Data and Performance), before making this assignment. This assignment has an accompanying Excel file.
3. Bicycle LOS and Level of Traffic Stress Analyses – This assignment has two parts. First, students are provided with the inputs and outputs for a segment of roadway that was evaluated using both Bicycle Level of Service and Level of Traffic Stress methods. They are asked to write a comparison of the outputs and describe what it means for bicyclist comfort. Second, students are provided with maps of a network that was evaluated using BLOS and LTS and asked select a route based on a certain priority. We strongly recommend teaching Class 3 (Data and Performance) before making this assignment. The network maps are provided in the assignment Word file, and as separate JPG files.
4. Existing Conditions Analysis – Students are asked to complete a field observation to develop a cross section of current conditions (including simple measurements, identification of conflict points, and notes about how modes currently interact). This could be a group assignment where observations are reported in a presentation. Students could also be asked to come up with potential solutions to the issues observed. This could be assigned at any point during the short series, but we recommend using it after teaching Class 2 (Facility Design).

From our experience working with instructors, there are lots of other ideas for ways to engage students. Any of the assignments could be completed as small group activities and if time allows, group presentations of findings are great opportunities for students to practice public speaking and discuss the different approaches they took for completing the assignments. Site visits are another opportunity to demonstrate some of the design concepts that are covered in the lectures and assignments.

*Reading and Resource List*

This list should be used as a resource for further information for the instructor or students. It includes key national resources and supporting research on bicycle and pedestrian transportation. This list may be used by instructors who wish to supplement the existing Short Series materials, or by students who would like more information about certain topics. The topics include: safety, planning and analysis, design guidance, technical resources, and national organizations. The list is not intended to be assigned “as is” to students.

**Suggested Guest Speakers**

* City transportation planner/engineer, including a bike/pedestrian coordinator
* State DOT engineer/planner involved with bike/pedestrian facility design
* Engineering/planning consultant

**Additional Information**

* More in-depth course content available in the [PBIC Bicycle and Pedestrian Planning Course for Graduate Students](http://www.pedbikeinfo.org/training/courses_masters.cfm).
* The online [PBIC Library](http://www.pedbikeinfo.org/data/library/library.cfm) contains case studies, reports, and other resources on all of the topics included in the Transportation Short Series.