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FOR 595.02: Landscape Assessment and Management

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Landscape Assessment and Management

FOR 595 Section 2 (3cr.) Fall 2000

Instructors: Tara Barrett. Robert Pfister

Description: This course focuses on the assessment, planning, and management of forest landscapes. Students should develop an increased understanding of basic principles underlying landscape assessment, along with an enhanced ability to apply those concepts to a management plan for a forest watershed. This year there will be an increased emphasis on the use of GIS and various modeling tools for assessment and planning.

Prerequisites:

Required: Forest ecology (For. 330) or Ecology (Biol. 340) or consent of instructor.

Helpful: Previous courses in GIS, resource policy, and silviculture.

This course fulfills the “Resource Management” requirement for the Master of Ecosystem Management program. It is intended to complement the Landscape Ecology graduate course offered in the spring semester.

Course format:

Lecture/discussion: Tuesdays/Thursday 11:10-12:00 For. 102

Lab: Wednesday 12:00-2:00 Joun. 106

Field trips: To be arranged (when the fires die down!)

Course grading:

Exams (2) 20% each

Presentation and class participation 25%

Final assessment and management plan 35%

Schedule and Readings (will be updated as the semester progresses)

Handout listing available GIS data

Landscape Assessment and Management (Forestry 595 Section 2)

Schedule and Readings

Tuesday, Sept. 5 Introduction to the course (TB/BP)

Wednesday, Sept. 6 Introduction to the lab, to ArcView, and to the Lubrecht data set (TB)

Handout: Data available for Lubrecht forest

Thursday, Sept. 7 Intro to landscape assessment (RP)

Pfister, R.D. and G. Jones. 1999. Landscape assessment in the Bitterroot Ecosystem Management Research Project

Tuesday, Sept. 12 Land classification with GIS: issues of scale and representation (TB)

Kootenai National Forest. 1996. Maps from the "Anywhere Forest Plan

Burrough, P. A. and R.A. McDonnell. 1998. Data models and axioms: Formal abstractions of reality. Ch. 2 in Principles of Geographical Information Systems. Oxford University Press, (electronic reserve)

Davis, L.S. and K.N. Johnson. 1987. Elements of forest management: land classification, prescriptions, and growth projection. Ch. 2 of Forest Management. McGraw-Hill. (electronic reserve)

Wednesday, Sept. 13 More intro to Lubrecht GIS (TB)

Thursday, Sept. 14 Vegetation classification (RP) / Survey of structure classification (TB)

O'Hara, K.L., P. A. Latham, P. Hessburg, and B.G. Smith. A structural classification for Inland Northwest Forest Vegetation. West. J. of Applied For. 11(3):97-102

Tuesday, Sept. 19 High-resolution vegetation modelling (TB)

Mohren, G.M.J. and H.E. Burkhart. 1994. Contrasts between biologically-based process models and management-oriented growth and yield models Forest Ecology and Management 69:1-5.

Bossel, Hartmut. 1991. Modelling forest dynamics. Moving from description to explanation. Forest Ecology and Management 42:129-142.

Beukema, S.J., E.D. Reinhardt, W.A. Kurz and N.L. Crookston. 2000. An overview of the fire and fuels extension to the forest vegetation simulator. In Proceedings from the Joint Fire Science Conference and Workshop (Vol I), L.F. Neuenschwander and K.C. Ryan (tech. eds.), Grove Hotel, Boise, ID, June 15-17, 1999.

Wednesday, Sept. 20 Vegetation modelling lab (TB)

Will use Suppose, SYS, and FVS to model plot growth

Thursday, Sept. 21 and Tuesday, Sept. 26 Landscape ecology review/discussion (RP)

Zonneveld, Isaak S. Scope and concepts of landscape ecology as an emerging science. P. 2-20 in Changing landscapes: an ecological perspective, I.S. Zonneveld and R.T.T. Forman (eds), Springer-Verlag.

Haber, W. 1990. Using landscape ecology in planning and management. P. 217-232 in Changing landscapes: an ecological perspective, I.S. Zonneveld and R.T.T. Forman (eds), Springer-Verlag.

Wednesday, Sept. 27 Database queries / existing vegetation at Lubrecht (RP and RA)

Thursday, Sept. 28 Lubrecht objectives and management (Hank Goetz)

Tuesday, Oct. 3 Landscape indices (TB)

Wednesday, Oct. 4 Fragstat lab using current/historic vegetation(TB)

Thursday, Oct. 5 Relationship of assessment to planning (TB)

Tuesday, Oct. 10 Open for team building (TB/RP)

Wednesday, Oct. II (if schedules permit) 12-6 p.m. field trip to Lubrecht ITB/RP)

Thursday, Oct. 12. TBA

Tuesday, October 17 First exam (RP)

Wednesday, October 18 (SIMPPLLE) (RP)

Thursday, October 19 (RP)

Tuesday, October 24 Forest planning decision support systems I (TB!

Wednesday, October 25 MAGIS lab (TB)

Thursday, October 26 Forest planning decision support systems II (TB)

We'll final the rest of the schedule at a later date. The other important dates you need to know are:
Tuesday, November 21 Second exam December 3,12, and 13 Class presentations December 14 Final recommendations for Lubrecht Forest