

**ESR 425/525****Watershed Hydrology****Spring 2009**

Where: Ondine 220, Portland State University  
Lecture: MW 1200-1350  
Instructor: Dr. Alan Yeakley (725-8040; yeakley@pdx.edu; office hrs: 10-12 Tues)  
Text: Dingman, 2008, Physical Hydrology  
Prerequisites: a minimum of one course each in physics and in calculus

| <u>Week</u> | <u>Topic(s)</u>                              | <u>Readings</u> | <u>Due</u>                   |
|-------------|--|-----------------|------------------------------|
| 1           | Hydrologic systems                           | Ch 1-3          |                              |
| 2           | Global hydrology, precipitation              | Ch 3-4          |                              |
| 3           | Precipitation, snowmelt                      | Ch 4-5          | HW 1 (due Apr 13)            |
| 4           | Workshop, <b>Midterm exam (Apr 22)</b>       |                 |                              |
| 5           | Soil moisture                                | Ch 6            | <b>Abstract (due Apr 29)</b> |
| 6           | Evapotranspiration, workshop                 | Ch 7            | HW 2 (due May 6)             |
| 7           | Streamflow                                   | Ch 9            |                              |
| 8           | Water resources mgmt, workshop               | Ch 10           | HW 3 (due May 20)            |
| 9           | <b>Oral presentations (May 27)</b>           |                 | <b>Term paper (May 27)</b>   |
| 10          | <b>Oral presentations (Jun 1, 3)</b>         |                 |                              |
|             | <b>Final exam (Jun 11, Thurs, 1230-1420)</b> |                 |                              |

- The term paper in the discipline of hydrology takes the form of a research proposal for graduate students and a literature review for undergraduate students. Detailed term paper guidelines will be handed out at the beginning of the course. All graduate students will give a 10 min oral presentation of the term paper in class in weeks 9 and 10. Oral presentations will be graded in part by peer-review.
- HW sets will be graded for completeness only. Detailed solutions will be provided for you to check your answers. Credit will not be given for HW sets handed in late (unless worked out in advance and reason is acceptable to instructor).
- The participation grade will consist of attendance, homework completion, class discussion, and active participation in the workshops and oral peer-review sessions.
- There will be three group-oriented workshop sessions during the course. Students will work in groups to formulate research proposals and briefly present them during each workshop session.
- Grades will be broken down as: Participation 20%, Midterm exam 20%, Final exam 20%, Term paper 40%