

One Step At A Time: Counting Pedestrians

Students learn pedestrian observation and data collection in the field

TRANSPORTATION CURRICULUM

THE MODULE

PATHWAY COUNTS

This assignment allows students to gain familiarity with manual pedestrian counts along a pathway. The exercise will allow students to become familiar with standardized field data collection.

INTERSECTION COUNTS

In this assignment, students learn to count pedestrians and bicyclists at intersections. The exercise will allow students to become familiar with standardized field data collection in a more complex environment.

CROSSINGS/INTERACTIONS WITH DRIVERS

This assignment teaches students a methodology for observing pedestrian behaviour and driver-pedestrian interactions. These observations can be used to examine engineering and planning decisions, built environment and design, traffic psychology, and roadway safety concepts and challenges.

WHY IT'S IMPORTANT FOR STUDENTS

These modules will enrich classroom learning and facilitate fieldwork experience. By encouraging students to consider behavioral interactions of roadway users, these modules provides students with field experience that generates data which underlie behavioral traffic theory and agent based traffic models. These instructional activities allow students to gain experience in field research design related to traffic safety, while standardizing and collecting much-needed pedestrian data.

Curriculum developed by Dr. Jennifer Dill, Portland State University



Improving the mobility
of people and goods
to build strong
communities

STUDENT AUDIENCE

Undergraduate or graduate students in courses related to travel behavior, traffic safety, urban planning and design, community health, or civil engineering.

TIME FRAME

In addition to class time:
2 hours per group for observation
(including site set-up)
6 hours per group to analyse the data
and write the report

INSTRUCTOR EXPERTISE

This guide allows instructors with little or no experience to integrate pedestrian-related curriculum.

MATERIALS LIST

- Clipboards and pens
- Coding sheets (included in the final report)
- Camera (cell phone cameras are fine)

LESSON PLAN OUTLINE

COMPLETE LESSON PLANS AND VISUAL AIDS ARE AVAILABLE IN THE GUIDEBOOK:
<https://nitc.trec.pdx.edu/research/project/999>

- Select locations for students to observe pedestrians (the guidebook offers guidelines for choosing locations).
- Print four to five aerial views or maps of the pathway or intersection for each group
- Encourage students to choose their observation days and times with a purpose (e.g. morning arrivals at a school)
- Students should be prepared to discuss their reasoning and implications in class once observations are complete.
- The final product will be completed observations and a 2-3 page analysis. Complexity will depend on course level.

LEARNING OBJECTIVES

- Gain familiarity with manual pedestrian counts along a pathway
- Learn to count pedestrians and bicyclists at intersections
- Learn to observe behavioral interactions of roadway users
- Gain experience in field research design

UNIQUE ASPECTS

Assigning groups and requiring out-of-class site visits is more flexible for students and preserves lecture time, but is highly dependent on student attendance. Assigning groups the day of field visit ensures that each group has enough participants to complete the exercises. This method may be best used when the visits take up lecture time, which also necessitates the use of sites closer to the classroom.

The National Institute for Transportation and Communities (NITC) is one of five U.S. Department of Transportation national university transportation centers. Housed at Portland State University, NITC is a program of the Transportation Research and Education Center (TREC). This research partnership also includes the University of Oregon, Oregon Institute of Technology, University of Utah, University of Arizona, and University of Texas at Arlington. We pursue our theme through research, education, and technology transfer.

