

Where: BHB 219, Portland State University

Lecture: MW 12-1:50 pm (1200-1350)

Instructor: [Dr. Alan Yeakley](mailto:yeakley@pdx.edu) (725-8040; yeakley@pdx.edu; office SB2 rm 206C: TBA)

Readings:

- Schlesinger, W. 1997. Biogeochemistry, Academic Press, San Diego, Ca.
- Likens and Bormann (LB), 1995 Biogeochemistry of a Forested Ecosystem, Springer-Verlag, New York.
- Sollins, P, Grier, C. McCorison, F., Cromack, K., Fogel, R., Fredriksen, R. 1980. The internal element cycles of an old-growth Douglas-fir ecosystem in western Oregon. Ecological Monographs 50: 261-285. (note: available via JSTOR at the PSU library).

Course outline:

| <u>Week</u> | <u>Dates</u> | <u>Lecture Topic (readings)</u> |
|-------------|--------------|--|
| 1 | Jan 5, 7 | Introduction (Schlesinger: Ch 1) |
| 2 | Jan 12, 14 | Atmosphere, lithosphere (Schlesinger: Ch 3-4) |
| 3 | Jan 19, 21 | Soil processes, carbon cycling (Schlesinger: Ch 4-6) (Note: PSU closed Jan 19) (Term paper titles/descriptions due Jan 21) |
| 4 | Jan 26, 28 | Soil processes, carbon cycling (Schlesinger: Ch 4-6; Sollins et al 1980) (HW1 due Jan 26) |
| 5 | Feb 2, 4 | Hydrology and chemistry of forested watersheds (L&B: Ch 1-3) (Abstract peer-review Feb 2) |
| 6 | Feb 9, 11 | Hydrology and chemistry of forested watersheds (L&B: Ch 4-8) (HW2 due Feb 9) |
| 7 | Feb 16, 18 | Pacific Northwest watersheds and applications (readings - TBA) (Mid-term exam Feb 16) |
| 8 | Feb 23, 25 | Pacific Northwest watersheds and applications (readings - TBA) (Written term paper due Feb 25) |
| 9 | Mar 2, 4 | Student presentations |
| 10 | Mar 9, 11 | Student presentations |

Class components: Readings assigned for the week should be read prior to the Monday class. Please note that participation levels within in-class discussions will be assessed. The major product of the class will be a term paper, with both abstract and oral components graded, in part, by peer-review.

Grade distribution: Term paper (50%), Mid-term exam (25%); Participation (Homework, Attendance, Vocal participation in class) (25%).