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**REM 471  
FOREST ECOSYSTEM MANAGEMENT  
Spring 2015**

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**Lecture: Thursday 2:30-4:20  
Tutorial: Friday 9:30 - 10:20 and/or 10:30-11:20**

**Instructor: Jordan Benner ([jordan\\_benner@sfu.ca](mailto:jordan_benner@sfu.ca))  
Office: Strand Hall Annex (Hakai House)**

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### **Course description**

In this course we will examine the problems of managing forest ecosystems for a variety of societal goals and objectives. We will start by examining the ecological characteristics of forest ecosystems and their dynamics. The second section will focus on the objectives and tools of forest management in an ecological context. The third section of the course will focus on the institutions, economics and policies of forest management and planning, with emphasis on British Columbia's historical and current management issues. We will conclude by combining the mix of topics discussed previously to examine several topical issues of special concern. This course will involve a mix of lectures, guest speakers, and group discussions, so active participation is very important. There will be at least one field exercise on Burnaby Mountain during class time and one longer field trip with several stops throughout the Lower Mainland.

### **Objectives**

1. To understand the objectives of forestry and how the basic tools of forestry are used to achieve those objectives.
2. To develop an understanding of the structure and dynamics of forest ecosystems, and to appreciate the constraints and opportunities they pose for forestry.
3. To become familiar with the history and objectives of forestry policy in B.C., and to be able to analyze current issues in forest management in that context.
4. To use 1-3 to understand a variety of current issues of debate in forest management.

### **Course Prerequisites**

At least one of REM 311, BISC 304, BISC 310, BISC 404, GEOG 315, or GEOG 316, or permission of instructor.

### **Evaluation of Students**

15% Class participation  
24% Paper reviews  
11% Student seminars  
7% Proposal and outline for final research paper  
8% Final research presentation  
35% Final research paper  
100%

### **Paper Reviews and Student Seminars**

Each student will be required to write 3 short reviews of journal articles over the term. Each review will be worth 8% of the final grade and collectively they will add to 24% of your final mark. I will assign 1-2 papers most weeks from which you will select a paper to review. You should examine each paper available for a given week before choosing which to review—both for background to the class and to ensure you make the best choice. You can assume that there will be at least 4-6 papers from which to

choose for each major topic of the course (e.g. Forest Ecology, Forest Practices, Forest Policy, Special Topics). Thus you will have some discretion over which papers you choose to review both within a topic and among topics over the term.

One of the paper reviews that you complete should form the basis of a seminar that you will lead during tutorial. These seminars will be comprised of a short presentation (~5 minutes), followed by a discussion that you lead (~15-20 minutes). They should ideally be done in pairs, so choose a partner that is interested in reviewing and discussing the same paper as you. However, you must first write and submit your review individually before teaming up to develop the seminar

### **Final Research Paper**

Your final research project represents 50% of your grade in the class (7% for the proposal and outline; 8% for the presentation; and 35% for the written paper). For this paper (maximum of 16 double spaced pages) you can choose virtually any subject related to forests and forestry. This gives you a lot of scope to choose a topic that is of interest to you! Most people will write a literature review on some problem of particular interest. In this case, you must choose a topic that has had sufficient body of research completed for there to be literature to review.

Instead of a literature review, some students may wish to undertake a field or lab-based research project, which would be written up as a regular primary research paper. For instance, in past years we have linked groups of students with GIS expertise with people needing analysis of spatial datasets for forest management and conservation planning (e.g. Nature Conservancy of Canada, Ministry of Forests, Graduate Students). In other cases, students have completed a field project (though the winter term doesn't lend itself to that) or analyzed a dataset that my lab have available. This kind of project is typically more work than a literature review, but may be more rewarding. If this appeals to you, you should discuss it with me as soon as possible in the term—and I recommend you team up with at least one or two other people to undertake a group project.

A proposal for the research paper (maximum one page, single spaced text) combined with a one-page outline of the paper is due mid semester. To prepare this proposal, you should have already read some papers and confirmed that there is a literature out there to review for your topic. If you are doing a literature review, you should have a sense of the main ideas in the literature on your topic and the overall structure of the arguments you will make. If you are doing a research project, then you should be far enough along that you know exactly what you will be doing and you know it will “work”. We will take one session of class time to “workshop” these proposals on the class session before they are due. You are also expected to give a 5-minute presentation about your research near the end of semester.