

Course Outline

Department of Economics
School of Business and Economics

ECON 3730-3
Forestry Economics (3,0,0)

Calendar Description

Students are introduced to the concepts and analytical techniques used in forestry economics and their application to forest management, conservation, and policy analysis. Topics include techniques for analyzing forestry investments; timber demand, supply, and pricing; valuation of non-marketed goods and services, such as recreation and wildlife habitat; land allocation and multiple use; forest management issues, such as planting, thinning, and optimal age of crop rotation; and regulatory issues, including allowable annual cut regulations, property rights, tenure, and taxes.

Educational Objectives/Outcomes

After completing this course, students should be able to:

1. Apply basic economics principles and concepts to forestry.
2. Evaluate forest investments using learned financial tools and apply the rules of discounting to forest investment.
3. Discuss how markets determine prices in forestry.
4. Describe how to determine the value of both market based as well as the benefits of non-marketed environmental goods and services provided by forests.
5. Reiterate some of the concepts and tools of economic analysis to the management of forest resources, including multiple uses.
6. Apply the economic tools used in determining optimal age of harvest, planting density, thinning and uneven-aged stand management.
7. Analyze forest ownership and policy issues from an economic perspective.

Prerequisites

ECON 1900

Co-requisites

Texts/Materials

Student Evaluation

Participation	0-20%
Assignments/quizzes	0-20%
Project	0-25%
Midterm(s)	30-60%
Final exam	30-50%

Course Topics

1. Introduction to Basic Concepts
 - Forestry from an economic viewpoint
 - Producer theory
 - Market imperfections
2. Forest Investment Analysis
 - Compounding, discounting and present value
 - Criteria for investment decisions
 - Interest rate, inflation, risk, uncertainty and expected value
3. Timber Demand, Supply and Pricing.
 - Forest products demand and supply
 - Demand and supply for timber
 - Long-run timber supply projections
4. Un-priced Forest Values
 - Problem of measurement
 - Consumer surplus as a measure of value
 - Travel cost method
 - Contingent valuation
5. Land Allocation and Multiple Use
 - Extensive margin
 - Intensive margin
 - Allocation among uses
 - Combinations of uses
6. Forest Management
 - Optimal crop rotation (even-aged stand management)
 - Optimal planting density and thinning
 - Uneven-aged stand management
7. Forest Regulation

- Regulating harvests over time
 - Sustained yield rationale and critique
- Property Rights and tenure Systems
 - Dimensions of property and their economic implications
 - Common forms of forest tenure
- Taxes and other charges
 - Types of forest levies and their economic implications

Special interest topics may be added at the discretion of the instructor if time permits.

Methods for Prior Learning Assessment and Recognition

As per TRU policy

Attendance Requirements – Include if different from TRU Policy

As per TRU policy

Special Course Activities – Optional

Use of Technology – Optional