Project Evaluation and Non-market Valuation Methods REM 651 (5)

Course Outline

Instructor: Duncan Knowler Office: TASC1 8427

Term: 2016-1 Office tel.: 778/782-3421

Lectures: Tu 4:30 PM – 6:20 PM Email: djk@sfu.ca

Th 2:30 PM – 4:20 PM

**Course Objective**

Introduces students to topics in the theory and practice of environmental and resource economics with an emphasis on the practical aspects. Three topics are addressed: (i) project appraisal, with an emphasis on projects having environmental or natural resources management implications. We concentrate on the special techniques required for incorporating sustainability in project analysis. While cost-benefit analysis (CBA) will be the main approach considered, we will also look at alternatives such as multi-criteria analysis (MCA); (ii) valuation of non-market benefits and costs, including the use of worked examples and case studies from the instructor’s own research. A lab exercise allows students to use an econometrics package to estimate willingness-to-pay with real data; (iii) economic analysis of renewable resources (e.g. fisheries, forestry), including extensions involving optimization and bioeconomic modelling. Although the course is primarily seminar-based, there will be important practical elements that will enable students to get ‘hands on’ experience using spreadsheets and standard econometric software.

**Course Prerequisites**

Completion of REM 621, ECON 200 or permission of instructor. Some previous exposure to quantitative methods is helpful but not required.

**Student Evaluation**

*Term Project* (40%) - students prepare a paper on a topic developed in consultation with the instructor. The topic should have some relation to the reading list, e.g. project appraisal, multi-criteria analysis, incorporating environment into CBA, non-market valuation or renewable resource economic/bioeconomics. Students will present their preliminary findings in class (5%) and written projects (35%) are due following the last class. Outlines are due earlier.

*Assignments* (60%) - students will be required to complete four assignments. Two will be short take home assignments (20% each), a third will be a short lab quiz (10%) and, in addition, students will present a pre-assigned discussion paper in class and lead a discussion (10%).

## Text and Supplementary Readings

N. Hanley and E.B. Barbier, *Pricing Nature - Cost–Benefit Analysis and Environmental Policy*, Edward Elgar Publishers UK, 2009. Additional electronic readings will be provided in a detailed reading list and will be uploaded to a course website.