

**Empowering Communities with Asset Mapping and  
GIS SOMA ECODISTRICT TREE INVENTORY**  
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**PARTNERS**

Institute for Sustainable Solutions, PSU  
Campus Sustainability Office  
Portland State University's Facilities Department  
SOMA EcoDistrict

**PROJECT**

Our urban forest is a critically important component to the region's ecosystem. City trees: clean the air; combat climate change; provide oxygen; provide cooling in summer; help prevent water pollution; help to prevent soil erosion; provide food for people; provide habitat for wildlife; help us to conserve energy; act as sound barriers; promote healing; and provide landscape beauty.

Increasingly, cities and neighborhoods have wanted to quantify these benefits and assess the health of the urban tree canopy to plan for tree care and future planting. The City of Portland has launched a significant street tree inventory effort and has encouraged residents across the city to enlist in various local neighborhood tree inventory projects. And while many of the street trees in downtown Portland are a part of city's inventory, much of Portland State University's campus and the South of Market EcoDistrict have not been documented.

The purpose of this project is to:

1. Understand the importance of trees to our city and the implications of the uneven distribution of trees in our city in terms of equity.
2. Evaluate and build on the inventory that was begun by Senior Capstone students in Fall 2015.
3. Inventory and collect data about all of the remaining trees in the SOMA EcoDistrict using a data collection smartphone app, Fulcrum.
4. Download and clean the data.
5. Analyze the data using i-trees (from the US Forest Service).
6. Interpret the i-tree analysis and develop recommendations.
7. Based on the findings, develop a Tree Plan for the PSU campus.

The deliverables are:

- The collected data (spreadsheets and photos)
- Analysis results including maps, charts, tables and explanatory narrative
- A Tree Plan for the PSU campus (team project)
- Presentation of the Tree Plan to ISS, CSO, and other partners

To do this you will work together to:

- ✓ Read relevant literature about the importance and value of urban trees
- ✓ Learn how to identify trees
- ✓ Learn to use the mobile data collection app
- ✓ Collect tree data using the mobile app
- ✓ Prepare the data for i-tree analysis
- ✓ Interpret the i-tree analysis and develop findings using maps, charts, tables, and narrative
- ✓ Develop a Tree Plan for the PSU campus
- ✓ Present findings and plan to partners

## PROJECT VALUES

Integral to this project are University Studies' four goals: inquiry and critical thinking; communication; the diversity of human experience; and ethics and social responsibility. In terms of inquiry and critical thinking, this project is interdisciplinary in its approach to problem-solving, investigating and conceptualizing our work. This term we will be emphasizing critical thinking especially with regard to the benefits of trees and the impacts of their distribution on community members – issues of equity.

With regard to communication, students will be encouraged to communicate with each other and with our community partners in multiple ways including conversation, text, imagery, maps, tables and charts if appropriate.

In terms of the diversity of experience, students will observe the quality of experience in a number of diverse neighborhoods with an eye toward sensitivity and empathy.

Ethics and social responsibility will be stressed as core values in all aspects of the work.

## WRITTEN AND VERBAL REFLECTIONS

Over the course of the term, you will be doing weekly posts that will ask you to think critically about various aspects of the project. In addition, we will be discussing the relationships between urban trees and social equity and urban trees and the larger notion of sustainability. Toward the end of the term, you will be asked to explore the **Regional Equity Atlas and the Healthy Trees Healthy People tool** ([www.treesandhealth.org/](http://www.treesandhealth.org/)) as a basis for an in-depth class discussion on the issue of equity and trees.

## GENERAL INFORMATION

Your class participation, cooperation, and self-motivation are critical to this effort. All students are

expected to attend all class sessions and the final presentation. Because full student participation is so important to the success of the project, students will be permitted no more than two absences without it affecting your grade. Whenever possible, please let us know if you know in advance if you will have to miss a class or activity.

## **READINGS**

Pdfs or links for the readings will be available on D2L.

## **GRADES\***

This is a graded 6-credit hour course. Your grade is dependent on three elements: (1) class attendance and in-class participation; (2) evidence of your individual contribution to the effort including your weekly posts; and (3) the final products. Because your grade is based on the quality of the ongoing activities and the final products that depend on the group effort, it may be difficult to know where you are, in terms of the grade, at any particular point in time. If, however, you actively participate, work well with the team, and do your best work, you will do well in the course. The components of your grade are broken out as follows:

- ✓ 40% Class/group participation including regular class attendance, fieldwork, and class discussion
- ✓ 30% Evidence of your own contribution including the weekly posts (total of 8 @ 2 points each, possible 16 points- 0=no post; 1=acceptable; 2=excellent), and your contributions to the deliverables (possible 14 points)
- ✓ 30% The deliverables and presentation

*\*Your grade will be negatively affected by more than two unexcused absences and/or consistent tardiness to class or field work sessions.*

