SEMINAR: WILLAMETTE RIVERSCAPE – GEOG 607

Winter 2014 Term, University of Oregon, 4 credits
Course Registration Number: 28031
Lecture: 9:00am – 11:50am Fridays, 207 CON
Instructor: Mark Fonstad, Condon 107F, fonstad@uoregon.edu, 541-346-4208
Instructor Office Hours: 1:00pm – 2:00pm Mondays and Wednesdays or by appointment

This seminar will survey modern research on the Willamette riverscape, and work to place these research activities into the context of the overall history and spatial patterning of the Willamette River's environment. We will have three overarching goals as we review the research.

(1) To put modern Willamette riverscape research into the context of the overall history, processes, forms, and functions of the Willamette River.

(2) To connect the history and geography of the Willamette's physical environment with modern human-environmental issues, and with the associated areas of knowledge that are being actively researched in dealing with these issues.

(3) To explore the best ways to connect modern Willamette riverscape research to education and outreach towards a broader audience.

REQUIRED READINGS

There is no overall textbook for this seminar. Weekly readings are from published articles and some printed material and will be distributed electronically to the class via Blackboard.

GRADES

This seminar is a Pass/No-Pass Only course. The determination of Pass/No-Pass will be based on the following components: (1) class participation, measured in terms of active engagement with weekly readings and discussion in class, (2) a term project on some aspect of the Willamette riverscape as defined by the instructor. A "Pass" for this course requires satisfactory effort for both of these components. As part of the class participation expectations, individual students will lead the discussions of the various assigned publications. All students are expected to read and discuss each of the readings, even if they are not the assigned lead for that particular publication.

FIELD TRIPS

This class will have associated field trips in support ofs the weekly reading materials. These field trips are not required, but they are strongly encouraged, and early in the term I will be asking students to make a decision on whether they will attend these field trips so that we can make logistical plans.

LATE/MAKE-UP WORK

Late work will not be accepted and make-up work will not be assigned, except in extreme circumstances and where you have documentation (i.e. doctor's note). If you must miss a project deadline due to illness or other unavoidable circumstances, you **MUST** notify the instructor prior to missing if possible.

DISABILITY SERVICES NOTICE
I work hard to ensure a quality learning experience for all students. If you need specific accommodations to get the most out of this class, please let me know by (1) informing me of your particular needs, and (2) providing the appropriate documentation from the campus learning services office. I will make every effort to accommodate your needs, but you must notify me by the first week of class if you need special arrangements.

NOTE: I consider this syllabus a contract between myself and the students in this course. In writing this syllabus, I have obligated myself to follow the policies and procedures contained herein. You are responsible for understanding and following these policies as well. I reserve the right to make changes to this syllabus. You will receive verbal and written notification of major changes to course policies, procedures and content.

TENTATIVE CLASS SCHEDULE (Subject to Change)

January 10
(1) Seminar Overview, Project Choices, Field Trip Planning
(2) Hulse, D., Gregory, S., Baker, J. (eds.). 2002. Willamette River Basin Planning Atlas. Oregon State University Press. Corvallis. 178 pp.

January 17
(1) *Atlas of Oregon*, pages 132-147
(2) Oregon: A Geologic History Website: http://www.oregongeology.org/sub/publications/ims/ims-028/tectonics.htm
(3) Orr, E.L. and Orr, W.N. 2012. Geology of Oregon. 6th Edition. Oregon State University Press. Corvallis. 304 pp. (For class, read only the Willamette Valley chapter, p. 186-211.)
(3) O'Connor, J.E., Sarna-Wojcicki, A., Wozniak, K.C., Polette, D.J., Fleck, R.J. 2001. Origin, extent, and thickness of Quarternary geologic units in Willamette Vally, Oregon. USGS Professional Paper 1620. Reston, VA. 52 pp.
(4) Evarts, R.C., O'Connor, J.E., Wells, R.E., Madin, I.P. 2009. The Portland Basin: A (big) river runs through it. GSA Today 19(9), 4-10.

January 24
(1) Bowen, W.A. 1978. The Willamette Valley, Migration and Settlement on the Oregon Frontier. University of Washington Press. Seattle. 119 pp.
(2) Miller, G.R. 1999. The Great Willamette River Flood of 1861. Oregon Historical Quarterly 100(2), 182 – 207.
(3) Benner, P.A. and Sedell, J.R. 1997. Upper Willamette River landscape – A historic perspective, in Laenen, Antonious, and Dunnette (eds.), River Quality – Dynamics and Restoration. Salem, MA, CRC Press, Inc. 23-47.

January 31
(1) Gregory, S. 2008. Historical channel modification and floodplain forest decline: implications for conservation and restoration of a large floodplain river – Willamette River, Oregon.

In Habersack, H., Piegay, H., Rinaldi, M. (eds.), Gravel-Bed Rivers VI: From Process Understanding to River Restoration. 763 – 777.

(2) Wallick, J.R., Jones, K.L., O'Connor, J.E., Keith, M.K. 2013. Geomorphic and vegetation processes of the Willamette River floodplain, Oregon – Current understanding and unanswered questions. USGS Open-File Report 2013-1246. 70 pp.

February 7

(1) Hughes, R.M., Gammon, J.R. 1987. Longitudinal changes in fish assemblages and water quality in the Willamette River, Oregon. Transactions of the American Fisheries Society 116: 196-209.

(2) Colvin, R., Giannico, G.R., Li, J., Boyer, K.L., Gerth, W.J. 2009. Fish use of intermittent watercourses draining agricultural lands in the upper Willamette River Valley, Oregon. Transactions of the American Fisheries Society 138, 1302-1313.

(3) Bangs, B.L., Scheerer, P.D., Miller, S.A. 2011. Effects of U.S. Army Corps of Engineers Willamette Projects operations on Oregon chub and other floodplain fishes (2009-2010). Corvallis, Oregon Department of Fish and Wildlife, Fish Division, Progress Report. 140 pp.

February 14

(1) Dykaar, B.B., Wigington, P.J. 2000. Floodplain formation and cottonwood colonization patterns on the Willamette River, Oregon, USA. Environmental Management 25(1): 87 – 104.

(2) Fierke, M.K., Kauffman, J.B. 2006. Riverscape-level patterns of riparian plant diversity along a successional gradient, Willamette river, Oregon. Plant Ecology 185(1): 85-95.

(3) Cline, S.P., Mcallister, L.S. 2012. Plant succession after hydrologic disturbance: inferences from contemporary vegetation on a chronosequence of bars, Willamette River, Oregon, USA. River Research and Applications 28(9): 1519-1539.

February 21

(1) River Design Group, Inc. 2012. Willamette River floodplain inundation mapping – Eugene to Oregon City, Oregon. Completed for the Meyer Memorial Trust, Corvallis, Oregon. 55 pp.

February 28

(1) Jerrick, N. 2001. Restoring a river of life: the Willamette Restoration Strategy Overview. Willamette Restoration Initiative, Portland. 240 pp.

(2) Bosse, C. 2004. Review of Jerrick, N: Restoring a River of Life. Review produced for HC 441: Science Colloquium. Willamette River Environmental Health, Robert D. Clark Honors College, University of Oregon, Spring Term, 2004.

March 7

(1) Baker, J.P., Hulse, D.W., Gregory, S.V., White, D., Van Sickle, J., Berger, P.A., Dole, D., Schumaker, N.H. 2004. Alternative futures for the Willamette River basin, Oregon. Ecological Applications 14(2): 313-324.

(2) Santelmann, M., McDonnell, J., Bolte, J., Chan, S., Morzillo, A.T., Hulse, D. 2012.

Willamette water 2100: river basins as complex social-ecological systems. In The Sustainable City VII 1: 575-586. (and also see http://envision.bioe.orst.edu/StudyAreas/WW2100/WW2100.htm)

(3) Hulse, D., Branscomb, A., Enright, C., Bolte, J. 2009. Anticipating floodplain trajectories: a comparison of two alternative futures approaches. Landscape Ecology 24(8): 1067-1090.

March 14
Term Project Presentations

Term Project due Thursday, March 20, 10:15am