

FO 8143 – ADVANCED FOREST ECONOMICS
DISTANCE COURSE SYLLABUS

Contact Information	Course Details
Instructor: Dr. Robert K. Grala Office: 343 Thompson Hall Phone: 325-7039 Office Hours: Tuesday and Thursday, 1-3 pm via email or chatroom	Location: (online) Credits: 3

Required Readings: readings include journal papers and USDA Forest Service publications that are listed at the end of this syllabus in “Required Readings”. Other materials will be provided to you or placed in the MyCourses.

Course Description: (Mississippi State University Bulletin): Three hours lecture. Application of current theory and techniques of economics of forestry. Emphasis is on the use of quantitative tools to improve decision making in forest resource management.

Material content: The course will start with discussion of basic economic concepts in terms of forestry. Significant part of the course will be devoted to economic tools used to evaluate forest projects and methods used to account for risk and uncertainty. In addition, you also will learn about timberland valuation and timberland investment, forest taxation, and valuation of non-market forest good and services. Finally, you will study economic contribution of forestry to local and regional economic development and role of US forestry in global forest markets.

Course Learning Outcomes: The primary goal of this course is to help you expand your understanding of theoretical concepts related to forest economics and their applications in decision making related to the use and management of forest resources. Concurrently to theoretical aspects you also will study recent trends in applied research to examine how effective are various economic tools in solving forestry-related problems. By the end of this course you should achieve the following:

1. Be able to apply basic and advanced forest economic concepts and theoretical models to solve problems related to the management, allocation and utilization of forest resources.
2. Understand economic relationships between forestry and other sectors and be able to determine potential shifts in management of forest resources in response to changes in these sectors.
3. Be able to select and use appropriate economic criteria to compare forest investments, conduct complex sensitivity analyses and generate recommendations based on the management objectives.
4. Identify and account for risk and uncertainty associated with particular forest investments and conduct long-term economic analyses.

The course outline below presents topics that will be instructed during the semester. Modifications to the course content might be needed during the semester and they will be announced in a timely manner.

Topics:

- Introduction to forest economics (1.5 contact hours)
- Review of basic microeconomics (3.0 contact hours)
- Review of forest investment financial analysis (6 contact hours)
- Review of capital budgeting (4.5 contact hours)
- Timber demand and supply, pricing of forest products, and trends in timber prices (3.0 contact hours)
- Concept of optimal rotation (3.0 contact hours)
- Forest management under risk and uncertainty (6.0 contact hours)
- Forest valuation and timberland investment (3.0 contact hours)
- Forest taxation (1.5 contact hours)
- Forest nonmarket goods and services (3.0 contact hours)
- Contributions of forestry to local and regional development (1.5 contact hours)
- US and global forest markets (1.5 contact hours)
- Online exams (3 exams, 2 contact hours each; 6 contact hours)
- Online presentations (3.0 contact hours)

Total contact hours: 46.5

Assigned Readings: It is assumed you have read the assigned readings. Doing so will help you understand the topic better and will enhance your learning experience. Also, it will help you to identify areas particularly interesting or difficult, which in turn will help instructor to facilitate lecture accordingly.

MyCourses Page: MyCourses provides you with an access to various course materials such as notes, exams, grades, and calendar. Please, visit this website regularly as new documents will be added frequently.

Exams: There will be two period exams followed by the final exam. All exams will be online. The period exams will cover topics as presented in the tentative course outline. The final exam will be comprehensive. There will be a review session before each exam in the chatroom to help you prepare for the exam and clarify difficulties with the material covered.

Term Paper: As a part of this course each student is required to prepare a review paper on topic related to forest economics or finance. The topic of the paper must be approved by the instructor. The paper length should be between 10 and 15 pages – excluding title page and references. Text should be double-spaced with 1” margin on each side. Font should be Times New Roman, size 12. Citations should follow “A Manual for Writers of Term Papers, Theses and Dissertations” by Kate L. Turabian. Students will be required to prepare a 20-minute PowerPoint presentation on her/his topic and present it to classmates online using Camtasia. The term paper grade will be based on the quality of the paper, presentation, and answers to the questions. A 10% penalty per calendar day will be applied to all late papers without extension.

Grading: Your course grade will depend on your performance in completing various course components. Partial point scores, final point score and final grade will be posted in MyCourses and will be based on the following percentage distribution:

Online Exams (100 points each)	300
Term paper and online presentation	120
Total	420

Grading scale:

A 90-100% B 80-89.9% C 70-79.9% D 60-69.9% F less than 60%

Attendance Policy: Students are expected to participate in online discussions. This participation will be your attendance in the course.

Academic Accommodations for Students with Disabilities: Students who require academic accommodations should contact the Office of Student Support Services, which will process their request. The office will need to be provided with documentation for request evaluation. Additionally, the student should notify the instructor as needing academic accommodation. Every effort will be made to provide requested accommodations. Policy and steps for requesting such accommodations are outlined in MSU Academic Operating Policy and Procedure Manual, Section 13.35, available at <http://www.msstate.edu/dept/audit/1235.html> (verified on January 5, 2008).

Academic Misconduct: Students are required to follow MSU Honor Code:

"As a Mississippi State University student I will conduct myself with honor and integrity at all times. I will not lie, cheat, or steal, nor will I accept the actions of those who do."

A full description of the code, its violations, and procedures for dealing with them are outlined in the MSU Academic Operating Policy and Procedure Manual, Section 12.07, which is available at <http://www.msstate.edu/dept/audit/PDF/1207.pdf> (verified on January 5, 2008). Students are urged to familiarize themselves with the full text of above document.

Required Readings

- P. A. Samuelson, Economics of Forestry in an Evolving Society, *Journal of Forest Economics* (1995), **1**, 115-149.
- C. J. Hepburn and P. Koundouri, Recent advances in discounting: Implications for forest economics, *Journal of Forest Economics* (2007), **13**, 169-189.
- W. D. Klemperer, Economic Analysis Applied to Forestry: Does It Short-Change Future Generations?, *Journal of Forestry* (1976), **74**, 609-611.
- B. B. Foster, A Service Foresters' Guide to Investment Terminologies--Which Ones Are Most Easily Understood By Landowners?, *Southern Journal of Applied Forestry* (1984), **8**, 115-119.
- C. Row, F. Kraiser and J. Sessions, Discount rate for long-term forest service investments, *Journal of Forestry* (1981), **79**, 367-369.
- J. C. Fortson, Factors affecting the discount rate of forestry investments, *Forest Products Journal* (1986), **36**, 67-72.
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- F. C. Zinkhan, The Term Structure of Interest Rates and the Evaluation of Forestry Investments: A Note, *Southern Journal of Applied Forestry* (1988), **12**, 256-258.
- B. B. Foster and G. N. Brooks, Rates of Return: Internal or Composite, *Journal of Forestry* (1983), **81**, 669-670.
- C. H. Schallau and M. E. Wirth, Reinvestment Rate and the analysis of forestry enterprises, *Journal of Forestry* (1980), **78**, 740-742.
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- W. D. Klemperer, Realizable Rate of Return: A Rejoinder, *Journal of Forestry* (1981), **79**, 673-673.
- S. H. Bullard, J. E. Gunter, M. L. Doolittle and K. G. Arano, Discount Rates for Nonindustrial Private Forest Landowners in Mississippi: How High a Hurdle?, *Southern Journal of Applied Forestry* (2002), **26**, 26-31.
- H. M. Gregersen, Effect of inflation on evaluation of forestry investments, *Journal of Forestry* (1975), **73**, 570-572.
- J. C. Fortson and R. C. Field, Capital Budgeting Techniques for Forestry: A Review, *Southern Journal of Applied Forestry* (1979), **3**, 141-143.
- D. Rose, C. R. Blinn and G. J. Brand, A guide to forestry investment analysis U.S. Dept. of Agriculture, Forest Service, North Central Forest Experiment Station St. Paul, MN (1989).
- W. D. Klemperer, Possible Misinterpretations of Equivalent Annual Incomes in Inflationary Times, *Northern Journal of Applied Forestry* (1987), **4**, 210-211.
- A. L. Lundgren, Ranking Investment Alternatives-A New Look, *Journal of Forestry* (1971), **69**, 568-573. W. D. Klemperer and B. J. Greber, Economics of Buying versus Leasing Timberlands, *Southern Journal of Applied Forestry* (1986), **10**, 211-214.
- H. J. Vaux, How much land do we need for timber growing?, *Journal of Forestry* (1973), **71**, 399-403.
- P. Berck, The economics of timber: a renewable resource in the long-run, *Bell Journal of Economics* (1979), **10**, 447-462.
- R. Alig, J. Mills and B. Butler, Private Timberlands: Growing Demands, Shrinking Land Base, *Journal of Forestry* (2002), **100**, 32-37.
- B. R. Wall, Future Timberland Area: A Crucial but Illusive Variable in Timber Economy Models, *Journal of Forestry* (1983), **81**, 721-723.

- S. A. Barlow, I. A. Munn, D. A. Cleaves and D. L. Evans, The Effect of Urban Sprawl on Timber Harvesting: A Look at Two Southern States, *Journal of Forestry* (1998), **96**, 1014.
- J. A. Stanturf, R. C. Kellison, F. S. Broerman and S. B. Jones, Productivity of Southern Pine Plantations: Where Are We and How Did We Get Here?, *Journal of Forestry* (2003), **101**, 26-31.
- P. J. Ince and I. Durbak, Pulpwood Supply and Demand: Development in the South, Little Growth Elsewhere, *Journal of Forestry* (2002), **100**, 20-25.
- P. H. Pearse, The optimum forest rotation, *Forestry Chronicle* (1967), **43**, 178-195.
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- C. W. Dangerfield and M. B. Edwards, Economic Comparison of Natural and Planted Regeneration of Loblolly Pine, *Southern Journal of Applied Forestry* (1991), **15**, 125-127.
- S. Calish, R. D. Fight and D. E. Teeguarden, How Do Nontimber Values Affect Douglas-fir Rotations?, *Journal of Forestry* (1978), **76**, 217-221.
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- W. D. Klemperer, T. H. Cathcart, H. T. and R. J. Alig, Risk and the discount rate in forestry, *Canadian Journal of Forest Research* (1994), **24**, 390-397.
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- S. Brown, A note on environmental risk and the rate of discount, *Journal of Environmental Economics and Management* (1983), **10**, 282-286.
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- T. A. Thomson, Risk and Return from Investments in Pine, Hardwoods, and Financial Markets, *Southern Journal of Applied Forestry* (1992), **16**, 20-24.
- J. E. de Steiguer, Forestland Market Values, *Journal of Forestry* (1982), **80**, 214-216.
- M. E. Aronow, C. S. Binkley and C. L. Washburn, Explaining Timberland Values in the United States, *Journal of Forestry* (2004), **102**, 14-18.
- D. N. Wear and D. N. Newman, The Speculative Shadow over Timberland Values in the US South, *Journal of Forestry* (2004), **102**, 25-31.
- J. H. Beuter and R. J. Alig, Forestland Values, *Journal of Forestry* (2004), **102**, 4-8.
- W. L. Mills, Forestland: Investment Attributes and Diversification Potential, *Journal of Forestry* (1988), **86**, 19-24.
- R. A. Kluender and W. T.L., Rethinking How Nonindustrial Landowners View Their Lands, *Southern Journal of Applied Forestry* (2000), **24**, 150-158.
- F. C. Zinkhan, Forestry Projects, Modern Portfolio Theory, and Discount Rate Selection, *Southern Journal of Applied Forestry* (1988), **12**, 132-135.
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