ESM 342 Field Methods: Forests

Required Texts: *Winter Twigs*, by H. M. Gilkey and P. L. Packard
*Plants of the Pacific Northwest Coast*, Pojar and Mackinnon

Also: Field notebook to jot your observations and take data, pencil.
Good rain-gear, sturdy boots, to wear on field trips in winter weather.
The purpose of this course is to review particular field techniques used in forests
that were introduced in ESM 220, learn some new ones, review sampling design,
and provide an opportunity to perform a short-term field research project.

Requirements: Attendance and participation: 25%, Midterm quiz 30%, Term
project; participation, write-up and oral presentation 45%. The term project will
involve work with a team on comparative plant species diversity study (trees
and/or shrubs) in nearby parks. The research project will require out-of class time
to collect data, and a scientific-style paper (this includes data analysis).

Tentative schedule:
Jan 5 Introduction: Familiarizing yourself with native shrubs and tree ID.
Tree and shrubs in Winter. Assignment: Read through the two field guides and
familiarize yourself with the common plant species. Review Tree-Shrub species

Jan 12 Demonstration of measurement of tree dbh, tree height, percent cover of
herbaceous plants and shrubs. Review “Forestry Measurements” posted on D2L

Jan 19 Field trip Park: Percent cover shrubs, transects of trees, DBH, height, age
(demonstrations), canopy structure. Leave at 10 am in front of Parking Structure 3
along 12th, or, meet at the trailhead (TBA)

Jan 26 Calculating percent cover, species diversity indexes, species abundances
using lab computers. Hand in your teams’ calculations of data collected Jan 19. Read
“Responses of a Warmer World”

Feb 2 Midterm quiz Plant ID. Discuss article on plant phenology, Demonstration of
method for phenology data collection

Feb 9 Field trip Lower Macleay trail: Plant Phenology. Leave at 10 am in front of
parking structure 3 along 12th. Or, meet at trailhead (From Thurman Ave, turn right
on NW 28th, then an immediate left onto Upshur, 3 blocks end of Upshur.)

Feb 16 Begin work on projects.
Feb 23 Project work time.
March 1 Project work time.

March 8 Project presentations