

JAN 28 2000

**GRANDE PRAIRIE REGIONAL COLLEGE**  
**DEPARTMENT OF SCIENCE AND TECHNOLOGY**

**Bachelor of Applied Forest Resource Management**

**ECOSYSTEM MANAGEMENT: FO3670**

**Transfer status:** Under discussion

**Pre-requisite:** FO3130 (Silviculture)

**Calender Description:**

Defining the concept of ecosystem management. Historical evolution of forest management. The Alberta Conservation Strategy provides the impetus for Ecosystem Management in Alberta; wildlife concerns; watershed management; other values of the forest. Application of Ecosystem Management; variable retention harvesting and restoration silviculture versus traditional silviculture systems.

**Instructor:** Albert Sproule  
Office: C203  
Phone: 539-2061  
Email: sproule@gprc.ab.ca

Lectures: Tuesday, Thursday 13:00 – 14:20 B305

**Recommended Textbook:**

"Creating a Forest for the 21<sup>st</sup> Century" 1996. Edited by Kathryn A. Kohm and Jerry F. Franklin. Island Press, Washington, D.C. 475 p.

**Textbooks Available in the Library:**

"Forest Ecology". 1996. J.P. Kimmins. Published by Prentice Hall.  
"Forest Ecosystems: Concept and Management". 1985. Waring, R.H. and W.H. Schlesinger. Published by Academic Press.  
"Forest Ecosystems". 1994. D. Terry. University of John Hopkins Press.

**Scientific Journals and Periodicals Available in the Library**

Canadian Journal of Forest Research  
Forestry Chronicle  
Northern Journal of Applied Forestry  
Silviculture

Proceedings from a number of ecosystem symposia are also available in the library.

## Lecture Schedule

|  |            |
|--|------------|
| What is an ecosystem?                                      | 3 lectures |
| - structural components                                    |            |
| - nature of systems  |            |
| - landscape and global ecology                             |            |
| Evolution of ecosystem management in Alberta               | 4 lectures |
| - The Alberta Forest Conservation Strategy                 |            |
| - strategies   |            |
| - principles   |            |
| Wildlife conservation and management                       | 3 lecture  |
| - utilization of wildlife                                  |            |
| - consumptive vs non-consumptive activities                | 1 lecture  |
| - relation between wildlife and habitat                    | 1 lecture  |
| The ecosystem approach                                     |            |
| - major wildlife habitats                                  | 4 lectures |
| - variable retention harvesting systems                    | 1 lecture  |
| - long rotations   | 1 lecture  |
| - lifeboating  |            |
| - design of a variable retention system                    | 3 lectures |
| - aggregated vs dispersed retention                        |            |
| - management issues in variable retention                  | 4 lectures |
| - wind, fire, forest health                                |            |
| - evidence in favour of retention                          | 1 lecture  |
| - difficulties in implementing retention systems           |            |
| Fire and ecosystem management                              | 4 lectures |
| - historical development of policy                         |            |
| - the role of fire   |            |
| - fire dependent ecosystems                                |            |
| Other types of disturbance                                 |            |
| - wind, flooding, insect and disease                       | 1 lecture  |
| Ecosystem management and enhanced forest management        | 3 lectures |
| - discussion of effects of genetic programs, stand tending |            |

### **TERM PAPER**

A term paper will be assigned within the first two weeks of the term. The paper will be on some aspect(s) of the philosophy or implementation of ecosystem management. The paper is worth 30% of the total term marks and is to be handed in not later than April 1<sup>st</sup>.

### **EXAMINATIONS AND MARK ALLOCATION**

|                      |     |
|----------------------|-----|
| Mid-term examination | 30% |
| Final examination    | 40% |
| Term Paper           | 30% |