College of Agriculture
Office of Academic Programs
N6 Agricultural Science Building
North Lexington, KY 40546-0091

859 257-3469

www.ca.uky.edu/students

November 23, 2008

MEMO

To: Dr. Jeannine Blackwell
Interim Associate Provost for UG Education

From: Dr. Mike Mullen
Associate Dean

Re: Major Revision of the BS Degree and Coursework in Forestry.

Attached please find a comprehensive revision of the Forestry UG degree program. This document represents two years of hard work on the part of the entire Forestry department in re-envisioning their entire program. I bring your attention to Appendix A – "Revision of the Undergraduate Forestry Curriculum." There you will find a thoughtful and purposeful analysis of the changing needs in forestry curricula, including input from stakeholders and employers, attention to outcomes, including a well-done analysis of outcomes across the curriculum in a comprehensive curriculum map. There too is the description of the proposed field semester which will replace the current summer camp, alignment of the curriculum with the Society of American Foresters accreditation requirements, and the departmental response to the Pinchot Institute for Conservation Report – "The Evolution of Forestry Education in the United States: Adapting to Changing Demands of Professional Forestry."

The revision resulted in an exhaustive evaluation of all courses in the program. There are several new courses and several courses with major changes that address the social and natural science needs of a contemporary forestry program as outlined by the Pinchot report and the departmental discussions with stakeholders.

We look forward to the approval of this significant revision. Representatives from the Department will be available to meet with the Undergraduate Council to discuss any issues which arise. Do not hesitate to contact Dr. Jim Ringe at 257-7594, Dr. Steven Bullard at 257-3217 or me at 257-3469 with questions.

Thanks to you and the UG Council for your work on this proposal.

UNIVERSITY OF KENTUCKY

Department of Forestry
College of Agriculture
214 Thomas Poe Cooper Building
Lexington, KY 40546-0073
(859) 257-7596
Fax: (859) 323-1031
www.uky.edu

September 30, 2008

Dr. Mike Mullen
Associate Dean - Academic Programs
College of Agriculture
N6 Agricultural Science Bldg N
University of Kentucky
Lexington, KY 40546-0091

Dear Dr. Mullen:

I would like to thank the College of Agriculture's Undergraduate Curriculum Committee for reviewing the Department of Forestry's application request to revise the undergraduate forestry curriculum.

The proposed undergraduate forestry curriculum has been revised based on comments from the Undergraduate Curriculum Committee. Revisions include replacing FOR 205 Forest Landscapes and Soils with PLS 366 Fundamentals of Soil Science, changing FOR 270 Wildlife Biology and Management to a 300-level course, and reducing the number of hours in the first semester of the freshman year.

These revisions were approved by the Department of Forestry at a faculty meeting on September 29, 2008.

In addition to the changes mentioned above, the 'Requested effective dates' on the forms were modified to reflect the transition that will occur between the existing and proposed curriculum. Several dropped course forms were removed from the application packet since these courses will still be taught during the transition period.

Enclosed is the revised undergraduate forestry curriculum proposal. If you have any questions, please contact me at 257-7596 or steve.bullard@uky.edu.

Sincerely,

Steven H. Bullard
Professor and Chair

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UNIVERSITY SENATE ROUTING LOG

Proposal Title: Revision of Undergraduate Forestry Curriculum

Name/email/phone for proposal contact: Jim Ringe / jringe@uky.edu / 859-257-7594

Instruction: To facilitate the processing of this proposal please identify the groups or individuals reviewing the proposal, identify a contact person for each entry, provide the consequences of the review (specifically, approval, rejection, no decision and vote outcome, if any) and please attach a copy of any report or memorandum developed with comments on this proposal.

Reviewed by: (Chairs, Directors, Faculty Groups, Faculty Councils, Committees, etc)	**Contact person Name (phone/email)**	**Consequences of Review:**	**Date of Proposal Review**	**Review Summary Attached? (yes or no)**
Curriculum Committee and Forestry Faculty	Steven H. Bullard 257-3217 steve.bullard@uky.edu	Approved	3/3/08	Yes
College of Agric. UG Curriculum Comm	Michael Mullen 257-3469 mike.mullen@uky.edu	Approved	9/29/2008	Yes

Summary of Department of Forestry Faculty Meeting on September 29, 2008

In March 2008, the Department of Forestry submitted an application request to revise the undergraduate forestry curriculum. In April 2008, the College of Agriculture's Undergraduate Curriculum Committee (UCC) reviewed and commented on the proposed undergraduate forestry curriculum.

The proposed undergraduate forestry curriculum was revised (Version 9/16/08) based on comments from the College of Agriculture's UCC. On September 29, 2008, the Department of Forestry voted on the recommended changes to the proposed forestry curriculum.

During the faculty meeting, two issues concerning the proposed undergraduate forestry curriculum were discussed. The first issue was to decide if FOR 205 Forest Landscapes and Soils should remain in the proposed curriculum or if FOR 205 should be replaced with PLS 366 Fundamentals of Soil Science. After much discussion, the Department of Forestry voted, 11 to 5, to replace FOR 205 with PLS 366 Fundamentals of Soil Science in the proposed curriculum.

The second issue was to vote on Version 9/16/08 of the proposed curriculum, not including the issue of the soils courses. Not including the soils courses mentioned above, the Department of Forestry voted, 14 to 2, to approve Version 9/16/08 of the proposed forestry curriculum.

College of Agriculture
Undergraduate Curriculum Committee
Minutes – Sept 29, 2008

Members Present: , Bob Coleman, Lee Edgerton, Clair Hicks, Bob Houtz, Cheryl Mimbs, Jim Ringe, Donna Smith, Tammy Stephenson, David Williams, Deborah Witham, Mike Mullen.

Guests: Steve Bullard (Chair) and Laura Lhotka, both from the Forestry department.

Absent: Desmond Brown

Mullen opened the meeting and asked Ringe, Bullard and Lhotka to update the committee on departmental discussions concerning the Forestry degree program revision. Bullard reported that the department had voted, by a vote of 11-5, to use PLS 366 rather than FOR 205 as their soil science course. He also reported that the Forestry faculty then voted on the entire Forestry package to reaffirm support for it moving forward. The vote in the department to reaffirm the entire package passed by a margin of 15-1. The resulting curriculum as amended kept the FOR 200 course, Conservation Biology, at the 200 level, and moved the FOR 270, Wildlife Biology and Management, to FOR 370. This will assist NRCM and Pre-Vet students who sometimes use this course as 300+ level directed elective credit in their programs. Houtz moved that the program be approved, Smith seconded. Witham asked about resources in general to make the program work. Are faculty resources in place to handle these changes. Bullard indicated that the faculty had worked together on this and that the resources are in place to handle the changes. He also indicated that changing the program to include PLS 366 helped in this regard. Mullen indicated that PLS was on board for adding 10-20 more students into PLS 366 as the program added students. Edgerton brought up the issue of students getting coursework outside of the department and not having a College identity. Bullard and Ringe acknowledged this as a problem, but explained that courses formerly taught in biology were not available, and that at many universities, there are separate departments of forestry, wildlife biology, and wood products, while all of these are incorporated into the Forestry department here. Mullen pointed out that the proposed program actually has more cross-college course work than the existing program with the inclusion of GEN 100 and PLS 366. Bullard also talked about the fact that this program revision was being looked at across the region as a model for curricular revision. Bullard then congratulated Laura Lhotka for all the work she has done in making this revision move forward. The Committee agreed and congratulated her as well. Mullen called for the question. Motion passed unanimously.

The Committee then considered PLS 557 – Seed Vigor, a new course proposal from Plant and Soil Sciences. Mimbs moved to accept the proposal, Ringe seconded. Edgerton asked about it being a web only course. Mullen explained that Dennis Tekrony in PLS was offering it DL only so that students, extension agents, seed dealers, and others from anywhere could access the course. Williams explained that there are few courses like this available nationally, yet there is a demand. He also pointed out that Tekrony is among the top experts in the nation in Seed Vigor and that it makes sense to have him offer this course. Mullen called for the question. Motion passed unanimously.

The meeting was adjourned.

REQUEST FOR CHANGE IN UNDERGRADUATE PROGRAM

1. General Information

College:	Agriculture			Department*:*	Forestry		
Current Program Name:	Forestry			*Proposed Program Name:*	*Forestry*		
Current Major Name:	Forestry			*Proposed Major Name:*	*Forestry*		
Current Degree Title:	Bachelor of Science in Forestry			*Proposed Degree Title:*	*Bachelor of Science in Forestry*		
Formal Option:	n/a			Specialty Field:	n/a		
Bulletin (yr and pgs):	2008-2009 pg 92-93	CIP Code:	B03.0502	UK ID #:		HEGIS CODE:	
Accrediting Agency (if applicable):	Society of American Foresters			Today's Date:	9/29/08		

2. Particular University Studies Requirements or Recommendations for this Program.

	Current	*Proposed*
I. Mathematics	MA 162	*MA 109 or Calculus*
II. Foreign Language	Two years in high school or 6 hours at college level	*Two years in high school or 6 hours at college level*
III. Inference-Logic	MA 123	*Calculus or Statistics and Logic*
IV. Written Communication	ENG 104 or Honors	*ENG 104*
V. Oral Communication	Suspended through Fall 2009	*Suspended through Fall 2009*
VI. Natural Sciences	CHE 105, CHE 107, CHE 111, CHE 113	*Satisfied by the premajor requirements*
VII. Social Sciences	AEC 101 or ECO 201; One other course other than economics from USP list	*Social Science 1 and 2 (courses from USP list)*
VIII. Humanities	Humanities course from USP list	*Humanities 1 and 2 (courses from USP list)*
IX. Cross-Cultural	Cross-Cultural course from USP list	*Cross-Cultural course from USP list*
X. USP Electives (3 must be outside the student's major)	BIO 150, BIO 152	*Elective 1 and 2*

To the extent that proposed changes in sections 3 through 8 involve courses offered in another program, please submit correspondence with the program(s) pertaining to the availability of such courses to your students.

3. University Graduation Writing Requirement – FOR 400 and FOR 470 will be used to satisfy the University Writing Requirement

4. College Depth & Breadth of Study Requirements (if applicable). Include particular courses required/recommended for this program.

Current	*Proposed*
Not applicable	*Not applicable*

5. Premajor or Preprofessional Course Requirements (if applicable).

Current	*Proposed*
High school trigonometry or MA 112 Trigonometry or equivalent GEN 100 Issues in Agriculture BIO 151 Principles of Biology Laboratory I BIO 153 Principles of Biology Laboratory II PHY 151 Introduction to Physics or any higher numbered physics course of 3 or more credit hours GEO 210 Pollution, Hazards, and Environmental Management or one other departmentally-approved course of 3 or more credit hours STA 291 Statistical Method	*GEN 100 Issues in Agriculture* *BIO 103 Basic Ideas of Biology or BIO 150 Principles of Biology I* *CHE 104 Introductory General Chemistry or CHE 105 General College Chemistry I*

6. Credit Hours.

a. Credit Hours Required:	Current:	133	*Proposed:*	*121*				
b. Total Required for Graduation:	Current:	133	*Proposed:*	*121*				
c. Required by Level:								
Currently:	100:	3	200:	9	300:	23	400-500:	18
Proposed:	*100:*	*6*	*200:*	*20*	*300:*	*39*	*400-500:*	*19*

d. Current Premajor or Preprofessional:	37-39	*d. Proposed Premajor or Preprofessional:*	*3*
e. Current Field of Concentration:	n/a	*e. Proposed Field of Concentration:*	*n/a*
f. Current Division of Hrs between Major Subject & Related Field:	n/a	*f. Proposed Division of Hrs between Major Subject & Related Field:*	*n/a*
g. Current Hrs Needed for a Specific Option or Specialization:	n/a	*g. Proposed Hrs Needed for a Specific Option/Specialization:*	*n/a*
h. Current Technical or Professional Support Electives:	n/a	*h. Proposed Technical or Professional Support Electives:*	*n/a*
i. Current Minimum Hours of Free or Supportive Electives:	16	*i. Proposed Minimum Hours of Free or Supportive Electives:*	*6*

7. Major or Professional Course Requirements.

Current	*Proposed*
FOR 100 Introduction to Forestry FOR 200 Map Reading and Photogrammetry FOR 205 Forest and Wildland Soils and Landscapes FOR 219 Silvics and Tree Identification FOR 300 Forest Measurements FOR 340 Forest Ecology FOR 350 Silviculture FOR 360 Wood Technology and Utilization FOR 375 Taxonomy of Forest Vegetation FOR 376 Silvicultural Practices FOR 377 Forest Surveying	*FOR 110 Natural Resource Issues* *FOR 150 Computer Applications in Natural Resource Professions* *FOR 200 Basics of Geospatial Technology* *PLS 366 Fundamentals of Soil Science* *FOR 219 Dendrology* *FOR 230 Conservation Biology* *FOR 240 Forestry and Natural Resource Ethics* *FOR 250 Statistics and Measurements I* *FOR 260 Forest Products and Wood Science* *FOR 370 Wildlife Biology and Management*

FOR 378 Forest Mensuration FOR 379 Harvest and Utilization of Wood FOR 402 Forest Entomology FOR 425 Timber Management FOR 430 Forest Wildlife Management FOR 460G Forest Watershed Management FOR 480 Integrated Forest Resource Management	*FOR 280 Forest Policy* *FOR 310 Introduction to Forest Health and Protection* *FOR 320 Forest Valuation and Economics* *FOR 330 GIS and Spatial Analysis* *FOR 340 Forest Ecology* *FOR 350 Silviculture* *FOR 355 Forest Fire Control and Use* *FOR 356 Landscape Assessment* *FOR 357 Inventory and Measurements II* *FOR 358 Silvicultural Practices* *FOR 359 Forest Operations and Utilization* *FOR 400 Human Dimensions of Forestry and Natural Resources* *FOR 425 Forest Management* *FOR 460 Forest Hydrology and Watershed Management* *FOR 470 Interdependent Natural Resource Issues - Analysis and Solutions* *FOR 480 Integrated Forest Resource Management*

8. Minor Requirements (if applicable).

Current	*Proposed*
n/a	*n/a*

9. Rationale for Change(s) – if rationale involves accreditation requirements, please include specific references to those.

The last major revision of the forestry curriculum occurred in 1992. Many things in forestry have changed since the 1992 revision. Some of the se changes include: forest resource issues; society's needs and expectations regarding professional foresters; forestry employers' needs and expectations; Society of American Foresters accreditation guidelines; technologies available to practicing foresters; technologies available for instruction and learning; and Departmental and College-level capabilities. Given these changes, the primary goal of the University of Kentucky undergraduate forestry education is to "produce graduates who are 'society-ready,' i.e., capable of dealing effectively with the complex economic, ecological, and social issues involving forest resources today. In Kentucky and beyond, our graduates must be prepared to effectively enhance the integrity, stability, and health of forests and related biotic communities, and to increase the long-term value added, sustainable income, and sustainable flow of services from forests and related resources." (Source: Department of Forestry Curriculum Revision Handbook 2006/2007)

10. List below the typical semester by semester program for a major.

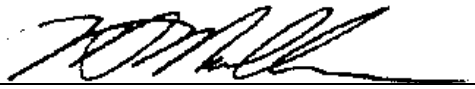
Current	Hours		*Proposed*	*Hours*
YEAR 1 - Fall			***YEAR 1 - Fall***	
ENG 104 Writing	4		*Math - MA 109 or calculus*	*3*
CHE 105 General Chemistry I	3		*Written - ENG 104*	*4*
FOR 100 Introduction to Forestry	3		*Natural Sciences 1 - CHE 104 or CHE 105*	*3*
MA 123 Elementary Calculus and Its Applications	3		*GEN 100 Issues in Agriculture*	*3*
USP Requirement	3		*FOR 110 Natural Resource Issues*	*1*
Current Total, Year 1 Fall	16		*Proposed Total, Year 1 Fall:*	*14*
YEAR 1 – Spring			***YEAR 1 – Spring***	
BIO 150 Principles of Biology	3		*Inference-Logic – calculus or (statistics and logic)*	*3*
BIO 151 Principles of Biology Lab	2		*Natural Sciences 2 - BIO 103 or BIO 150*	*3*
CHE 107 General Chemistry II	3		*Social Science 1*	*3*
CHE 115 Gen. Chemistry Lab	3		*Humanities 1*	*3*
USP Requirements	6		*FOR 150 Computer Applications in Natural Resource Professions*	*2*
Current Total, Year 1 Spring:	17		*Proposed Total, Year 1 Spring:*	*14*
YEAR 2 - Fall			***YEAR 2 – Fall***	
BIO 152 Principles of Biology II	3		*FOR 200 Basics of Geospatial Technology*	*2*
BIO 153 Principles of Biology Lab II	2		*FOR 250 Statistics and Measurements I*	*3*
FOR 205 Forest & Wildland Soils and Landscapes	4		*FOR 219 Dendrology*	*4*
FOR 219 Silvics and Tree Identification	3		*FOR 230 Conservation Biology*	*3*
Second Writing Course	3		*FOR 260 Forest Products and Wood Science*	*4*
Current Total, Year 2 Fall:	15		*Proposed Total, Year 2 Fall:*	*16*
YEAR 2 - Spring			***YEAR 2 – Spring***	
FOR 200 Map Reading and Photogrammetry	2		*PLS 366 Fundamentals of Soil Science*	*4*
SOC 260 Population, Resources, & Change OR GEO 210 Pollution, Hazards, & Env. Mgmt.	3		*Humanities 2*	*3*
STA 291 Statistical Method	3		*FOR 370 Wildlife Biology and Management*	*4*
PHY 151 Introduction to Physics	3		*FOR 280 Forest Policy ** *	*2*
AEC 101 Economics of Food and Ag. OR ECO 201 Principles of Economics	3		*FOR 240 Forestry and Natural Resource Ethics ** *	*2*

USP Requirement	3		***Half semester policy and half ethics*	
Current Total, Year 2 Spring:	17		*Proposed Total, Year 2 Spring:*	*15*
YEAR 3 - Fall			***YEAR 3 - Fall***	
FOR 300 Forest Measurements	4		*FOR 310 Introduction to Forest Health and Protection*	*3*
FOR 340 Forest Ecology	3		*FOR 320 Forest Valuation and Economics*	*3*
FOR 402 Forest Entomology	3		*FOR 330 GIS and Spatial Analysis*	*3*
MA 162 Finite Math and Its Application	3		*FOR 340 Forest Ecology*	*4*
Elective	3		*FOR 350 Silviculture*	*4*
Current Total, Year 3 Fall:	16		*Proposed Total, Year 3 Fall:*	*17*
YEAR 3 - Spring			***YEAR 3 - Spring***	
FOR 350 Silviculture	4		*FOR 355 Forest Fire Control and Use*	*1*
FOR 360 Wood Technology and Utilization	4		*FOR 356 Landscape Assessment*	*5*
FOR 599-002 Forest Ethics	3		*FOR 357 Inventory and Measurements II*	*2*
Electives	6		*FOR 358 Silvicultural Practices*	*3*
			FOR 359 Forest Operations and Utilization	*3*
Current Total, Year 3 Spring:	17		*Proposed Total, Year 3 Spring:*	*14*
YEAR 3 – Summer (Field Semester)				
FOR 375 Taxonomy of Forest Vegetation	1			
FOR 376 Silvicultural Practices	2			
FOR 377 Forest Surveying	1			
FOR 378 Forest Mensuration	2			
FOR 379 Harvest and Wood Utilization	2			
Current Total, Year 3 Summer:	8			
YEAR 4 – Fall			***YEAR 4 - Fall***	
FOR 425 Timber Management	4		*Elective 1*	*3*
FOR 430 Forest Wildlife Management	3		*Social Science 2*	*3*
FOR 460G Forest Watershed Management	3		*FOR 400 Human Dimensions of Forestry & Natural Resources*	*3*
Electives	6		*FOR 425 Forest Management*	*4*
			FOR 460 Forest Hydrology and Watershed Management	*4*
Current Total, Year 4 Fall:	16		*Proposed Total, Year 4 Fall:*	*17*

YEAR 4 - Spring			***YEAR 4 - Spring***	
FOR 480 Integrated Forest Resource Management	5		*Cross-Cultural*	*3*
Electives	7		*Elective 2*	*3*
			FOR 470 Interdependent Natural Resource Issues – Analysis and Solutions	*3*
			FOR 480 Integrated Forest Resource Management (Capstone)	*5*
Current Total, Year 4 Spring:	12		*Proposed Total, Year 4 Spring:*	*14*
Current Total Hours: 134			*Proposed Total Hours: 121*	

12.	**Requested effective date for changes (term/year):**	Fall	/	2009		
13.	**Within the department, who should be contacted for further information about the proposed program change?**					
	Name:	Jim Ringe	**Phone:**	859-257-7594	**Email:**	jringe@uky.edu

14. Signatures of Approval.

3/3/08	Steven H. Bullard	/	
DATE of Approval by Department Faculty	printed name	Reported by Department Chair	signature
9/29/08	Michael Mullen	/	
DATE of Approval by College Faculty	printed name	Reported by College Dean	signature
3/3/2009		/ Sharon Gill Digitally signed by Sharon Gill DN: cn=Sharon Gill, o, ou=Undergraduate Education, email=sgill@uky.edu, c=US Date: 2009.03.12 15:46:35 -04'00'	
*DATE of Approval by Undergraduate Council	printed name	Reported by Undergraduate Council Chair	signature
		/	
*DATE of Approval by Graduate Council	printed name	Reported by Graduate Council Chair	signature
		/	
*DATE of Approval by Health Care Colleges Council (HCCC)	printed name	Reported by Health Care Colleges Council Chair	signature
*DATE of Approval by Senate Council		Reported by Office of the Senate Council	
*DATE of Approval by the University Senate		Reported by the Office of the Senate Council	

*If applicable, as provided by the *University Senate Rules.*

Rev 7/08

Section 2

New Courses for the BS in Forestry

APPLICATION FOR NEW COURSE

1. Submitted by the College of Agriculture Date: 03/03/2008

Department/Division proposing course: Department of Forestry

2. Proposed designation and Bulletin description of this course:

a. Prefix and Number FOR 110

b. Title* Natural Resource Issues

*If title is longer than 24 characters, write a sensible title (24 characters or less) for use on transcripts:

c. Courses must be described by at least one of the categories below. Include the number of actual contact hours per week for each category, as applicable.

(___) CLINICAL (___) COLLOQUIUM (___) DISCUSSION (___) LABORATORY (1) LECTURE

(___) INDEPEND. STUDY (___) PRACTICUM (___) RECITATION (___) RESEARCH (___) RESIDENCY

(___) SEMINAR (___) STUDIO (___) OTHER – Please explain: _____

d. Please choose a grading system: ☑ Letter (A, B, C, etc.) ☐ Pass/Fail

e. Number of credit hours: 1

f. Is this course repeatable? YES ☐ NO ☑ If YES, maximum number of credit hours: _____

g. Course description:

A communication intensive course in which students will learn to research current forestry and natural resource issues, interpret popular press and professional publications, evaluate opposing viewpoints, and discuss issues in a clear, effective and professional manner through a variety of communication media.

h. Prerequisite(s), if any:

None

i. Will this course be offered through Distance Learning? YES ☐ NO ☑

If YES, please identify one of the methods below that reflects how the majority of the course content will be delivered:

☐ Internet/Web-based ☐ Interactive video ☐ Extended campus ☐ Kentucky Educational Television (KET/teleweb) ☐ Other

Please describe "Other": _____

3. Teaching method: ☑ N/A or ☐ Community-Based Experience ☐ Service Learning Component ☐ Both

4. To be cross-listed as: _____ _____

Prefix and Number Signature of chair of cross-listing department

5. Requested effective date (term/year): Fall / 2009

APPLICATION FOR NEW COURSE

6. Course to be offered (please check all that apply): ☑ Fall ☐ Spring ☐ Summer

7. Will the course be offered every year? ☑ YES ☐ NO

If NO, please explain: _____

8. Why is this course needed?

To prepare forestry graduates to be society ready and understand current natural resource issues.

9. **a.** By whom will the course be taught? Dr. Dave Wagner

b. Are facilities for teaching the course now available? ☑ YES ☐ NO

If NO, what plans have been made for providing them?

_____

10. What yearly enrollment may be reasonably anticipated?

20

11. **a.** Will this course serve students primarily within the department? ☑ Yes ☐ No

b. Will it be of interest to a significant number of students outside the department? ☑ YES ☐ NO

If YES, please explain.

Natural Resource Conservation and Management majors may be interested in this course.

12. Will the course serve as a University Studies Program course[†]? ☐ YES ☑ NO

If YES, under what Area? _____

[†]AS OF SPRING 2007, THERE IS A MORATORIUM ON APPROVAL OF NEW COURSES FOR USP.

13. Check the category most applicable to this course:

☐ traditional – offered in corresponding departments at universities elsewhere

☑ relatively new – now being widely established

☐ not yet to be found in many (or any) other universities

14. Is this course applicable to the requirements for at least one degree or certificate at UK? ☑ Yes ☐ No

15. Is this course part of a proposed new program? ☐ YES ☑ NO

If YES, please name: _____

16. Will adding this course change the degree requirements for ANY program on campus? ☑ YES ☐ NO

If YES[‡], list below the programs that will require this course:

Undergraduate Forestry Program

[‡]In order to change the program(s), a program change form(s) must also be submitted.

APPLICATION FOR NEW COURSE

17. ☑ The major teaching objectives of the proposed course, syllabus and/or reference list to be used are attached.

18. ☐ Check box if course is 400G or 500. If the course is 400G- or 500-level, *you must include a syllabus showing differentiation* for undergraduate and graduate students by (i) requiring additional assignments by the graduate students; and/or (ii) the establishment of different grading criteria in the course for graduate students. (See *SR 3.1.4)*

19. Within the department, who should be contacted for further information about the proposed new course?

Name: Jim Ringe Phone: 859-257-7594 Email: jringe@uky.edu

20. Signatures to report approvals:

March 3, 2008	Steven H. Bullard /	
DATE of Approval by Department Faculty	printed name	Reported by Department Chair signature
9/29/2008	Michael Mullen /	
DATE of Approval by College Faculty	printed name	Reported by College Dean signature
3/3/2009	Sharon Gill /	
* DATE of Approval by Undergraduate Council	printed name	Reported by Undergraduate Council Chair signature
* DATE of Approval by Graduate Council	/ printed name	Reported by Graduate Council Chair signature
* DATE of Approval by Health Care Colleges Council (HCCC)	/ printed name	Reported by Health Care Colleges Council Chair signature
* DATE of Approval by Senate Council		Reported by Office of the Senate Council
* DATE of Approval by University Senate		Reported by Office of the Senate Council

Sharon Gill
Digitally signed by Sharon Gill
DN: cn=Sharon Gill, o, ou=Undergraduate Education, email=sgill@uky.edu, c=US
Date: 2009.03.12 12:11:55 -04'00'

*If applicable, as provided by the *University Senate Rules*

Course Syllabus

FOR 110

Natural Resource Issues

Class Period

Lecture: 50 minutes per week

Instructor

Dr. Dave Wagner
Room 209A T.P. Cooper Building
859-257-3773
dwagner@uky.edu

COURSE OVERVIEW

Course Description

A communication intensive course in which students will learn to research current forestry and natural resource issues, interpret popular press and professional publications, evaluate opposing viewpoints, and discuss issues in a clear, effective, and professional manner through oral and written communication.

Student Learning Outcomes

At the end of this course, the student will be able to demonstrate the following skills.

1. When presented with a natural resource issue, you will be able to analyze the issue from a variety of perspectives. These issues may include human population, invasive plants and animals, fragmentation and parcelization, global and climate change, rural-urban interface, ecosystem services, food production, erosion, water quality, energy use, land use, and biotechnology.
2. When presented with a natural resource issue, you will be able to use the University of Kentucky Library as well as other resources, such as the internet, to find professional publications and popular press items related to the issue. You will be able to read and interpret both popular press material and professional publications and critically evaluate opposing viewpoints on an issue.
3. When given a natural resource issue, you will be able to report various aspects of the natural resource issue through written work and oral presentations. You will develop (or refine) and use communication skills essential for your professional career. The communication components of this course will develop or improve your functional skills to:
    a. Prepare and deliver individual and team, informative and persuasive, oral presentations.

b. Work in small teams, which includes identifying team objectives, assigning tasks, monitoring progress, developing collective conclusions, and presenting results.
c. Search electronic databases to acquire information that can be used to define and illuminate issues and questions underlying natural resource debates.
d. Utilize electronic media to prepare, present, and transmit reports and documents.
e. Appreciate the bases for various perspectives of debated resource issues, and critically analyze strengths and weaknesses of arguments presented.

Grading Procedures – Assignments, Grading Criteria, Letter Grades

Oral presentations - 20%
Written and other miscellaneous assignments (20%), distributed as follows:
Analysis of Public Speaker - 3%
Final Draft of Written Version of Individual Persuasive Presentation - 5%
Several Additional Assignments - 12%
Quizzes - 20%
Final exam - 15%
Evaluations by your peers of your contributions to your team - 15%
Instructor's evaluation of your level of course participation - 10%

Letter Grades
A: $\geq 90\%$
B: $\geq 80\%$ and $< 90\%$
C: $\geq 70\%$ and $< 80\%$
D: $\geq 60\%$ and $< 70\%$
E: $< 60\%$

Course Outline

Week 1 – Course Introduction and Orientation, Greatest Good Video I

Week 2 – Greatest Good Video II, Society of American Foresters (Mission, Code of Ethics, and publications)

Week 3 – Careers (SAF Video, Guest Speakers)

Week 4 – The State of America's Forests (Alvarez 2007), Kentucky Forest Fact Sheets

*Week 5 – Issue #1: Student Presentations and Discussion

Week 6 – Issue #1: Student Presentations and Discussion

Week 7 – Issue #1: Student Presentations and Discussion

Week 8 – Issue #2: Student Presentations and Discussion

Week 9 – Issue #2: Student Presentations and Discussion

Week 10 – Issue #2: Student Presentations and Discussion

Week 11 – Issue #3: Student Presentations and Discussion

Week 12 – Issue #3: Student Presentations and Discussion

Week 13 – Issue #3: Student Presentations and Discussion

Week 14 – Course Wrap-up, Course Evaluation by Students

*Issues might include use of publicly-owned lands, forest fragmentation, forestland divestiture, invasive species, *etc.*

COURSE POLICIES

Attendance and Excused Absences

Oral presentations, discussion, impromptu writing, and other activities will occupy most of our time during most class sessions. Consequently, ***your attendance, punctuality, and participation are necessary*** for your success in FOR 110. ***You must complete all assignments prior to the class session for which they are assigned*** so that you are prepared for class.

Beginning with the first class session after the University's "add" deadline of the semester, attendance will be recorded on a sign-in sheet during every class session. ***It is solely YOUR RESPONSIBILITY*** to sign in ***legibly*** on the attendance sheet. Your overall course percentage score will be reduced by 5% for each day that your signature does not appear on the sign-in sheet, unless you have an excused absence. In addition to this direct penalty, in-class activities and assignments generally cannot be excused or made up for days when you are absent. Also, unexcused absences will substantially reduce your "participation" grade. Note that the 10% "participation" grade is not a "freebie." You must attend every class session and participate actively throughout the semester in order to have a chance to earn the entire 10%.

I cannot over-emphasize the importance of consistent classroom attendance and timely submission of all assignments. In accordance with UK policy, you will not be excused from nor be permitted to make up late assignments, missed oral presentations, missed in-class work, missed quizzes, the final exam, the 5%-per-absence grade penalty, or any other late (or missed) requirement of the course, except for reasons of excused absence or in cases of extreme hardship. Please be aware that it is **your responsibility** to abide by UK's timeliness requirements (http://www.uky.edu/Student Affairs/Code/) in contacting me about excused absences or tardiness. If you abide by these timeliness requirements and provide suitable documentation of the reason, you will be excused from, or permitted to make up (at my discretion), work missed due to excused absence or tardiness. Please do not ask me for an excused absence without documentation – such requests are not fair to your classmates and will not be granted.

Academic Integrity, Cheating and Plagiarism

Cheating of any form, including plagiarism, will not be tolerated. Cheating will be dealt with in accordance with University regulations and may result in failure of the course and expulsion from the University. Please take this admonition seriously. (See http://www.uky.edu/StudentAffairs/Code/)

Professional Preparation

This course helps prepare you for your professional career. You are expected to attend class, be on time, participate in class discussions, and be respectful of your instructor and fellow classmates.

Disability Statement

Students with a disability that need classroom or exam accommodations should contact the Disability Resource Center, 257-2754, room 2 Alumni Gym, jkarnes@uky.edu .

APPLICATION FOR NEW COURSE

1. Submitted by the College of Agriculture Date: 03/03/2008

Department/Division proposing course: Department of Forestry

2. Proposed designation and Bulletin description of this course:

a. Prefix and Number FOR 150

b. Title* Computer Applications in Natural Resource Professions

*If title is longer than 24 characters, write a sensible title (24 characters or less) for use on transcripts:
Computer App N.R. Prof

c. Courses must be described by at least one of the categories below. Include the number of actual contact hours per week for each category, as applicable.

(___) CLINICAL (___) COLLOQUIUM (___) DISCUSSION (_4_) LABORATORY (___) LECTURE

(___) INDEPEND. STUDY (___) PRACTICUM (___) RECITATION (___) RESEARCH (___) RESIDENCY

(___) SEMINAR (___) STUDIO (___) OTHER – Please explain: _____

d. Please choose a grading system: ☑ Letter (A, B, C, etc.) ☐ Pass/Fail

e. Number of credit hours: 2

f. Is this course repeatable? YES ☐ NO ☑ If YES, maximum number of credit hours: _____

g. Course description:

Use and application of standard computer software to solve problems. Emphasis will be placed on decision processes and algorithm construction. Additionally, students will learn to construct aesthetic graphs, diagrams, maps and other visual material and will gain experience communicating results in a variety of written formats.

h. Prerequisite(s), if any:

None

i. Will this course be offered through Distance Learning? YES ☐ NO ☑

If YES, please identify one of the methods below that reflects how the majority of the course content will be delivered:

☐ Internet/Web-based ☐ Interactive video ☐ Extended campus ☐ Kentucky Educational Television (KET/teleweb) ☐ Other

Please describe "Other": _____

3. Teaching method: ☑ N/A or ☐ Community-Based Experience ☐ Service Learning Component ☐ Both

4. To be cross-listed as: _____ _____
Prefix and Number Signature of chair of cross-listing department

5. Requested effective date (term/year): Spring / 2010

APPLICATION FOR NEW COURSE

6. Course to be offered (please check all that apply): ☐ Fall ☑ Spring ☐ Summer

7. Will the course be offered every year? ☑ YES ☐ NO

If NO, please explain: _____

8. Why is this course needed?

To provide future forestry and natural resource professionals various computer skills that will be needed to be successful.

9. **a.** By whom will the course be taught? Dr. Jim Ringe

b. Are facilities for teaching the course now available? ☑ YES ☐ NO

If NO, what plans have been made for providing them?

_____

10. What yearly enrollment may be reasonably anticipated?

20

11. **a.** Will this course serve students primarily within the department? ☑ Yes ☐ No

b. Will it be of interest to a significant number of students outside the department? ☑ YES ☐ NO

If YES, please explain.

Natural Resource Conservation and Management majors may be interested in this course.

12. Will the course serve as a University Studies Program course†? ☐ YES ☑ NO

If YES, under what Area? _____

†AS OF SPRING 2007, THERE IS A MORATORIUM ON APPROVAL OF NEW COURSES FOR USP.

13. Check the category most applicable to this course:

☑ traditional – offered in corresponding departments at universities elsewhere

☐ relatively new – now being widely established

☐ not yet to be found in many (or any) other universities

14. Is this course applicable to the requirements for at least one degree or certificate at UK? ☑ Yes ☐ No

15. Is this course part of a proposed new program? ☐ YES ☑ NO

If YES, please name: _____

16. Will adding this course change the degree requirements for ANY program on campus? ☑ YES ☐ NO

If YES‡, list below the programs that will require this course:

Undergraduate Forestry Program

‡In order to change the program(s), a program change form(s) must also be submitted.

APPLICATION FOR NEW COURSE

17. ☑ The major teaching objectives of the proposed course, syllabus and/or reference list to be used are attached.

18. ☐ Check box if course is 400G or 500. If the course is 400G- or 500-level, *you must include a syllabus showing differentiation* for undergraduate and graduate students by (i) requiring additional assignments by the graduate students; and/or (ii) the establishment of different grading criteria in the course for graduate students. (See *SR 3.1.4)*

19. Within the department, who should be contacted for further information about the proposed new course?

Name: Jim Ringe Phone: 859-257-7594 Email: jringe@uky.edu

20. Signatures to report approvals:

March 3, 2008	Steven H. Bullard	/	
DATE of Approval by Department Faculty	printed name	Reported by Department Chair	signature
9/29/2008	Michael Mullen	/	
DATE of Approval by College Faculty	printed name	Reported by College Dean	signature
		/	
* DATE of Approval by Undergraduate Council	printed name	Reported by Undergraduate Council Chair	signature
		/	
* DATE of Approval by Graduate Council	printed name	Reported by Graduate Council Chair	signature
		/	
* DATE of Approval by Health Care Colleges Council (HCCC)	printed name	Reported by Health Care Colleges Council Chair	signature
* DATE of Approval by Senate Council		Reported by Office of the Senate Council	
* DATE of Approval by University Senate		Reported by Office of the Senate Council	

*If applicable, as provided by the *University Senate Rules*

Course Syllabus

FOR 150

Computer Applications in Natural Resource Professions

Class Period

Lab: 4 hours per week

Instructor

Dr. J. M. Ringe
Room 108 T.P. Cooper Building
859-257-7594
jringe@uky.edu

COURSE OVERVIEW

Course Description

Use and application of standard computer software to solve problems in forestry and natural resources. Emphasis will be placed on decision processes and algorithm construction. Additionally, students will learn to construct aesthetic graphs, diagrams, maps and other visual material and will gain experience communicating results in a variety of written formats.

Student Learning Outcomes

At the end of this course, the student will be able to demonstrate the following skills.

1. When given a task, you will be able to explain the decision process and construct an algorithm for accomplishing the task.
2. When given a forestry and natural resource scenario, you will be able to use the computer to build formulas and create spreadsheets to address the scenario.
3. When given a forestry and natural resource scenario, you will be able to use the computer to construct appropriate and aesthetic graphs, diagrams, maps, presentations, and other visual material.
4. When given a forestry and natural resource project, you will be able to effectively and professionally explain the methods and results of the project to different types of audiences through emails, memos, letters, handouts, posters, and presentations.

Grading Procedures – Assignments, Grading Criteria, Letter Grades

Grades will be based on attendance and in-class exercises (40%), a mid-term exam (30%), and a final exam (30%). Final grades will be assigned as follows:

Letter Grades
A: ≥ 90%
B: ≥ 80% and < 90%
C: ≥ 70% and < 80%
D: ≥ 60% and < 70%
E: < 60%

Course Outline

Week 1: Email
Topics include email etiquette and use of attachments and list serves

Weeks 2 – 5: Use of Spreadsheets
Topics include spreadsheet design, entering data, using functions, developing specialized equations, using referenced variables, and generating charts and graphs.

Weeks 6 – 8: Basic Statistics
Topics include use of the basic statistical functions of spreadsheets, understanding the underlying calculations, and interpretation of results.

Weeks 9 – 12: Use of Word Processors
Topics include setting up a visually appealing document, use of fonts, borders and other special features, double column format, table creation and use, importation of spreadsheets and digital images, and creation of equations.

Weeks 13 and 14: Use of PowerPoint
Topics include the basics of what constitutes an effective presentation, effective outlining techniques, use of backgrounds and fonts, and importation of graphics and digital images.

COURSE POLICIES

Attendance and Excused Absences

Lectures: Attending lectures is required (and expected) of all students. Skipping class is not acting in your best interest, will most likely adversely affect your grade, is disrespectful of your instructor, and is not professional behavior.

Exams: Make-up exams and quizzes will be given only to students who miss an exam as a result of excused absences. In all other circumstances, a grade of 0 (zero) will result for the missed exam or quiz.

Academic Integrity, Cheating and Plagiarism

Cheating of any form, including plagiarism, will not be tolerated. Cheating will be dealt with in accordance with University regulations. (See http://www.uky.edu/Student Affairs/Code/)

Professional Preparation

This course helps prepare you for your professional career. You are expected to attend class, be on time, participate in class discussions, and be respectful of your instructor and fellow classmates.

Disability Statement

Students with a disability that need classroom or exam accommodations should contact the Disability Resource Center, 257-2754, room 2 Alumni Gym, jkarnes@uky.edu .

APPLICATION FOR NEW COURSE

1. Submitted by the College of Agriculture Date: 3/03/08

Department/Division proposing course: Department of Forestry

2. Proposed designation and Bulletin description of this course:

a. Prefix and Number FOR 240

b. Title* Forestry and Natural Resource Ethics

*If title is longer than 24 characters, write a sensible title (24 characters or less) for use on transcripts:
Forest. Nat. Res. Ethics

c. Courses must be described by at least one of the categories below. Include the number of actual contact hours per week for each category, as applicable.

(___) CLINICAL (___) COLLOQUIUM (___) DISCUSSION (___) LABORATORY (2) LECTURE

(___) INDEPEND. STUDY (___) PRACTICUM (___) RECITATION (___) RESEARCH (___) RESIDENCY

(___) SEMINAR (___) STUDIO (___) OTHER – Please explain: _____

d. Please choose a grading system: ☑ Letter (A, B, C, etc.) ☐ Pass/Fail

e. Number of credit hours: 2

f. Is this course repeatable? YES ☐ NO ☑ If YES, maximum number of credit hours: _____

g. Course description:

A study of the key ethical concepts of conservation, preservation, deep ecology, land ethic, spiritualism/religion, and multiple value systems as applied to forestry and natural resource issues. Students will gain an understanding of the ethical dilemmas faced by natural resource professionals, and will be able to identify ways of handling these dilemmas, including application of professional associations' codes of ethics.

h. Prerequisite(s), if any:

None

i. Will this course be offered through Distance Learning? YES ☐ NO ☑

If YES, please identify one of the methods below that reflects how the majority of the course content will be delivered:

☐ Internet/Web-based ☐ Interactive video ☐ Extended campus ☐ Kentucky Educational Television (KET/teleweb) ☐ Other

Please describe "Other": _____

3. Teaching method: ☑ N/A or ☐ Community-Based Experience ☐ Service Learning Component ☐ Both

4. To be cross-listed as: _____ _____

Prefix and Number Signature of chair of cross-listing department

5. Requested effective date (term/year): Spring / 2011

APPLICATION FOR NEW COURSE

6. Course to be offered (please check all that apply): ☐ Fall ☑ Spring ☐ Summer

7. Will the course be offered every year? ☑ YES ☐ NO

If NO, please explain: _____

8. Why is this course needed?

Forest ethics is needed to comply with Society of American Forester accreditation requirements. Understanding forestry and natural resource ethics is critical to forestry and natural resource professionals today.

9. **a.** By whom will the course be taught? Dr. Paul Kalisz

b. Are facilities for teaching the course now available? ☑ YES ☐ NO

If NO, what plans have been made for providing them?

_____

10. What yearly enrollment may be reasonably anticipated?

20

11. **a.** Will this course serve students primarily within the department? ☑ Yes ☐ No

b. Will it be of interest to a significant number of students outside the department? ☑ YES ☐ NO

If YES, please explain.

Natural Resource Conservation and Management majors may be interested in this course.

12. Will the course serve as a University Studies Program course†? ☐ YES ☑ NO

If YES, under what Area? _____

†AS OF SPRING 2007, THERE IS A MORATORIUM ON APPROVAL OF NEW COURSES FOR USP.

13. Check the category most applicable to this course:

☑ traditional – offered in corresponding departments at universities elsewhere

☐ relatively new – now being widely established

☐ not yet to be found in many (or any) other universities

14. Is this course applicable to the requirements for at least one degree or certificate at UK? ☑ Yes ☐ No

15. Is this course part of a proposed new program? ☐ YES ☑ NO

If YES, please name: _____

16. Will adding this course change the degree requirements for ANY program on campus? ☑ YES ☐ NO

If YES‡, list below the programs that will require this course:

Undergraduate Forestry Program

‡In order to change the program(s), a program change form(s) must also be submitted.

APPLICATION FOR NEW COURSE

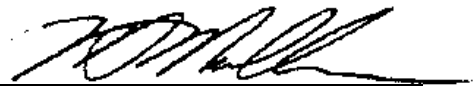
17. ☑ The major teaching objectives of the proposed course, syllabus and/or reference list to be used are attached.

18. ☐ Check box if course is 400G or 500. If the course is 400G- or 500-level, *you must include a syllabus showing differentiation* for undergraduate and graduate students by (i) requiring additional assignments by the graduate students; and/or (ii) the establishment of different grading criteria in the course for graduate students. (See *SR 3.1.4)*

19. Within the department, who should be contacted for further information about the proposed new course?

Name: Jim Ringe Phone: 859-257-7594 Email: jringe@uky.edu

20. Signatures to report approvals:

March 3, 2008	Steven H. Bullard	/	
DATE of Approval by Department Faculty	printed name	Reported by Department Chair	signature
9/29/2008	Michael Mullen	/ 	
DATE of Approval by College Faculty	printed name	Reported by College Dean	signature
		/	
* DATE of Approval by Undergraduate Council	printed name	Reported by Undergraduate Council Chair	signature
		/	
* DATE of Approval by Graduate Council	printed name	Reported by Graduate Council Chair	signature
		/	
* DATE of Approval by Health Care Colleges Council (HCCC)	printed name	Reported by Health Care Colleges Council Chair	signature
* DATE of Approval by Senate Council		Reported by Office of the Senate Council	
* DATE of Approval by University Senate		Reported by Office of the Senate Council	

*If applicable, as provided by the *University Senate Rules*

Course Syllabus

FOR 240

Forestry and Natural Resource Ethics

Class Period

Lecture: 2 hours per week

Instructor

Dr. Paul Kalisz
Room 102 T.P. Cooper Building
859-257-7606
pkalisz@uky.edu

COURSE OVERVIEW

Course Description

A study of the key ethical concepts of conservation, preservation, deep ecology, land ethic, spiritualism/religion, and multiple value systems as applied to forestry and natural resource issues. Students will gain an understanding of the ethical dilemmas faced by natural resource professionals, and will be able to identify ways of handling these dilemmas, including application of professional associations' codes of ethics.

Student Learning Outcomes

At the end of this course, the student will be able to demonstrate the following skills.

1. Describe forest history in the United States.
2. Describe and apply key ethical concepts of conservation, preservation, deep ecology, land ethic, spiritual/religion, and multiple value systems to forestry and natural resource issues.
3. Discuss the origins and history of modern environmental ethics.
4. When given an issue such as wild animals or invasive species, you will be able to discuss the ethical dilemmas related to the issue and how different ethical perspectives frame these issues.
5. When given an ethical dilemma, you will be able to apply professional associations' codes of ethics as a guide for addressing the ethical dilemma. Professional associations include Society of American Foresters, The Wildlife Society, Association of Consulting Foresters, and Forest Stewards Guild.
6. Describe ethical issues professionals face, including public natural resource agencies, and identify ways of handling the ethical dilemmas. Ethical issues professionals may face

include honesty, conflict of interest, confidentiality, professionalism, and responsibility to an employer.

Grading Procedures – Assignments, Grading Criteria, Letter Grades

Performance as a facilitator – 40%
Participation in round table discussions – 40%
Final Exam – 20%

Letter Grades
A: $\geq 90\%$
B: $\geq 80\%$ and $< 90\%$
C: $\geq 70\%$ and $< 80\%$
D: $\geq 60\%$ and $< 70\%$
E: $< 60\%$

Course Outline

Week 1 – Forest history

Week 2 – Forest history

Week 3 – Ethical systems

Week 4 - Ethical systems (cont.)

Week 5 – Two philosophical issues in forestry: multiple value systems and rights of trees and other natural objects

Week 6 – Two philosophical issues in forestry (cont.)

Week 7 – Conventional & Ecoforesty Approaches

Week 8 – Professional Codes of Ethics

Week 9 – Ethics in practice - professionalism

Week 10 – Ethics in practice – conflict of interest

Week 11 – Ethics in practice - honesty

Week 12 – Ethical challenges in public natural resource agencies

Week 13 – Pesticides and biotechnology

Week 14 – Global issues

COURSE POLICIES

Attendance and Excused Absences

Attendance is mandatory - 1% will be deducted from your final grade for each unexcused absence.

Academic Integrity, Cheating and Plagiarism

Cheating of any form, including plagiarism, will not be tolerated. Cheating will be dealt with in accordance with University regulations. (See http://www.uky.edu/Student Affairs/Code/)

Professional Preparation

This course helps prepare you for your professional career. You are expected to attend class, be on time, participate in class discussions, and be respectful of your instructor and fellow classmates.

Disability Statement

Students with a disability that need classroom or exam accommodations should contact the Disability Resource Center, 257-2754, room 2 Alumni Gym, jkarnes@uky.edu .

APPLICATION FOR NEW COURSE

1. Submitted by the College of Agriculture Date: 03/03/2008

Department/Division proposing course: Department of Forestry

2. Proposed designation and Bulletin description of this course:

a. Prefix and Number FOR 280

b. Title* Forest Policy

*If title is longer than 24 characters, write a sensible title (24 characters or less) for use on transcripts:

c. Courses must be described by at least one of the categories below. Include the number of actual contact hours per week for each category, as applicable.

(___) CLINICAL (___) COLLOQUIUM (___) DISCUSSION (___) LABORATORY (2) LECTURE

(___) INDEPEND. STUDY (___) PRACTICUM (___) RECITATION (___) RESEARCH (___) RESIDENCY

(___) SEMINAR (___) STUDIO (___) OTHER – Please explain: _____

d. Please choose a grading system: ☑ Letter (A, B, C, etc.) ☐ Pass/Fail

e. Number of credit hours: 2

f. Is this course repeatable? YES ☐ NO ☑ If YES, maximum number of credit hours: _____

g. Course description:

Examine the political process as it relates to formulation, analysis, evaluation, and implementation of forest policies. Assess the impacts of various policy decisions and employ the policy process to address such forestry issues as urbanization, fragmentation, invasive species, global competition, certification, and climate change.

h. Prerequisite(s), if any:

None

i. Will this course be offered through Distance Learning? YES ☐ NO ☑

If YES, please identify one of the methods below that reflects how the majority of the course content will be delivered:

☐ Internet/Web-based ☐ Interactive video ☐ Extended campus ☐ Kentucky Educational Television (KET/teleweb) ☐ Other

Please describe "Other": _____

3. Teaching method: ☑ N/A or ☐ Community-Based Experience ☐ Service Learning Component ☐ Both

4. To be cross-listed as: _____ _____

Prefix and Number Signature of chair of cross-listing department

5. Requested effective date (term/year): Spring / 2011

APPLICATION FOR NEW COURSE

6. Course to be offered (please check all that apply): ☐ Fall ☑ Spring ☐ Summer

7. Will the course be offered every year? ☑ YES ☐ NO

If NO, please explain: _____

8. Why is this course needed?

A course on forest policy is needed to comply with Society of American Forester accreditation requirements and to prepare forestry graduates to understand the political process at it relates to forest policy.

9. **a.** By whom will the course be taught? Dr. Steve Bullard

b. Are facilities for teaching the course now available? ☑ YES ☐ NO

If NO, what plans have been made for providing them?

_____

10. What yearly enrollment may be reasonably anticipated?

20

11. **a.** Will this course serve students primarily within the department? ☑ Yes ☐ No

b. Will it be of interest to a significant number of students outside the department? ☑ YES ☐ NO

If YES, please explain.

Natural Resource Conservation and Management majors may be interested in this course.

12. Will the course serve as a University Studies Program course†? ☐ YES ☑ NO

If YES, under what Area? _____

†AS OF SPRING 2007, THERE IS A MORATORIUM ON APPROVAL OF NEW COURSES FOR USP.

13. Check the category most applicable to this course:

☑ traditional – offered in corresponding departments at universities elsewhere

☐ relatively new – now being widely established

☐ not yet to be found in many (or any) other universities

14. Is this course applicable to the requirements for at least one degree or certificate at UK? ☑ Yes ☐ No

15. Is this course part of a proposed new program? ☐ YES ☑ NO

If YES, please name: _____

16. Will adding this course change the degree requirements for ANY program on campus? ☑ YES ☐ NO

If YES‡, list below the programs that will require this course:

Undergraduate Forestry Program

‡In order to change the program(s), a program change form(s) must also be submitted.

APPLICATION FOR NEW COURSE

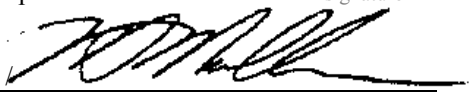
17. ☑ The major teaching objectives of the proposed course, syllabus and/or reference list to be used are attached.

18. ☐ Check box if course is 400G or 500. If the course is 400G- or 500-level, *you must include a syllabus showing differentiation* for undergraduate and graduate students by (i) requiring additional assignments by the graduate students; and/or (ii) the establishment of different grading criteria in the course for graduate students. (See *SR 3.1.4)*

19. Within the department, who should be contacted for further information about the proposed new course?

Name: Jim Ringe Phone: 859-257-7594 Email: jringe@uky.edu

20. Signatures to report approvals:

March 3, 2008	Steven H. Bullard	/	
DATE of Approval by Department Faculty	printed name	Reported by Department Chair	signature
9/29/2008	Michael Mullen		
DATE of Approval by College Faculty	printed name	Reported by College Dean	signature
		/	
* DATE of Approval by Undergraduate Council	printed name	Reported by Undergraduate Council Chair	signature
		/	
* DATE of Approval by Graduate Council	printed name	Reported by Graduate Council Chair	signature
		/	
* DATE of Approval by Health Care Colleges Council (HCCC)	printed name	Reported by Health Care Colleges Council Chair	signature
* DATE of Approval by Senate Council		Reported by Office of the Senate Council	
* DATE of Approval by University Senate		Reported by Office of the Senate Council	

*If applicable, as provided by the *University Senate Rules*

Course Syllabus

FOR 280

Forest Policy

Class Period

Lecture: 2 hours per week

Instructor

Dr. Steve Bullard
Room 106 T.P. Cooper Building
859-257-7596
steve.bullard@uky.edu

COURSE OVERVIEW

Course Description

An examination of the political process as it relates to forestry, especially the formulation, analysis, evaluation, and implementation of forest policies. Students will learn to assess the impacts of various policy decisions as well as how to employ the policy process to address such forestry issues as urbanization, fragmentation, demographic shifts, invasive species, global competition, forest certification, climate change, and bioenergy.

Student Learning Outcomes

At the end of this course, the student will be able to demonstrate the following skills.

1. When given a forest policy, you will be able to explain the political process including how policy is formed, analyzed, evaluated, and implemented. Differentiate between proactive and reactive policy.
2. Identify participants in the political process and explain the role these participants play in the political process. Participants may include government branches (legislative, executive, judicial), government agencies (Dept. of Energy, Dept. of Agriculture, Environmental Protection Agency, Bureau of Land Management, and U.S. Forest Service), interest groups, and media.
3. Explain how various programs, laws, and regulations impact forestry. These programs, laws, and regulations may include public ownership and management of land, federal environmental regulations, wildlife policy, forestry regulations, public assistance for private owners, and global forest policy issues.
4. When given a forest threat or issue at the local, regional, national, or global level, you will be able to explain how current and future policy approaches at the local, state, and federal level can address the threat. You will also be able to explain opposing viewpoints

on the threat. These threats may include urbanization, fragmentation, demographic shifts, invasive species, global competition, forest certification, climate change, and bioenergy.

Grading Procedures – Assignments, Grading Criteria, Letter Grades

Writing Assignments (3)	30%
Presentation	20%
Exam I	15%
Exam II	15%
Final Exam	20%

Letter Grades
A: ≥ 90%
B: ≥ 80% and < 90%
C: ≥ 70% and < 80%
D: ≥ 60% and < 70%
E: < 60%

Course Outline

Week 1: Course Introduction. Overview of the policy process.

Week 2: Policy Formulation

Week 3: Policy Analysis

Week 4: Policy Evaluation

Week 5: Policy Implementation

Week 6 – 8: Participants in the Political Process – government agencies, interest groups, media, etc.

Week 9 - 11: Programs, Laws, and Regulations Influencing Forestry

Week 12 - 14: Policy Approaches to Addressing Forestry Issues (local, regional, national, and global level)

COURSE POLICIES

Attendance and Excused Absences

Attendance is required. If you have more than two unexcused absences your grade will be lowered by one point for each unexcused absence. For example, if you have three unexcused absences your final grade will be lowered by three points. Excused absences are defined by S.R. 5.2.4.2 http://www.uky.edu/StudentAffairs/Code/part2.html .

For excused absences, students will be able to make up the missed work or exam. Students must inform the instructor of the advance, if possible, but not later than one week after the missed class.

Academic Integrity, Cheating and Plagiarism

Cheating of any form, including plagiarism, will not be tolerated. Cheating will be dealt with in accordance with University regulations. (See http://www.uky.edu/Student Affairs/Code/)

Professional Preparation

This course helps prepare you for your professional career. You are expected to attend class, be on time, participate in class discussions, and be respectful of your instructor and fellow classmates.

Disability Statement

Students with a disability that need classroom or exam accommodations should contact the Disability Resource Center, 257-2754, room 2 Alumni Gym, jkarnes@uky.edu .

APPLICATION FOR NEW COURSE

1. Submitted by the College of Agriculture Date: 03/03/2008

Department/Division proposing course: Department of Forestry

2. Proposed designation and Bulletin description of this course:

a. Prefix and Number FOR 310

b. Title* Introduction to Forest Health and Protection

*If title is longer than 24 characters, write a sensible title (24 characters or less) for use on transcripts:
Forest Health Protection

c. Courses must be described by at least one of the categories below. Include the number of actual contact hours per week for each category, as applicable.

(___) CLINICAL (___) COLLOQUIUM (___) DISCUSSION (___) LABORATORY (3) LECTURE

(___) INDEPEND. STUDY (___) PRACTICUM (___) RECITATION (___) RESEARCH (___) RESIDENCY

(___) SEMINAR (___) STUDIO (___) OTHER – Please explain: _____

d. Please choose a grading system: ☑ Letter (A, B, C, etc.) ☐ Pass/Fail

e. Number of credit hours: 3

f. Is this course repeatable? YES ☐ NO ☑ If YES, maximum number of credit hours: _____

g. Course description:

Modular course with one-third devoted to forest entomology, one-third to forest pathology, and one-third to other topics such as abiotic agents and invasive species. Identify various agents that affect forest health, assess the impacts of these agents on forest health, and learn different methods for addressing these impacts.

h. Prerequisite(s), if any:

BIO 103 or BIO 150

i. Will this course be offered through Distance Learning? YES ☐ NO ☑

If YES, please identify one of the methods below that reflects how the majority of the course content will be delivered:

☐ Internet/Web-based ☐ Interactive video ☐ Extended campus ☐ Kentucky Educational Television (KET/teleweb) ☐ Other

Please describe "Other": _____

3. Teaching method: ☑ N/A or ☐ Community-Based Experience ☐ Service Learning Component ☐ Both

4. To be cross-listed as: _____ _____

Prefix and Number Signature of chair of cross-listing department

5. Requested effective date (term/year): Fall / 2011

APPLICATION FOR NEW COURSE

6. Course to be offered (please check all that apply): ☑ Fall ☐ Spring ☐ Summer

7. Will the course be offered every year? ☑ YES ☐ NO

If NO, please explain: _____

8. Why is this course needed?

Maintaining healthy forests and protecting them from pests or diseases, exotic and invasive species, and other elements is critical. This course is needed to provided students with an understanding of forest entomology, forest pathology, and other abiotic agents.

9. **a.** By whom will the course be taught? Dr. Paul Kalisz

b. Are facilities for teaching the course now available? ☑ YES ☐ NO

If NO, what plans have been made for providing them?

_____

10. What yearly enrollment may be reasonably anticipated?

20

11. **a.** Will this course serve students primarily within the department? ☑ Yes ☐ No

b. Will it be of interest to a significant number of students outside the department? ☐ YES ☑ NO

If YES, please explain.

12. Will the course serve as a University Studies Program course†? ☐ YES ☑ NO

If YES, under what Area? _____

†AS OF SPRING 2007, THERE IS A MORATORIUM ON APPROVAL OF NEW COURSES FOR USP.

13. Check the category most applicable to this course:

☑ traditional – offered in corresponding departments at universities elsewhere

☐ relatively new – now being widely established

☐ not yet to be found in many (or any) other universities

14. Is this course applicable to the requirements for at least one degree or certificate at UK? ☑ Yes ☐ No

15. Is this course part of a proposed new program? ☐ YES ☑ NO

If YES, please name: _____

16. Will adding this course change the degree requirements for ANY program on campus? ☑ YES ☐ NO

If YES‡, list below the programs that will require this course:

Undergraduate Forestry Program

‡In order to change the program(s), a program change form(s) must also be submitted.

APPLICATION FOR NEW COURSE

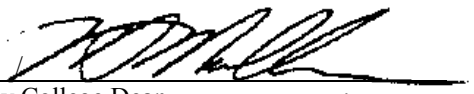
17. ☑ The major teaching objectives of the proposed course, syllabus and/or reference list to be used are attached.

18. ☐ Check box if course is 400G or 500. If the course is 400G- or 500-level, *you must include a syllabus showing differentiation* for undergraduate and graduate students by (i) requiring additional assignments by the graduate students; and/or (ii) the establishment of different grading criteria in the course for graduate students. (See *SR 3.1.4)*

19. Within the department, who should be contacted for further information about the proposed new course?

Name: Jim Ringe Phone: 859-257-7594 Email: jringe@uky.edu

20. Signatures to report approvals:

March 3, 2008	Steven H. Bullard	/	
DATE of Approval by Department Faculty	printed name	Reported by Department Chair	signature
9/29/2008	Michael Mullen	/	
DATE of Approval by College Faculty	printed name	Reported by College Dean	signature
		/	
* DATE of Approval by Undergraduate Council	printed name	Reported by Undergraduate Council Chair	signature
		/	
* DATE of Approval by Graduate Council	printed name	Reported by Graduate Council Chair	signature
		/	
* DATE of Approval by Health Care Colleges Council (HCCC)	printed name	Reported by Health Care Colleges Council Chair	signature
* DATE of Approval by Senate Council		Reported by Office of the Senate Council	
* DATE of Approval by University Senate		Reported by Office of the Senate Council	

*If applicable, as provided by the *University Senate Rules*

Course Syllabus

FOR 310

Introduction to Forest Health and Protection

Class Period

Lecture: 3 hours per week

Instructor

Dr. Paul Kalisz
Room 102 T.P. Cooper Building
859-257-7606
pkalisz@uky.edu

COURSE OVERVIEW

Course Description

A modular course with approximately one-third devoted to forest entomology, one-third to forest pathology, and one-third devoted to other topics such as abiotic agents and invasive species. Students will learn to identify various agents that affect forest health, assess the impacts of these agents on forest health, and learn different methods for addressing these impacts. *Prerequisites: BIO 103 or BIO 150.*

Student Learning Outcomes

At the end of this course, the student will be able to demonstrate the following skills.

1. When presented with a forest health problem, you will be able to describe the problem, how it got there, and what can be done about it.
2. Describe the basic concepts and terminology associated with forest health and protection.
3. When given historical forest health issues, you will be able to describe different aspects and consequences of historical forest health issues.
4. When presented with invasive or exotic plants in a rural or urban area, you will be able to identify the plants, describe how they affect the rural and/or urban area, and identify methods of addressing the problem.
5. When presented with a pest or disease, you will be able to identify the pest or disease, describe how it affects forest health and forest products, and identify methods of addressing the problem.
6. Describe forest health issues in urban areas and at the rural-urban interface.

7. Identify the impacts various elements such as fire, wind, water, freeze, and drought have on forest health. Identify the impacts animals, such as deer and elk, have on forest health. Describe different methods of addressing these elements.
8. Describe forest health issues in Kentucky and the region. These issues may include southern pine beetle, gypsy moth, hemlock woolly adelgid, oak decline, emerald ash borer, dogwood anthracnose, and sudden oak death.

Grading Procedures – Assignments, Grading Criteria, Letter Grades

Assignments and in-class quizzes - 25%
Three written exams - 30%
Term Report - 20%
Participation - 5%
Final exam - 20%

Letter Grades
A: $\geq 90\%$
B: $\geq 80\%$ and $< 90\%$
C: $\geq 70\%$ and $< 80\%$
D: $\geq 60\%$ and $< 70\%$
E: $< 60\%$

Course Outline

Week 1 – Ecological Principles and Concepts of Forest Health

Week 2 – Invasive Exotic Species

Week 3 – Fire

Week 4 – Weather, Climate, and Climate Change

Week 5 – Introduction to Diseases

Week 6 – Animals, Chemical Abnormalities and People-Pressure Diseases

Week 7 – Fungal - Foliage, Vascular Wilt, and Canker Diseases

Week 8 – Fungal – Rust and Root Diseases; Discoloration and Decay

Week 9 – Bacterial and Viral Diseases; Nematodes and Parasitic Seed Plants

Week 10 – Forest Declines; Nursery and Seed Orchard Diseases

Week 11 – Introduction to Forest Entomology

Week 12 – Defoliators

Week 13 – Bark Beetles and Borers

Week 14 – Piercing and Sucking Insects

COURSE POLICIES

Attendance and Excused Absences

Class periods will be used for discussions, lectures, slide shows, writing, and quizzes. You must read the text to effectively and successfully participate in class activities and to do well on tests. Please be prepared and participate. Your preparation and participation will help to make the class interesting and worth-while for all of us. Attendance is mandatory - 1% will be deducted from your final grade for each unexcused absence.

Academic Integrity, Cheating and Plagiarism

Cheating of any form, including plagiarism, will not be tolerated. Cheating will be dealt with in accordance with University regulations. (See http://www.uky.edu/Student Affairs/Code/)

Professional Preparation

This course helps prepare you for your professional career. You are expected to attend class, be on time, participate in class discussions, and be respectful of your instructor and fellow classmates.

Disability Statement

Students with a disability that need classroom or exam accommodations should contact the Disability Resource Center, 257-2754, room 2 Alumni Gym, jkarnes@uky.edu .

APPLICATION FOR NEW COURSE

1. Submitted by the College of Agriculture Date: 03/03/2008

Department/Division proposing course: Department of Forestry

2. Proposed designation and Bulletin description of this course:

a. Prefix and Number FOR 320

b. Title* Forest Valuation and Economics

*If title is longer than 24 characters, write a sensible title (24 characters or less) for use on transcripts:
Forest Valuation Econ.

c. Courses must be described by at least one of the categories below. Include the number of actual contact hours per week for each category, as applicable.

(___) CLINICAL (___) COLLOQUIUM (___) DISCUSSION (___) LABORATORY (3) LECTURE

(___) INDEPEND. STUDY (___) PRACTICUM (___) RECITATION (___) RESEARCH (___) RESIDENCY

(___) SEMINAR (___) STUDIO (___) OTHER – Please explain: _____

d. Please choose a grading system: ☑ Letter (A, B, C, etc.) ☐ Pass/Fail

e. Number of credit hours: 3

f. Is this course repeatable? YES ☐ NO ☑ If YES, maximum number of credit hours: _____

g. Course description:

Apply economic concepts to silvicultural practices, land values, and values affiliated with various forest uses. Apply supply and demand concepts and financial computations to identify and quantify economic consequences of silvicultural actions or management practices. Taxation and monetizing ecosystem services will be discussed.

h. Prerequisite(s), if any:

MA 109 or Calculus

i. Will this course be offered through Distance Learning? YES ☐ NO ☑

If YES, please identify one of the methods below that reflects how the majority of the course content will be delivered:

☐ Internet/Web-based ☐ Interactive video ☐ Extended campus ☐ Kentucky Educational Television (KET/teleweb) ☐ Other

Please describe "Other": _____

3. Teaching method: ☑ N/A or ☐ Community-Based Experience ☐ Service Learning Component ☐ Both

4. To be cross-listed as: _____ _____

Prefix and Number Signature of chair of cross-listing department

5. Requested effective date (term/year): Fall / 2011

APPLICATION FOR NEW COURSE

6. Course to be offered (please check all that apply): ☑ Fall ☐ Spring ☐ Summer

7. Will the course be offered every year? ☑ YES ☐ NO

If NO, please explain: _____

8. Why is this course needed?

A course on forest valuation and economics is needed to comply with the Society of American Foresters accreditation requirements and to address the complex forestry issues of today, an understanding of economics is necessary.

9. **a.** By whom will the course be taught? Dr. Tamara Cushing

b. Are facilities for teaching the course now available? ☑ YES ☐ NO

If NO, what plans have been made for providing them?

_____

10. What yearly enrollment may be reasonably anticipated?

20

11. **a.** Will this course serve students primarily within the department? ☑ Yes ☐ No

b. Will it be of interest to a significant number of students outside the department? ☐ YES ☑ NO

If YES, please explain.

12. Will the course serve as a University Studies Program course†? ☐ YES ☑ NO

If YES, under what Area? _____

†AS OF SPRING 2007, THERE IS A MORATORIUM ON APPROVAL OF NEW COURSES FOR USP.

13. Check the category most applicable to this course:

☑ traditional – offered in corresponding departments at universities elsewhere

☐ relatively new – now being widely established

☐ not yet to be found in many (or any) other universities

14. Is this course applicable to the requirements for at least one degree or certificate at UK? ☑ Yes ☐ No

15. Is this course part of a proposed new program? ☐ YES ☑ NO

If YES, please name: _____

16. Will adding this course change the degree requirements for ANY program on campus? ☑ YES ☐ NO

If YES‡, list below the programs that will require this course:

Undergraduate Forestry Program

‡In order to change the program(s), a program change form(s) must also be submitted.

APPLICATION FOR NEW COURSE

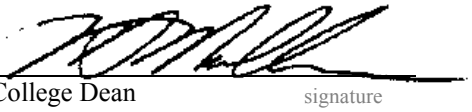
17. ☑ The major teaching objectives of the proposed course, syllabus and/or reference list to be used are attached.

18. ☐ Check box if course is 400G or 500. If the course is 400G- or 500-level, *you must include a syllabus showing differentiation* for undergraduate and graduate students by (i) requiring additional assignments by the graduate students; and/or (ii) the establishment of different grading criteria in the course for graduate students. (See *SR 3.1.4)*

19. Within the department, who should be contacted for further information about the proposed new course?

Name: Jim Ringe Phone: 859-257-7594 Email: jringe@uky.edu

20. Signatures to report approvals:

March 3, 2008	Steven H. Bullard	/	
DATE of Approval by Department Faculty	printed name	Reported by Department Chair	signature
9/29/2008	Michael Mullen	/	
DATE of Approval by College Faculty	printed name	Reported by College Dean	signature
		/	
* DATE of Approval by Undergraduate Council	printed name	Reported by Undergraduate Council Chair	signature
		/	
* DATE of Approval by Graduate Council	printed name	Reported by Graduate Council Chair	signature
		/	
* DATE of Approval by Health Care Colleges Council (HCCC)	printed name	Reported by Health Care Colleges Council Chair	signature
* DATE of Approval by Senate Council		Reported by Office of the Senate Council	
* DATE of Approval by University Senate		Reported by Office of the Senate Council	

*If applicable, as provided by the *University Senate Rules*

Course Syllabus

FOR 320

Forest Valuation and Economics

Class Period

Lecture: 3 hours per week

Instructor

Dr. Tamara Cushing
Room 104 T.P. Cooper Building
859-257-2149
tamara.cushing@uky.edu

COURSE OVERVIEW

Course Description

A study of the application of economic concepts to silvicultural practices, land values, and values affiliated with various forest uses. Students will learn to apply supply and demand concepts and financial computations to identify and quantify the economic consequences of a particular silvicultural action or management practice. Effects of taxation as well as the societal trend toward monetizing ecosystem services will also be covered. *Prerequisites: MA 109 or Calculus.*

Student Learning Outcomes

At the end of this course, the student will be able to demonstrate the following skills.

1. Apply economic concepts to silvicultural practices, land values, timber values, wildlife, and hunting.
2. When given a forestry scenario, you will be able to apply appropriate economic formulas to address the given scenario and use computer programs to calculate forest economic formulas.
3. When given timber and timberland data, you will be able to estimate the market value of the timber and timberland.
4. When given a silvicultural practice or management plan, you will be able to identify the economic consequences of the particular silvicultural practice or management plan.
5. Describe and apply antitrust regulations to forestry practices.
6. When given a forestry scenario, you will be able to apply supply and demand concepts and identify the impact on timber and other forestry based markets. These forestry scenarios may include forest reserve practices, globalization, consumer preferences,

landowner demographics, determinants of timber price, non-timber products and services, market failures and peculiarities of timber products, new market trends, certification, change in forestland ownership, and incentive base policies.

7. Identify how federal, state, and local tax regulations, including property tax, income tax, estate tax, and severance/yield tax, govern the practice of forestry.
8. Identify societal trends toward monetizing ecosystem services and recognize the multiple benefits of forests are often public goods. Be able to explain the difference between value and price.

Grading Procedures – Assignments, Grading Criteria, Letter Grades

Quizzes	20%
Assignments	25%
Exams (2)	30%
Final	25%

Letter Grades
A: $\geq 90\%$
B: $\geq 80\%$ and $< 90\%$
C: $\geq 70\%$ and $< 80\%$
D: $\geq 60\%$ and $< 70\%$
E: $< 60\%$

Course Outline

Week 1 – Introduction – What is forest economics and why do we care?

Week 2 – Markets

Week 3 – Supply and Demand

Week 4 – Case Study – Asia and how things going on in Asia affect our woodland owners in the U.S.

Week 5 – Marginal Analysis

Week 6 – Discounting and Compounding

Week 7 – Discounting and Compounding

Week 8 – Investment Analysis

Week 9 – Capital Budgeting

Week 10 – Inflation, Risk, and Uncertainty

Week 11 – Valuation and Appraisal

Week 12 – Taxation

Week 13 – Non-timber Products

Week 14 – Valuation of Ecosystem Services

COURSE POLICIES

Attendance and Excused Absences

Attending lectures is expected of all students. Skipping class is not acting in your best interest. Weekly quizzes will be given. Make-up exams and quizzes will be given only to students who miss an exam as a result of excused absences. In all other circumstances, a grade of 0 (zero) will result for the missed exam or quiz.

Academic Integrity, Cheating and Plagiarism

Cheating of any form, including plagiarism, will not be tolerated. Cheating will be dealt with in accordance with University regulations. (See http://www.uky.edu/Student Affairs/Code/)

Professional Preparation

This course helps prepare you for your professional career. You are expected to attend class, be on time, participate in class discussions, and be respectful of your instructor and fellow classmates.

Disability Statement

Students with a disability that need classroom or exam accommodations should contact the Disability Resource Center, 257-2754, room 2 Alumni Gym, jkarnes@uky.edu .

APPLICATION FOR NEW COURSE

1. Submitted by the College of Agriculture Date: 03/03/2008

Department/Division proposing course: Department of Forestry

2. Proposed designation and Bulletin description of this course:

a. Prefix and Number FOR 330

b. Title* GIS and Spatial Analysis

*If title is longer than 24 characters, write a sensible title (24 characters or less) for use on transcripts:

c. Courses must be described by at least one of the categories below. Include the number of actual contact hours per week for each category, as applicable.

( ) CLINICAL ( ) COLLOQUIUM ( ) DISCUSSION (3) LABORATORY (2) LECTURE

( ) INDEPEND. STUDY ( ) PRACTICUM ( ) RECITATION ( ) RESEARCH ( ) RESIDENCY

( ) SEMINAR ( ) STUDIO ( ) OTHER – Please explain:

d. Please choose a grading system: ☑ Letter (A, B, C, etc.) ☐ Pass/Fail

e. Number of credit hours: 3

f. Is this course repeatable? YES ☐ NO ☑ If YES, maximum number of credit hours:

g. Course description:

Principles and operations of Geographic Information Systems (GIS) applied to forestry and natural resources. Students will learn to collect necessary field data to create GIS maps and digital spatial data sets, perform basic spatial analysis, and integrate social and economic data to solve spatially related natural resource problems.

h. Prerequisite(s), if any:

MA 109 or Calculus, FOR 150 and FOR 200

i. Will this course be offered through Distance Learning? YES ☐ NO ☑

If YES, please identify one of the methods below that reflects how the majority of the course content will be delivered:

☐ Internet/Web-based ☐ Interactive video ☐ Extended campus ☐ Kentucky Educational Television (KET/teleweb) ☐ Other

Please describe "Other":

3. Teaching method: ☐ N/A or ☐ Community-Based Experience ☑ Service Learning Component ☐ Both

4. To be cross-listed as:

Prefix and Number

Signature of chair of cross-listing department

5. Requested effective date (term/year): Fall / 2011

APPLICATION FOR NEW COURSE

6. Course to be offered (please check all that apply): ☑ Fall ☐ Spring ☐ Summer

7. Will the course be offered every year? ☑ YES ☐ NO

If NO, please explain: _____

8. Why is this course needed?

A course on GIS and spatial analysis is needed to provide forestry graduates the high-tech mapping skills that are needed to be professional foresters.

9. **a.** By whom will the course be taught? Dr. Songlin Fei

b. Are facilities for teaching the course now available? ☑ YES ☐ NO

If NO, what plans have been made for providing them?

_____

10. What yearly enrollment may be reasonably anticipated?

20

11. **a.** Will this course serve students primarily within the department? ☑ Yes ☐ No

b. Will it be of interest to a significant number of students outside the department? ☑ YES ☐ NO

If YES, please explain.

Natural Resource Conservation and Management majors

12. Will the course serve as a University Studies Program course[†]? ☐ YES ☑ NO

If YES, under what Area? _____

[†]AS OF SPRING 2007, THERE IS A MORATORIUM ON APPROVAL OF NEW COURSES FOR USP.

13. Check the category most applicable to this course:

☑ traditional – offered in corresponding departments at universities elsewhere

☐ relatively new – now being widely established

☐ not yet to be found in many (or any) other universities

14. Is this course applicable to the requirements for at least one degree or certificate at UK? ☑ Yes ☐ No

15. Is this course part of a proposed new program? ☐ YES ☑ NO

If YES, please name: _____

16. Will adding this course change the degree requirements for ANY program on campus? ☑ YES ☐ NO

If YES[‡], list below the programs that will require this course:

Undergraduate Forestry Program

[‡]In order to change the program(s), a program change form(s) must also be submitted.

APPLICATION FOR NEW COURSE

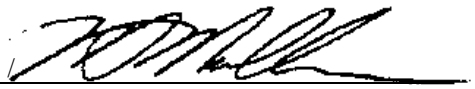
17. ☑ The major teaching objectives of the proposed course, syllabus and/or reference list to be used are attached.

18. ☐ Check box if course is 400G or 500. If the course is 400G- or 500-level, *you must include a syllabus showing differentiation* for undergraduate and graduate students by (i) requiring additional assignments by the graduate students; and/or (ii) the establishment of different grading criteria in the course for graduate students. (See *SR 3.1.4)*

19. Within the department, who should be contacted for further information about the proposed new course?

Name: Jim Ringe Phone: 859-257-7594 Email: jringe@uky.edu

20. Signatures to report approvals:

March 3, 2008	Steven H. Bullard	/	
DATE of Approval by Department Faculty	printed name	Reported by Department Chair	signature
9/29/2008	Michael Mullen	/	
DATE of Approval by College Faculty	printed name	Reported by College Dean	signature
		/	
* DATE of Approval by Undergraduate Council	printed name	Reported by Undergraduate Council Chair	signature
		/	
* DATE of Approval by Graduate Council	printed name	Reported by Graduate Council Chair	signature
		/	
* DATE of Approval by Health Care Colleges Council (HCCC)	printed name	Reported by Health Care Colleges Council Chair	signature
* DATE of Approval by Senate Council		Reported by Office of the Senate Council	
* DATE of Approval by University Senate		Reported by Office of the Senate Council	

*If applicable, as provided by the *University Senate Rules*

Course Syllabus

FOR 330

GIS and Spatial Analysis

Class Period

Lecture: 2 hours per week
Lab: 3 hours per week

Instructor

Dr. Songlin Fei
Room 204 T.P. Cooper Building
songlin.fei@uky.edu

COURSE OVERVIEW

Course Description

Principles and operations of Geographic Information Systems (GIS) applied to forestry and natural resource problems. Students will learn to collect necessary field data to create GIS maps and digital spatial data sets, perform basic spatial analysis, and integrate social and economic data to solve spatially related natural resource problems. *Prerequisites: MA 109 or Calculus, FOR 150, and FOR 200.*

Student Learning Outcomes

At the end of this course, the student will be able to demonstrate the following skills.

1. Describe the principles of geographic information systems (GIS) including data layers, data models, and map projections.
2. When given a natural resource problem, you will be able to create digital spatial data sets, perform basic spatial analysis, and integrate social and economic data to solve spatially related natural resource problems.
3. Locate and retrieve spatial data sets from public domain sources.
4. When given a field site, you will be able to use a global positioning unit to collect data and integrate the field data into a GIS map.
5. Explain trends in GIS technology and recognize challenges and opportunities related to GIS.

Grading Procedures – Assignments, Grading Criteria, Letter Grades

Course grades will be based on a weighted average of results as follows:

Homework/Lab – 50%

Weekly Quizzes – 10%
Midterm Exam – 20%
Term Project – 20%

Homework assignments are due at the beginning of the class one week after they are assigned, unless otherwise noted. Late homework will not be accepted for a grade. If your homework is late (without excused absence), I will be happy to review the homework but you will not receive credit for the assignment. Makeup labs are possible if the instructor has advance notice. Labs are generally turned in as printed maps and/or tables. If you are working at home it is possible to submit the printed lab assignments via email as a PDF. Please do not send .mdx or shapefiles. Your grade is for individual effort; copied files/maps from other students will be construed as cheating.

Weekly quizzes are to test your knowledge about the broad topics we are covering in class. Typically, I draw from what has been covered during previous classes or readings. I will give the quiz during the first few minutes of class. The quizzes are usually made up of a few multiple choice, short answer, true/false questions. Weekly quizzes are also designed to check your attendance. Your attendance in class is expected. Attendance will start counting on the first day of class following the end of the Drop/Add period. Three or more unexcused absences can result in your being removed from the class role. University closures will prevail.

The midterm exam will be a *Keyboard Exam.* This will be an open notes/book/help file exam. You will NOT be able to utilize any help from other people. You will be given a problem or a series of problems, data, and time to produce a product or a series of products based on concepts we have covered in the course.

Late homework, make-up quizzes and exams will only be given with an excused absence (S.R. 5.2.4.2). It is the student's responsibility to inform the instructor of the absence, preferably in advance, but no later than one week after the absence.

The purposes of the term project are 1) to enable you to explore in-depth an analysis performed with GIS and 2) to make an oral presentation that will be informative to you and to your classmates. Undergraduate student and graduate student will receive different assignments on term projects. Detailed instruction of the term project will be handed out in the fifth week of the semester.

I will try to grade all lab exercises and exams in a one-week period, for quick turn around. However, this won't happen in all cases. ***Grading will be on a straight scale, not on a curve***. If you all do well, you will all get an A. The scale is:

A 90 – 100 B 80 - 89 C 70 – 79 D 60 - 69

Course Outline

Week 1 - Introduction to GIS & ArcGIS. Introduction to raster, vector data structure.
Lab - Introduction to ArcGIS

Week 2 - Data models, map basics, vector data – point, line and area. Data models, raster data, tin, quadtree.
Lab - Displaying Data

Week 3 - Data format, coverage, shapefile. Data format, Geodatabase.
Lab - Getting information about features.

Week 4 - Relations databases, table manipulation. Data sources, entry and editing, metadata.
Lab - Analyzing feature relationships

Week 5 - Data sources, entry and editing. Basic geodesy, datum, coordinate systems, map projections
Lab - Analyzing feature relationships

Week 6 - Map transformation. Presenting data.
Lab - Creating and editing data

Week 7 – Exam. GPS.
Lab – Study for exam

Week 8 - Photos and satellite images digital data. Photos and satellite images digital data.
Lab – GPS

Week 9 - Basic spatial analysis. Raster analysis and modeling
Lab - Creating Models

Week 10 - Terrain analysis. Interpolation geostats.
Lab - Vector analysis

Week 11 - Interpolation geostats. Habitat modeling.
Lab - Spatial analysis

Week 12 - Habitat modeling. Cartographic modeling.
Lab - Spatial analysis. Raster Analysis

Week 13 - Data quality and future trends. Presentation preparation.

Week 14 - Oral Presentations

COURSE POLICIES

Attendance and Excused Absences

Your attendance in class is expected. Attendance will start counting on the first day of class following the end of the Drop/Add period. Three or more unexcused absences can result in your being removed from the class role. University closures will prevail.

Late homework, make-up quizzes and exams will only be given with an excused absence (S.R. 5.2.4.2). It is the student's responsibility to inform the instructor of the absence, preferably in advance, but no later than one week after the absence.

Academic Integrity, Cheating and Plagiarism

Cheating or plagiarism in any form is strictly prohibited. We will all follow the rules governing us set forth by the University of Kentucky. For more information, see Part II of "The Code of Student Conduct" which can be viewed online at http://www.uky.edu/StudentAffairs/Code/part2.html or can be obtained in the Dean of Students Office. The minimum penalty for either of these academic offenses is an "E" in the course, with suspension and dismissal also possibilities.

Professional Preparation

This course helps prepare you for your professional career. You are expected to attend class, be on time, participate in class discussions, and be respectful of your instructor and fellow classmates.

Disability Statement

Students with a disability that need classroom or exam accommodations should contact the Disability Resource Center, 257-2754, room 2 Alumni Gym, jkarnes@uky.edu .

APPLICATION FOR NEW COURSE

1. Submitted by the College of Agriculture Date: 03/03/2008

Department/Division proposing course: Department of Forestry

2. Proposed designation and Bulletin description of this course:

a. Prefix and Number FOR 355

b. Title* Forest Fire Control and Use

*If title is longer than 24 characters, write a sensible title (24 characters or less) for use on transcripts:
Forest Fire Control Use

c. Courses must be described by at least one of the categories below. Include the number of actual contact hours per week for each category, as applicable.

(___) CLINICAL (___) COLLOQUIUM (___) DISCUSSION (___) LABORATORY (___) LECTURE

(___) INDEPEND. STUDY (40) PRACTICUM (___) RECITATION (___) RESEARCH (___) RESIDENCY

(___) SEMINAR (___) STUDIO (___) OTHER – Please explain: NOTE: Course is 40 hrs. for 1 week

d. Please choose a grading system: ☑ Letter (A, B, C, etc.) ☐ Pass/Fail

e. Number of credit hours: 1

f. Is this course repeatable? YES ☐ NO ☑ If YES, maximum number of credit hours: _____

g. Course description:

A study of fire related concepts as they relate to trees, soils, landscapes, water quality, hydrology, wildlife, timber products, ecology and silviculture. In completing this course, students will become Red Card Certified through the U.S. Forest Service.

h. Prerequisite(s), if any:

FOR 150, FOR 219, FOR 250, FOR 370, FOR 330, FOR 340, FOR 350, PLS 366, or consent of the field semester coordinator.

i. Will this course be offered through Distance Learning? YES ☐ NO ☑

If YES, please identify one of the methods below that reflects how the majority of the course content will be delivered:

☐ Internet/Web-based ☐ Interactive video ☐ Extended campus ☐ Kentucky Educational Television (KET/teleweb) ☐ Other

Please describe "Other": _____

3. Teaching method: ☑ N/A or ☐ Community-Based Experience ☐ Service Learning Component ☐ Both

4. To be cross-listed as: _____ _____

Prefix and Number Signature of chair of cross-listing department

5. Requested effective date (term/year): Spring / 2012

APPLICATION FOR NEW COURSE

6. Course to be offered (please check all that apply): ☐ Fall ☑ Spring ☐ Summer

7. Will the course be offered every year? ☑ YES ☐ NO

If NO, please explain: _____

8. Why is this course needed?

As part of the Spring Field Semester, this course will provide forestry students hands-on experience in fire related concepts as they relate to trees, soils, landscapes, water quality, hydrology, wildlife , timber products, ecology and silviculture.

9. **a.** By whom will the course be taught? Dr. Jim Ringe

b. Are facilities for teaching the course now available? ☑ YES ☐ NO

If NO, what plans have been made for providing them?

_____

10. What yearly enrollment may be reasonably anticipated?

20

11. **a.** Will this course serve students primarily within the department? ☑ Yes ☐ No

b. Will it be of interest to a significant number of students outside the department? ☐ YES ☑ NO

If YES, please explain.

12. Will the course serve as a University Studies Program course[†]? ☐ YES ☑ NO

If YES, under what Area? _____

[†]AS OF SPRING 2007, THERE IS A MORATORIUM ON APPROVAL OF NEW COURSES FOR USP.

13. Check the category most applicable to this course:

☑ traditional – offered in corresponding departments at universities elsewhere

☐ relatively new – now being widely established

☐ not yet to be found in many (or any) other universities

14. Is this course applicable to the requirements for at least one degree or certificate at UK? ☑ Yes ☐ No

15. Is this course part of a proposed new program? ☐ YES ☑ NO

If YES, please name: _____

16. Will adding this course change the degree requirements for ANY program on campus? ☑ YES ☐ NO

If YES[‡], list below the programs that will require this course:

Undergraduate Forestry Program

[‡]In order to change the program(s), a program change form(s) must also be submitted.

APPLICATION FOR NEW COURSE

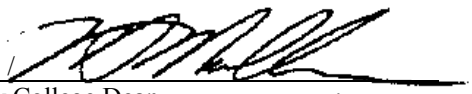
17. ☑ The major teaching objectives of the proposed course, syllabus and/or reference list to be used are attached.

18. ☐ Check box if course is 400G or 500. If the course is 400G- or 500-level, *you must include a syllabus showing differentiation* for undergraduate and graduate students by (i) requiring additional assignments by the graduate students; and/or (ii) the establishment of different grading criteria in the course for graduate students. (See *SR 3.1.4)*

19. Within the department, who should be contacted for further information about the proposed new course?

Name: Jim Ringe Phone: 859-257-7594 Email: jringe@uky.edu

20. Signatures to report approvals:

March 3, 2008	Steven H. Bullard	/	
DATE of Approval by Department Faculty	printed name	Reported by Department Chair	signature
9/29/2008	Michael Mullen	/	
DATE of Approval by College Faculty	printed name	Reported by College Dean	signature
		/	
* DATE of Approval by Undergraduate Council	printed name	Reported by Undergraduate Council Chair	signature
		/	
* DATE of Approval by Graduate Council	printed name	Reported by Graduate Council Chair	signature
		/	
* DATE of Approval by Health Care Colleges Council (HCCC)	printed name	Reported by Health Care Colleges Council Chair	signature
* DATE of Approval by Senate Council		Reported by Office of the Senate Council	
* DATE of Approval by University Senate		Reported by Office of the Senate Council	

*If applicable, as provided by the *University Senate Rules*

Course Syllabus

FOR 355

Forest Fire Control and Use

Class Period

Practicum (Spring Field Semester): 1 week (40 hours) of Spring Field Semester

Instructor

Dr. J. M. Ringe
Room 108 T.P. Cooper Building
859-257-7594
jringe@uky.edu

COURSE OVERVIEW

Course Description

A study of fire related concepts as they relate to trees, soils, landscapes, water quality, hydrology, wildlife, timber products, ecology and silviculture. In completing this course, students will become Red Card Certified through the U.S. Forest Service. *Prerequisites: FOR 150, FOR 219, FOR 250, FOR 370, FOR 330, FOR 340, FOR 350, PLS 366, or consent of the field semester coordinator.*

Student Learning Outcomes

At the end of this course, the student will be able to demonstrate the following skills.
1. Explain fire concepts and become Red Card Certified through the U.S. Forest Service.

During this course, students will become Red Card Certified through the U.S. Forest Service. Fire related concepts will be incorporated throughout the semester to show students how fire affects trees, soils, landscapes, water quality, hydrology, wildlife, timber products, forest ecology, and how fire is used for silviculture. Students will also learn policy, economic, ethical, and social impacts of fire throughout the semester.

Grading Procedures – Assignments, Grading Criteria, Letter Grades

Participation	60%
Quizzes	40%

Participation

Participation will be evaluated by attendance. Attendance will be taken at all U.S. Forest Service Training Sessions.

Letter Grades
A: ≥ 90%
B: ≥ 80% and < 90%
C: ≥ 70% and < 80%
D: ≥ 60% and < 70%
E: < 60%

Course Outline

One Week: Red Card Fire Certification - Become Red Card Certified through the U.S. Forest Service. Topics covered include Introduction to Incident Command, Firefighting Training, and Introduction to Wildland Fire Behavior

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COURSE POLICIES

Attendance and Excused Absences

Attendance is mandatory. Attendance will be taken at all U.S. Forest Service training sessions. If you foresee an absence, it is essential that you contact the instructor as soon as possible. If a student has excused absences in excess of one fifth of the class contact hours, a student may petition and receive a "W" or an "I" for the class.

Academic Integrity, Cheating and Plagiarism

Cheating of any form, including plagiarism, will not be tolerated. Cheating will be dealt with in accordance with University regulations. (See http://www.uky.edu/Student Affairs/Code/)

Professional Preparation

This course helps prepare you for your professional career. You are expected to attend class, be on time, participate in class discussions, and be respectful of your instructor and fellow classmates.

Disability Statement

Students with a disability that need classroom or exam accommodations should contact the Disability Resource Center, 257-2754, room 2 Alumni Gym, jkarnes@uky.edu .

APPLICATION FOR NEW COURSE

1. Submitted by the College of Agriculture Date: 03/03/2008

Department/Division proposing course: Department of Forestry

2. Proposed designation and Bulletin description of this course:

a. Prefix and Number FOR 356

b. Title* Landscape Assessment

*If title is longer than 24 characters, write a sensible title (24 characters or less) for use on transcripts:

c. Courses must be described by at least one of the categories below. Include the number of actual contact hours per week for each category, as applicable.

(___) CLINICAL (___) COLLOQUIUM (___) DISCUSSION (___) LABORATORY (___) LECTURE

(___) INDEPEND. STUDY (40) PRACTICUM (___) RECITATION (___) RESEARCH (___) RESIDENCY

(___) SEMINAR (___) STUDIO (___) OTHER – Please explain: NOTE: Course is 40 hrs. for 5 weeks

d. Please choose a grading system: ☑ Letter (A, B, C, etc.) ☐ Pass/Fail

e. Number of credit hours: 5

f. Is this course repeatable? YES ☐ NO ☑ If YES, maximum number of credit hours: _____

g. Course description:

Students will learn to assess various landscape types through week-long, in-depth studies of five topic areas, while studying how the topics are interrelated. The topic areas are winter dendrology, wildlife, soils, hydrology, and health and protection. During the module, students will visit sites throughout Kentucky and the region.

h. Prerequisite(s), if any:

FOR 150, FOR 219, FOR 250, FOR 370, FOR 330, FOR 340, FOR 350, PLS 366, or consent of the field semester coordinator.

i. Will this course be offered through Distance Learning? YES ☐ NO ☑

If YES, please identify one of the methods below that reflects how the majority of the course content will be delivered:

☐ Internet/Web-based ☐ Interactive video ☐ Extended campus ☐ Kentucky Educational Television (KET/teleweb) ☐ Other

Please describe "Other": _____

3. Teaching method: ☑ N/A or ☐ Community-Based Experience ☐ Service Learning Component ☐ Both

4. To be cross-listed as: _____ _____

Prefix and Number Signature of chair of cross-listing department

5. Requested effective date (term/year): Spring / 2012

APPLICATION FOR NEW COURSE

6. Course to be offered (please check all that apply): ☐ Fall ☑ Spring ☐ Summer

7. Will the course be offered every year? ☑ YES ☐ NO

If NO, please explain: _____

8. Why is this course needed?

As part of the Spring Field Semester, this course will provide forestry students hands-on experience to assess various landscapes.

9. **a.** By whom will the course be taught? Dr. Paul Kalisz

b. Are facilities for teaching the course now available? ☑ YES ☐ NO

If NO, what plans have been made for providing them?

_____

10. What yearly enrollment may be reasonably anticipated?

20

11. **a.** Will this course serve students primarily within the department? ☑ Yes ☐ No

b. Will it be of interest to a significant number of students outside the department? ☐ YES ☑ NO

If YES, please explain.

12. Will the course serve as a University Studies Program course†? ☐ YES ☑ NO

If YES, under what Area? _____

†AS OF SPRING 2007, THERE IS A MORATORIUM ON APPROVAL OF NEW COURSES FOR USP.

13. Check the category most applicable to this course:

☑ traditional – offered in corresponding departments at universities elsewhere

☐ relatively new – now being widely established

☐ not yet to be found in many (or any) other universities

14. Is this course applicable to the requirements for at least one degree or certificate at UK? ☑ Yes ☐ No

15. Is this course part of a proposed new program? ☐ YES ☑ NO

If YES, please name: _____

16. Will adding this course change the degree requirements for ANY program on campus? ☑ YES ☐ NO

If YES‡, list below the programs that will require this course:

Undergraduate Forestry Program

‡In order to change the program(s), a program change form(s) must also be submitted.

APPLICATION FOR NEW COURSE

17. ☑ The major teaching objectives of the proposed course, syllabus and/or reference list to be used are attached.

18. ☐ Check box if course is 400G or 500. If the course is 400G- or 500-level, *you must include a syllabus showing differentiation* for undergraduate and graduate students by (i) requiring additional assignments by the graduate students; and/or (ii) the establishment of different grading criteria in the course for graduate students. (See *SR 3.1.4)*

19. Within the department, who should be contacted for further information about the proposed new course?

Name: Jim Ringe Phone: 859-257-7594 Email: jringe@uky.edu

20. Signatures to report approvals:

March 3, 2008	Steven H. Bullard	/	
DATE of Approval by Department Faculty	printed name	Reported by Department Chair	signature
9/29/2008	Michael Mullen	/	
DATE of Approval by College Faculty	printed name	Reported by College Dean	signature
		/	
* DATE of Approval by Undergraduate Council	printed name	Reported by Undergraduate Council Chair	signature
		/	
* DATE of Approval by Graduate Council	printed name	Reported by Graduate Council Chair	signature
		/	
* DATE of Approval by Health Care Colleges Council (HCCC)	printed name	Reported by Health Care Colleges Council Chair	signature
* DATE of Approval by Senate Council		Reported by Office of the Senate Council	
* DATE of Approval by University Senate		Reported by Office of the Senate Council	

*If applicable, as provided by the *University Senate Rules*

Course Syllabus

FOR 356

Landscape Assessment

Class Period

Practicum (Spring Field Semester): 40 hours per week for 5 weeks of Spring Field Semester.

Instructor

Dr. Paul Kalisz
Room 102 T.P. Cooper Building
859-257-7606
pkalisz@uky.edu

COURSE OVERVIEW

Course Description

Students will learn to assess various landscape types through week-long, in-depth studies of five topic areas, while studying how the topics are interrelated. The topic areas are winter dendrology, wildlife, soils, hydrology, and health and protection. During the module, students will visit sites throughout Kentucky and the region. *Prerequisites: FOR 150, FOR 219, FOR 250, FOR 370, FOR 330, FOR 340, FOR 350, PLS 366, or consent of the field semester coordinator.*

Student Learning Outcomes

At the end of this course, the student will be able to demonstrate the following skills.
Dendrology (Winter)

1. Identify trees in the winter landscape by using tree components such as buds, twigs, and bark.
2. Use your knowledge of site quality characteristics to understand why certain tree species are located on different sites.

Wildlife

1. Apply knowledge of sampling theory in wildlife to practical applications such as taking vegetation measurement samples.
2. Evaluate cover at the ground, mid-story, and canopy level to determine how vegetation impacts wildlife habitat.
3. Apply knowledge of home range and patch size to select appropriate wildlife management principles for a given area.

Soils

1. Relate how soil properties influence a given landscape.
2. Analyze the difference between soil types and evaluate soil site quality.

Hydrology

1. Demonstrate proper sampling procedures for measuring flow, water quality, and other hydrologic variables.
2. Use collected data to analyze the variation between different landscapes and watersheds.

Health and Protection

1. Identify exotic and invasive plants. Explain exotic and invasive plant characteristics and relate how these characteristics impact rural and urban areas.
2. Identify forest health threats (pests, disease, wind, ice, water, drought, fire, wildlife, invasive plants) and use your knowledge of forest practices to describe ways to protect the forest from these threats.
3. Analyze ecosystems and critical habitat areas and the related silvicultural practices that should or should not be conducted in these areas.

Grading Procedures – Assignments, Grading Criteria, Letter Grades

Field Participation – 10%
Field Exercises – 60%
Quizzes – 30%

Letter Grades
A: $\geq 90\%$
B: $\geq 80\%$ and $< 90\%$
C: $\geq 70\%$ and $< 80\%$
D: $\geq 60\%$ and $< 70\%$
E: $< 60\%$

Course Outline

{Week 1 is FOR 355 Forest Fire Control and Use}

Week 2: Dendrology (Winter)
Week 3: Wildlife
Week 4: Soils
Week 5: Hydrology
Week 6: Health and Protection

During this module, students will learn to assess landscapes. Students will receive weeklong in-depth knowledge on a main topic area, while incorporating material from other topics. These topics include dendrology, wildlife, soils, hydrology, health and protection, and

inventory and measurements. Students will visit different ecosystems in the region to understand both plant and animal communities that exist and how soils and hydrology help shape the landscape.

Integration: Throughout this module, students will return to the sample property to understand dendrology, wildlife, soils, hydrology, health and protection, inventory and measurements at the sample property. During visits to the sample property, students will gather data on particular topic areas to create GIS map layers for the sites. At the end of the module, students will have assessed the sample property and created a digital map of the site containing GIS layers for trees, wildlife, soils, hydrology, stand inventory data, and forest health.

COURSE POLICIES

Attendance and Excused Absences

Attendance is mandatory. If you foresee an absence, it is essential that you contact the instructor as soon as possible. If a student has excused absences in excess of one fifth of the class contact hours, a student may petition and receive a "W" or an "I" for the class.

Academic Integrity, Cheating and Plagiarism

Cheating of any form, including plagiarism, will not be tolerated. Cheating will be dealt with in accordance with University regulations. (See http://www.uky.edu/Student Affairs/Code/)

Professional Preparation

This course helps prepare you for your professional career. You are expected to attend class, be on time, participate in class discussions, and be respectful of your instructor and fellow classmates.

Disability Statement

Students with a disability that need classroom or exam accommodations should contact the Disability Resource Center, 257-2754, room 2 Alumni Gym, jkarnes@uky.edu .

APPLICATION FOR NEW COURSE

1. Submitted by the College of Agriculture Date: 03/03/2008

Department/Division proposing course: Department of Forestry

2. Proposed designation and Bulletin description of this course:

a. Prefix and Number FOR 357

b. Title* Inventory and Measurements II

*If title is longer than 24 characters, write a sensible title (24 characters or less) for use on transcripts:
Inventory & Measurements

c. Courses must be described by at least one of the categories below. Include the number of actual contact hours per week for each category, as applicable.

(___) CLINICAL (___) COLLOQUIUM (___) DISCUSSION (___) LABORATORY (___) LECTURE

(___) INDEPEND. STUDY (40) PRACTICUM (___) RECITATION (___) RESEARCH (___) RESIDENCY

(___) SEMINAR (___) STUDIO (___) OTHER – Please explain: NOTE: Course is 40 hrs. for 2 weeks

d. Please choose a grading system: ☑ Letter (A, B, C, etc.) ☐ Pass/Fail

e. Number of credit hours: 2

f. Is this course repeatable? YES ☐ NO ☑ If YES, maximum number of credit hours: _____

g. Course description:

This course teaches students how to conduct forest inventories using a variety of criteria and measurements. Students will use GPS to establish area boundaries and GIS to construct area maps. They will learn how to use inventory data to determine economic value.

h. Prerequisite(s), if any:

FOR 150, FOR 219, FOR 250, FOR 370, FOR 330, FOR 340, FOR 350, PLS 366 or consent of the field semester coordinator.

i. Will this course be offered through Distance Learning? YES ☐ NO ☑

If YES, please identify one of the methods below that reflects how the majority of the course content will be delivered:

☐ Internet/Web-based ☐ Interactive video ☐ Extended campus ☐ Kentucky Educational Television (KET/teleweb) ☐ Other

Please describe "Other": _____

3. Teaching method: ☑ N/A or ☐ Community-Based Experience ☐ Service Learning Component ☐ Both

4. To be cross-listed as: _____ _____
Prefix and Number Signature of chair of cross-listing department

5. Requested effective date (term/year): Spring / 2012

APPLICATION FOR NEW COURSE

6. Course to be offered (please check all that apply): ☐ Fall ☑ Spring ☐ Summer

7. Will the course be offered every year? ☑ YES ☐ NO

If NO, please explain: _____

8. Why is this course needed?

As part of the Spring Field Semester, this course will provide forestry students hands-on experience to conduct forest inventories using a variety of criteria and measurements.

9. **a.** By whom will the course be taught? Dr. Paul Kalisz

b. Are facilities for teaching the course now available? ☑ YES ☐ NO

If NO, what plans have been made for providing them?

_____

10. What yearly enrollment may be reasonably anticipated?

20

11. **a.** Will this course serve students primarily within the department? ☑ Yes ☐ No

b. Will it be of interest to a significant number of students outside the department? ☐ YES ☑ NO

If YES, please explain.

12. Will the course serve as a University Studies Program course[†]? ☐ YES ☑ NO

If YES, under what Area? _____

[†]AS OF SPRING 2007, THERE IS A MORATORIUM ON APPROVAL OF NEW COURSES FOR USP.

13. Check the category most applicable to this course:

☑ traditional – offered in corresponding departments at universities elsewhere

☐ relatively new – now being widely established

☐ not yet to be found in many (or any) other universities

14. Is this course applicable to the requirements for at least one degree or certificate at UK? ☑ Yes ☐ No

15. Is this course part of a proposed new program? ☐ YES ☑ NO

If YES, please name: _____

16. Will adding this course change the degree requirements for ANY program on campus? ☑ YES ☐ NO

If YES[‡], list below the programs that will require this course:

Undergraduate Forestry Program

[‡]In order to change the program(s), a program change form(s) must also be submitted.

APPLICATION FOR NEW COURSE

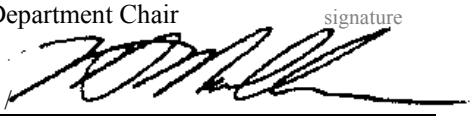
17. ☑ The major teaching objectives of the proposed course, syllabus and/or reference list to be used are attached.

18. ☐ Check box if course is 400G or 500. If the course is 400G- or 500-level, *you must include a syllabus showing differentiation* for undergraduate and graduate students by (i) requiring additional assignments by the graduate students; and/or (ii) the establishment of different grading criteria in the course for graduate students. (See *SR 3.1.4)*

19. Within the department, who should be contacted for further information about the proposed new course?

Name: Jim Ringe Phone: 859-257-7594 Email: jringe@uky.edu

20. Signatures to report approvals:

March 3, 2008	Steven H. Bullard	/	
DATE of Approval by Department Faculty	printed name	Reported by Department Chair	signature
9/29/2008	Michael Mullen	/	
DATE of Approval by College Faculty	printed name	Reported by College Dean	signature
		/	
* DATE of Approval by Undergraduate Council	printed name	Reported by Undergraduate Council Chair	signature
		/	
* DATE of Approval by Graduate Council	printed name	Reported by Graduate Council Chair	signature
		/	
* DATE of Approval by Health Care Colleges Council (HCCC)	printed name	Reported by Health Care Colleges Council Chair	signature
* DATE of Approval by Senate Council		Reported by Office of the Senate Council	
* DATE of Approval by University Senate		Reported by Office of the Senate Council	

*If applicable, as provided by the *University Senate Rules*

Course Syllabus

FOR 357

Inventory and Measurements II

Class Period

Practicum (Spring Field Semester): 40 hours per week for 2 weeks of Spring Field Semester.

Instructor

Dr. Paul Kalisz
Room 102 T.P. Cooper Building
859-257-7606
pkalisz@uky.edu

COURSE OVERVIEW

Course Description

This course teaches students how to conduct forest inventories using a variety of criteria and measurements. Students will use GPS to establish area boundaries and GIS to construct area maps. They will learn how to use inventory data to determine economic value. *Prerequisites: FOR 150, FOR 219, FOR 250, FOR 370, FOR 330, FOR 340, FOR 350, PLS 366, or consent of the field semester coordinator.*

Student Learning Outcomes

At the end of this course, the student will be able to demonstrate the following skills.

1. Demonstrate the correct procedures for conducting and writing a timber inventory. This includes using proper techniques to measure height, diameter, crown width, and stand basal area and using global positioning systems to collect stand borders, navigate, and conduct sampling.
2. Analyze different sites by comparing measurements and recognize other ways to classify a site besides site index.
3. Evaluate how silvicultural prescriptions impact wood product value.

Grading Procedures – Assignments, Grading Criteria, Letter Grades

Field Participation – 10%
Field Exercises – 60%
Quizzes – 30%

Letter Grades
A: ≥ 90%
B: ≥ 80% and < 90%
C: ≥ 70% and < 80%
D: ≥ 60% and < 70%

E: < 60%

Course Outline

{Week 1 is FOR 355 Forest Fire Control and Use}
{Week 2-6 is FOR 356 Landscape Assessment}

Week 7-8: Inventory and Measurements II – Timber inventory, measurements, GPS, and wood product value

Integration: Throughout this module and the previous module on Landscape Assessment, students will return to the sample property to understand dendrology, wildlife, soils, hydrology, health and protection, inventory and measurements at the sample property. During visits to the sample property, students will gather data on particular topic areas to create GIS map layers for the sites. At the end of the module, students will have assessed the sample property and created a digital map of the site containing GIS layers for trees, wildlife, soils, hydrology, stand inventory data, and forest health.

COURSE POLICIES

Attendance and Excused Absences

Attendance is mandatory. If you foresee an absence, it is essential that you contact the instructor as soon as possible. If a student has excused absences in excess of one fifth of the class contact hours, a student may petition and receive a "W" or an "I" for the class.

Academic Integrity, Cheating and Plagiarism

Cheating of any form, including plagiarism, will not be tolerated. Cheating will be dealt with in accordance with University regulations. (See http://www.uky.edu/Student Affairs/Code/)

Professional Preparation

This course helps prepare you for your professional career. You are expected to attend class, be on time, participate in class discussions, and be respectful of your instructor and fellow classmates.

Disability Statement

Students with a disability that need classroom or exam accommodations should contact the Disability Resource Center, 257-2754, room 2 Alumni Gym, jkarnes@uky.edu .

APPLICATION FOR NEW COURSE

1. Submitted by the College of Agriculture Date: 03/03/2008

Department/Division proposing course: Department of Forestry

2. Proposed designation and Bulletin description of this course:

a. Prefix and Number FOR 358

b. Title* Silvicultural Practices

*If title is longer than 24 characters, write a sensible title (24 characters or less) for use on transcripts:

c. Courses must be described by at least one of the categories below. Include the number of actual contact hours per week for each category, as applicable.

(___) CLINICAL (___) COLLOQUIUM (___) DISCUSSION (___) LABORATORY (___) LECTURE

(___) INDEPEND. STUDY (40) PRACTICUM (___) RECITATION (___) RESEARCH (___) RESIDENCY

(___) SEMINAR (___) STUDIO (___) OTHER – Please explain: NOTE: Course is 40 hrs. for 3 weeks

d. Please choose a grading system: ☑ Letter (A, B, C, etc.) ☐ Pass/Fail

e. Number of credit hours: 3

f. Is this course repeatable? YES ☐ NO ☑ If YES, maximum number of credit hours: _____

g. Course description:

A study of the silvicultural practices for altering the forest canopy and regenerating the forest. Students will learn to apply these practices to meet multiple use objectives such as forest products, wildlife, health and protection, watershed, and recreation and develop silvicultural prescriptions.

h. Prerequisite(s), if any:

FOR 150, FOR 219, FOR 250, FOR 370, FOR 330, FOR 340, FOR 350, PLS 366, or consent of the field semester coordinator.

i. Will this course be offered through Distance Learning? YES ☐ NO ☑

If YES, please identify one of the methods below that reflects how the majority of the course content will be delivered:

☐ Internet/Web-based ☐ Interactive video ☐ Extended campus ☐ Kentucky Educational Television (KET/teleweb) ☐ Other

Please describe "Other": _____

3. Teaching method: ☑ N/A or ☐ Community-Based Experience ☐ Service Learning Component ☐ Both

4. To be cross-listed as: _____ _____

Prefix and Number Signature of chair of cross-listing department

5. Requested effective date (term/year): Spring / 2012

APPLICATION FOR NEW COURSE

6. Course to be offered (please check all that apply): ☐ Fall ☑ Spring ☐ Summer

7. Will the course be offered every year? ☑ YES ☐ NO

If NO, please explain: _____

8. Why is this course needed?

As part of the Spring Field Semester, this course will provide forestry students hands-on experience to apply and develop silvicultural practices to meet the multiple use objective such as forest products, wildlife, health and protection, watershed, and recreation.

9. **a.** By whom will the course be taught? Dr. John Lhotka

b. Are facilities for teaching the course now available? ☑ YES ☐ NO

If NO, what plans have been made for providing them?

_____

10. What yearly enrollment may be reasonably anticipated?

20

11. **a.** Will this course serve students primarily within the department? ☑ Yes ☐ No

b. Will it be of interest to a significant number of students outside the department? ☐ YES ☑ NO

If YES, please explain.

12. Will the course serve as a University Studies Program course†? ☐ YES ☑ NO

If YES, under what Area? _____

†AS OF SPRING 2007, THERE IS A MORATORIUM ON APPROVAL OF NEW COURSES FOR USP.

13. Check the category most applicable to this course:

☑ traditional – offered in corresponding departments at universities elsewhere

☐ relatively new – now being widely established

☐ not yet to be found in many (or any) other universities

14. Is this course applicable to the requirements for at least one degree or certificate at UK? ☑ Yes ☐ No

15. Is this course part of a proposed new program? ☐ YES ☑ NO

If YES, please name: _____

16. Will adding this course change the degree requirements for ANY program on campus? ☑ YES ☐ NO

If YES‡, list below the programs that will require this course:

Undergraduate Forestry Program

‡In order to change the program(s), a program change form(s) must also be submitted.

APPLICATION FOR NEW COURSE

17. ☑ The major teaching objectives of the proposed course, syllabus and/or reference list to be used are attached.

18. ☐ Check box if course is 400G or 500. If the course is 400G- or 500-level, *you must include a syllabus showing differentiation* for undergraduate and graduate students by (i) requiring additional assignments by the graduate students; and/or (ii) the establishment of different grading criteria in the course for graduate students. (See *SR 3.1.4)*

19. Within the department, who should be contacted for further information about the proposed new course?

Name: Jim Ringe Phone: 859-257-7594 Email: jringe@uky.edu

20. Signatures to report approvals:

March 3, 2008	Steven H. Bullard	/	
DATE of Approval by Department Faculty	printed name	Reported by Department Chair	signature
9/29/2008	Michael Mullen		
DATE of Approval by College Faculty	printed name	Reported by College Dean	signature
		/	
* DATE of Approval by Undergraduate Council	printed name	Reported by Undergraduate Council Chair	signature
		/	
* DATE of Approval by Graduate Council	printed name	Reported by Graduate Council Chair	signature
		/	
* DATE of Approval by Health Care Colleges Council (HCCC)	printed name	Reported by Health Care Colleges Council Chair	signature
* DATE of Approval by Senate Council		Reported by Office of the Senate Council	
* DATE of Approval by University Senate		Reported by Office of the Senate Council	

*If applicable, as provided by the *University Senate Rules*

Course Syllabus

FOR 358

Silvicultural Practices

Class Period

Practicum (Spring Field Semester): 40 hours per week for 3 weeks of Spring Field Semester.

Instructor

Dr. John Lhotka
Room 210 T.P. Cooper Building
859-257-9701
john.lhotka@uky.edu

COURSE OVERVIEW

Course Description

A study of the silvicultural practices for altering the forest canopy and regenerating the forest. Students will learn to apply these practices to meet multiple use objectives such as forest products, wildlife, health and protection, watershed, and recreation and develop silvicultural prescriptions. *Prerequisites: FOR 150, FOR 219, FOR 250, FOR 370, FOR 330, FOR 340, FOR 350, PLS 366, or consent of the field semester coordinator.*

Student Learning Outcomes

At the end of this course, the student will be able to demonstrate the following skills.

Alteration of forest canopy, regeneration, and regional applications

1. Analyze how to alter the forest canopy to meet a given objective.
2. Assess stand stocking and demonstrate the correct procedures for marking the stand for a thinning or other intermediate treatment.
3. Demonstrate the correct procedures for conducting a natural regeneration assessment.
4. Demonstrate the correct procedures for conducting artificial regeneration.
5. Compare various silvicultural practices throughout the region.

Prescriptions

1. Describe the components of a silvicultural prescription for multiple objectives such as recreation, wildlife, health and protection, and forest products.
2. Analyze critical habitat areas and explain how to incorporate critical habitat areas into management prescriptions.

Grading Procedures – Assignments, Grading Criteria, Letter Grades

Field Participation – 10%
Field Exercises – 60%
Quizzes – 30%

Letter Grades
A: ≥ 90%
B: ≥ 80% and < 90%
C: ≥ 70% and < 80%
D: ≥ 60% and < 70%
E: < 60%

Course Outline

{Week 1 is FOR 355 Forest Fire Control and Use}
{Week 2-6 is FOR 356 Landscape Assessment}
{Week 7-8 is FOR 357 Inventory and Measurements II}

Week 9-10: Alteration of forest canopy, regeneration, and regional applications
Week 11: Prescriptions

During this module, students will learn silvicultural practices for altering the forest canopy and regenerating the forest. Students will apply these practices to meet multiple use objectives such as forest products, wildlife, health and protection, and recreation. Students will visit sites within Kentucky and throughout the South to see various silvicultural applications.

Integration: By the end of the module students will develop silvicultural prescriptions for forest products, wildlife, health and protection, and recreation objectives on the sample property.

COURSE POLICIES

Attendance and Excused Absences

Attendance is mandatory. If you foresee an absence, it is essential that you contact the instructor as soon as possible. If a student has excused absences in excess of one fifth of the class contact hours, a student may petition and receive a "W" or an "I" for the class.

Academic Integrity, Cheating and Plagiarism

Cheating of any form, including plagiarism, will not be tolerated. Cheating will be dealt with in accordance with University regulations. (See http://www.uky.edu/Student Affairs/Code/)

Professional Preparation

This course helps prepare you for your professional career. You are expected to attend class, be on time, participate in class discussions, and be respectful of your instructor and fellow classmates.

Disability Statement

Students with a disability that need classroom or exam accommodations should contact the Disability Resource Center, 257-2754, room 2 Alumni Gym, jkarnes@uky.edu .

APPLICATION FOR NEW COURSE

1. Submitted by the College of Agriculture Date: 03/03/2008

Department/Division proposing course: Department of Forestry

2. Proposed designation and Bulletin description of this course:

a. Prefix and Number FOR 359

b. Title* Forest Operations and Utilization

*If title is longer than 24 characters, write a sensible title (24 characters or less) for use on transcripts:
Forest Oper. & Utiliz.

c. Courses must be described by at least one of the categories below. Include the number of actual contact hours per week for each category, as applicable.

(___) CLINICAL (___) COLLOQUIUM (___) DISCUSSION (___) LABORATORY (___) LECTURE

(___) INDEPEND. STUDY (40) PRACTICUM (___) RECITATION (___) RESEARCH (___) RESIDENCY

(___) SEMINAR (___) STUDIO (___) OTHER – Please explain: NOTE: Course is 40 hrs. for 3 weeks

d. Please choose a grading system: ☑ Letter (A, B, C, etc.) ☐ Pass/Fail

e. Number of credit hours: 3

f. Is this course repeatable? YES ☐ NO ☑ If YES, maximum number of credit hours: _____

g. Course description:

Plan and design timber harvests, mark a stand for harvest, and describe the effects of harvesting. Use herbicides and pesticides to eradicate invasive species, perform tree planting, conduct thinnings, and participate in prescribed burns. Learn timber utilization technology and determine value added in converting trees to lumber.

h. Prerequisite(s), if any:

FOR 150, FOR 219, FOR 250, FOR 370, FOR 330, FOR 340, FOR 350, PLS 366, or consent of the field semester coordinator.

i. Will this course be offered through Distance Learning? YES ☐ NO ☑

If YES, please identify one of the methods below that reflects how the majority of the course content will be delivered:

☐ Internet/Web-based ☐ Interactive video ☐ Extended campus ☐ Kentucky Educational Television (KET/teleweb) ☐ Other

Please describe "Other": _____

3. Teaching method: ☑ N/A or ☐ Community-Based Experience ☐ Service Learning Component ☐ Both

4. To be cross-listed as: _____ _____
Prefix and Number Signature of chair of cross-listing department

5. Requested effective date (term/year): Spring / 2012

APPLICATION FOR NEW COURSE

6. Course to be offered (please check all that apply): ☐ Fall ☑ Spring ☐ Summer

7. Will the course be offered every year? ☑ YES ☐ NO

If NO, please explain: _____

8. Why is this course needed?

As part of the Spring Field Semester, this course will provide forestry students the hands-on experience to plan and design timber harvest and describe the effects of harvesting. Students will also receive hands-on experience with timber utilization technologies and determining value added in converting standing trees to finished products.

9. **a.** By whom will the course be taught? Dr. Terry Conners and Dr. Jeff Stringer

b. Are facilities for teaching the course now available? ☑ YES ☐ NO

If NO, what plans have been made for providing them?

_____

10. What yearly enrollment may be reasonably anticipated?

20

11. **a.** Will this course serve students primarily within the department? ☑ Yes ☐ No

b. Will it be of interest to a significant number of students outside the department? ☐ YES ☑ NO

If YES, please explain.

12. Will the course serve as a University Studies Program course†? ☐ YES ☑ NO

If YES, under what Area? _____

†AS OF SPRING 2007, THERE IS A MORATORIUM ON APPROVAL OF NEW COURSES FOR USP.

13. Check the category most applicable to this course:

☑ traditional – offered in corresponding departments at universities elsewhere

☐ relatively new – now being widely established

☐ not yet to be found in many (or any) other universities

14. Is this course applicable to the requirements for at least one degree or certificate at UK? ☑ Yes ☐ No

15. Is this course part of a proposed new program? ☐ YES ☑ NO

If YES, please name: _____

16. Will adding this course change the degree requirements for ANY program on campus? ☑ YES ☐ NO

If YES‡, list below the programs that will require this course:

Undergraduate Forestry Program

‡In order to change the program(s), a program change form(s) must also be submitted.

APPLICATION FOR NEW COURSE

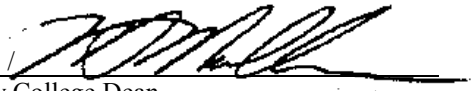
17. ☑ The major teaching objectives of the proposed course, syllabus and/or reference list to be used are attached.

18. ☐ Check box if course is 400G or 500. If the course is 400G- or 500-level, *you must include a syllabus showing differentiation* for undergraduate and graduate students by (i) requiring additional assignments by the graduate students; and/or (ii) the establishment of different grading criteria in the course for graduate students. (See *SR 3.1.4)*

19. Within the department, who should be contacted for further information about the proposed new course?

Name: Jim Ringe Phone: 859-257-7594 Email: jringe@uky.edu

20. Signatures to report approvals:

March 3, 2008	Steven H. Bullard	/	
DATE of Approval by Department Faculty	printed name	Reported by Department Chair	signature
9/29/2008	Michael Mullen	/	
DATE of Approval by College Faculty	printed name	Reported by College Dean	signature
		/	
* DATE of Approval by Undergraduate Council	printed name	Reported by Undergraduate Council Chair	signature
		/	
* DATE of Approval by Graduate Council	printed name	Reported by Graduate Council Chair	signature
		/	
* DATE of Approval by Health Care Colleges Council (HCCC)	printed name	Reported by Health Care Colleges Council Chair	signature
* DATE of Approval by Senate Council		Reported by Office of the Senate Council	
* DATE of Approval by University Senate		Reported by Office of the Senate Council	

*If applicable, as provided by the *University Senate Rules*

Course Syllabus

FOR 359

Forest Operations and Utilization

Class Period

Practicum (Spring Field Semester): 40 hours per week for 3 weeks of Spring Field Semester.

Instructor

Dr. Terry Conners
Room 202 T.P. Cooper Building
859-257-2463
tconners@uky.edu

Dr. Jeff Stringer
Room 213B T.P. Cooper Building
859-257-5994
stringer@uky.edu

COURSE OVERVIEW

Course Description

Students will learn to plan and design timber harvests in line with Best Management Practices, mark a stand for harvest, and describe the effects of harvesting on the landscape. They will learn to use herbicides and pesticides to eradicate invasive species, perform tree planting, conduct thinnings, and participate in prescribed burns. Students will become familiar with major timber utilization technologies and learn to determine value added in converting standing trees into lumber and lumber into finished products. *Prerequisites: FOR 150, FOR 219, FOR 250, FOR 370, FOR 330, FOR 340, FOR 350, PLS 366 or consent of the field semester coordinator.*

Student Learning Outcomes

At the end of this course, the student will be able to demonstrate the following skills.

Harvesting

1. Apply best management practices (BMPs) to forestry practices.
2. Explain various harvesting practices and the related costs associated with these practices.
3. Apply harvesting layout and design principles and describe the correct procedures for creating roads, landings, skids, stream crossings, fires lanes, logging roads, and marking a stand to survive a harvest. Apply BMPs to harvesting layout and design.
4. Use your knowledge of harvesting, forests, soils, watersheds, and wildlife to examine the impact of harvesting on the landscape.
5. Use your knowledge of forestry and logging to become certified as a Master Logger, which includes chainsaw training.

Technical Aspects

1. Explain the costs (economic, social, and environmental) associated with harvesting, site preparations, and prescribed burns.
2. Use your knowledge of proper herbicide and pesticide application techniques to become certified in herbicide and pesticide application.
3. Demonstrate the correct techniques for tree planting.
4. Demonstrate the correct procedures for conducting a thinning operation.
5. Examine prescribed burns and recognize how fire affects wildlife habitat structure and environmental conditions impacting understory plant response.
6. Describe genetic concepts after visiting a breeding program seed orchard.

Utilization – Primary and Secondary

1. Compare various mill processes and mill facilities such as facility size, process, wood input, tree type, and supply.
2. Calculate value added at secondary processing facilities.

Grading Procedures – Assignments, Grading Criteria, Letter Grades

Field Participation – 10%
Field Exercises – 60%
Quizzes – 30%

Letter Grades
A: $\geq 90\%$
B: $\geq 80\%$ and $< 90\%$
C: $\geq 70\%$ and $< 80\%$
D: $\geq 60\%$ and $< 70\%$
E: $< 60\%$

Course Outline

{Week 1 is FOR 355 Forest Fire Control and Use}
{Week 2-6 is FOR 356 Landscape Assessment}
{Week 7-8 is FOR 357 Inventory and Measurements II}
{Week 9-11 is FOR 358 Silvicultural Practices}

Week 12: Harvesting
Week 13: Technical Aspects
Week 14: Utilization – Primary and Secondary

During this module, students will examine harvesting practices, including layout and design. Students will use silvicultural prescriptions learned in the previous module and apply those prescriptions to this module. Students will receive hands-on training in prescribed burns, site preparation, herbicide and pesticide application, and tree planting and learn the costs associated with these activities.

Integration: Students will design harvesting operations on the sample property using geospatial techniques, good business sense, and ethical considerations.

COURSE POLICIES

Attendance and Excused Absences

Attendance is mandatory. If you foresee an absence, it is essential that you contact the instructor as soon as possible. If a student has excused absences in excess of one fifth of the class contact hours, a student may petition and receive a "W" or an "I" for the class.

Academic Integrity, Cheating and Plagiarism

Cheating of any form, including plagiarism, will not be tolerated. Cheating will be dealt with in accordance with University regulations. (See http://www.uky.edu/Student Affairs/Code/)

Professional Preparation

This course helps prepare you for your professional career. You are expected to attend class, be on time, participate in class discussions, and be respectful of your instructor and fellow classmates.

Disability Statement

Students with a disability that need classroom or exam accommodations should contact the Disability Resource Center, 257-2754, room 2 Alumni Gym, jkarnes@uky.edu .

APPLICATION FOR NEW COURSE

1. Submitted by the College of Agriculture Date: 03/03/2008

Department/Division proposing course: Department of Forestry

2. Proposed designation and Bulletin description of this course:

a. Prefix and Number FOR 400

b. Title* Human Dimensions of Forestry and Natural Resources

*If title is longer than 24 characters, write a sensible title (24 characters or less) for use on transcripts:
Human Dimens. For. & NR

c. Courses must be described by at least one of the categories below. Include the number of actual contact hours per week for each category, as applicable.

(___) CLINICAL (___) COLLOQUIUM (___) DISCUSSION (___) LABORATORY (3) LECTURE

(___) INDEPEND. STUDY (___) PRACTICUM (___) RECITATION (___) RESEARCH (___) RESIDENCY

(___) SEMINAR (___) STUDIO (___) OTHER – Please explain: _____

d. Please choose a grading system: ☑ Letter (A, B, C, etc.) ☐ Pass/Fail

e. Number of credit hours: 3

f. Is this course repeatable? YES ☐ NO ☑ If YES, maximum number of credit hours: _____

g. Course description:

In an issues based format, students will study societal trends and their impact on natural systems, the disconnect between society and nature, wildlife-human interactions, as well as problems related to globalization and urbanization.

h. Prerequisite(s), if any:

Senior Standing or consent of the instructor. This is a writing-intensive (W) course approved to fulfill the upper tier of the graduation writing requirement (GWR). To receive W credit for this course, you must have successfully completed the first-year writing requirement (ENG 104 or its equivalent) and have completed at least 30 hours of coursework. Forestry majors must complete this course and FOR 470 to fulfill upper tier of the GWR.

i. Will this course be offered through Distance Learning? YES ☐ NO ☑

If YES, please identify one of the methods below that reflects how the majority of the course content will be delivered:

☐ Internet/Web-based ☐ Interactive video ☐ Extended campus ☐ Kentucky Educational Television (KET/teleweb) ☐ Other

Please describe "Other": _____

3. Teaching method: ☑ N/A or ☐ Community-Based Experience ☐ Service Learning Component ☐ Both

4. To be cross-listed as: _____ _____
Prefix and Number Signature of chair of cross-listing department

5. Requested effective date (term/year): Fall / 2012

APPLICATION FOR NEW COURSE

6. Course to be offered (please check all that apply): ☑ Fall ☐ Spring ☐ Summer

7. Will the course be offered every year? ☑ YES ☐ NO

If NO, please explain: _____

8. Why is this course needed?

A course on the human dimension aspects of forestry and natural resources is needed to comply with Society of American Forester accreditation requirements. Understanding social aspects of forestry is critical to forestry and natural resource professionals today.

9. **a.** By whom will the course be taught? Dr. Steve Bullard

b. Are facilities for teaching the course now available? ☑ YES ☐ NO

If NO, what plans have been made for providing them?

_____

10. What yearly enrollment may be reasonably anticipated?

20

11. **a.** Will this course serve students primarily within the department? ☑ Yes ☐ No

b. Will it be of interest to a significant number of students outside the department? ☑ YES ☐ NO

If YES, please explain.

Natural Resource Conservation and Management majors may be interested in this course.

12. Will the course serve as a University Studies Program course[†]? ☐ YES ☑ NO

If YES, under what Area? _____

[†]AS OF SPRING 2007, THERE IS A MORATORIUM ON APPROVAL OF NEW COURSES FOR USP.

13. Check the category most applicable to this course:

☐ traditional – offered in corresponding departments at universities elsewhere

☑ relatively new – now being widely established

☐ not yet to be found in many (or any) other universities

14. Is this course applicable to the requirements for at least one degree or certificate at UK? ☑ Yes ☐ No

15. Is this course part of a proposed new program? ☐ YES ☑ NO

If YES, please name: _____

16. Will adding this course change the degree requirements for ANY program on campus? ☑ YES ☐ NO

If YES[‡], list below the programs that will require this course:

Undergraduate Forestry Program

[‡]In order to change the program(s), a program change form(s) must also be submitted.

APPLICATION FOR NEW COURSE

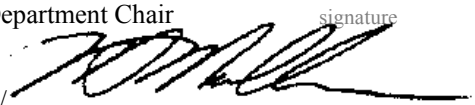
17. ☑ The major teaching objectives of the proposed course, syllabus and/or reference list to be used are attached.

18. ☐ Check box if course is 400G or 500. If the course is 400G- or 500-level, *you must include a syllabus showing differentiation* for undergraduate and graduate students by (i) requiring additional assignments by the graduate students; and/or (ii) the establishment of different grading criteria in the course for graduate students. (See *SR 3.1.4)*

19. Within the department, who should be contacted for further information about the proposed new course?

Name: Jim Ringe Phone: 859-257-7594 Email: jringe@uky.edu

20. Signatures to report approvals:

March 3, 2008	Steven H. Bullard	/		
DATE of Approval by Department Faculty	printed name	Reported by Department Chair	signature	
9/29/2008	Michael Mullen	/		
DATE of Approval by College Faculty	printed name	Reported by College Dean	signature	
		/		
* DATE of Approval by Undergraduate Council	printed name	Reported by Undergraduate Council Chair	signature	
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* DATE of Approval by Senate Council		Reported by Office of the Senate Council		
* DATE of Approval by University Senate		Reported by Office of the Senate Council		

*If applicable, as provided by the *University Senate Rules*

Course Syllabus

FOR 400

Human Dimensions of Forestry and Natural Resources

Class Period

Lecture: 3 hours per week

Instructor

Dr. Steve Bullard
Room 106 T.P. Cooper Building
859-257-7596
steve.bullard@uky.edu

COURSE OVERVIEW

Course Description

In an issues based format, students will study societal trends and their impact on natural systems, the disconnect between society and nature, wildlife-human interactions, as well as problems related to globalization and urbanization.

Prerequisites: Senior Standing or consent of the instructor. This is a writing-intensive (W) course approved to fulfill the upper tier of the graduation writing requirement (GWR). To receive W credit for this course, you must have successfully completed the first-year writing requirement (ENG 104 or its equivalent) and have completed at least 30 hours of coursework. Forestry majors must complete this course and FOR 470 to fulfill the upper tier graduation writing requirement.

Student Learning Outcomes

At the end of this course, the student will be able to demonstrate the following skills.

1. Explain the history of humans and natural resources and how changes in values and trends have altered the use of natural resources.
2. When given a forestry or natural resource scenario, you will be able to identify stakeholders involved, explain different stakeholder perspectives (values and beliefs), and critically evaluate opposing viewpoints. Based on the stakeholders involved, you will be able to describe decision making and public participation options and recognize potential power issues involved in the scenario.
3. When given a situation such as recreation, forest certification, globalization, rural-urban interface, ecosystem services, wildlife, and forest health, you will be able to explain the interconnection between society and natural resources across a range of societies. These

situations may involve the role of communities, employment, extractive industries, resource dependency, poverty, land ownership patterns, and property rights.

4. Describe the Tragedy of the Commons and apply this concept to natural resource issues such as forestry, fisheries, and water.
5. Explain the environmental movement in the United States including the role of mainstream, grassroots, and radical groups.
6. This course is a writing intensive course and by the end of the course you will be able to successfully complete the Writing Learning Outcomes. The **Writing Learning Outcomes** include:
    a. Write a paper that is essentially free of mechanical errors (grammar, punctuation, spelling, and syntax) and awkwardness, using a style that is appropriate to the purpose and audience.
    b. Demonstrate an ability to discover, evaluate, and clearly present evidence in support of an argument in the subject area and utilize documentation that conforms to the formats and the citation conventions of the subject area.
    c. Be aware that composing a successful text frequently takes multiple drafts, with varying degrees of focus on generating, revising, editing, and proofreading.
    d. Write a capable, interesting essay about a complex issue in forestry and natural resources for a general university audience.

Grading Procedures – Assignments, Grading Criteria, Letter Grades

Part of this course is to effectively communicate natural resource information to a wide range of audiences. Therefore, 30 percent of your grade is based on a written assignment on a natural resource topic of interest to the student. Topics must be discussed and approved by the instructor. Details of the writing assignment are described in the Writing Assignment section.

Students will be assigned readings and will lead the class discussion for the particular reading assignment. Students not leading the discussion will participate in class discussions. Class discussions, both participation and leading, will be 25 percent of your grade.

At the end of the semester, students will present their paper to the class and invited stakeholders. The presentation is worth 15 percent of your grade.

<u>Grading Criteria</u>
Writing Assignment – 30%
Class Discussions (participation and leading) – 25%
Presentation – 15%
Midterm – 15%
Comprehensive Final Exam – 15%

<u>Letter Grades</u>
A: $\geq 90\%$
B: $\geq 80\%$ and $< 90\%$
C: $\geq 70\%$ and $< 80\%$
D: $\geq 60\%$ and $< 70\%$
E: $< 60\%$

Writing Requirements - Assignments
Students will be required to write a minimum of 8 pages of formal writing that is drafted, reviewed, and revised. These 8 pages will be a single-authored assignment.

There will be a draft, review, and revision processes that will be used in the course. Examples include peer review workshops of drafts, instructors' written comments on drafts, and individual student-instructor conferences about drafts.

Grading Policies of Writing Assignments
To pass the course and fulfill the upper tier of the Graduate Writing Requirement, you must submit all formal writing assignments and earn a grade of C or better on each assignment. Any major assignment that receives a D or below must be revised to reflect competency and resubmitted. You may resubmit such assignments two times. If you fail to achieve a C grade on the final version of any major writing assignment, you will receive a failing grade for the course. Note that assignments or requirements other than the formal writing become a factor in the final determination of your course grade only if you have achieved a grade of C or higher on all formal writing assignments.

At the discretion of the instructor, students who fail to achieve competency may receive I (incomplete) grades, but in no case may a student whose writing fails to reach the level of C (competent) receive a passing grade in a course that satisfies the University Writing Requirement.

Course Outline

Week 1: Course overview. History of Humans and Natural Resources – Changes in Values and Trends

Week 2 and 3: Who are the Stakeholders – Values, Beliefs, Viewpoints, and Power

Week 4 and 5: Role of Communities

Week 6 and 7: Employment, Extractive Industries, Resource Dependency, Poverty

Week 8 and 9: Landownership Patterns

Week 10 and 11: Property Rights and Tragedy of the Commons

Week 12 and 13: Environmental Movement – Mainstream, Grassroots, and Radical Groups

Week 14: Presentations

COURSE POLICIES

Attendance and Excused Absences

Attendance is strongly recommended. This course is based around class discussions and participation. If you have more than two unexcused absences your grade will be lowered by one point for each unexcused absence. For example, if you have three unexcused absences your final grade will be lowered by three points. Excused absences are defined by S.R. 5.2.4.2 http://www.uky.edu/StudentAffairs/Code/part2.html .

For excused absences, students will be able to make up the missed work or exam. Students must inform the instructor of the advance, if possible, but not later than one week after the missed class.

Academic Integrity, Cheating and Plagiarism

Cheating of any form, including plagiarism, will not be tolerated. Cheating will be dealt with in accordance with University regulations. (See http://www.uky.edu/Student Affairs/Code/)

Part II of *Student Rights and Responsibilities* (available online at http://www.uky.edu/StudentAffairs/Code/ part2.html) states that all academic work, written or otherwise, submitted by students to their instructors or other academic supervisors, is expected to be the result of their own thought, research, or self-expression. In cases where students feel unsure about a question of plagiarism involving their work, they are obliged to consult their instructors on the matter before submission.

When students submit work purporting to be their own, but which in any way borrows ideas, organization, wording or anything else from another source without appropriate acknowledgment of the fact, the students are guilty of plagiarism. Plagiarism includes reproducing someone else's work, whether it be published article, chapter of a book, a paper from a friend or some file, or whatever. Plagiarism also includes the practice of employing or allowing another person to alter or revise the work which a student submits as his/her own, whoever that other person may be. Students may discuss assignments among themselves or with an instructor or tutor, but when the actual work is done, it must be done by the student, and the student alone. When a student's assignment involves research in outside sources or information, the student must carefully acknowledge exactly what, where and how he/she has employed them. If the words of someone else are used, the student must put quotation marks around the passage in question and add an appropriate indication of its origin. Making simple changes while leaving the organization, content and phraseology intact is plagiaristic. However, nothing in these Rules shall apply to those ideas which are so generally and freely circulated as to be a part of the public domain. (Section 6.3.1). The minimum penalty for an academic offense, such as cheating or plagiarism, is an E in the course (Section 6.4.1).

Information about the Writing Requirement

Questions about the W option should be referred to the Director of the UK Writing Initiative, Professor Janet Carey Eldred, eldred@uky.edu.

Writing Initiative Office
152 Bowman Hall
University of Kentucky
Lexington, KY 40508-0059
859-257-4831
www.uky.edu/UGS/WritingInitiative

Professional Preparation

This course helps prepare you for your professional career. You are expected to attend class, be on time, participate in class discussions, and be respectful of your instructor and fellow classmates.

Disability Statement

Students with a disability that need classroom or exam accommodations should contact the Disability Resource Center, 257-2754, room 2 Alumni Gym, jkarnes@uky.edu .

APPLICATION FOR NEW COURSE

1. Submitted by the College of Agriculture Date: 03/03/2008

Department/Division proposing course: Department of Forestry

2. Proposed designation and Bulletin description of this course:

a. Prefix and Number FOR 470

b. Title* Interdependent Natural Resource Issues

*If title is longer than 24 characters, write a sensible title (24 characters or less) for use on transcripts:
Interdep Nat Res Issues

c. Courses must be described by at least one of the categories below. Include the number of actual contact hours per week for each category, as applicable.

(___) CLINICAL (___) COLLOQUIUM (___) DISCUSSION (___) LABORATORY (___) LECTURE

(___) INDEPEND. STUDY (_8_) PRACTICUM (___) RECITATION (___) RESEARCH (___) RESIDENCY

(___) SEMINAR (___) STUDIO (___) OTHER – Please explain: 1 day/week for 1st nine weeks

d. Please choose a grading system: ☑ Letter (A, B, C, etc.) ☐ Pass/Fail

e. Number of credit hours: 3

f. Is this course repeatable? YES ☐ NO ☑ If YES, maximum number of credit hours: _____

g. Course description:

Culmination of the student's study of public concerns and problems related to natural resources. Work in teams to find and verify information on diverse topics, listen to and address public concerns, communicate natural resource information to a wide range of audiences, and be effective professionals in working toward solutions.

h. Prerequisite(s), if any:

Senior Standing. This is a writing-intensive (W) course approved to fulfill the upper tier of the graduation writing requirement (GWR). To receive W credit for this course, you must have successfully completed the first-year writing requirement (ENG 104 or its equivalent) and have completed at least 30 hours of coursework. Forestry majors must complete this course and FOR 400 to fulfill the upper tier graduation writing requirements.

i. Will this course be offered through Distance Learning? YES ☐ NO ☑

If YES, please identify one of the methods below that reflects how the majority of the course content will be delivered:

☐ Internet/Web-based ☐ Interactive video ☐ Extended campus ☐ Kentucky Educational Television (KET/teleweb) ☐ Other

Please describe "Other": _____

3. Teaching method: ☑ N/A or ☐ Community-Based Experience ☐ Service Learning Component ☐ Both

4. To be cross-listed as: _____ _____

Prefix and Number Signature of chair of cross-listing department

5. Requested effective date (term/year): Spring / 2013

APPLICATION FOR NEW COURSE

6. Course to be offered (please check all that apply): ☐ Fall ☑ Spring ☐ Summer

7. Will the course be offered every year? ☑ YES ☐ NO

If NO, please explain: _____

8. Why is this course needed?

This is one of the two capstone courses in the forestry curriculum. This course is needed to provided forestry students with the skills and knowledge to address various forestry and natural resource issues.

9. **a.** By whom will the course be taught? Dr. Dave Wagner

b. Are facilities for teaching the course now available? ☑ YES ☐ NO

If NO, what plans have been made for providing them?

_____

10. What yearly enrollment may be reasonably anticipated?

20

11. **a.** Will this course serve students primarily within the department? ☑ Yes ☐ No

b. Will it be of interest to a significant number of students outside the department? ☑ YES ☐ NO

If YES, please explain.

Natural Resource Conservation Management majors

12. Will the course serve as a University Studies Program course†? ☐ YES ☑ NO

If YES, under what Area? _____

†AS OF SPRING 2007, THERE IS A MORATORIUM ON APPROVAL OF NEW COURSES FOR USP.

13. Check the category most applicable to this course:

☐ traditional – offered in corresponding departments at universities elsewhere

☑ relatively new – now being widely established

☐ not yet to be found in many (or any) other universities

14. Is this course applicable to the requirements for at least one degree or certificate at UK? ☑ Yes ☐ No

15. Is this course part of a proposed new program? ☐ YES ☑ NO

If YES, please name: _____

16. Will adding this course change the degree requirements for ANY program on campus? ☑ YES ☐ NO

If YES‡, list below the programs that will require this course:

Undergraduate Forestry Program

‡In order to change the program(s), a program change form(s) must also be submitted.

APPLICATION FOR NEW COURSE

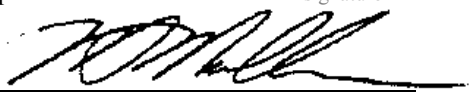
17. ☑ The major teaching objectives of the proposed course, syllabus and/or reference list to be used are attached.

18. ☐ Check box if course is 400G or 500. If the course is 400G- or 500-level, *you must include a syllabus showing differentiation* for undergraduate and graduate students by (i) requiring additional assignments by the graduate students; and/or (ii) the establishment of different grading criteria in the course for graduate students. (See *SR 3.1.4)*

19. Within the department, who should be contacted for further information about the proposed new course?

Name: Jim Ringe Phone: 859-257-7594 Email: jringe@uky.edu

20. Signatures to report approvals:

March 3, 2008	Steven H. Bullard	/	
DATE of Approval by Department Faculty	printed name	Reported by Department Chair	signature
9/29/2008	Michael Mullen	/	
DATE of Approval by College Faculty	printed name	Reported by College Dean	signature
		/	
* DATE of Approval by Undergraduate Council	printed name	Reported by Undergraduate Council Chair	signature
		/	
* DATE of Approval by Graduate Council	printed name	Reported by Graduate Council Chair	signature
		/	
* DATE of Approval by Health Care Colleges Council (HCCC)	printed name	Reported by Health Care Colleges Council Chair	signature
* DATE of Approval by Senate Council		Reported by Office of the Senate Council	
* DATE of Approval by University Senate		Reported by Office of the Senate Council	

*If applicable, as provided by the *University Senate Rules*

Course Syllabus

FOR 470

Interdependent Natural Resource Issues

Class Period

Practicum: One day per week for first nine weeks of semester.

Instructor

Dr. Dave Wagner
Room 209A T.P. Cooper Building
859-257-3773
dwagner@uky.edu

COURSE OVERVIEW

Course Description

This is one of the capstone courses in the forestry curriculum and is designed to be the culmination of the student's study of public concerns and problems related to natural resources. Working in teams, students will learn to find and verify information on a diverse range of topics from various sources, listen to and address public concerns, communicate natural resource information to a wide range of audiences, and be effective professionals in working toward solutions.

Prerequisites: Senior Standing. This is a writing-intensive (W) course approved to fulfill the upper tier of the graduation writing requirement (GWR). To receive W credit for this course, you must have successfully completed the first-year writing requirement (ENG 104 or its equivalent) and have completed at least 30 hours of coursework. Forestry majors must complete this course and FOR 400 to fulfill the upper tier graduation writing requirement.

Student Learning Outcomes

At the end of this course, the student will be able to demonstrate the following skills.

1. Describe professional and leadership skills needed to be a 'Society Ready' forester and demonstrate effective habits and leadership skills of professionals.
2. Explain effective methods for alternative dispute resolution and be able to identify and address stakeholders involved in a dispute.
3. Demonstrate effective listening and communication skills and be able to address diverse audiences such as landowners, government agencies, media, and scientists.
4. Analyze different social, economic, and ecological approaches to address forest health issues or threats. Forest health issues and threats may include requirements of a healthy

forest ecosystem, invasive plants and animals, fragmentation and parcelization, changes in land ownership patterns, global change, climate change, and pollution.

5. Analyze (based on readings, class discussions, and previous courses) issues that cause a disconnect between society and natural resources.
6. Broadly describe how to manage forest ecosystems to meet ecological, economic, and social needs. This includes incorporating conservation biology concepts and the influence of urban areas and communities on forest ecosystems.
7. Communicate forestry concepts to youth using programs such as Project Learning Tree.
8. This course is a writing intensive course and by the end of the course you will be able to successfully complete the Writing Learning Outcomes. The **Writing Learning Outcomes** include:
    a. Write a paper that is essentially free of mechanical errors (grammar, punctuation, spelling, and syntax) and awkwardness, using a style that is appropriate to the purpose and audience.
    b. Demonstrate an ability to discover, evaluate, and clearly present evidence in support of an argument in the subject area and utilize documentation that conforms to the formats and the citation conventions of the subject area.
    c. Be aware that composing a successful text frequently takes multiple drafts, with varying degrees of focus on generating, revising, editing, and proofreading.
    d. Write a capable, interesting essay about a complex issue in forestry and natural resources for a general university audience.

Grading Procedures – Assignments, Grading Criteria, Letter Grades

This course is a designed to be a culmination of the student's study of natural resource issues. The course is project oriented as opposed to lecture-based. Students will work both in teams and individually to complete three class projects worth a total of 30 percent of your grade. A presentation at the end of the course will be worth 10 percent of your grade.

Part of this course is to effectively communicate natural resource information to a wide range of audiences. Therefore, 30 percent of your grade is based on a written assignment on a natural resource topic of interest to the student. Topics must be discussed and approved by the instructor. Details of the writing assignment are described in the Writing Assignment section.

A midterm and comprehensive final exam will each be worth 15 percent of your grade.

<u>Grading Criteria</u>
Class Projects (3) – 30 %
Writing Assignment – 30%
Presentation – 10%
Midterm – 15%
Comprehensive Final Exam – 15%

<u>Letter Grades</u>
A: $\geq$ 90%

B: ≥ 80% and < 90%
C: ≥ 70% and < 80%
D: ≥ 60% and < 70%
E: < 60%

Writing Assignment

Writing Requirements - Assignments
Students will be required to write a minimum of 8 pages of formal writing that is drafted, reviewed, and revised. These 8 pages will be a single-authored assignment.

There will be a draft, review, and revision processes that will be used in the course. The review process may include peer review workshops of drafts, instructors' written comments on drafts, and individual student-instructor conferences about drafts.

Assessment
Please submit two copies of your final paper to the instructor. One copy will be graded by the instructor; the second copy will be used for SACS assessment and should be a clean copy, with only your student ID number (NOT social security number) listed at the top of the page, with all other identifying information (your name, instructor name, and course and section number) removed.

Grading Policies of Writing Assignments
To pass the course and fulfill the upper tier of the Graduate Writing Requirement, you must submit all formal writing assignments and earn a grade of C or better on each assignment. Any major assignment that receives a D or below must be revised to reflect competency and resubmitted. You may resubmit such assignments two times. If you fail to achieve a C grade on the final version of any major writing assignment, you will receive a failing grade for the course. Note that assignments or requirements other than the formal writing become a factor in the final determination of your course grade only if you have achieved a grade of C or higher on all formal writing assignments.

At the discretion of the instructor, students who fail to achieve competency may receive I (incomplete) grades, but in no case may a student whose writing fails to reach the level of C (competent) receive a passing grade in a course that satisfies the University Writing Requirement.

Course Outline

Week 1: Course overview. Professional Leadership Skills.

Week 2: Alternative Dispute Resolution

Week 3: Communication and Leadership Skills

Week 4 – 8: Class discussions in the morning. Visit landowners, government agencies, media, and scientists, to discuss forestry and natural resource issues including forest

health issues. Communicate forestry and natural resource concepts to youth.

Week 9: Presentations

COURSE POLICIES

Attendance and Excused Absences

Attendance is mandatory. For each unexcused absence, your final average will be lowered by one point. Excused absences are defined by S.R. 5.2.4.2 http://www.uky.edu/StudentAffairs/Code/part2.html .

For excused absences, students will be able to make up the missed work or exam. Students must inform the instructor of the advance, if possible, but not later than one week after the missed class.

Academic Integrity, Cheating and Plagiarism

Cheating of any form, including plagiarism, will not be tolerated. Cheating will be dealt with in accordance with University regulations. (See http://www.uky.edu/Student Affairs/Code/)

Part II of *Student Rights and Responsibilities* (available online at http://www.uky.edu/StudentAffairs/Code/ part2.html) states that all academic work, written or otherwise, submitted by students to their instructors or other academic supervisors, is expected to be the result of their own thought, research, or self-expression. In cases where students feel unsure about a question of plagiarism involving their work, they are obliged to consult their instructors on the matter before submission.

When students submit work purporting to be their own, but which in any way borrows ideas, organization, wording or anything else from another source without appropriate acknowledgment of the fact, the students are guilty of plagiarism. Plagiarism includes reproducing someone else's work, whether it be published article, chapter of a book, a paper from a friend or some file, or whatever. Plagiarism also includes the practice of employing or allowing another person to alter or revise the work which a student submits as his/her own, whoever that other person may be. Students may discuss assignments among themselves or with an instructor or tutor, but when the actual work is done, it must be done by the student, and the student alone. When a student's assignment involves research in outside sources or information, the student must carefully acknowledge exactly what, where and how he/she has employed them. If the words of someone else are used, the student must put quotation marks around the passage in question and add an appropriate indication of its origin. Making simple changes while leaving the organization, content and phraseology intact is plagiaristic. However, nothing in these Rules shall apply to those ideas which are so generally and freely circulated as to be a part of the public domain. (Section 6.3.1). The minimum penalty for an academic offense, such as cheating or plagiarism, is an E in the course (Section 6.4.1).

Information about the Writing Requirement

Questions about the W option should be referred to the Director of the UK Writing Initiative, Professor Janet Carey Eldred, eldred@uky.edu.

Writing Initiative Office
152 Bowman Hall
University of Kentucky
Lexington, KY 40508-0059
859-257-4831
www.uky.edu/UGS/WritingInitiative

Professional Preparation

This course helps prepare you for your professional career. You are expected to attend class, be on time, participate in class discussions, and be respectful of your instructor and fellow classmates.

Disability Statement

Students with a disability that need classroom or exam accommodations should contact the Disability Resource Center, 257-2754, room 2 Alumni Gym, jkarnes@uky.edu .

Section 3

Course Changes for the BS in Forestry

APPLICATION FOR CHANGE IN EXISTING COURSE: MAJOR and MINOR

1. Submitted by the College of: Agriculture Date: 03/03/2008

Department/Division offering course: Department of Forestry

2. What type of change is being proposed? ☑ Major ☐ Minor*

*See the description at the end of this form regarding what constitutes a minor change. Minor changes are sent directly from the dean of the college to the Chair of the Senate Council.

If the Senate Council chair deems the change not to be minor, the form will be sent to the appropriate Council for normal processing and an email notification will be sent to the contact person.

PROPOSED CHANGES

Please complete all "Current" fields.

Fill out the "*Proposed*" field only for items being changed. Enter N/A if not changing.

Circle the number for each item(s) being changed. For example: (6.)

3. Current prefix & number: FOR 200 *Proposed prefix & number:* N/A

4. Current Title: Map Reading and Photogrammetry

Proposed Title†: Basics of Geospatial Technology

†If title is longer than 24 characters (including spaces), write a sensible title (24 characters or less) for use on transcripts:
Basics Geospatial Tech

5. Current number of credit hours: 2 *Proposed number of credit hours:* 2

6. Currently, is this course repeatable? YES ☐ NO ☑ If YES, current maximum credit hours: _____

Proposed to be repeatable? *YES* ☐ *NO* ☑ *If YES, proposed maximum credit hours:* _____

7. Current grading system: ☑ Letter (A, B, C, etc.) ☐ Pass/Fail

Proposed grading system: ☑ *Letter (A, B, C, etc.)* ☐ *Pass/Fail*

8. Courses must be described by at least one of the categories below. Include the number of actual contact hours per week for each category, as applicable.

Current:

(☐ CLINICAL ☐ COLLOQUIUM ☐ DISCUSSION 4 LABORATORY ☐ LECTURE

(☐ INDEPEND. STUDY ☐ PRACTICUM ☐ RECITATION ☐ RESEARCH ☐ RESIDENCY

(☐ SEMINAR ☐ STUDIO ☐ OTHER – Please explain: _____

Proposed:

(☐ *CLINICAL* ☐ *COLLOQUIUM* ☐ *DISCUSSION* *3* *LABORATORY* *1* *LECTURE*

☐ *INDEPEND. STUDY* ☐ *PRACTICUM* ☐ *RECITATION* ☐ *RESEARCH* ☐ *RESIDENCY*

☐ *SEMINAR* ☐ *STUDIO* ☐ *OTHER – Please explain:* _____

9. Requested effective date (term/year): Fall / 2010

APPLICATION FOR CHANGE IN EXISTING COURSE: MAJOR and MINOR

10. Current teaching method: ☑ N/A ☐ Community-Based Experience ☐ Service Learning Component ☐ Both

Proposed teaching method (if applicable): ☐ *Community-Based Experience* ☐ *Service Learning Component* ☐ *Both*

11. Current cross-listing: ☑ N/A

Prefix and Number _____ NAME of current cross-listing DEPARTMENT _____

a. Proposed – REMOVE the current cross-listing: ☐

b. Proposed – ADD a cross-listing: _____ _____

Prefix and Number *Signature of chair of proposed cross-listing department*

12. Current prerequisites:

MA 109 and MA 112 or high school equivalents.

Proposed prerequisites:

None

13. Current Bulletin description:

Use of topographic maps and aerial photos to determine distances, heights, directions, and areas. Location of ground features on maps and photos and of map and photo features on the ground.

Proposed Bulletin description:

A basic introduction to the various types of maps and their uses, field navigation skills, and map making. The course is heavily field and laboratory based, with an emphasis on hands-on learning and practice. Both traditional technologies, such as compasses, U.S. Geological Survey maps, and aerial photographs as well as newer technologies, such as global positioning systems and geographic information system databases will be employed in carrying out course exercises.

14. What has prompted this change?

The proposed course incorporates traditional map technologies such as compasses, topographic maps, and aerial photographs with new technologies such as global positioning systems (GPS) and geographic information systems (GIS). Navigations skills and the ability to use GPS and GIS are needed in later courses and as professional foresters.

15. If there are to be significant changes in the content or teaching objectives of this course, indicate changes:

In addition to map interpretation and compass and pacing, students will learn to use GPS units and construct aesthetic accurate maps. See the syllabus (FOR 200) for a detailed listing of the proposed student learning outcomes and content.

16. Please list any other department that could be affected by the proposed change:

_____

17. Will changing this course change the degree requirements for ANY program on campus? ☑ YES ☐ NO

If YES‡, list below the programs that require this course:

Undergraduate Forestry Program

‡ In order for the course change to be considered, program change form(s) for the programs above must also be submitted.

APPLICATION FOR CHANGE IN EXISTING COURSE: MAJOR and MINOR

18. Is this course currently included in the University Studies Program? ☐ Yes ☑ No

19. ☐ Check box if changed to 400G or 500. If changed to 400G- or 500-level, *you must include a syllabus showing differentiation* for undergraduate and graduate students by (i) requiring additional assignments by the graduate students; and/or (ii) the establishment of different grading criteria in the course for graduate students. (See *SR 3.1.4)*

20. Within the department, who should be contacted for further information on the proposed course change?

Name: Jim Ringe Phone: 859-257-7594 Email: jringe@uky.edu

21. Signatures to report approvals:

March 3, 2008	Steven H. Bullard /		
DATE of Approval by Department Faculty	printed name	Reported by Department Chair	signature
9/29/2008	Michael Mullen /		
DATE of Approval by College Faculty	printed name	Reported by College Dean	signature
	/		
*DATE of Approval by Undergraduate Council	printed name	Reported by Undergraduate Council Chair	signature
	/		
*DATE of Approval by Graduate Council	printed name	Reported by Graduate Council Chair	signature
	/		
*DATE of Approval by Health Care Colleges Council (HCCC)	printed name	Reported by Health Care Colleges Council Chair	signature
*DATE of Approval by Senate Council		Reported by Office of the Senate Council	
*DATE of Approval by the University Senate		Reported by the Office of the Senate Council	

*If applicable, as provided by the *University Senate Rules.*

****

Excerpt from *University Senate Rules:*

SR 3.3.0.G.2: **Definition.** A request may be considered a minor change if it meets one of the following criteria:

a. change in number within the same hundred series;
b. editorial change in the course title or description which does not imply change in content or emphasis;
c. a change in prerequisite(s) which does not imply change in content or emphasis, or which is made necessary by the elimination or significant alteration of the prerequisite(s);
d. a cross-listing of a course under conditions set forth in *SR 3.3.0.E*;
e. correction of typographical errors.

Course Syllabus

FOR 200

Basics of Geospatial Technology

Class Period

Lecture: 1 hour per week
Lab: 3 hours per week

Instructor

Dr. J. M. Ringe
Room 108 T.P. Cooper Building
859-257-7594
jringe@uky.edu

COURSE OVERVIEW

Course Description

A basic introduction to the various types of maps and their uses, field navigation skills, and map making. The course is heavily field and laboratory based, with an emphasis on hands-on learning and practice. Both traditional technologies, such as compasses, U.S. Geological Survey maps, and aerial photographs as well as newer technologies, such as global positioning systems and geographic information system databases will be employed in carrying out course exercises.

Student Learning Outcomes

At the end of this course, the student will be able to demonstrate the following skills.

1. Interpret individual maps (topographic map, aerial photo, field map, soils map, geology map, digital image) and synthesize data from multiple maps to describe a particular site.
2. Demonstrate the correct usage of a compass to find direction and navigate in the field by taking and following azimuths, triangulating, pacing, and setting a declination.
3. Construct digital and hand-written field and land classification maps using compass and pacing, global positioning systems (GPS), topographic maps, aerial photos, field maps, soils maps, geology maps, and digital images.
4. Demonstrate the correct usage of a GPS unit in the field to collect data and construct maps with the data using computer software to make corrections to the GPS data and incorporate GPS data into existing geographic information system databases.
5. Construct aesthetic, accurate maps using your knowledge of proper map design skills.
6. Knowledge of basic geographic information concepts including remote sensing imagery, map projections, and modeling earth.

Grading Procedures – Assignments, Grading Criteria, Letter Grades

Grades will be determined from attendance and in-class exercises (40%), a mid-term exam (30%), and a final exam (30%). Attendance is recorded after the student completes the class exercise and returns borrowed equipment. The attendance policy is described on page 3.

Final grades will be assigned as follows:

Letter Grades
A: $\geq 90\%$
B: $\geq 80\%$ and $< 90\%$
C: $\geq 70\%$ and $< 80\%$
D: $\geq 60\%$ and $< 70\%$
E: $< 60\%$

Course Outline

Week 1 – Introduction to topographic maps, contour lines, feature shapes, scales, distances, coordinate systems

Week 2 – Determining cross-sections from topographic maps, calculating elevations, elevation differences and slope characteristics

Week 3 – Introduction to compasses, determining and following azimuths, determining pace, compass and pacing traverses

Week 4 – Using map and compass together, declinations, navigating around obstacles, location of landmarks through triangulation

Week 5 – Introduction to aerial photos, plotting aerial boundaries on maps

Week 6 – Stereovision, creating stereo pairs, determining photo scales from maps and ground truthing

Week 7 – Determination of area on maps and photos

Week 8 – Determining angles on photos and heights from stereopairs

Week 9 – Making field maps

Week 10 – Plotting boundaries from deeds

Week 11 – Introduction to GPS

Week 12 – Creating boundary surveys and permanent landmarks with GPS

Week 13 – Introduction to GIS

Week 14 – Using GPS and GIS together to create maps and profiles

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COURSE POLICIES

Attendance and Excused Absences

Attendance is recorded after the student completes the class exercise and returns the borrowed equipment.

Lectures: Attending lectures is required (and expected) of all students. Skipping class is not acting in your best interest, will most likely adversely affect your grade, is disrespectful of your instructor, and is not professional behavior.

Lab Sessions: Attending lab sessions is required of all students. Missing labs will cause you extreme difficulty on the lab exams. Make-up labs will be given only for excused absences.

Exams: Make-up exams and quizzes (Lab or Lecture) will be given only to students who miss an exam as a result of excused absences. In all other circumstances, a grade of 0 (zero) will result for the missed exam or quiz.

Academic Integrity, Cheating and Plagiarism

Cheating of any form, including plagiarism, will not be tolerated. Cheating will be dealt with in accordance with University regulations. (See http://www.uky.edu/Student Affairs/Code/)

Professional Preparation

This course helps prepare you for your professional career. You are expected to attend class, be on time, participate in class discussions, and be respectful of your instructor and fellow classmates.

Disability Statement

Students with a disability that need classroom or exam accommodations should contact the Disability Resource Center, 257-2754, room 2 Alumni Gym, jkarnes@uky.edu .

APPLICATION FOR CHANGE IN EXISTING COURSE: MAJOR and MINOR

1. Submitted by the College of: Agriculture Date: 03/03/2008

Department/Division offering course: Department of Forestry

2. What type of change is being proposed? ☑ Major ☐ Minor*

*See the description at the end of this form regarding what constitutes a minor change. Minor changes are sent directly from the dean of the college to the Chair of the Senate Council.

If the Senate Council chair deems the change not to be minor, the form will be sent to the appropriate Council for normal processing and an email notification will be sent to the contact person.

PROPOSED CHANGES

Please complete all "Current" fields.

Fill out the "*Proposed*" field only for items being changed. Enter N/A if not changing.

Circle the number for each item(s) being changed. For example: (6.)

3. Current prefix & number: FOR 219 *Proposed prefix & number:* N/A

4. Current Title: Silvics and Tree Identification

Proposed Title†: Dendrology

†If title is longer than 24 characters (including spaces), write a sensible title (24 characters or less) for use on transcripts:

5. Current number of credit hours: 3 *Proposed number of credit hours:* 4

6. Currently, is this course repeatable? YES ☐ NO ☑ If YES, current maximum credit hours: _____

Proposed to be repeatable? *YES* ☐ *NO* ☑ *If YES, proposed maximum credit hours:* _____

7. Current grading system: ☑ Letter (A, B, C, etc.) ☐ Pass/Fail

Proposed grading system: ☑ *Letter (A, B, C, etc.)* ☐ *Pass/Fail*

8. Courses must be described by at least one of the categories below. Include the number of actual contact hours per week for each category, as applicable.

Current:

(☐ CLINICAL ☐ COLLOQUIUM ☐ DISCUSSION 3 LABORATORY 2 LECTURE

(☐ INDEPEND. STUDY ☐ PRACTICUM ☐ RECITATION ☐ RESEARCH ☐ RESIDENCY

(☐ SEMINAR ☐ STUDIO ☐ OTHER – Please explain: _____

Proposed:

(☐ *CLINICAL* ☐ *COLLOQUIUM* ☐ *DISCUSSION* 4 *LABORATORY* 2 *LECTURE*

☐ *INDEPEND. STUDY* ☐ *PRACTICUM* ☐ *RECITATION* ☐ *RESEARCH* ☐ *RESIDENCY*

☐ *SEMINAR* ☐ *STUDIO* ☐ *OTHER – Please explain:* _____

9. Requested effective date (term/year): Fall / 2010

APPLICATION FOR CHANGE IN EXISTING COURSE: MAJOR and MINOR

10. Current teaching method: ☑ N/A ☐ Community-Based Experience ☐ Service Learning Component ☐ Both

Proposed teaching method (if applicable): ☐ *Community-Based Experience* ☐ *Service Learning Component* ☐ *Both*

11. Current cross-listing: ☑ N/A

Prefix and Number _____ NAME of current cross-listing DEPARTMENT _____

a. Proposed – REMOVE the current cross-listing: ☐

b. Proposed – ADD a cross-listing:

Prefix and Number _____ *Signature of chair of proposed cross-listing department* _____

12. Current prerequisites:

One semester of botany.

Proposed prerequisites:

None

13. Current Bulletin description:

Silvics, taxonomy, and preparation of woody plants native to the U.S.

Proposed Bulletin description:

A study of the basic concepts of botany related to woody species and their use, along with basic soil and site characteristics in the identification of trees and forest vegetation.

14. What has prompted this change?

The proposed undergraduate forestry revision has less science requirements than the existing forestry program. Students will still receive natural science education but they will receive it within the context of forestry.

15. If there are to be significant changes in the content or teaching objectives of this course, indicate changes:

This course will now cover basic concepts of botany including photosynthesis and light, reproduction, and parts and processes of trees. See the syllabus (FOR 219) for a detailed listing of the proposed student learning outcomes and content.

16. Please list any other department that could be affected by the proposed change:

_____

17. Will changing this course change the degree requirements for ANY program on campus? ☑ YES ☐ NO

If YES‡, list below the programs that require this course:

Undergraduate Forestry Program

‡ In order for the course change to be considered, program change form(s) for the programs above must also be submitted.

APPLICATION FOR CHANGE IN EXISTING COURSE: MAJOR and MINOR

18. Is this course currently included in the University Studies Program? ☐ Yes ☑ No

19. ☐ Check box if changed to 400G or 500. If changed to 400G- or 500-level, *you must include a syllabus showing differentiation* for undergraduate and graduate students by (i) requiring additional assignments by the graduate students; and/or (ii) the establishment of different grading criteria in the course for graduate students. (See *SR 3.1.4)*

20. Within the department, who should be contacted for further information on the proposed course change?

Name: Jim Ringe Phone: 859-257-7594 Email: jringe@uky.edu

21. Signatures to report approvals:

March 3, 2008	Steven H. Bullard /		
DATE of Approval by Department Faculty	printed name	Reported by Department Chair	signature
9/29/2008	Michael Mullen /		
DATE of Approval by College Faculty	printed name	Reported by College Dean	signature
	/		
*DATE of Approval by Undergraduate Council	printed name	Reported by Undergraduate Council Chair	signature
	/		
*DATE of Approval by Graduate Council	printed name	Reported by Graduate Council Chair	signature
	/		
*DATE of Approval by Health Care Colleges Council (HCCC)	printed name	Reported by Health Care Colleges Council Chair	signature
*DATE of Approval by Senate Council		Reported by Office of the Senate Council	
*DATE of Approval by the University Senate		Reported by the Office of the Senate Council	

*If applicable, as provided by the *University Senate Rules.*

****

Excerpt from *University Senate Rules:*

SR 3.3.0.G.2: **Definition.** A request may be considered a minor change if it meets one of the following criteria:

a. change in number within the same hundred series;
b. editorial change in the course title or description which does not imply change in content or emphasis;
c. a change in prerequisite(s) which does not imply change in content or emphasis, or which is made necessary by the elimination or significant alteration of the prerequisite(s);
d. a cross-listing of a course under conditions set forth in *SR 3.3.0.E*;
e. correction of typographical errors.

Course Syllabus

FOR 219

Dendrology

Class Period

Lecture: 2 hours per week
Lab: 4 hours per week

Instructor

Robert Paratley
Room 217B T.P. Cooper Building
859-257-3094
rparatl@uky.edu

COURSE OVERVIEW

Course Description

A study of the basic concepts of botany related to woody species and their use, along with basic soil and site characteristics in the identification of trees and forest vegetation. Laboratory, four hours per week.

Student Learning Outcomes

At the end of this course, the student will be able to demonstrate the following skills.

1. Explain basic concepts of botany including photosynthesis and light, reproduction, and parts and processes of trees.
2. When given a particular location, you will be able to identify basic soil and site characteristics (topography, aspect, relief, and drainage) and analyze how these characteristics impact tree location.
3. Explain concepts such as natural and human-caused disturbance; reproduction and regeneration; and succession, competition, and tolerance.
4. When in rural and urban settings, you will be able to identify trees and shrubs based on the bark, twig, leaf, flower, and fruit. You will be able to use taxonomy to identify the trees and shrubs using their family, genus, and species name.
5. Differentiate the general distribution of tree types in the United States including eastern deciduous forests, southern forests, boreal forests, northern hardwood forests, western montane forests, pacific coast forests, and other forest types.
6. Describe the role forest history, urban forestry, fire, and forest health have in the United States.

Grading Procedures – Assignments, Grading Criteria, Letter Grades

Midterm written exam	15%
Field quizzes	35%
Field final exam	20%
Written final exam	25%
Participation	5%

Letter Grades
A: ≥ 90%
B: ≥ 80% and < 90%
C: ≥ 70% and < 80%
D: ≥ 60% and < 70%
E: < 60%

Course Outline

Week 1 – Field characters: habit; bark; leaves; flowers; fruit

Week 2 – Forest regions of Kentucky; geology and soil types

Week 3 – Water in landscapes and soils; site quality; site indicators

Week 4 – Disturbance and recovery; succession

Week 5 – Plant reproduction: life cycles; flowers and fruit

Week 6 – Plant reproduction: selfing, outcrossing; hybrids; species complexes

Week 7 – Plant cell; life processes: photosynthesis and respiration

Week 8 – Water movement: xylem, phloem, tracheids, vessel elements

Week 9 – Introduction to wood

Week 10 – Geography of North American forests: Eastern Deciduous forest

Week 11 – Geography of North American forests: Southern forests; Boreal forests

Week 12 – Geography of North American forests: Western Montane forests

Week 13 – Geography of North American forests: California; Pacific Northwest

Week 14 – Wetland forests: swamp forests, riparian forests

Week 15 – Forest history: anthropogenic influences

COURSE POLICIES

Attendance and Excused Absences

Attendance: I will take attendance. Missing class will affect your final grade. You are required to attend the Wednesday afternoon labs and field trips. I require advance notice if you will miss Wednesday afternoon meetings. Acceptable excuses include illness, family emergency, thesis fieldwork, meetings out of town (conference, meeting) directly related to another class.

Make-up Exams: Make-up exams will only be given for excused absences, and you are responsible for notifying me ahead of time. See above for valid excuses. Unexcused absence will be result in a zero for that exam or portion of the exam.

Academic Integrity, Cheating and Plagiarism

Cheating of any form, including plagiarism, will not be tolerated. Cheating will be dealt with in accordance with University regulations. (See http://www.uky.edu/Student Affairs/Code/)

Professional Preparation

This course helps prepare you for your professional career. You are expected to attend class, be on time, participate in class discussions, and be respectful of your instructor and fellow classmates.

Disability Statement

Students with a disability that need classroom or exam accommodations should contact the Disability Resource Center, 257-2754, room 2 Alumni Gym, jkarnes@uky.edu .

APPLICATION FOR CHANGE IN EXISTING COURSE: MAJOR and MINOR

1. Submitted by the College of: Agriculture Date: 03/03/2008

Department/Division offering course: Department of Forestry

2. What type of change is being proposed? ☑ Major ☐ Minor*

*See the description at the end of this form regarding what constitutes a minor change. Minor changes are sent directly from the dean of the college to the Chair of the Senate Council.

If the Senate Council chair deems the change not to be minor, the form will be sent to the appropriate Council for normal processing and an email notification will be sent to the contact person.

PROPOSED CHANGES

Please complete all "Current" fields.

Fill out the "*Proposed*" field only for items being changed. Enter N/A if not changing.

Circle the number for each item(s) being changed. For example: (6.)

3. Current prefix & number: FOR 315 *Proposed prefix & number:* FOR 230

4. Current Title: Conservation Biology

Proposed Title†: N/A

†If title is longer than 24 characters (including spaces), write a sensible title (24 characters or less) for use on transcripts:

5. Current number of credit hours: 3 *Proposed number of credit hours:* N/A

6. Currently, is this course repeatable? YES ☐ NO ☑ If YES, current maximum credit hours: _____

Proposed to be repeatable? *YES* ☐ *NO* ☑ *If YES, proposed maximum credit hours:* _____

7. Current grading system: ☑ Letter (A, B, C, etc.) ☐ Pass/Fail

Proposed grading system: ☑ *Letter (A, B, C, etc.)* ☐ *Pass/Fail*

8. Courses must be described by at least one of the categories below. Include the number of actual contact hours per week for each category, as applicable.

Current:

(☐ CLINICAL ☐ COLLOQUIUM ☐ DISCUSSION ☐ LABORATORY 3 LECTURE

(☐ INDEPEND. STUDY ☐ PRACTICUM ☐ RECITATION ☐ RESEARCH ☐ RESIDENCY

(☐ SEMINAR ☐ STUDIO ☐ OTHER – Please explain: _____

Proposed:

(☐ *CLINICAL* ☐ *COLLOQUIUM* ☐ *DISCUSSION* ☐ *LABORATORY* 3 *LECTURE*

☐ *INDEPEND. STUDY* ☐ *PRACTICUM* ☐ *RECITATION* ☐ *RESEARCH* ☐ *RESIDENCY*

☐ *SEMINAR* ☐ *STUDIO* ☐ *OTHER – Please explain:* _____

9. Requested effective date (term/year): Fall / 2010

APPLICATION FOR CHANGE IN EXISTING COURSE: MAJOR and MINOR

10. Current teaching method: ☑ N/A ☐ Community-Based Experience ☐ Service Learning Component ☐ Both

Proposed teaching method (if applicable): ☐ *Community-Based Experience* ☐ *Service Learning Component* ☐ *Both*

11. Current cross-listing: ☑ N/A

Prefix and Number _____ NAME of current cross-listing DEPARTMENT _____

a. Proposed – REMOVE the current cross-listing: ☐

b. Proposed – ADD a cross-listing:

Prefix and Number _____ *Signature of chair of proposed cross-listing department* _____

12. Current prerequisites:

BIO 150 and 152 or consent of the instructor

Proposed prerequisites:

None

13. Current Bulletin description:

This course is a multidisciplinary science designed to deal with the global crisis confronting natural biological systems. This course will review the scientific evidence demonstrating loss of biological diversity across all taxonomic groups. Various strategies for conserving biological diversity will be presented, including single-species, ecosystem, and landscape level approaches. Emphasis will be places on strategies for managing small populations. Additional topics to be addressed...

Proposed Bulletin description:

The basic history and principles of conservation biology, including diversity, extinction, evolution, and fragmentation. Students will learn the applications of conservation biology to such topics as forest management and wetland management and study the ethical perspectives related to conservation biology, including environmental ethics, deep ecology, and the land ethic.

14. What has prompted this change?

This course is now offered at the 200-level and will be a required course for forestry majors.

15. If there are to be significant changes in the content or teaching objectives of this course, indicate changes:

The student learning outcomes have been modified to reflect the change from a 300-level to a 200-level course. See the syllabus (FOR 230) for a detailed listing of the proposed student learning outcomes and content.

16. Please list any other department that <u>could</u> be affected by the proposed change:

_____

17. Will changing this course change the degree requirements for ANY program on campus? ☑ YES ☐ NO

If YES‡, list below the programs that require this course:

Undergraduate Forestry Program

‡ In order for the <u>course</u> change to be considered, <u>program</u> change form(s) for the programs above must also be submitted.

APPLICATION FOR CHANGE IN EXISTING COURSE: MAJOR and MINOR

18. Is this course currently included in the University Studies Program? ☐ Yes ☑ No

19. ☐ Check box if changed to 400G or 500. If changed to 400G- or 500-level, *you must include a syllabus showing differentiation* for undergraduate and graduate students by (i) requiring additional assignments by the graduate students; and/or (ii) the establishment of different grading criteria in the course for graduate students. (See *SR 3.1.4)*

20. Within the department, who should be contacted for further information on the proposed course change?

Name: Jim Ringe Phone: 859-257-7594 Email: jringe@uky.edu

21. Signatures to report approvals:

March 3, 2008	Steven H. Bullard /		
DATE of Approval by Department Faculty	printed name	Reported by Department Chair	signature
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*If applicable, as provided by the *University Senate Rules.*

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c. a change in prerequisite(s) which does not imply change in content or emphasis, or which is made necessary by the elimination or significant alteration of the prerequisite(s);
d. a cross-listing of a course under conditions set forth in *SR 3.3.0.E*;
e. correction of typographical errors.

Course Syllabus

FOR 230

Conservation Biology

Class Period

Lecture: 3 hours per week

Instructor

Dr. John Cox
Room 208 T.P. Cooper Building
859-257-9507
jjcox@uky.edu

COURSE OVERVIEW

Course Description

The basic history and principles of conservation biology (both plant and animal), including diversity, extinction, evolution, and fragmentation. Students will learn the applications of conservation biology (both plant and animal) to such topics as forest management and wetland management and study the ethical perspectives related to conservation biology, including environmental ethics, deep ecology, and the land ethic.

Student Learning Outcomes

At the end of this course, the student will be able to demonstrate the following skills.

1. Explain diversity, in terms of both plants and animals, and how diversity is measured, maintained, and eliminated.
2. Describe the history of conservation biology.
3. Describe conservation values and ethical perspectives such as environmental ethics, deep ecology, and land ethic and apply these values and perspectives to conservation biology issues.
4. Analyze extinction and evolution in both plants and animals and the impact on humans and vice versa. Be able to explain extinction and evolution in terms of its impact on genetics and speciation and names. Be able to describe extinction case studies.
5. Describe fragmentation and explain the causes and biological consequences (both plant and animal) of fragmentation.
6. Explain the role forest management, wetland management, and land use decisions have in addressing conservation (both plant and animal) issues.
7. Analyze conservation policy, such as the Endangered Species Act, and its impact on conservation biology (both plant and animal).

8. When given a case study, you will be able to explain conservation biology issues at the local, regional, national, and global level.

Grading Procedures – Assignments, Grading Criteria, Letter Grades

Course Evaluation/Grading: Evaluation (your grade) in this course is based on the total number of cumulative points (600 total possible) you receive for the listed assignments below:

A = 540-600 pts. B = 480-539 pts. C = 420-479 pts. D = 360-419 pts. E = < 360 pts.

Evaluation Criteria	Points Each	Total Points
15 Reading Quizzes – Short Assignments	10	150
Weekly News Reviews	5	50
Midterm Exam	100	100
Sustainable Living Plan	100	100
Species/Site/System Recovery and Management Plan	100	100
Final Exam	100	100
Total Possible Points		**600**

Quizzes and Assignments: During the course there will be a total of 15 short-assignments and reading quizzes. These represent 25% of the total points in the course. The nature of short assignments will vary but may consist of brief essays, quantitative activities, group discussions, class participation, or other forms of evaluative exercises designed to stimulate learning and understanding of course material. These may be conducted in or out of class depending on the assignment. Quizzes will be unannounced and may be given at the beginning or end of class. Some of these will be open notes, while others may not. It therefore pays to read the material and pay attention and participate in class.

Weekly News Reviews: Newspapers are a rich source of biodiversity and conservation biology news. Over the course of the semester you will submit **5** weekly news reviews. News reviews allow you to *briefly* (no more than 2 pages double-spaced) relate how the article relates to some aspect of biodiversity conservation. *This is not a summary* - I can read the article myself to see what it is about (you will attach it to your evaluation). Don't ignore the business section or even the comics for some of the best material. You will not be graded on the quality of the article you select, but how well you relate it to this class. **Grammar, sentence structure, and clarity count on these assignments, as in all writing assignments**. These summaries will be turned in on the Thursdays indicated on the syllabus. We will discuss a few of the issues you uncover on these days. Keep in mind that not all articles will be equally rich with relevant information, but it is up to you to draw the link between the article and the subject matter of this course. You will have opportunity to edit your work for the possibility of a higher grade. Each revised news review must be accompanied by the previous week's original review (with my comments) and its revision (this is how writing skills are improved).

Exams: Exams will consist of questions of various formats. Multiple choice, short answer, and essay are typical. The final exam will include questions that incorporate basic concepts and ideas from the first portion of the course. Missed exams cannot be made up without a valid excuse (see attendance).

Sustainable Living Plan: This assignment is designed to make you think, consider, and plan major life choices and events within a resource consumption framework. It will hopefully be enlightening, perhaps sobering, and certainly challenging. More details will be provided in a future handout. This could be a group assignment if there is interest.

Species Recovery Plan: This group assignment will challenge your team to lead and coordinate the recovery of an endangered or threatened species. More details will be provided in a future handout.

Course Outline

Week 1 – Course Overview; Human-Nature Relations: A Historical Tour

Week 2 – Conservation Biology. Biodiversity

Week 3 – Threats to Biodiversity: Extinction End Game. Why care? Conservation Values and Ethics

Week 4 – Habitat Loss and Degradation. Habitat Fragmentation

Week 5 – Overexploitation. Species Invasions

Week 6 – Species Invasions. Climate Change

Week 7 – Conservation Genetics

Week 8 – Ecological Economics

Week 9 – Species Approaches to Conservation. Landscape Approaches to Conservation

Week 10 – Ecosystem Approaches to Conservation

Week 11 – Protected Areas Management

Week 12 – Species Restoration. Ecosystem Restoration

Week 13 – Sustainable Development. Sustainable Living

Week 14 –Conservation Science and Policy. Environmental Activism

COURSE POLICIES

Attendance and Excused Absences

Students will be expected to attend all sessions and attendance will be taken at the beginning of every class. Excused absences include sickness, death of family member, and others officially listed in UK regulations. Please provide me with advanced notice if you are going to miss class. If you miss class there is a high probability that you'll miss an assignment or quiz. Assignments and quizzes cannot be made up, but won't count against you if you have *an excused absence*. *For every 3 unexcused absences you will drop 1 letter grade since technically you'll have missed about 10% of the course sessions at that point.*

Academic Integrity, Cheating and Plagiarism

Cheating of any form, including plagiarism, will not be tolerated. Cheating will be dealt with in accordance with University regulations. (See http://www.uky.edu/Student Affairs/Code/)

Professional Preparation

This course helps prepare you for your professional career. You are expected to attend class, be on time, participate in class discussions, and be respectful of your instructor and fellow classmates.

Disability Statement

Students with a disability that need classroom or exam accommodations should contact the Disability Resource Center, 257-2754, room 2 Alumni Gym, jkarnes@uky.edu .

APPLICATION FOR CHANGE IN EXISTING COURSE: MAJOR and MINOR

1. Submitted by the College of: Agriculture Date: 03/03/2008

Department/Division offering course: Department of Forestry

2. What type of change is being proposed? ☑ Major ☐ Minor*

*See the description at the end of this form regarding what constitutes a minor change. Minor changes are sent directly from the dean of the college to the Chair of the Senate Council.

If the Senate Council chair deems the change not to be minor, the form will be sent to the appropriate Council for normal processing and an email notification will be sent to the contact person.

PROPOSED CHANGES

Please complete all "Current" fields.

Fill out the "*Proposed*" field only for items being changed. Enter N/A if not changing.

Circle the number for each item(s) being changed. For example: (6.)

3. Current prefix & number: FOR 300 *Proposed prefix & number:* FOR 250

4. Current Title: Forest Measurements

Proposed Title†: Statistics and Measurements I

†If title is longer than 24 characters (including spaces), write a sensible title (24 characters or less) for use on transcripts: Stats and Measurements I

5. Current number of credit hours: 4 *Proposed number of credit hours:* 3

6. Currently, is this course repeatable? YES ☐ NO ☑ If YES, current maximum credit hours: _____

Proposed to be repeatable? *YES* ☐ *NO* ☑ *If YES, proposed maximum credit hours:* _____

7. Current grading system: ☑ Letter (A, B, C, etc.) ☐ Pass/Fail

Proposed grading system: ☑ *Letter (A, B, C, etc.)* ☐ *Pass/Fail*

8. Courses must be described by at least one of the categories below. Include the number of actual contact hours per week for each category, as applicable.

Current:

(☐ CLINICAL ☐ COLLOQUIUM ☐ DISCUSSION 2 LABORATORY 3 LECTURE

(☐ INDEPEND. STUDY ☐ PRACTICUM ☐ RECITATION ☐ RESEARCH ☐ RESIDENCY

(☐ SEMINAR ☐ STUDIO ☐ OTHER – Please explain: _____

Proposed:

(☐ *CLINICAL* ☐ *COLLOQUIUM* ☐ *DISCUSSION* 2 *LABORATORY* 2 *LECTURE*

☐ *INDEPEND. STUDY* ☐ *PRACTICUM* ☐ *RECITATION* ☐ *RESEARCH* ☐ *RESIDENCY*

☐ *SEMINAR* ☐ *STUDIO* ☐ *OTHER – Please explain:* _____

9. Requested effective date (term/year): Fall / 2010

APPLICATION FOR CHANGE IN EXISTING COURSE: MAJOR and MINOR

10. Current teaching method: ☑ N/A ☐ Community-Based Experience ☐ Service Learning Component ☐ Both

Proposed teaching method (if applicable): ☐ *Community-Based Experience* ☐ *Service Learning Component* ☐ *Both*

11. Current cross-listing: ☑ N/A

Prefix and Number _____ NAME of current cross-listing DEPARTMENT _____

a. Proposed – REMOVE the current cross-listing: ☐

b. Proposed – ADD a cross-listing:

Prefix and Number _____ *Signature of chair of proposed cross-listing department* _____

12. Current prerequisites:

MA 123 and STA 291

Proposed prerequisites:

MA 109 or Calculus, FOR 110, FOR 200

13. Current Bulletin description:

Basic forest surveying; units of measure and their application in determining volume in forest stands and products; statistical techniques and photogrammetry in volume estimate; site classification and growth determinations; continuous forest inventory and data processing techniques.

Proposed Bulletin description:

The application of statistical concepts, computations, and software to forestry sampling and inventory problems. Land, individual tree and timber stand measurement techniques will be covered as will the design and implementation of sampling systems to derive information necessary to meet landowner objectives.

14. What has prompted this change?

This course was revised to provide students with additional information on statistical concepts for solving forestry problems.

15. If there are to be significant changes in the content or teaching objectives of this course, indicate changes:

Student learning outcomes have been added to this course that address statistical concepts for solving forestry problems. See the syllabus (FOR 250) for a detailed listing of the proposed student learning outcomes and content.

16. Please list any other department that could be affected by the proposed change:

_____

17. Will changing this course change the degree requirements for ANY program on campus? ☑ YES ☐ NO

If YES‡, list below the programs that require this course:

Undergraduate Forestry Program

‡ In order for the course change to be considered, program change form(s) for the programs above must also be submitted.

APPLICATION FOR CHANGE IN EXISTING COURSE: MAJOR and MINOR

18. Is this course currently included in the University Studies Program? ☐ Yes ☑ No

19. ☐ Check box if changed to 400G or 500. If changed to 400G- or 500-level, *you must include a syllabus showing differentiation* for undergraduate and graduate students by (i) requiring additional assignments by the graduate students; and/or (ii) the establishment of different grading criteria in the course for graduate students. (See *SR 3.1.4)*

20. Within the department, who should be contacted for further information on the proposed course change?

Name: Jim Ringe Phone: 859-257-7594 Email: jringe@uky.edu

21. Signatures to report approvals:

March 3, 2008	Steven H. Bullard /		
DATE of Approval by Department Faculty	printed name	Reported by Department Chair	signature
9/29/2008	Michael Mullen /		
DATE of Approval by College Faculty	printed name	Reported by College Dean	signature
	/		
*DATE of Approval by Undergraduate Council	printed name	Reported by Undergraduate Council Chair	signature
	/		
*DATE of Approval by Graduate Council	printed name	Reported by Graduate Council Chair	signature
	/		
*DATE of Approval by Health Care Colleges Council (HCCC)	printed name	Reported by Health Care Colleges Council Chair	signature
*DATE of Approval by Senate Council		Reported by Office of the Senate Council	
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*If applicable, as provided by the *University Senate Rules.*

****

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SR 3.3.0.G.2: **Definition.** A request may be considered a minor change if it meets one of the following criteria:

a. change in number within the same hundred series;
b. editorial change in the course title or description which does not imply change in content or emphasis;
c. a change in prerequisite(s) which does not imply change in content or emphasis, or which is made necessary by the elimination or significant alteration of the prerequisite(s);
d. a cross-listing of a course under conditions set forth in *SR 3.3.0.E*;
e. correction of typographical errors.

Course Syllabus

FOR 250

Statistics and Measurements I

Class Period

Lecture: 2 hours per week
Lab: 2 hours per week

Instructor

Dr. Paul Kalisz
Room 102 T.P. Cooper Building
859-257-7606
pkalisz@uky.edu

COURSE OVERVIEW

Course Description

The application of statistical concepts, computations, and software to forestry sampling and inventory problems. Land, individual tree and timber stand measurement techniques will be covered as will the design and implementation of sampling systems to derive information necessary to meet landowner objectives. *Prerequisites: MA 109 or Calculus, FOR 100, and FOR 200.*

Student Learning Outcomes

At the end of this course, the student will be able to demonstrate the following skills.

1. Apply basic statistical concepts to analyze and solve a given problem.
2. When given a particular scenario, you will be able to use basic statistical software programs to input the data and solve the problem.
3. While in the field, you will be able to take land and standing tree measurements using a compass, prism, d-tape, global positioning system, Biltmore stick, and increment borer. Using these tools, you will be able to take land measurements to measure distances and determine area, and take standing tree measurements to determine height, form expressions, crowns, age, volume, and weights.
4. For a given field site, you will be able to design and conduct a timber inventory that meets specific landowner objectives. You will be able to apply sampling theory and design concepts to ensure appropriate sampling methods and units of measurement are used when designing and conducting the timber inventory.

5. When given wood product data, including specialty wood products, you will be able to calculate the weight, volume, and cost of the wood product and, as needed, apply log rules to determine volume.
6. Explain the basic concepts of site, stocking, and density.
7. Explain the basic concepts of growth and yield models.

Grading Procedures – Assignments, Grading Criteria, Letter Grades

Assignments, quizzes, problems - 40%
Three written tests - 25%
Field projects (on campus) – 20%
Final Exam – 15%

Letter Grades
A: $\geq 90\%$
B: $\geq 80\%$ and $< 90\%$
C: $\geq 70\%$ and $< 80\%$
D: $\geq 60\%$ and $< 70\%$
E: $< 60\%$

Course Outline

Week 1 – Statistics

Week 2 – Statistics (cont.)

Week 3 – Statistics (cont.)

Week 4 – Sampling

Week 5 - Land area measurements

Week 6 – Wood product volume and mass

Week 7 – Log rules and specialty products

Week 8 – Measurement of standing trees

Week 9 - Standing tree volume, mass, and quality

Week 10 – Inventory

Week 11 – Inventory (cont.)

Week 12 – Site quality, stocking and density

Week 13 – Site quality, stocking and density (cont.)

Week 14 – Tree growth

COURSE POLICIES

Attendance and Excused Absences

Attendance is mandatory - 1% will be deducted from your final grade for each unexcused absence.

Academic Integrity, Cheating and Plagiarism

Cheating of any form, including plagiarism, will not be tolerated. Cheating will be dealt with in accordance with University regulations. (See http://www.uky.edu/Student Affairs/Code/)

Professional Preparation

This course helps prepare you for your professional career. You are expected to attend class, be on time, participate in class discussions, and be respectful of your instructor and fellow classmates.

Disability Statement

Students with a disability that need classroom or exam accommodations should contact the Disability Resource Center, 257-2754, room 2 Alumni Gym, jkarnes@uky.edu .

APPLICATION FOR CHANGE IN EXISTING COURSE: MAJOR and MINOR

1. Submitted by the College of: Agriculture Date: 03/03/2008

Department/Division offering course: Department of Forestry

2. What type of change is being proposed? ☑ Major ☐ Minor*

*See the description at the end of this form regarding what constitutes a minor change. Minor changes are sent directly from the dean of the college to the Chair of the Senate Council.

If the Senate Council chair deems the change not to be minor, the form will be sent to the appropriate Council for normal processing and an email notification will be sent to the contact person.

PROPOSED CHANGES

Please complete all "Current" fields.

Fill out the "*Proposed*" field only for items being changed. Enter N/A if not changing.

Circle the number for each item(s) being changed. For example: (6.)

3. Current prefix & number: FOR 360 *Proposed prefix & number:* FOR 260

4. Current Title: Wood Technology and Utilization

Proposed Title†: Forest Products and Wood Science

†If title is longer than 24 characters (including spaces), write a sensible title (24 characters or less) for use on transcripts: Forest Prod. Wood Sci.

5. Current number of credit hours: 4 *Proposed number of credit hours:* N/A

6. Currently, is this course repeatable? YES ☐ NO ☑ If YES, current maximum credit hours: _____

Proposed to be repeatable? *YES* ☐ *NO* ☑ *If YES, proposed maximum credit hours:* _____

7. Current grading system: ☑ Letter (A, B, C, etc.) ☐ Pass/Fail

Proposed grading system: ☑ *Letter (A, B, C, etc.)* ☐ *Pass/Fail*

8. Courses must be described by at least one of the categories below. Include the number of actual contact hours per week for each category, as applicable.

Current:

(☐ CLINICAL ☐ COLLOQUIUM ☐ DISCUSSION 2 LABORATORY 3 LECTURE

(☐ INDEPEND. STUDY ☐ PRACTICUM ☐ RECITATION ☐ RESEARCH ☐ RESIDENCY

(☐ SEMINAR ☐ STUDIO ☐ OTHER – Please explain: _____

Proposed:

(☐ *CLINICAL* ☐ *COLLOQUIUM* ☐ *DISCUSSION* 2 *LABORATORY* 3 *LECTURE*

☐ *INDEPEND. STUDY* ☐ *PRACTICUM* ☐ *RECITATION* ☐ *RESEARCH* ☐ *RESIDENCY*

☐ *SEMINAR* ☐ *STUDIO* ☐ *OTHER – Please explain:* _____

9. Requested effective date (term/year): Fall / 2010

APPLICATION FOR CHANGE IN EXISTING COURSE: MAJOR and MINOR

10. Current teaching method: ☑ N/A ☐ Community-Based Experience ☐ Service Learning Component ☐ Both

Proposed teaching method (if applicable): ☐ *Community-Based Experience* ☐ *Service Learning Component* ☐ *Both*

11. Current cross-listing: ☑ N/A

Prefix and Number _____ NAME of current cross-listing DEPARTMENT _____

a. Proposed – REMOVE the current cross-listing: ☐

b. Proposed – ADD a cross-listing: _____ _____

Prefix and Number *Signature of chair of proposed cross-listing department*

12. Current prerequisites:

BIO 106 and 107, PHY 151, or consent of instructor

Proposed prerequisites:

None

13. Current Bulletin description:

General anatomy of wood and study of its properties. Identification of major species based on microscopic and macroscopic features. Sources, processing, and utilization of wood products.

Proposed Bulletin description:

An examination of basic material properties of wood, methods by which it is used, and issues and economic conditions in which domestic and global wood markets operate. Concepts covered include species identification, chemical and mechanical properties and their effect on utilization, utilization technologies and their linkage to silvicultural practices, and affiliated issues such as recycling, product certification, environmental concerns, and alternative products.

14. What has prompted this change?

This course has been revised to incorporate the broad spectrum of forest products and not just timber products. The course title has been modified to reflect this change.

15. If there are to be significant changes in the content or teaching objectives of this course, indicate changes:

Student learning outcomes have been modified to address the forest product industry and the management practices for various forest products. See the syllabus (FOR 260) for a detailed listing of the proposed student learning outcomes and content.

16. Please list any other department that could be affected by the proposed change:

_____

17. Will changing this course change the degree requirements for ANY program on campus? ☑ YES ☐ NO

If YES‡, list below the programs that require this course:

Undergraduate Forestry Program

‡ In order for the course change to be considered, program change form(s) for the programs above must also be submitted.

APPLICATION FOR CHANGE IN EXISTING COURSE: MAJOR and MINOR

18. Is this course currently included in the University Studies Program? ☐ Yes ☑ No

19. ☐ Check box if changed to 400G or 500. If changed to 400G- or 500-level, *you must include a syllabus showing differentiation* for undergraduate and graduate students by (i) requiring additional assignments by the graduate students; and/or (ii) the establishment of different grading criteria in the course for graduate students. (See *SR 3.1.4)*

20. Within the department, who should be contacted for further information on the proposed course change?

Name: Jim Ringe Phone: 859-257-7594 Email: jringe@uky.edu

21. Signatures to report approvals:

March 3, 2008	Steven H. Bullard /		
DATE of Approval by Department Faculty	printed name	Reported by Department Chair	signature
9/29/2008	Michael Mullen /		
DATE of Approval by College Faculty	printed name	Reported by College Dean	signature
	/		
*DATE of Approval by Undergraduate Council	printed name	Reported by Undergraduate Council Chair	signature
	/		
*DATE of Approval by Graduate Council	printed name	Reported by Graduate Council Chair	signature
	/		
*DATE of Approval by Health Care Colleges Council (HCCC)	printed name	Reported by Health Care Colleges Council Chair	signature
*DATE of Approval by Senate Council		Reported by Office of the Senate Council	
*DATE of Approval by the University Senate		Reported by the Office of the Senate Council	

*If applicable, as provided by the *University Senate Rules.*

****

Excerpt from *University Senate Rules:*

SR 3.3.0.G.2: **Definition.** A request may be considered a minor change if it meets one of the following criteria:

a. change in number within the same hundred series;
b. editorial change in the course title or description which does not imply change in content or emphasis;
c. a change in prerequisite(s) which does not imply change in content or emphasis, or which is made necessary by the elimination or significant alteration of the prerequisite(s);
d. a cross-listing of a course under conditions set forth in *SR 3.3.0.E*;
e. correction of typographical errors.

Course Syllabus

FOR 260

Forest Products and Wood Science

Class Period

Lecture: 3 hours per week
Lab: 2 hours per week

Instructor

Dr. J. M. Ringe
Room 108 T.P. Cooper Building
859-257-7594
jringe@uky.edu

COURSE OVERVIEW

Course Description

An examination of basic material properties of wood, methods by which it is used, and issues and economic conditions in which domestic and global wood markets operate. Concepts covered include species identification, chemical and mechanical properties and their effect on utilization, utilization technologies and their linkage to silvicultural practices, and affiliated issues such as recycling, product certification, environmental concerns, and alternative products. Laboratory, two hours per week.

Student Learning Outcomes

At the end of this course, the student will be able to demonstrate the following skills.

1. Describe basic concepts of wood science including chemical and mechanical properties of wood and wood identification. Use computers to perform calculations related to basic wood science.
2. When given a tree or stand, you will be able to determine which mill process and end product would be appropriate taking into consideration the impact of silvicultural practices, tree health (fire, insects, weather) and cultural practices (stock, treatment, fertilization, water) on wood and product quality.
3. Explain issues surrounding the wood product industry including market and economic conditions, wood technologies, recycling, forest product certification, environmental concerns, and public perception of certain forest products.
4. Describe terms associated with the wood product industry and why different woods are used in wood product processes.

5. Discuss state and regional forest product industry and analyze how global markets may affect the region's forest products industry.
6. Describe various forest products, including agroforestry products, and analyze how different management practices affect the types of forest products in a given area.

Grading Procedures – Assignments, Grading Criteria, Letter Grades

Lecture Exam I	15%
Lecture Exam II	15%
Lecture Final	20%
Lab Quiz I	10%
Lab Quiz II	10%
Lab Quiz III	10%
Lab Final	20%

Note: Lecture exams, including the final, are <u>not</u> cumulative.
Lab quizzes, including the final <u>are</u> cumulative.

<u>Letter Grades</u>
A: $\geq 90\%$
B: $\geq 80\%$ and $< 90\%$
C: $\geq 70\%$ and $< 80\%$
D: $\geq 60\%$ and $< 70\%$
E: $< 60\%$

Course Outline

Week 1 – Introduction and Macroscopic Character of Wood

Week 2 – Composition of Wood Cells

Week 3 – Softwood Structure

Week 4 – Hardwood Structure

Week 5 – Juvenile and Reaction Wood

Week 6 – Wood and Water

Week 7 – Specific Gravity and Density

Week 8 – Deterioration

Week 9 – Mechanical Properties

Week 10 – Silviculture and Wood Quality

Week 11 – Lumber and Plywood

Week 12 – Composites and Fiber Products

Week 13 – Wood Markets – Regional, National, and Global

Week 14 – Forest Products

COURSE POLICIES

Attendance and Excused Absences

Lectures: Attending lectures is required (and expected) of all students. Skipping class is not acting in your best interest, will most likely adversely affect your grade, is disrespectful of your instructor, and is not professional behavior.

Lab Sessions: Attending lab sessions is required of all students. Missing labs will cause you extreme difficulty on the lab exams. Make-up labs will be given only for excused absences.

Exams: Make-up exams and quizzes (Lab or Lecture) will be given only to students who miss an exam as a result of excused absences. In all other circumstances, a grade of 0 (zero) will result for the missed exam or quiz.

Academic Integrity, Cheating and Plagiarism

Cheating of any form, including plagiarism, will not be tolerated. Cheating will be dealt with in accordance with University regulations. (See http://www.uky.edu/Student Affairs/Code/)

Professional Preparation

This course helps prepare you for your professional career. You are expected to attend class, be on time, participate in class discussions, and be respectful of your instructor and fellow classmates.

Disability Statement

Students with a disability that need classroom or exam accommodations should contact the Disability Resource Center, 257-2754, room 2 Alumni Gym, jkarnes@uky.edu .

APPLICATION FOR CHANGE IN EXISTING COURSE: MAJOR and MINOR

1. Submitted by the College of: Agriculture Date: 03/03/2008

Department/Division offering course: Department of Forestry

2. What type of change is being proposed? ☑ Major ☐ Minor*

*See the description at the end of this form regarding what constitutes a minor change. Minor changes are sent directly from the dean of the college to the Chair of the Senate Council.

If the Senate Council chair deems the change not to be minor, the form will be sent to the appropriate Council for normal processing and an email notification will be sent to the contact person.

PROPOSED CHANGES

Please complete all "Current" fields.

Fill out the "*Proposed*" field only for items being changed. Enter N/A if not changing.

Circle the number for each item(s) being changed. For example: (6.)

3. Current prefix & number: FOR 430 *Proposed prefix & number:* FOR 370

4. Current Title: Forest Wildlife Management

Proposed Title†: Wildlife Biology and Management

†If title is longer than 24 characters (including spaces), write a sensible title (24 characters or less) for use on transcripts: Wildlife Bio. and Mgmt

5. Current number of credit hours: 3 *Proposed number of credit hours:* 4

6. Currently, is this course repeatable? YES ☐ NO ☑ If YES, current maximum credit hours: _____

Proposed to be repeatable? *YES* ☐ *NO* ☑ *If YES, proposed maximum credit hours:* _____

7. Current grading system: ☑ Letter (A, B, C, etc.) ☐ Pass/Fail

Proposed grading system: ☑ *Letter (A, B, C, etc.)* ☐ *Pass/Fail*

8. Courses must be described by at least one of the categories below. Include the number of actual contact hours per week for each category, as applicable.

Current:

(☐ CLINICAL ☐ COLLOQUIUM ☐ DISCUSSION 2 LABORATORY 2 LECTURE

(☐ INDEPEND. STUDY ☐ PRACTICUM ☐ RECITATION ☐ RESEARCH ☐ RESIDENCY

(☐ SEMINAR ☐ STUDIO ☐ OTHER – Please explain: _____

Proposed:

(☐ *CLINICAL* ☐ *COLLOQUIUM* ☐ *DISCUSSION* 3 *LABORATORY* 3 *LECTURE*

☐ *INDEPEND. STUDY* ☐ *PRACTICUM* ☐ *RECITATION* ☐ *RESEARCH* ☐ *RESIDENCY*

☐ *SEMINAR* ☐ *STUDIO* ☐ *OTHER – Please explain:* _____

9. Requested effective date (term/year): Spring / 2011

APPLICATION FOR CHANGE IN EXISTING COURSE: MAJOR and MINOR

10. Current teaching method: ☑ N/A ☐ Community-Based Experience ☐ Service Learning Component ☐ Both

Proposed teaching method (if applicable): ☐ *Community-Based Experience* ☐ *Service Learning Component* ☐ *Both*

11. Current cross-listing: ☑ N/A

Prefix and Number _____ NAME of current cross-listing DEPARTMENT _____

a. Proposed – REMOVE the current cross-listing: ☐

b. Proposed – ADD a cross-listing:

Prefix and Number _____ *Signature of chair of proposed cross-listing department* _____

12. Current prerequisites:

Summer Camp (FOR 375, 376, 377, 378, 379) or consent of the instructor.

Proposed prerequisites:

None

13. Current Bulletin description:

The principles and practices of wildlife ecology and management with emphasis on the forest environment.

Proposed Bulletin description:

Applications of basic biological concepts such as physiology, energetics, nutrition, digestive systems, and anatomy to the study of wildlife and wildlife management. In addition to basic wildlife biology, students will also learn taxonomy and identification of wildlife and the principles of wildlife management as well as applied field techniques such as trapping and radio telemetry.

14. What has prompted this change?

The proposed undergraduate forestry revision has less science requirements than the existing forestry program. Students will still receive natural science education but they will receive it within the context of forestry. This course is now offered at the 300-level.

15. If there are to be significant changes in the content or teaching objectives of this course, indicate changes:

This course will now cover basic concepts of animal biology in addition to wildlife biology. Some of the wildlife management content that is currently being taught has been shifted to the field semester. See the syllabus (FOR 370) for a detailed listing of the proposed student learning outcomes and content.

16. Please list any other department that could be affected by the proposed change:

_____

17. Will changing this course change the degree requirements for ANY program on campus? ☑ YES ☐ NO

If YES‡, list below the programs that require this course:

Undergraduate Forestry Program

‡ In order for the course change to be considered, program change form(s) for the programs above must also be submitted.

APPLICATION FOR CHANGE IN EXISTING COURSE: MAJOR and MINOR

18. Is this course currently included in the University Studies Program? ☐ Yes ☑ No

19. ☐ Check box if changed to 400G or 500. If changed to 400G- or 500-level, *you must include a syllabus showing differentiation* for undergraduate and graduate students by (i) requiring additional assignments by the graduate students; and/or (ii) the establishment of different grading criteria in the course for graduate students. (See *SR 3.1.4)*

20. Within the department, who should be contacted for further information on the proposed course change?

Name: Jim Ringe Phone: 859-257-7594 Email: jringe@uky.edu

21. Signatures to report approvals:

March 3, 2008	Steven H. Bullard /		
DATE of Approval by Department Faculty	printed name	Reported by Department Chair	signature
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d. a cross-listing of a course under conditions set forth in *SR 3.3.0.E*;
e. correction of typographical errors.

Course Syllabus

FOR 370

Wildlife Biology and Management

Class Period

Lecture: 3 hours per week
Lab: 3 hours per week

Instructor

Dr. Michael Lacki
Room 207 T.P. Cooper Building
859-257-8571
mlacki@uky.edu

COURSE OVERVIEW

Course Description

This course includes the application of basic biological concepts such as physiology, energetics, nutrition, digestive systems, and anatomy to the study of wildlife and wildlife management. Students will also learn taxonomy and identification of wildlife, the principles of wildlife management, and applied field techniques such as trapping and radio telemetry. Laboratory, three hours per week.

Student Learning Outcomes

At the end of this course, the student will be able to demonstrate the following skills.

1. Explain basic biological concepts such as physiology, energetics, nutrition, digestive systems, and anatomy.
2. Describe the history of wildlife management in North America.
3. Explain principles of wildlife management, including 1) biogeography, distribution of species, habitat requirements, forest structure, and vegetation type; 2) biodiversity, interactions, and structure; 3) taxonomy, wildlife identification, and natural history; and 4) harvesting theory and population dynamics.
4. Describe and apply correct wildlife field techniques such as trapping and radio telemetry.
5. Analyze public perceptions of a given wildlife current event and describe ways to address public concerns surrounding the current event.

Grading Procedures – Assignments, Grading Criteria, Letter Grades

The course requirements will include 4 laboratory exams, 3 lecture exams, and an attendance grade. Allocation of points on a % basis will be as follows:
Laboratory Exams – 10 % each (40 % of total grade)
Lecture Exams – 15 % Exam 1, 15 % Exam 2, and 20 % Exam 3 (50 % of total grade)
Attendance Grade – 10 % of total grade (see attendance policy on page 3)

Total = 100 %

Letter Grades
A: ≥ 90%
B: ≥ 80% and < 90%
C: ≥ 70% and < 80%
D: ≥ 60% and < 70%
E: < 60%

Course Outline

(Lecture; Lab)

Week 1 – History of Wildlife Management in North America;
Taxonomic Principles and Biogeography of Kentucky

Week 2 – Ecological Succession, Habitat Management, and Life History Strategies;
Taxonomy and Natural History of Amphibians

Week 3 – Energetics and the Importance of Cover and Space;
Taxonomy and Natural History of Reptiles

Week 4 – Nutrition and Digestive Systems of Wildlife (*Lecture Exam 1*);
Techniques – Food Habits Analysis

Week 5 – Principles of Population Dynamics and Population Regulation;
Lab Exam 1 – Amphibians

Week 6 – Harvesting Theory;
Lab Exam 2 - Reptiles

Week 7 – Life Table Analysis and Integration of Harvesting with Population Theory;
Techniques - Aging and Sexing

Week 8 – Population Estimation Procedures;
Taxonomy and Natural History of Birds

Week 9 – Silviculture and Principles of Forest Management (*Lecture Exam 2*);
Taxonomy and Natural History of Mammals

Week 10 – Stand-scale Management for Wildlife;
Techniques – Radio Telemetry

Week 11 – Landscape-scale Management for Wildlife;
Lab Exam 3 - Birds

Week 12 – Habitat Restoration for Wildlife;
Lab Exam 4 - Mammals

Week 13 – Anatomy, Reproduction, and Physiological Condition Indices;
Techniques - Necropsy Procedures

Week 14 – Endangered Species and the Wildlife Biodiversity Crisis
Techniques – Trapping

Week 15 - Finals (*Lecture Exam 3*)

COURSE POLICIES

Attendance and Excused Absences

Attendance at all laboratory exercises is mandatory. Attendance at lectures will be taken. For each unexcused absence, your attendance grade will be lowered by two percentage points.

Excused absences are defined by S.R. 5.2.4.2 http://www.uky.edu/StudentAffairs/Code/part2.html . For excused absences, students will be able to make up the missed work or exam. Students must inform the instructor of the advance, if possible, but not later than one week after the missed class.

Academic Integrity, Cheating and Plagiarism

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This course helps prepare you for your professional career. You are expected to attend class, be on time, participate in class discussions, and be respectful of your instructor and fellow classmates.

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APPLICATION FOR CHANGE IN EXISTING COURSE: MAJOR and MINOR

1. Submitted by the College of: Agriculture Date: 03/03/2008

Department/Division offering course: Department of Forestry

2. What type of change is being proposed? ☑ Major ☐ Minor*

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If the Senate Council chair deems the change not to be minor, the form will be sent to the appropriate Council for normal processing and an email notification will be sent to the contact person.

PROPOSED CHANGES

Please complete all "Current" fields.

Fill out the "*Proposed*" field only for items being changed. Enter N/A if not changing.

Circle the number for each item(s) being changed. For example: (6.)

3. Current prefix & number: FOR 340 *Proposed prefix & number:* N/A

4. Current Title: Forest Ecology

Proposed Title†: N/A

†If title is longer than 24 characters (including spaces), write a sensible title (24 characters or less) for use on transcripts:

5. Current number of credit hours: 3 *Proposed number of credit hours:* 4

6. Currently, is this course repeatable? YES ☐ NO ☑ If YES, current maximum credit hours: _____

Proposed to be repeatable? *YES* ☐ *NO* ☑ *If YES, proposed maximum credit hours:* _____

7. Current grading system: ☑ Letter (A, B, C, etc.) ☐ Pass/Fail

Proposed grading system: ☑ *Letter (A, B, C, etc.)* ☐ *Pass/Fail*

8. Courses must be described by at least one of the categories below. Include the number of actual contact hours per week for each category, as applicable.

Current:

(☐ CLINICAL ☐ COLLOQUIUM ☐ DISCUSSION 3 LABORATORY 2 LECTURE

(☐ INDEPEND. STUDY ☐ PRACTICUM ☐ RECITATION ☐ RESEARCH ☐ RESIDENCY

(☐ SEMINAR ☐ STUDIO ☐ OTHER – Please explain: _____

Proposed:

(☐ *CLINICAL* ☐ *COLLOQUIUM* ☐ *DISCUSSION* *4* *LABORATORY* *3* *LECTURE*

☐ *INDEPEND. STUDY* ☐ *PRACTICUM* ☐ *RECITATION* ☐ *RESEARCH* ☐ *RESIDENCY*

☐ *SEMINAR* ☐ *STUDIO* ☐ *OTHER – Please explain:* _____

9. Requested effective date (term/year): Fall / 2011

APPLICATION FOR CHANGE IN EXISTING COURSE: MAJOR and MINOR

10. Current teaching method: ☑ N/A ☐ Community-Based Experience ☐ Service Learning Component ☐ Both

Proposed teaching method (if applicable): ☐ *Community-Based Experience* ☐ *Service Learning Component* ☐ *Both*

11. Current cross-listing: ☑ N/A

Prefix and Number _____ NAME of current cross-listing DEPARTMENT _____

a. Proposed – REMOVE the current cross-listing: ☐

b. Proposed – ADD a cross-listing:

Prefix and Number _____ *Signature of chair of proposed cross-listing department* _____

12. Current prerequisites:

FOR 205 and FOR 219, or consent of instructor

Proposed prerequisites:

BIO 103 or BIO 150

13. Current Bulletin description:

The study of the forest as a biological community with emphasis on the interrelationships between trees and other organisms comprising the community, and the interrelationships between these organisms and the physical environment.

Proposed Bulletin description:

The study of the forest as a biological community, covering ecosystem concepts such as energy flow, forest nutrition, nutrient cycling, and decomposition. Interrelationships between trees and other organisms comprising the community is also examined through concepts of disturbance, succession, population dynamics, biological and ecosystem diversity, ecosystem management, and ecosystem services.

14. What has prompted this change?

The course hours have increased to provide students with additional field experience that is critical to understanding forest ecology concepts.

15. If there are to be significant changes in the content or teaching objectives of this course, indicate changes:

The basic student learning outcomes for the course have remained the same. See the syllabus (FOR 340) for a detailed listing of the proposed student learning outcomes and content.

16. Please list any other department that could be affected by the proposed change:

_____

17. Will changing this course change the degree requirements for ANY program on campus? ☑ YES ☐ NO

If YES‡, list below the programs that require this course:

Undergraduate Forestry Program

‡ In order for the course change to be considered, program change form(s) for the programs above must also be submitted.

APPLICATION FOR CHANGE IN EXISTING COURSE: MAJOR and MINOR

18. Is this course currently included in the University Studies Program? ☐ Yes ☑ No

19. ☐ Check box if changed to 400G or 500. If changed to 400G- or 500-level, *you must include a syllabus showing differentiation* for undergraduate and graduate students by (i) requiring additional assignments by the graduate students; and/or (ii) the establishment of different grading criteria in the course for graduate students. (See *SR 3.1.4)*

20. Within the department, who should be contacted for further information on the proposed course change?

Name: Jim Ringe Phone: 859-257-7594 Email: jringe@uky.edu

21. Signatures to report approvals:

March 3, 2008	Steven H. Bullard /		
DATE of Approval by Department Faculty	printed name	Reported by Department Chair	signature
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*If applicable, as provided by the *University Senate Rules.*

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c. a change in prerequisite(s) which does not imply change in content or emphasis, or which is made necessary by the elimination or significant alteration of the prerequisite(s);
d. a cross-listing of a course under conditions set forth in *SR 3.3.0.E*;
e. correction of typographical errors.

Course Syllabus

FOR 340

Forest Ecology

Class Period

Lecture: 3 hours per week
Lab: 4 hours per week

Instructor

Dr. Mary Arthur
Room 103 T.P Cooper Building
859-257-2852
marthur@uky.edu

COURSE OVERVIEW

Course Description

The study of the forest as a biological community, covering ecosystem concepts such as energy flow, forest nutrition, nutrient cycling, and decomposition. Interrelationships between trees and other organisms comprising the community is also examined through concepts of disturbance, succession, population dynamics, biological and ecosystem diversity, ecosystem management, and ecosystem services. Laboratory, four hours per week. *Prerequisites: BIO 103 or BIO 150.*

Student Learning Outcomes

At the end of this course, the student will be able to demonstrate the following skills.

1. Explain human and forest history and have a basic understanding of forestry, forest ecology, forest geography, and forest communities.
2. When discussing the forest as an ecosystem, you will be able to describe ecosystem concepts and processes such as energy flow, forest soils, forest hydrology, forest nutrition, nutrient cycling, and decomposition.
3. When discussing forest community dynamics and population ecology, you will be able to describe concepts and processes such as community ecology, disturbance, forest site and disturbance, succession, fire ecology, population ecology, tree life history, population dynamics, dendrochronology, and invasive species.
4. When discussing the forest and tree environment, you will be able to explain concepts and processes such as structure and function of forest trees; radiation, water and carbon balance; water and trees; temperature and tree growth; biological and ecosystem diversity; and ecosystem management and ecosystem services.

5. When in the field, you will be able to use proper field note taking and data collection techniques. After returning from the field, you will be able to analyze and interpret data using statistics. You will use computers to conduct data analysis and present the data in graph format.

Grading Procedures – Assignments, Grading Criteria, Letter Grades

Two hourly exams – 30%
One final exam – 15%
Class participation – 5%
Lab paper – 50%

Class Participation

Class participation will be graded using in-class 'quizzes' each morning, in which students have to respond to a question posed at the top of the day's lecture outline and turn it in when they leave class. The question typically comes from the previous lecture.

Letter Grades

A: $\geq 90\%$
B: $\geq 80\%$ and $< 90\%$
C: $\geq 70\%$ and $< 80\%$
D: $\geq 60\%$ and $< 70\%$
E: $< 60\%$

Course Outline

Week 1 - Course introduction; Human history and forests. Exponential growth; Introduction to forestry and forest ecology. Forest geography.

Week 2 - Nature of forest communities. Forest history. Ecosystem concept and energy flow

Week 3 - Energy flow in ecosystems. Forest soils.

Week 4 - Forest hydrology. Forest nutrition; review for exam.

Week 5 - Nutrient cycling in forest ecosystems. Nutrient cycling in forest ecosystems.

Week 6 - EXAM. Decomposition.

Week 7 - Community ecology. Disturbance.

Week 8 - Forest site and disturbance. Succession.

Week 9 - Fire ecology. Population ecology.

Week 10 - In-class review. Tree life history.

Week 11 - EXAM. Population dynamics.

Week 13 - Structure and function of forest trees. Radiation, water and carbon balance.

Week 14 - Water and trees. Temperature and tree growth.

Week 15 - Biological and ecosystem diversity. Ecosystem management.

COURSE POLICIES

Attendance and Excused Absences

Absences: Attendance is mandatory for the lab section of this course. **You will receive no credit for a missed lab.** In addition, there will be some in-class writing in this course that will be counted toward your final grade. Thus, while attendance will not be taken in lecture, you will periodically be asked to hand in very short writing assignments in class which will be entered into the grade book. Excused absences include: (1) illness of the student (you must notify the instructor in advance of a missed lab meeting), (2) serious illness or death of a family member, (3) official college trips, and (4) major religious holidays. For category 2, notify the instructor within 1 week of the absence – verification may be required. For category 3, notify the instructor at least 1 week prior to the event and in the case of category 4, notification must be in writing, no later than August 31st.

Make-up exams: Make-up exams will be given only for excused absences; all other missed exams result in a grade of zero.

Academic Integrity, Cheating and Plagiarism

Cheating of any form, including plagiarism, will not be tolerated. Cheating will be dealt with in accordance with University regulations. (See http://www.uky.edu/Student Affairs/Code/)

Professional Preparation

This course helps prepare you for your professional career. You are expected to attend class, be on time, participate in class discussions, and be respectful of your instructor and fellow classmates.

Disability Statement

Students with a disability that need classroom or exam accommodations should contact the Disability Resource Center, 257-2754, room 2 Alumni Gym, jkarnes@uky.edu .

APPLICATION FOR CHANGE IN EXISTING COURSE: MAJOR and MINOR

1. Submitted by the College of: Agriculture Date: 03/03/2008

Department/Division offering course: Department of Forestry

2. What type of change is being proposed? ☑ Major ☐ Minor*

*See the description at the end of this form regarding what constitutes a minor change. Minor changes are sent directly from the dean of the college to the Chair of the Senate Council.

If the Senate Council chair deems the change not to be minor, the form will be sent to the appropriate Council for normal processing and an email notification will be sent to the contact person.

PROPOSED CHANGES

Please complete all "Current" fields.

Fill out the "*Proposed*" field only for items being changed. Enter N/A if not changing.

Circle the number for each item(s) being changed. For example: (6.)

3. Current prefix & number: FOR 350 *Proposed prefix & number:* N/A

4. Current Title: Silviculture

Proposed Title†: N/A

†If title is longer than 24 characters (including spaces), write a sensible title (24 characters or less) for use on transcripts:

5. Current number of credit hours: 4 *Proposed number of credit hours:* N/A

6. Currently, is this course repeatable? YES ☐ NO ☑ If YES, current maximum credit hours: _____

Proposed to be repeatable? *YES* ☐ *NO* ☑ *If YES, proposed maximum credit hours:* _____

7. Current grading system: ☑ Letter (A, B, C, etc.) ☐ Pass/Fail

Proposed grading system: ☑ *Letter (A, B, C, etc.)* ☐ *Pass/Fail*

8. Courses must be described by at least one of the categories below. Include the number of actual contact hours per week for each category, as applicable.

Current:

(☐ CLINICAL ☐ COLLOQUIUM ☐ DISCUSSION 2 LABORATORY 3 LECTURE

(☐ INDEPEND. STUDY ☐ PRACTICUM ☐ RECITATION ☐ RESEARCH ☐ RESIDENCY

(☐ SEMINAR ☐ STUDIO ☐ OTHER – Please explain: _____

Proposed:

(☐ *CLINICAL* ☐ *COLLOQUIUM* ☐ *DISCUSSION* 3 *LABORATORY* 3 *LECTURE*

☐ *INDEPEND. STUDY* ☐ *PRACTICUM* ☐ *RECITATION* ☐ *RESEARCH* ☐ *RESIDENCY*

☐ *SEMINAR* ☐ *STUDIO* ☐ *OTHER – Please explain:* _____

9. Requested effective date (term/year): Fall / 2011

APPLICATION FOR CHANGE IN EXISTING COURSE: MAJOR and MINOR

10. Current teaching method: ☑ N/A ☐ Community-Based Experience ☐ Service Learning Component ☐ Both

Proposed teaching method (if applicable): ☐ *Community-Based Experience* ☐ *Service Learning Component* ☐ *Both*

11. Current cross-listing: ☑ N/A

Prefix and Number _____ NAME of current cross-listing DEPARTMENT _____

a. Proposed – REMOVE the current cross-listing: ☐

b. Proposed – ADD a cross-listing: _____ _____

Prefix and Number *Signature of chair of proposed cross-listing department*

12. Current prerequisites:

FOR 205, FOR 219, FOR 340, or consent of instructor

Proposed prerequisites:

FOR 219 and FOR 250

13. Current Bulletin description:

Principles and techniques of intermediate cutting, natural and artificial regeneration, systems of reproduction, application of genetics and tree improvement to intensive forest management, and silviculture of some of the major forest types of the United States.

Proposed Bulletin description:

A study of ecologically based manipulations of forests to achieve desired management objectives. Develop and apply silvicultural prescriptions and learn the effects of these prescriptions on timber and non-timber forest benefits, forest health and biodiversity, soil, and water resources as well as their effect on broader social, economic, and ecological issues.

14. What has prompted this change?

The prerequisites for this course have been updated to match the changes in the proposed undergraduate forestry curriculum.

15. If there are to be significant changes in the content or teaching objectives of this course, indicate changes:

The basic student learning outcomes for the course have remained the same. See the syllabus (FOR 350) for a detailed listing of the proposed student learning outcomes and content.

16. Please list any other department that could be affected by the proposed change:

_____

17. Will changing this course change the degree requirements for ANY program on campus? ☑ YES ☐ NO

If YES‡, list below the programs that require this course:

Undergraduate Forestry Program

‡ In order for the course change to be considered, program change form(s) for the programs above must also be submitted.

APPLICATION FOR CHANGE IN EXISTING COURSE: MAJOR and MINOR

18. Is this course currently included in the University Studies Program? ☐ Yes ☑ No

19. ☐ Check box if changed to 400G or 500. If changed to 400G- or 500-level, *you must include a syllabus showing differentiation* for undergraduate and graduate students by (i) requiring additional assignments by the graduate students; and/or (ii) the establishment of different grading criteria in the course for graduate students. (See *SR 3.1.4)*

20. Within the department, who should be contacted for further information on the proposed course change?

Name: Jim Ringe Phone: 859-257-7594 Email: jringe@uky.edu

21. Signatures to report approvals:

March 3, 2008	Steven H. Bullard /		
DATE of Approval by Department Faculty	printed name	Reported by Department Chair	signature
9/29/2008	Michael Mullen /		
DATE of Approval by College Faculty	printed name	Reported by College Dean	signature
	/		
*DATE of Approval by Undergraduate Council	printed name	Reported by Undergraduate Council Chair	signature
	/		
*DATE of Approval by Graduate Council	printed name	Reported by Graduate Council Chair	signature
	/		
*DATE of Approval by Health Care Colleges Council (HCCC)	printed name	Reported by Health Care Colleges Council Chair	signature
*DATE of Approval by Senate Council		Reported by Office of the Senate Council	
*DATE of Approval by the University Senate		Reported by the Office of the Senate Council	

*If applicable, as provided by the *University Senate Rules.*

****

Excerpt from *University Senate Rules:*

SR 3.3.0.G.2: **Definition.** A request may be considered a minor change if it meets one of the following criteria:

a. change in number within the same hundred series;
b. editorial change in the course title or description which does not imply change in content or emphasis;
c. a change in prerequisite(s) which does not imply change in content or emphasis, or which is made necessary by the elimination or significant alteration of the prerequisite(s);
d. a cross-listing of a course under conditions set forth in *SR 3.3.0.E*;
e. correction of typographical errors.

Course Syllabus

FOR 350

Silviculture

Class Period

Lecture: 3 hours per week
Lab: 3 hours per week

Instructor

Dr. John Lhotka
Room 210 T.P. Cooper Building
859-257-9701
john.lhotka@uky.edu

COURSE OVERVIEW

Course Description

A study of ecologically based manipulations of forests to achieve desired management objectives. Students will learn how to develop and apply silvicultural prescriptions and learn the effects of these prescriptions on timber and non-timber forest benefits, forest health and biodiversity, soil, and water resources as well as their effect on broader social, economic, and ecological issues. Laboratory, three hours per week. *Prerequisites: FOR 219 and FOR 250.*

Student Learning Outcomes

At the end of this course, the student will be able to demonstrate the following skills.

1. Describe common silvicultural terms and techniques used in establishing and influencing composition, growth, and quality of forests.
2. When given a silvicultural prescription, you will be able to describe how the silvicultural prescription influences timber production, forest health, biodiversity, soil and water resources, and non-timber products/benefits. You will also be able to describe how the silvicultural prescription influences social, economic, and ecological issues.
3. When given land management objectives, you will be able to develop silvicultural prescriptions using various silvicultural concepts.
4. When given a silvicultural practice, you will be able to analyze the interconnections between biological principles and the silvicultural practice.
5. Describe the ecology and management of forest ecosystems common to Kentucky and the surrounding region.

6. When given inventory data, you will be able to perform statistical calculations for projecting future forest, stand, and tree conditions and use computer simulations to understand temporal aspects of silviculture.

Grading Procedures – Assignments, Grading Criteria, Letter Grades

Course grade will be based upon performance on the following evaluations:

Exams – 70%
Writing and Laboratory Assignments – 20%
Quizzes – 10%

Letter Grades
A: $\geq 90\%$
B: $\geq 80\%$ and $< 90\%$
C: $\geq 70\%$ and $< 80\%$
D: $\geq 60\%$ and $< 70\%$
E: $< 60\%$

A grading curve may or may not be applied to the final course grade at the discretion of the instructor.

Course Outline

Week 1 – What is silviculture, common terminology, introduction to silvicultural systems

Week 2 – Stand dynamics, site quality/productivity

Week 3 – Tree and stand growth, effects of density management

Week 4 – Thinning methods

Week 5 – Release/improvement cuttings, pruning, fertilization

Week 6 – Ecology of regeneration

Week 7 – Site preparation

Week 8 – Even-aged regeneration methods

Week 9– Uneven-aged regeneration methods

Week 10 – Artificial regeneration

Week 11 – Silviculture of Kentucky's major forest types

Week 12 – Forest health and restoration

Week 13 – Managing forest structure for multiple-use objectives

Week 14 – Comprehensive final exam

COURSE POLICIES

Attendance and Excused Absences

Attendance is highly recommended for lecture, but is required for laboratory periods. Each unexcused absence for laboratory will decrease final grade by 1%.

Academic Integrity, Cheating and Plagiarism

Cheating of any form, including plagiarism, will not be tolerated. Cheating will be dealt with in accordance with University regulations. (See http://www.uky.edu/Student Affairs/Code/)

Professional Preparation

This course helps prepare you for your professional career. You are expected to attend class, be on time, participate in class discussions, and be respectful of your instructor and fellow classmates.

Disability Statement

Students with a disability that need classroom or exam accommodations should contact the Disability Resource Center, 257-2754, room 2 Alumni Gym, jkarnes@uky.edu .

APPLICATION FOR CHANGE IN EXISTING COURSE: MAJOR and MINOR

1. Submitted by the College of: Agriculture Date: 03/03/2008

Department/Division offering course: Department of Forestry

2. What type of change is being proposed? ☐ Major ☑ Minor*

*See the description at the end of this form regarding what constitutes a minor change. Minor changes are sent directly from the dean of the college to the Chair of the Senate Council.

If the Senate Council chair deems the change not to be minor, the form will be sent to the appropriate Council for normal processing and an email notification will be sent to the contact person.

PROPOSED CHANGES

Please complete all "Current" fields.

Fill out the "*Proposed*" field only for items being changed. Enter N/A if not changing.

Circle the number for each item(s) being changed. For example: (6.)

3. Current prefix & number: FOR 425 *Proposed prefix & number:* N/A

4. Current Title: Timber Management

Proposed Title†: Forest Management

†If title is longer than 24 characters (including spaces), write a sensible title (24 characters or less) for use on transcripts:

5. Current number of credit hours: 4 *Proposed number of credit hours:* N/A

6. Currently, is this course repeatable? YES ☐ NO ☑ If YES, current maximum credit hours: _____

Proposed to be repeatable? *YES* ☐ *NO* ☑ *If YES, proposed maximum credit hours:* _____

7. Current grading system: ☑ Letter (A, B, C, etc.) ☐ Pass/Fail

Proposed grading system: ☑ *Letter (A, B, C, etc.)* ☐ *Pass/Fail*

8. Courses must be described by at least one of the categories below. Include the number of actual contact hours per week for each category, as applicable.

Current:

(☐ CLINICAL ☐ COLLOQUIUM ☐ DISCUSSION 3 LABORATORY 3 LECTURE

(☐ INDEPEND. STUDY ☐ PRACTICUM ☐ RECITATION ☐ RESEARCH ☐ RESIDENCY

(☐ SEMINAR ☐ STUDIO ☐ OTHER – Please explain: _____

Proposed:

(☐ *CLINICAL* ☐ *COLLOQUIUM* ☐ *DISCUSSION* 3 *LABORATORY* 3 *LECTURE*

☐ *INDEPEND. STUDY* ☐ *PRACTICUM* ☐ *RECITATION* ☐ *RESEARCH* ☐ *RESIDENCY*

☐ *SEMINAR* ☐ *STUDIO* ☐ *OTHER – Please explain:* _____

9. Requested effective date (term/year): Fall / 2012

APPLICATION FOR CHANGE IN EXISTING COURSE: MAJOR and MINOR

10. Current teaching method: ☑ N/A ☐ Community-Based Experience ☐ Service Learning Component ☐ Both

Proposed teaching method (if applicable): ☐ *Community-Based Experience* ☐ *Service Learning Component* ☐ *Both*

11. Current cross-listing: ☐ N/A AEC 425 (Prefix and Number) Department of Agricultural Economics (NAME of current cross-listing DEPARTMENT)

a. Proposed – REMOVE the current cross-listing: ☐

b. Proposed – ADD a cross-listing: _____ (*Prefix and Number*) _____ (*Signature of chair of proposed cross-listing department*)

12. Current prerequisites:

MA 162, FOR 201, and Summer Camp (FOR 375, 376, 377, 378, and 379) or consent of instructor

Proposed prerequisites:

Completion of the Spring Field Semester (FOR 355, 356, 357, 358, and 359) or consent of instructor

13. Current Bulletin description:

The principles of sustained yield timber management, organization of the forest area, management objectives, timber valuation, regulation of the cut, and timber management plans.

Proposed Bulletin description:

The principles of sustained yield forest management, management objectives, forest regulation, allowable cut, and timing of timber harvests. Students will identify management objectives for various properties and ownership types and integrate scientific knowledge and both timber and non-timber considerations with landowner objectives to derive management decisions.

14. What has prompted this change?

The prerequisites for this course have been updated to match the changes in the proposed undergraduate forestry curriculum.

15. If there are to be significant changes in the content or teaching objectives of this course, indicate changes:

The basic student learning outcomes for the course have remained the same. See the syllabus (FOR 425) for a detailed listing of the proposed student learning outcomes and content.

16. Please list any other department that could be affected by the proposed change:

_____

17. Will changing this course change the degree requirements for ANY program on campus? ☑ YES ☐ NO

If YES‡, list below the programs that require this course:

Undergraduate Forestry Program

‡ In order for the course change to be considered, program change form(s) for the programs above must also be submitted.

APPLICATION FOR CHANGE IN EXISTING COURSE: MAJOR and MINOR

18. Is this course currently included in the University Studies Program? ☐ Yes ☑ No

19. ☐ Check box if changed to 400G or 500. If changed to 400G- or 500-level, *you must include a syllabus showing differentiation* for undergraduate and graduate students by (i) requiring additional assignments by the graduate students; and/or (ii) the establishment of different grading criteria in the course for graduate students. (See *SR 3.1.4)*

20. Within the department, who should be contacted for further information on the proposed course change?

Name: Jim Ringe Phone: 859-257-7594 Email: jringe@uky.edu

21. Signatures to report approvals:

March 3, 2008	Steven H. Bullard /		
DATE of Approval by Department Faculty	printed name	Reported by Department Chair	signature
9/29/2008	Michael Mullen /		
DATE of Approval by College Faculty	printed name	Reported by College Dean	signature
	/		
*DATE of Approval by Undergraduate Council	printed name	Reported by Undergraduate Council Chair	signature
	/		
*DATE of Approval by Graduate Council	printed name	Reported by Graduate Council Chair	signature
	/		
*DATE of Approval by Health Care Colleges Council (HCCC)	printed name	Reported by Health Care Colleges Council Chair	signature
*DATE of Approval by Senate Council		Reported by Office of the Senate Council	
*DATE of Approval by the University Senate		Reported by the Office of the Senate Council	

*If applicable, as provided by the *University Senate Rules.*

****

Excerpt from *University Senate Rules:*

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b. editorial change in the course title or description which does not imply change in content or emphasis;
c. a change in prerequisite(s) which does not imply change in content or emphasis, or which is made necessary by the elimination or significant alteration of the prerequisite(s);
d. a cross-listing of a course under conditions set forth in *SR 3.3.0.E*;
e. correction of typographical errors.

Course Syllabus

FOR 425

Forest Management

Class Period

Lecture: 3 hours per week
Lab: 3 hours per week

Instructor

Dr. Tamara Cushing
Room 104 T.P. Cooper Building
859-257-2149
tamara.cushing@uky.edu

COURSE OVERVIEW

Course Description

The principles of sustained yield forest management, management objectives, forest regulation, allowable cut, and timing of timber harvests. Students will identify management objectives for various properties and ownership types and integrate scientific knowledge and both timber and non-timber considerations with landowner objectives to derive management decisions. Laboratory, three hours per week. *Prerequisites: Completion of the Field Semester or consent of instructor.*

Student Learning Outcomes

At the end of this course, the student will be able to demonstrate the following skills.

1. Apply concepts such as growth and yield, mean annual increment, periodic annual increment, and site quality to forest management decisions.

2. When given a field site, you will use global positioning systems and geographic information systems to create a stand map consisting of various map layers including tree and wildlife layers.

3. When given a field site, you will be able determine what timber needs to be cut, how much should be cut, and when the cutting should occur. You will be able to describe forest regulation terms such as growing stock, annual harvest, volume control, area control, and equivalence acres and perform calculations using these concepts.

4. When preparing a forest management plan, you will be able to identify management objectives for various properties and ownership types and integrate scientific knowledge with landowner objectives.

5. When given data, you will be able to use linear programming to determine harvest scheduling and rotation.

6. Apply non-timber considerations such as wildlife, water quality, and recreation to forest management decisions.

7. Identify the key components of a forest management plan and explain how to prepare a professional forest management plan.

8. Integrate financial analysis into forest management decisions.

Grading Procedures – Assignments, Grading Criteria, Letter Grades

Quizzes	20%
Assignments	15%
Lab Write-Up	10%
Exams (2)	30%
Final	25%

Letter Grades
A: $\geq 90\%$
B: $\geq 80\%$ and $< 90\%$
C: $\geq 70\%$ and $< 80\%$
D: $\geq 60\%$ and $< 70\%$
E: $< 60\%$

Course Outline

Week 1 – Introduction to Forest Management

Week 2 – Land Classification

Week 3 – Silvicultural Systems and Stand Prescriptions

Week 4 – Growth and Yield Concepts

Week 5 – Determination of Optimal Rotation Age

Week 6 – Stand Level Management Planning

Week 7 – Forest Regulation

Week 8 – Forest Regulation

Week 9 – Linear Programming

Week 10 – Linear Programming

Week 11 – Decision Analysis

Week 12 – Decision Analysis

Week 13 – Managing for Non-Timber Objectives

Week 14 – Management Plans

COURSE POLICIES

Attendance and Excused Absences

Attending lectures is expected of all students. Skipping class is not acting in your best interest. Weekly quizzes will be given. Make-up exams and quizzes will be given only to students who miss an exam as a result of excused absences. In all other circumstances, a grade of 0 (zero) will result for the missed exam or quiz.

Academic Integrity, Cheating and Plagiarism

Cheating of any form, including plagiarism, will not be tolerated. Cheating will be dealt with in accordance with University regulations. (See http://www.uky.edu/Student Affairs/Code/)

Professional Preparation

This course helps prepare you for your professional career. You are expected to attend class, be on time, participate in class discussions, and be respectful of your instructor and fellow classmates.

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Students with a disability that need classroom or exam accommodations should contact the Disability Resource Center, 257-2754, room 2 Alumni Gym, jkarnes@uky.edu .

APPLICATION FOR CHANGE IN EXISTING COURSE: MAJOR and MINOR

1. Submitted by the College of: Agriculture Date: 03/03/2008

Department/Division offering course: Department of Agriculture

2. What type of change is being proposed? ☑ Major ☐ Minor*

*See the description at the end of this form regarding what constitutes a minor change. Minor changes are sent directly from the dean of the college to the Chair of the Senate Council.

If the Senate Council chair deems the change not to be minor, the form will be sent to the appropriate Council for normal processing and an email notification will be sent to the contact person.

PROPOSED CHANGES

Please complete all "Current" fields.

Fill out the "*Proposed*" field only for items being changed. Enter N/A if not changing.

Circle the number for each item(s) being changed. For example: (6.)

3. Current prefix & number: FOR 460G *Proposed prefix & number:* FOR 460

4. Current Title: Forest Watershed Management

Proposed Title†: Forest Hydrology and Watershed Management

†If title is longer than 24 characters (including spaces), write a sensible title (24 characters or less) for use on transcripts: Forest Hydr Wtrshd Mgmt

5. Current number of credit hours: 3 *Proposed number of credit hours:* 4

6. Currently, is this course repeatable? YES ☐ NO ☑ If YES, current maximum credit hours: _____

Proposed to be repeatable? *YES* ☐ *NO* ☑ *If YES, proposed maximum credit hours:* _____

7. Current grading system: ☑ Letter (A, B, C, etc.) ☐ Pass/Fail

Proposed grading system: ☑ *Letter (A, B, C, etc.)* ☐ *Pass/Fail*

8. Courses must be described by at least one of the categories below. Include the number of actual contact hours per week for each category, as applicable.

Current:

(☐ CLINICAL ☐ COLLOQUIUM ☐ DISCUSSION ☐ LABORATORY 3 LECTURE

(☐ INDEPEND. STUDY ☐ PRACTICUM ☐ RECITATION ☐ RESEARCH ☐ RESIDENCY

(☐ SEMINAR ☐ STUDIO ☐ OTHER – Please explain: _____

Proposed:

(☐ *CLINICAL* ☐ *COLLOQUIUM* ☐ *DISCUSSION* 3 *LABORATORY* 3 *LECTURE*

☐ *INDEPEND. STUDY* ☐ *PRACTICUM* ☐ *RECITATION* ☐ *RESEARCH* ☐ *RESIDENCY*

☐ *SEMINAR* ☐ *STUDIO* ☐ *OTHER – Please explain:* _____

9. Requested effective date (term/year): Fall / 2012

APPLICATION FOR CHANGE IN EXISTING COURSE: MAJOR and MINOR

10. Current teaching method: ☑ N/A ☐ Community-Based Experience ☐ Service Learning Component ☐ Both

Proposed teaching method (if applicable): ☐ *Community-Based Experience* ☐ *Service Learning Component* ☐ *Both*

11. Current cross-listing: ☑ N/A

Prefix and Number _____ NAME of current cross-listing DEPARTMENT _____

a. Proposed – REMOVE the current cross-listing: ☐

b. Proposed – ADD a cross-listing:

Prefix and Number _____ *Signature of chair of proposed cross-listing department* _____

12. Current prerequisites:

Summer Camp (FOR 375, 376, 377, 378, and 379) or consent of instructor

Proposed prerequisites:

CHE 104 or CHE 105, MA 109 or Calculus, FOR 200, and PLS 366

13. Current Bulletin description:

Principles and techniques involved in forest watershed management as related to the water resource. The influence of forestry practices on water movement into and through the watershed; water storage; water loss, vegetation and water yields; water quality. All-day field trip required.

Proposed Bulletin description:

Principles and techniques involved in watershed management as it relates to the practice of forestry. Emphasis is placed on understanding the hydrologic cycle, plant-soil interactions from a land-use and landscape perspective, and the need for implementation of forestry best management practices.

14. What has prompted this change?

This course hours have increased to provide students with additional field experience that is critical to understanding forest hydrology and watershed concepts. The title has been changed to better reflect the hydrology and watershed management topics that are taught in the course.

15. If there are to be significant changes in the content or teaching objectives of this course, indicate changes:

The basic student learning outcomes for the course have remained the same. See the syllabus (FOR 460) for a detailed listing of the proposed student learning outcomes and content.

16. Please list any other department that could be affected by the proposed change:

_____

17. Will changing this course change the degree requirements for ANY program on campus? ☑ YES ☐ NO

If YES‡, list below the programs that require this course:

Undergraduate Forestry Program

‡ In order for the course change to be considered, program change form(s) for the programs above must also be submitted.

APPLICATION FOR CHANGE IN EXISTING COURSE: MAJOR and MINOR

18. Is this course currently included in the University Studies Program? ☐ Yes ☑ No

19. ☐ Check box if changed to 400G or 500. If changed to 400G- or 500-level, *you must include a syllabus showing differentiation* for undergraduate and graduate students by (i) requiring additional assignments by the graduate students; and/or (ii) the establishment of different grading criteria in the course for graduate students. (See *SR 3.1.4)*

20. Within the department, who should be contacted for further information on the proposed course change?

Name: Jim Ringe Phone: 859-257-7594 Email: jringe@uky.edu

21. Signatures to report approvals:

March 3, 2008	Steven H. Bullard /		
DATE of Approval by Department Faculty	printed name	Reported by Department Chair	signature
9/29/2008	Michael Mullen /		
DATE of Approval by College Faculty	printed name	Reported by College Dean	signature
*DATE of Approval by Undergraduate Council	/ printed name	Reported by Undergraduate Council Chair	signature
*DATE of Approval by Graduate Council	/ printed name	Reported by Graduate Council Chair	signature
*DATE of Approval by Health Care Colleges Council (HCCC)	/ printed name	Reported by Health Care Colleges Council Chair	signature
*DATE of Approval by Senate Council		Reported by Office of the Senate Council	
*DATE of Approval by the University Senate		Reported by the Office of the Senate Council	

*If applicable, as provided by the *University Senate Rules.*

****

Excerpt from *University Senate Rules:*

SR 3.3.0.G.2: **Definition.** A request may be considered a minor change if it meets one of the following criteria:

a. change in number within the same hundred series;
b. editorial change in the course title or description which does not imply change in content or emphasis;
c. a change in prerequisite(s) which does not imply change in content or emphasis, or which is made necessary by the elimination or significant alteration of the prerequisite(s);
d. a cross-listing of a course under conditions set forth in *SR 3.3.0.E*;
e. correction of typographical errors.

Course Syllabus

FOR 460

Forest Hydrology and Watershed Management

Class Period

Lecture: 3 hours per week
Lab: 3 hours per week

Instructor

Dr. Chris Barton
Room 203 T.P. Cooper Building
859-257-2099
chris.barton@uky.edu

COURSE OVERVIEW

Course Description

Principles and techniques involved in watershed management as it relates to the practice of forestry. Emphasis is placed on understanding the hydrologic cycle, plant-soil interactions from a land-use and landscape perspective, and the need for implementation of forestry best management practices. Laboratory, three hours per week. *Prerequisites: CHE 104 or CHE 105, MA 109 or Calculus, FOR 200, and PLS 366.*

Student Learning Outcomes

At the end of this course, the student will be able to demonstrate the following skills.

1. Use your knowledge of the hydrologic cycle to explain how climate, soils, vegetation, and land-use affect the amount, timing, and quality of water.
2. Explain the plant-soil water relationship from the hydrologic perspective.
3. Explain hydrologic interactions from a land-use and landscape perspective.
4. Comprehend the need for forestry best management practices in relation to hydrology and watershed management.
5. Quantitatively measure and calculate hydrologic variables and describe analytical procedures for evaluating precipitation, evapotranspiration, infiltration, and stream flow.
6. Analyze current issues in watershed management in relation to social and economic impacts.
7. Interpret hydrology data and graphs as related to hydrology and watershed management.

Grading Procedures – Assignments, Grading Criteria, Letter Grades

Exam I	15%
Exam II	15%
Final Exam	15%
Homework (4)	20% (5 each)
Lab Reports (4)	20% (5 each)
Technical Report	15%

Letter Grades

A: $\geq 90\%$
B: $\geq 80\%$ and $< 90\%$
C: $\geq 70\%$ and $< 80\%$
D: $\geq 60\%$ and $< 70\%$
E: $< 60\%$

Course Outline

I. Water Resources
- A. Watershed Management and Water Resources
- B. Worldwide Water Resources

II. Introduction to Hydrologic Cycle

III. Precipitation
- A. Process
- B. Measurement
- C. Analysis of Precipitation Data

IV. Interception and Net Precipitation
- A. Process
- B. Hydrologic Importance

V. Evapotranspiration and Soil Water
- A. Water Budget
- B. Process of Evaporation
- C. Soil Evaporation
- D. Transpiration
- E. Potential ET - Actual ET

VI. Infiltration
- A. Process and Measurement
- B. Infiltration Equations
- C. Land-use Impacts on Infiltration

VII. Runoff and Streamflow

A. Measurement of Streamflow
B. Field calculations

VIII. Stream Channel Morphology
A. River Continuum Concept
B. Rosgens Stream Classification concept

IX. Water Quality
A. Overview
B. Physical Characteristics
C. Chemical Characteristics

X. Erosion Processes and Control -
A. Surface Erosion
B. Gully Erosion and Control
C. Mass Soil Erosion

XI. Water Quality Management-BMPs
A. Riparian Systems
B. Wetland Systems
C. Roads, landings, trails etc.

XII. Watershed Management Planning, Multiple Use and Sustainable Development

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COURSE POLICIES

Attendance and Excused Absences

Attendance is mandatory for this course.

Excused absences include: 1) illness of the student, 2) serious illness or death of an immediate family member, 3) official college trips, and 4) major religious holidays. For categories 1 and 2, notification must occur within 1 week of the absence, and verification may be required. For categories 3 and 4, the instructor must be notified in writing 1 week prior to the event. Other unusual, legitimate problems will be addressed on a case-by-case basis. If a student has excused absences in excess of one fifth of the class contact hours, a student may petition and receive either a "W" or an "I" for the course.

Exams must be taken at the designated times unless ***prior*** arrangements have been approved by the instructor. Prior arrangements can be made for academic or health reasons, but will not be made for personal convenience.

Problem sets are due two weeks after the date on which it was assigned unless otherwise indicated. **Late problem sets will be deducted by 10% each day** unless ***prior*** arrangements have been made with the instructor.

Academic Integrity, Cheating and Plagiarism

Plagiarism and other forms of cheating are unacceptable and will not be tolerated. Additional information on plagiarism may be found at http://www.uky.edu/Ombud/Plagiarism.pdf .

Professional Preparation

This course helps prepare you for your professional career. You are expected to attend class, be on time, participate in class discussions, and be respectful of your instructor and fellow classmates.

Disability Statement

Students with a disability that need classroom or exam accommodations should contact the Disability Resource Center, 257-2754, room 2 Alumni Gym, jkarnes@uky.edu .

APPLICATION FOR CHANGE IN EXISTING COURSE: MAJOR and MINOR

1. Submitted by the College of: Agriculture Date: 03/03/2008

Department/Division offering course: Department of Forestry

2. What type of change is being proposed? ☑ Major ☐ Minor*

*See the description at the end of this form regarding what constitutes a minor change. Minor changes are sent directly from the dean of the college to the Chair of the Senate Council.

If the Senate Council chair deems the change not to be minor, the form will be sent to the appropriate Council for normal processing and an email notification will be sent to the contact person.

PROPOSED CHANGES

Please complete all "Current" fields.

Fill out the "*Proposed*" field only for items being changed. Enter N/A if not changing.

Circle the number for each item(s) being changed. For example: (6.)

3. Current prefix & number: FOR 480 *Proposed prefix & number:* N/A

4. Current Title: Integrated Forest Resource Management

Proposed Title†: N/A

†If title is longer than 24 characters (including spaces), write a sensible title (24 characters or less) for use on transcripts:

5. Current number of credit hours: 5 *Proposed number of credit hours:* N/A

6. Currently, is this course repeatable? YES ☐ NO ☑ If YES, current maximum credit hours: _____

Proposed to be repeatable? *YES* ☐ *NO* ☑ *If YES, proposed maximum credit hours:* _____

7. Current grading system: ☑ Letter (A, B, C, etc.) ☐ Pass/Fail

Proposed grading system: ☑ *Letter (A, B, C, etc.)* ☐ *Pass/Fail*

8. Courses must be described by at least one of the categories below. Include the number of actual contact hours per week for each category, as applicable.

Current:

(☐ CLINICAL ☐ COLLOQUIUM ☐ DISCUSSION 4 LABORATORY 3 LECTURE

(☐ INDEPEND. STUDY ☐ PRACTICUM ☐ RECITATION ☐ RESEARCH ☐ RESIDENCY

(☐ SEMINAR ☐ STUDIO ☐ OTHER – Please explain: _____

Proposed:

(☐ *CLINICAL* ☐ *COLLOQUIUM* ☐ *DISCUSSION* ☐ *LABORATORY* ☐ *LECTURE*

☐ *INDEPEND. STUDY* 8 *PRACTICUM* ☐ *RECITATION* ☐ *RESEARCH* ☐ *RESIDENCY*

☐ *SEMINAR* ☐ *STUDIO* ☐ *OTHER – Please explain:* NOTE: Course meets 1 day per week

9. Requested effective date (term/year): Spring / 2013

APPLICATION FOR CHANGE IN EXISTING COURSE: MAJOR and MINOR

10. Current teaching method: ☑ N/A ☐ Community-Based Experience ☐ Service Learning Component ☐ Both

Proposed teaching method (if applicable): ☐ *Community-Based Experience* ☐ *Service Learning Component* ☐ *Both*

11. Current cross-listing: ☑ N/A

Prefix and Number _____ NAME of current cross-listing DEPARTMENT _____

a. Proposed – REMOVE the current cross-listing: ☐

b. Proposed – ADD a cross-listing:

Prefix and Number _____ *Signature of chair of proposed cross-listing department* _____

12. Current prerequisites:

FOR 425, FOR 430, FOR 440, and FOR 460G

Proposed prerequisites:

Completion of Field Semester, FOR 425, FOR 460, and Senior Standing

13. Current Bulletin description:

This is the capstone course in the forestry curriculum. Students will be presented with a real life management scenario in a forested location in Kentucky. They will be required to collect data, determine management objectives, and develop action plans for managing the forest according to the desires of the owner and subject to realistic legal, economic, and social constraints. Students will be required to present their management plans at the end of the semester to the forestry faculty.

Proposed Bulletin description:

Capstone course. Students will be presented with a real life management scenario in a forested location in Kentucky. Working in teams, students will collect data, determine management objectives, and develop action plans for managing the forest according to the desires of the owner, subject to realistic legal, economic, ethical, and social constraints. Students will be required to produce a professional management plan and present the plan in a public forum at the end of the semester.

14. What has prompted this change?

The prerequisites for this course have been updated to match the changes in the proposed undergraduate forestry curriculum.

15. If there are to be significant changes in the content or teaching objectives of this course, indicate changes:

The basic student learning outcomes for the course have remained the same. See the syllabus (FOR 480) for a detailed listing of the proposed student learning outcomes and content.

16. Please list any other department that could be affected by the proposed change:

_____

17. Will changing this course change the degree requirements for ANY program on campus? ☑ YES ☐ NO

If YES‡, list below the programs that require this course:

Undergraduate Forestry Program

‡ In order for the course change to be considered, program change form(s) for the programs above must also be submitted.

APPLICATION FOR CHANGE IN EXISTING COURSE: MAJOR and MINOR

18. Is this course currently included in the University Studies Program? ☐ Yes ☑ No

19. ☐ Check box if changed to 400G or 500. If changed to 400G- or 500-level, *you must include a syllabus showing differentiation* for undergraduate and graduate students by (i) requiring additional assignments by the graduate students; and/or (ii) the establishment of different grading criteria in the course for graduate students. (See *SR 3.1.4)*

20. Within the department, who should be contacted for further information on the proposed course change?

Name: Jim Ringe Phone: 859-259-7594 Email: jringe@uky.edu

21. Signatures to report approvals:

March 3, 2008	Steven H. Bullard /		
DATE of Approval by Department Faculty	printed name	Reported by Department Chair	signature
9/29/2008	Michael Mullen /		
DATE of Approval by College Faculty	printed name	Reported by College Dean	signature
	/		
*DATE of Approval by Undergraduate Council	printed name	Reported by Undergraduate Council Chair	signature
	/		
*DATE of Approval by Graduate Council	printed name	Reported by Graduate Council Chair	signature
	/		
*DATE of Approval by Health Care Colleges Council (HCCC)	printed name	Reported by Health Care Colleges Council Chair	signature
*DATE of Approval by Senate Council		Reported by Office of the Senate Council	
*DATE of Approval by the University Senate		Reported by the Office of the Senate Council	

*If applicable, as provided by the *University Senate Rules.*

****

Excerpt from *University Senate Rules:*

SR 3.3.0.G.2: **Definition.** A request may be considered a minor change if it meets one of the following criteria:

a. change in number within the same hundred series;
b. editorial change in the course title or description which does not imply change in content or emphasis;
c. a change in prerequisite(s) which does not imply change in content or emphasis, or which is made necessary by the elimination or significant alteration of the prerequisite(s);
d. a cross-listing of a course under conditions set forth in *SR 3.3.0.E*;
e. correction of typographical errors.

Course Syllabus

FOR 480

Integrated Forest Resource Management

Class Period

Practicum: One day per week

Instructors

Dr. Tamara Cushing
Room 104 T.P. Cooper Building
859-257-2149
tamara.cushing@uky.edu

Dr. John Lhotka
Room 210 T.P. Cooper Building
859-257-9701
john.lhotka@uky.edu

COURSE OVERVIEW

Course Description

This is the other capstone course in the forestry curriculum. Students will be presented with a real life management scenario in a forested location in Kentucky. Working in teams, students will collect data, determine management objectives, and develop action plans for managing the forest according to the desires of the owner, subject to realistic legal, economic, ethical, and social constraints. Students will be required to produce a professional management plan and present the plan in a public forum at the end of the semester. *Prerequisites: Completion of Field Semester, FOR 425, FOR 460, and Senior Standing.*

Student Learning Outcomes

At the end of this course, the student will be able to demonstrate the following skills.

1. Relate your knowledge of forestry concepts with information collected on a forested property to design and implement a comprehensive inventory proposal, including describing a property's biophysical properties, historical and present land use by using land records and legal descriptions.
2. Relate your knowledge of forestry concepts with information collected on a forested property to develop a detailed management prescription incorporating the landowner's objectives and administering the objectives in light of ethical forestry and stewardship guidelines.
3. Demonstrate effective interaction skills and professional conduct with various types of landowners and the public.

Grading Procedures – Assignments, Grading Criteria, Letter Grades

Teams will be graded on how well they demonstrate the breadth and depth of their professional competence in required assignments:

Newspaper article	5%	
Web Journal	10%	
Inventory Proposal	5%	(Fifteen percent determined by peer evaluation)
Forest Inventory Report	25%	(Fifteen percent determined by peer evaluation)
Forest Management Plan	30%	(Fifteen percent determined by peer evaluation)
Presentation of Management Plan	25%	(Fifteen percent determined by peer evaluation)

Letter Grades

A: $\geq 90\%$
B: $\geq 80\%$ and $< 90\%$
C: $\geq 70\%$ and $< 80\%$
D: $\geq 60\%$ and $< 70\%$
E: $< 60\%$

Course Outline

Week 1 – Class overview, Visit tracts, GPS Training, Soils and Forest Inventory, Begin preliminary sampling

Week 2 – Data Collection, Winter Dendrology

Week 3 – Data Collection, Statement of Landowner Characteristics and Objectives Due

Week 4 – Data Collection, Wildlife Habitat, Inventory Proposal Due

Week 5 – Data Collection, Courthouse Data Collection

Week 6 – Data Collection

Week 7 – Data Collection/Analysis

Week 8 – Data Collection/ Analysis, Inventory Report Due

Week 9 – Data Collection/Analysis

Week 10 – Preparation of Management Plan

Week 11 – Preparation of Management Plan

Week 12 – Preparation of Management Plan

Week 13 – Preparation of Management Plan and Presentation

Week 14 – Management Plan & Presentation

COURSE POLICIES

Attendance and Excused Absences

Attendance is mandatory. If you foresee an absence, it is essential that you contact one of the instructors as soon as possible. If a student has excused absences in excess of one fifth of the class contact hours, a student may petition and receive a "W" or an "I" for the class.

Academic Integrity, Cheating and Plagiarism

Cheating of any form, including plagiarism, will not be tolerated. Cheating will be dealt with in accordance with University regulations. (See http://www.uky.edu/Student Affairs/Code/)

Professional Preparation

This course helps prepare you for your professional career. You are expected to attend class, be on time, participate in class discussions, and be respectful of your instructor and fellow classmates.

Disability Statement

Students with a disability that need classroom or exam accommodations should contact the Disability Resource Center, 257-2754, room 2 Alumni Gym, jkarnes@uky.edu .

Section 4

Dropped Courses for the BS in Forestry

UNIVERSITY OF KENTUCKY
APPLICATION TO DROP A COURSE

1. Submitted by College of Agriculture Date 03/03/2008

   Department/Division offering course Department of Forestry

2. Prefix and Number FOR 440 Title Forest Resources for Recreation Credits 3

3. Effective Date Fall 2009 (semester & year)

4. Why is the course to be dropped?

   This course is no longer a requirement for the Bachelors of Science in Forestry. Recreation topics are now included in courses throughout the proposed forestry curriculum.

5. Will dropping this course change the degree requirements in one or more programs? ☑ Yes ☐ No
   If yes, explain the change(s) below. (NOTE – If "yes," a program change must be submitted.)

   Undergraduate Forestry Program

6. Has the course been taken by a significant number of students in other departments/colleges? ☐ Yes ☑ No

   a. If yes, list the college(s) or department(s) from which student enrollment in this course has come, if known.

      N/A

   b. What provision has been made for meeting the needs of these students?

      N/A

7. Is this course in current use in any of the Community Colleges? ☐ Yes ☑ No
   If so, please submit evidence (e.g., correspondence) that the Community College System has been consulted.

8. Is this course currently included in the University Studies Program? ☐ Yes ☑ No

9. Within the Department, who should be contacted for further information about this proposal?

   Jim Ringe 859-257-7594

   Nam e Phone Extension

UNIVERSITY OF KENTUCKY
APPLICATION TO DROP A COURSE

Signatures of Approval:

March 3, 2008 Date of Approval by Department Faculty	Reported by Department Chair
9/29/2008 Date of Approval by College Faculty	Reported by College Dean
*Date of Approval by Undergraduate Council	Reported by Undergraduate Council Chair
*Date of Approval by Graduate Council	Reported by Graduate Council Chair
*Date of Approval by Health Care Colleges Council (HCCC)	Reported by HCCC Chair
*Date of Approval by Senate Council	Reported by Senate Council Office
*Date of Approval by University Senate	Reported by Senate Council Office

*If applicable, as provided by the Rules of the University Senate.

Rev 07/06

Section 5

Writing Intensive Course Applications for Graduation Writing Requirement

BACK

UNIVERSITY OF KENTUCKY
APPLICATION FOR WRITING-INTENSIVE (W) SECTIONS OF SERIES OF COURSES

1. Submitted by College of: Agriculture Date: 03/03/2008

   Department/division offering courses: Department of Forestry

2. Course 1 information
   (a) Prefix and number: FOR 400
   (b) Title: Human Dimensions of Forestry and Natural Resources
   (c) Credits: 3
   (d) To be cross-listed as: _____ (Prefix and number)

3. Course 2 information
   (a) Prefix and number: FOR 470
   (b) Title: Interdependent Natural Resource Issues
   (c) Credits: 3
   (d) To be cross-listed as: _____ (Prefix and number)

4. Course 3 information (if applicable)
   (a) Prefix and number: _____
   (b) Title: _____
   (c) Credits: _____
   (d) To be cross-listed as: _____ (Prefix and number)

5. Effective date: Fall 2012 (Semester and year) _____ (Signature: Department Chair)

6.	Are the prerequisites (first-year writing and 30+ hours of credit) included on the syllabus?	X	Yes	☐	No
7.	Are the upper-tier GWR learning outcomes included on each syllabus?	X	Yes	☐	No
8.	Do the courses, in total, require students to write a minimum of 15 pages of formal writing?	X	Yes	☐	No
9.	Are all formal writing assignments required to be drafted, reviewed, and revised?	X	Yes	☐	No
10.	Are at least 10 of the 15 pages single-authored assignments?	X	Yes	☐	No
11.	Are all assignments that are included in the 15-page total at least 4 pages long?	X	Yes	☐	No
12.	Does one of the courses require a 4-page paper written for a general university audience?	X	Yes	☐	No

Which course requires this assignment (for SACS assessment)? FOR 470

Prefix and number

13. Do all courses' grading requirements stipulate that, to pass the course, the student must submit all formal assignments (in draft and final form) and earn a grade of C or higher on each? X Yes ☐ No

14. Do all courses' grading requirements stipulate that any major assignment that receives a D or below must be revised to reflect competency and resubmitted? X Yes ☐ No

15. Does each syllabus include a substantive discussion of what constitutes plagiarism? X Yes ☐ No

UNIVERSITY OF KENTUCKY
APPLICATION FOR WRITING-INTENSIVE (W) SECTIONS OF SERIES OF COURSES

16. Are these already existing courses? ☐ Yes X No
If not, have the new course proposals been submitted to the Undergraduate Council? X Yes ☐ No

17. Within the department, who should be consulted for further information on the proposed course changes?
Name: Jim Ringe Phone extension: 859-257-7594

Course Syllabi

Please attach to this application the syllabus for each course in the series.

Deadline to be included in the Bulletin

Courses to be offered spring 2008: 9/1/07

Courses to be offered fall 2007: 1/24/07

Recommendations

Graduation Writing Requirement Committee
☐ Recommend approval ☐ Recommend approval, with changes ☐ Recommend rejection

Notes: _____

Director of Writing Initiative
☐ Recommend approval ☐ Recommend approval, with changes ☐ Recommend rejection

Notes: _____

Signature of Approval

_____ _____
Undergraduate Council Date

Rev 5/05

Course Syllabus

FOR 400

Human Dimensions of Forestry and Natural Resources

Class Period

Lecture: 3 hours per week

Instructor

Dr. Steve Bullard
Room 106 T.P. Cooper Building
859-257-7596
steve.bullard@uky.edu

COURSE OVERVIEW

Course Description

In an issues based format, students will study societal trends and their impact on natural systems, the disconnect between society and nature, wildlife-human interactions, as well as problems related to globalization and urbanization.

Prerequisites: Senior Standing or consent of the instructor. This is a writing-intensive (W) course approved to fulfill the upper tier of the graduation writing requirement (GWR). To receive W credit for this course, you must have successfully completed the first-year writing requirement (ENG 104 or its equivalent) and have completed at least 30 hours of coursework. Forestry majors must complete this course and FOR 470 to fulfill the upper tier graduation writing requirement.

Student Learning Outcomes

At the end of this course, the student will be able to demonstrate the following skills.

1. Explain the history of humans and natural resources and how changes in values and trends have altered the use of natural resources.
2. When given a forestry or natural resource scenario, you will be able to identify stakeholders involved, explain different stakeholder perspectives (values and beliefs), and critically evaluate opposing viewpoints. Based on the stakeholders involved, you will be able to describe decision making and public participation options and recognize potential power issues involved in the scenario.
3. When given a situation such as recreation, forest certification, globalization, rural-urban interface, ecosystem services, wildlife, and forest health, you will be able to explain the interconnection between society and natural resources across a range of societies. These

situations may involve the role of communities, employment, extractive industries, resource dependency, poverty, land ownership patterns, and property rights.

4. Describe the Tragedy of the Commons and apply this concept to natural resource issues such as forestry, fisheries, and water.
5. Explain the environmental movement in the United States including the role of mainstream, grassroots, and radical groups.
6. This course is a writing intensive course and by the end of the course you will be able to successfully complete the Writing Learning Outcomes. The **Writing Learning Outcomes** include:
    a. Write a paper that is essentially free of mechanical errors (grammar, punctuation, spelling, and syntax) and awkwardness, using a style that is appropriate to the purpose and audience.
    b. Demonstrate an ability to discover, evaluate, and clearly present evidence in support of an argument in the subject area and utilize documentation that conforms to the formats and the citation conventions of the subject area.
    c. Be aware that composing a successful text frequently takes multiple drafts, with varying degrees of focus on generating, revising, editing, and proofreading.
    d. Write a capable, interesting essay about a complex issue in forestry and natural resources for a general university audience.

Grading Procedures – Assignments, Grading Criteria, Letter Grades

Part of this course is to effectively communicate natural resource information to a wide range of audiences. Therefore, 30 percent of your grade is based on a written assignment on a natural resource topic of interest to the student. Topics must be discussed and approved by the instructor. Details of the writing assignment are described in the Writing Assignment section.

Students will be assigned readings and will lead the class discussion for the particular reading assignment. Students not leading the discussion will participate in class discussions. Class discussions, both participation and leading, will be 25 percent of your grade.

At the end of the semester, students will present their paper to the class and invited stakeholders. The presentation is worth 15 percent of your grade.

<u>Grading Criteria</u>
Writing Assignment – 30%
Class Discussions (participation and leading) – 25%
Presentation – 15%
Midterm – 15%
Comprehensive Final Exam – 15%

<u>Letter Grades</u>
A: $\geq 90\%$
B: $\geq 80\%$ and $< 90\%$
C: $\geq 70\%$ and $< 80\%$
D: $\geq 60\%$ and $< 70\%$
E: $< 60\%$

Writing Requirements - Assignments
Students will be required to write a minimum of 8 pages of formal writing that is drafted, reviewed, and revised. These 8 pages will be a single-authored assignment.

There will be a draft, review, and revision processes that will be used in the course. Examples include peer review workshops of drafts, instructors' written comments on drafts, and individual student-instructor conferences about drafts.

Grading Policies of Writing Assignments
To pass the course and fulfill the upper tier of the Graduate Writing Requirement, you must submit all formal writing assignments and earn a grade of C or better on each assignment. Any major assignment that receives a D or below must be revised to reflect competency and resubmitted. You may resubmit such assignments two times. If you fail to achieve a C grade on the final version of any major writing assignment, you will receive a failing grade for the course. Note that assignments or requirements other than the formal writing become a factor in the final determination of your course grade only if you have achieved a grade of C or higher on all formal writing assignments.

At the discretion of the instructor, students who fail to achieve competency may receive I (incomplete) grades, but in no case may a student whose writing fails to reach the level of C (competent) receive a passing grade in a course that satisfies the University Writing Requirement.

Course Outline

Week 1: Course overview. History of Humans and Natural Resources – Changes in Values and Trends

Week 2 and 3: Who are the Stakeholders – Values, Beliefs, Viewpoints, and Power

Week 4 and 5: Role of Communities

Week 6 and 7: Employment, Extractive Industries, Resource Dependency, Poverty

Week 8 and 9: Landownership Patterns

Week 10 and 11: Property Rights and Tragedy of the Commons

Week 12 and 13: Environmental Movement – Mainstream, Grassroots, and Radical Groups

Week 14: Presentations

COURSE POLICIES

Attendance and Excused Absences

Attendance is strongly recommended. This course is based around class discussions and participation. If you have more than two unexcused absences your grade will be lowered by one point for each unexcused absence. For example, if you have three unexcused absences your final grade will be lowered by three points. Excused absences are defined by S.R. 5.2.4.2 http://www.uky.edu/StudentAffairs/Code/part2.html .

For excused absences, students will be able to make up the missed work or exam. Students must inform the instructor of the advance, if possible, but not later than one week after the missed class.

Academic Integrity, Cheating and Plagiarism

Cheating of any form, including plagiarism, will not be tolerated. Cheating will be dealt with in accordance with University regulations. (See http://www.uky.edu/Student Affairs/Code/)

Part II of *Student Rights and Responsibilities* (available online at http://www.uky.edu/StudentAffairs/Code/ part2.html) states that all academic work, written or otherwise, submitted by students to their instructors or other academic supervisors, is expected to be the result of their own thought, research, or self-expression. In cases where students feel unsure about a question of plagiarism involving their work, they are obliged to consult their instructors on the matter before submission.

When students submit work purporting to be their own, but which in any way borrows ideas, organization, wording or anything else from another source without appropriate acknowledgment of the fact, the students are guilty of plagiarism. Plagiarism includes reproducing someone else's work, whether it be published article, chapter of a book, a paper from a friend or some file, or whatever. Plagiarism also includes the practice of employing or allowing another person to alter or revise the work which a student submits as his/her own, whoever that other person may be. Students may discuss assignments among themselves or with an instructor or tutor, but when the actual work is done, it must be done by the student, and the student alone. When a student's assignment involves research in outside sources or information, the student must carefully acknowledge exactly what, where and how he/she has employed them. If the words of someone else are used, the student must put quotation marks around the passage in question and add an appropriate indication of its origin. Making simple changes while leaving the organization, content and phraseology intact is plagiaristic. However, nothing in these Rules shall apply to those ideas which are so generally and freely circulated as to be a part of the public domain. (Section 6.3.1). The minimum penalty for an academic offense, such as cheating or plagiarism, is an E in the course (Section 6.4.1).

Information about the Writing Requirement

Questions about the W option should be referred to the Director of the UK Writing Initiative, Professor Janet Carey Eldred, eldred@uky.edu.

Writing Initiative Office
152 Bowman Hall
University of Kentucky
Lexington, KY 40508-0059
859-257-4831
www.uky.edu/UGS/WritingInitiative

Professional Preparation

This course helps prepare you for your professional career. You are expected to attend class, be on time, participate in class discussions, and be respectful of your instructor and fellow classmates.

Disability Statement

Students with a disability that need classroom or exam accommodations should contact the Disability Resource Center, 257-2754, room 2 Alumni Gym, jkarnes@uky.edu .

Course Syllabus

FOR 470

Interdependent Natural Resource Issues

Class Period

Practicum: One day per week for first nine weeks of semester.

Instructor

Dr. Dave Wagner
Room 209A T.P. Cooper Building
859-257-3773
dwagner@uky.edu

COURSE OVERVIEW

Course Description

This is one of the capstone courses in the forestry curriculum and is designed to be the culmination of the student's study of public concerns and problems related to natural resources. Working in teams, students will learn to find and verify information on a diverse range of topics from various sources, listen to and address public concerns, communicate natural resource information to a wide range of audiences, and be effective professionals in working toward solutions.

Prerequisites: Senior Standing. This is a writing-intensive (W) course approved to fulfill the upper tier of the graduation writing requirement (GWR). To receive W credit for this course, you must have successfully completed the first-year writing requirement (ENG 104 or its equivalent) and have completed at least 30 hours of coursework. Forestry majors must complete this course and FOR 400 to fulfill the upper tier graduation writing requirement.

Student Learning Outcomes

At the end of this course, the student will be able to demonstrate the following skills.

1. Describe professional and leadership skills needed to be a 'Society Ready' forester and demonstrate effective habits and leadership skills of professionals.
2. Explain effective methods for alternative dispute resolution and be able to identify and address stakeholders involved in a dispute.
3. Demonstrate effective listening and communication skills and be able to address diverse audiences such as landowners, government agencies, media, and scientists.
4. Analyze different social, economic, and ecological approaches to address forest health issues or threats. Forest health issues and threats may include requirements of a healthy

forest ecosystem, invasive plants and animals, fragmentation and parcelization, changes in land ownership patterns, global change, climate change, and pollution.

5. Analyze (based on readings, class discussions, and previous courses) issues that cause a disconnect between society and natural resources.
6. Broadly describe how to manage forest ecosystems to meet ecological, economic, and social needs. This includes incorporating conservation biology concepts and the influence of urban areas and communities on forest ecosystems.
7. Communicate forestry concepts to youth using programs such as Project Learning Tree.
8. This course is a writing intensive course and by the end of the course you will be able to successfully complete the Writing Learning Outcomes. The **Writing Learning Outcomes** include:
    a. Write a paper that is essentially free of mechanical errors (grammar, punctuation, spelling, and syntax) and awkwardness, using a style that is appropriate to the purpose and audience.
    b. Demonstrate an ability to discover, evaluate, and clearly present evidence in support of an argument in the subject area and utilize documentation that conforms to the formats and the citation conventions of the subject area.
    c. Be aware that composing a successful text frequently takes multiple drafts, with varying degrees of focus on generating, revising, editing, and proofreading.
    d. Write a capable, interesting essay about a complex issue in forestry and natural resources for a general university audience.

Grading Procedures – Assignments, Grading Criteria, Letter Grades

This course is a designed to be a culmination of the student's study of natural resource issues. The course is project oriented as opposed to lecture-based. Students will work both in teams and individually to complete three class projects worth a total of 30 percent of your grade. A presentation at the end of the course will be worth 10 percent of your grade.

Part of this course is to effectively communicate natural resource information to a wide range of audiences. Therefore, 30 percent of your grade is based on a written assignment on a natural resource topic of interest to the student. Topics must be discussed and approved by the instructor. Details of the writing assignment are described in the Writing Assignment section.

A midterm and comprehensive final exam will each be worth 15 percent of your grade.

<u>Grading Criteria</u>
Class Projects (3) – 30 %
Writing Assignment – 30%
Presentation – 10%
Midterm – 15%
Comprehensive Final Exam – 15%

<u>Letter Grades</u>
A: $\geq$ 90%

B: ≥ 80% and < 90%
C: ≥ 70% and < 80%
D: ≥ 60% and < 70%
E: < 60%

Writing Assignment

Writing Requirements - Assignments
Students will be required to write a minimum of 8 pages of formal writing that is drafted, reviewed, and revised. These 8 pages will be a single-authored assignment.

There will be a draft, review, and revision processes that will be used in the course. The review process may include peer review workshops of drafts, instructors' written comments on drafts, and individual student-instructor conferences about drafts.

Assessment
Please submit two copies of your final paper to the instructor. One copy will be graded by the instructor; the second copy will be used for SACS assessment and should be a clean copy, with only your student ID number (NOT social security number) listed at the top of the page, with all other identifying information (your name, instructor name, and course and section number) removed.

Grading Policies of Writing Assignments
To pass the course and fulfill the upper tier of the Graduate Writing Requirement, you must submit all formal writing assignments and earn a grade of C or better on each assignment. Any major assignment that receives a D or below must be revised to reflect competency and resubmitted. You may resubmit such assignments two times. If you fail to achieve a C grade on the final version of any major writing assignment, you will receive a failing grade for the course. Note that assignments or requirements other than the formal writing become a factor in the final determination of your course grade only if you have achieved a grade of C or higher on all formal writing assignments.

At the discretion of the instructor, students who fail to achieve competency may receive I (incomplete) grades, but in no case may a student whose writing fails to reach the level of C (competent) receive a passing grade in a course that satisfies the University Writing Requirement.

Course Outline

Week 1: Course overview. Professional Leadership Skills.

Week 2: Alternative Dispute Resolution

Week 3: Communication and Leadership Skills

Week 4 – 8: Class discussions in the morning. Visit landowners, government agencies, media, and scientists, to discuss forestry and natural resource issues including forest

health issues. Communicate forestry and natural resource concepts to youth.

Week 9: Presentations

COURSE POLICIES

Attendance and Excused Absences

Attendance is mandatory. For each unexcused absence, your final average will be lowered by one point. Excused absences are defined by S.R. 5.2.4.2 http://www.uky.edu/StudentAffairs/Code/part2.html .

For excused absences, students will be able to make up the missed work or exam. Students must inform the instructor of the advance, if possible, but not later than one week after the missed class.

Academic Integrity, Cheating and Plagiarism

Cheating of any form, including plagiarism, will not be tolerated. Cheating will be dealt with in accordance with University regulations. (See http://www.uky.edu/Student Affairs/Code/)

Part II of *Student Rights and Responsibilities* (available online at http://www.uky.edu/StudentAffairs/Code/ part2.html) states that all academic work, written or otherwise, submitted by students to their instructors or other academic supervisors, is expected to be the result of their own thought, research, or self-expression. In cases where students feel unsure about a question of plagiarism involving their work, they are obliged to consult their instructors on the matter before submission.

When students submit work purporting to be their own, but which in any way borrows ideas, organization, wording or anything else from another source without appropriate acknowledgment of the fact, the students are guilty of plagiarism. Plagiarism includes reproducing someone else's work, whether it be published article, chapter of a book, a paper from a friend or some file, or whatever. Plagiarism also includes the practice of employing or allowing another person to alter or revise the work which a student submits as his/her own, whoever that other person may be. Students may discuss assignments among themselves or with an instructor or tutor, but when the actual work is done, it must be done by the student, and the student alone. When a student's assignment involves research in outside sources or information, the student must carefully acknowledge exactly what, where and how he/she has employed them. If the words of someone else are used, the student must put quotation marks around the passage in question and add an appropriate indication of its origin. Making simple changes while leaving the organization, content and phraseology intact is plagiaristic. However, nothing in these Rules shall apply to those ideas which are so generally and freely circulated as to be a part of the public domain. (Section 6.3.1). The minimum penalty for an academic offense, such as cheating or plagiarism, is an E in the course (Section 6.4.1).

Information about the Writing Requirement

Questions about the W option should be referred to the Director of the UK Writing Initiative, Professor Janet Carey Eldred, eldred@uky.edu.

Writing Initiative Office
152 Bowman Hall
University of Kentucky
Lexington, KY 40508-0059
859-257-4831
www.uky.edu/UGS/WritingInitiative

Professional Preparation

This course helps prepare you for your professional career. You are expected to attend class, be on time, participate in class discussions, and be respectful of your instructor and fellow classmates.

Disability Statement

Students with a disability that need classroom or exam accommodations should contact the Disability Resource Center, 257-2754, room 2 Alumni Gym, jkarnes@uky.edu .

Appendix A

Revision of the Undergraduate Forestry Curriculum

Department of Forestry
College of Agriculture
University of Kentucky

September 29, 2008

If you have any questions or comments on the proposed curriculum please contact:

Jim Ringe
UK Department of Forestry
859-257-7594
jringe@uky.edu

Table of Contents

Introduction

It has been fifteen years since the last revision of the undergraduate forestry curriculum at the University of Kentucky (UK). The needs and expectations of forestry employers and society have changed during this time. Technologies available to foresters have changed as well as need for foresters to effectively address economic, social, and ecological issues surrounding forest resources. (Curriculum Revision Handbook 2006/2007)

Given these changes, the primary goal of the University of Kentucky undergraduate forestry education is to:

> "produce graduates who are 'society-ready,' i.e., capable of dealing effectively with the complex economic, ecological, and social issues involving forest resources today. In Kentucky and beyond, our graduates must be prepared to effectively enhance the integrity, stability, and health of forests and related biotic communities, and to increase the long-term value added, sustainable income, and sustainable flow of services from forests and related resources." (Curriculum Revision Handbook 2006/2007)

The basic objectives for the curriculum revisions are to:

1. "More effectively prepare our graduates for success in meeting current and prospective needs of society and of forestry employers.
2. Meet SAF [Society of American Foresters] accreditation guidelines." (Curriculum Revision Handbook 2006/2007)

Members of the Curriculum Revision Committee have met with departmental faculty and external stakeholders to receive input on the proposed draft curriculum using a process outlined in Figure 1. Discussions with departmental faculty and external stakeholders included general and technical competencies, suggested prerequisites, textbooks, and timing for each course. In addition to discussing the learning outcomes for each course, the committee also identified nine themes or common threads to be reinforced throughout the curriculum. These common threads include collaborative problem solving, communication, ecosystem approach, ethics, forest health and protection, geospatial, human dimensions of natural resources, information literacy, and managerial leadership.

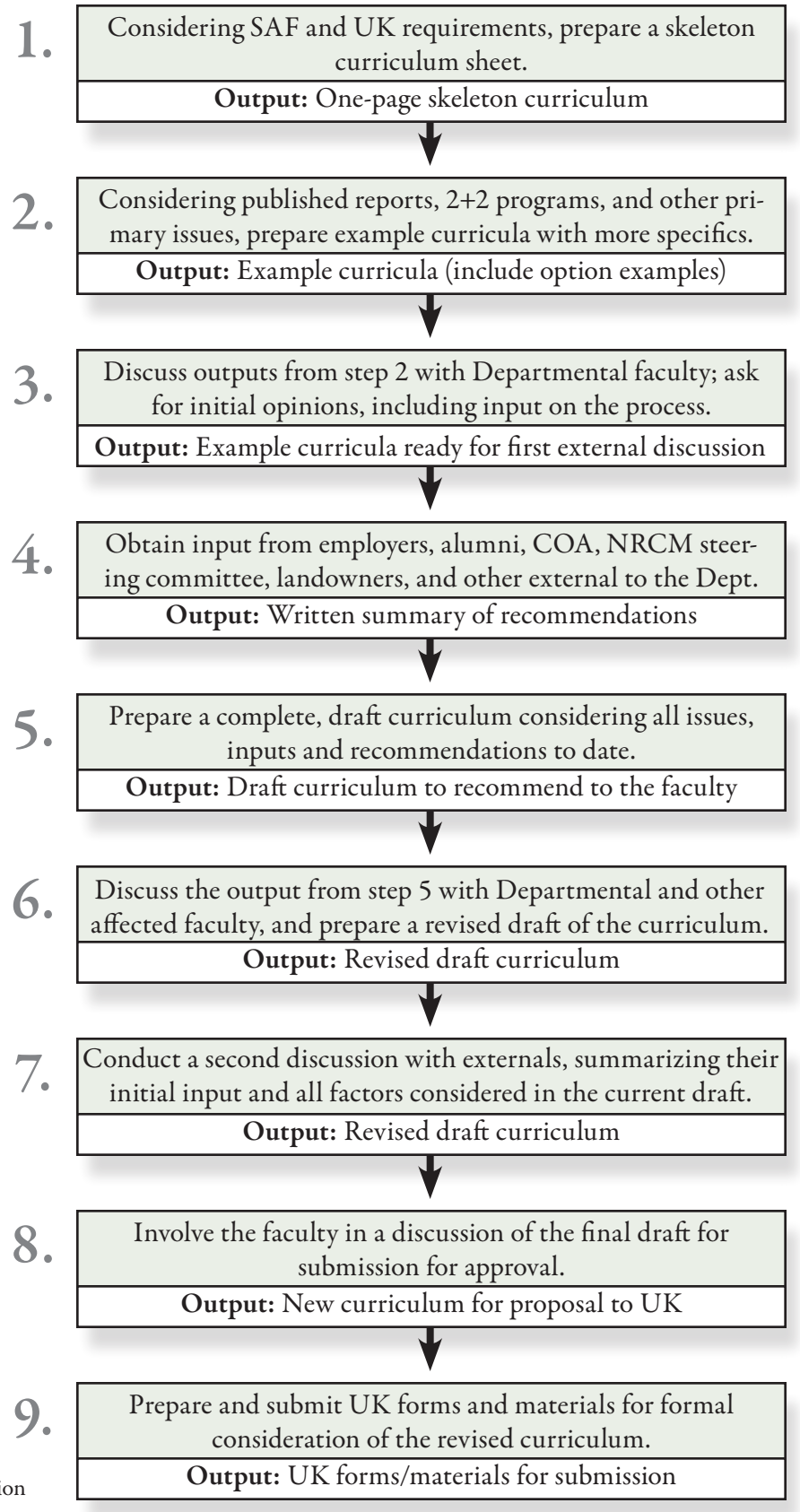
This document provides an overview of the proposed undergraduate forestry curriculum including:

- An outline of the curriculum revision process (Figure 1)
- The proposed draft curriculum (Figure 2)
- Course descriptions, prerequisites, learning outcomes, and common threads (Section 1)
- Spring field semester framework, schedule, course learning outcomes, and suggested activities (Section 2)
- Summary of how the proposed curriculum addresses the Society of American Foresters Accreditation Standards and Pinchot Report competencies (Section 3)

Curriculum Revision Committee Members

Mary Arthur	Laura Lhotka
Steve Bullard	Jim Ringe
Tammy Cushing	Andrea Schuhmann
Paul Kalisz	Dave Wagner
Mike Lacki	

Figure 1. Draft Curriculum Process



Source: Curriculum Revision Handbook 2006/2007

Figure 2. Proposed Curriculum (Version 9/16/08)

Freshman Year

Fall		Spring	
Math - MA 109 or calculus	3	Inference-Logic - calculus or (stats. and logic)	3
Written - ENG 104	4	Natural Sciences 2 - BIO 103 or BIO 150	3
Natural Sciences 1 - CHE 104 or CHE 105	3	Social Science 1	3
GEN 100 Issues in Agriculture	3	Humanities 1	3
FOR 110 Natural Resource Issues	1	FOR 150 Computer Applications in Natural Resource Professions	2
	14		14

Transfer Point

Sophomore Year

Fall		Spring	
FOR 200 Basics of Geospatial Technology	2	PLS 366 Fundamentals of Soil Science	4
FOR 250 Statistics and Measurements I	3	Humanities 2	3
FOR 219 Dendrology	4	FOR 370 Wildlife Biology and Management	4
FOR 230 Conservation Biology	3	FOR 280 Forest Policy **	2
FOR 260 Forest Products and Wood Science	4	FOR 240 Forestry & Natural Res. Ethics **	2
	16	**Half semester policy and half ethics	15

Junior Year

Fall		Spring Field Semester	
FOR 310 Intro. to Forest Health & Protection	3	FOR 355 Forest Fire Control and Use	1
FOR 320 Forest Valuation and Economics	3	FOR 356 Landscape Assessment	5
FOR 330 GIS and Spatial Analysis	3	FOR 357 Inventory and Measurements II	2
FOR 340 Forest Ecology	4	FOR 358 Silvicultural Practices	3
FOR 350 Silviculture	4	FOR 359 Forest Operations and Utilization	3
	17		14

Senior Year

Fall		Spring	
Elective 1	3		
Social Science 2	3	Cross-Cultural	3
FOR 400 Human Dim. of Forestry and N.R.	3	Elective 2	3
FOR 425 Forest Management	4	FOR 470 Interdependent Natural Resource Issues – Analysis and Solutions	3
FOR 460 Forest Hyd. and Watershed Mgmt.	4	FOR 480 Integrated Forest Resource Mgmt.	5
	17		14

University Studies Program Course Code and Name
BIO 103 Basic Ideas of Biology
BIO 150 Principles of Biology I
CHE 104 Introductory General Chemistry
CHE 105 General College Chemistry I
ENG 104 Writing: An Accelerated Foundational Course
MA 109 College Algebra

Total Credit Hours	121
Forestry Hours	84
USP Hours	37

Note: Six hours of foreign language is needed if not taken in high school.

Section I

Course Description, Learning Outcomes, and Common Threads

Section 1 outlines by course number the course descriptions, prerequisites (if any), learning outcomes, and common threads of all courses except the spring field semester courses. The spring field semester is described in Section 2.

Curriculum Revision Committee members met with departmental faculty and external stakeholders to receive input on the revised curriculum. Meetings with these internal and external stakeholders included discussions on general and technical competencies, suggested prerequisites, textbooks, and timing for each course. Information from the internal and external stakeholders was used to create the course descriptions, prerequisites, course learning outcomes, and common threads outlined in this section.

The Curriculum Revision Committee identified nine themes or common threads to be reinforced throughout the curriculum. These themes or common threads are based on initial discussions with external stakeholders and the Pinchot Institute for Conservation Report (Sample et al 2000)[1] which examined skills needed to be a successful practicing forester. These common threads include collaborative problem solving, communication, ecosystem approach, ethics, forest health and protection, geospatial, human dimensions of natural resources, information literacy, and managerial leadership. It is anticipated that several faculty will be in charge of the curriculum threads to ensure the common threads are appropriately integrated into the courses.

The **course descriptions** will be the basis for the course descriptions provided in the University of Kentucky Bulletin.

The **course learning outcomes** will be included as part of each course syllabus.

The **common threads** are a guide to show how certain topic areas are covered throughout the curriculum.

1 Sample, V.A., N.E. Block, P.C. Ringgold, and J.W. Giltmier. 2000. The evolution of forestry education in the United States: Adapting to changing demands of professional forestry. Pinchot Institute for Conservation, Washington, D.C. 62 p.

FOR 110 - Natural Resource Issues 1 credits

Course Description

A communication intensive course in which students will learn to research current forestry and natural resource issues, interpret popular press and professional publications, evaluate opposing viewpoints, and discuss issues in a clear, effective and professional manner through oral and written communication.

Learning Outcomes

1. When presented with a natural resource issue, you will be able to analyze the issue from a variety of perspectives. These issues may include human population, invasive plants and animals, fragmentation and parcelization, global and climate change, rural-urban interface, ecosystem services, food production, erosion, water quality, energy use, land use, and biotechnology.

2. When presented with a natural resource issue, you will be able to use the University of Kentucky Library as well as other resources, such as the internet, to find professional publications and popular press items related to the issue. You will be able to read and interpret both popular press material and professional publications and critically evaluate opposing viewpoints on an issue.

3. When given a natural resource issue, you will be able to report various aspects of the natural resource issue through written work and oral presentations. You will develop (or refine) and use communication skills essential for your professional career. The communication components of this course will develop or improve your functional skills to:

   a. Prepare and deliver individual and team, informative and persuasive, oral presentations.
   b. Work in small teams, which includes identifying team objectives, assigning tasks, monitoring progress, developing collective conclusions, and presenting results.
   c. Search electronic databases to acquire information that can be used to define and illuminate issues and questions underlying natural resource debates.
   d. Utilize electronic media to prepare, present, and transmit reports and documents.
   e. Appreciate the bases for various perspectives of debated resource issues, and critically analyze strengths and weaknesses of arguments presented.

Common Threads

Collaborative Problem Solving - Discuss effective people skills, negotiation techniques, and managerial skills needed by natural resource professionals to effectively address natural resource issues.

Communication - Explain natural resource issues through written work and oral presentations using effective writing styles and presentation techniques to clearly and succinctly discuss the material in a manner appropriate for the audience at hand.

Ecosystem Approach - Describe ecosystem services and ecosystem issues and identify ways to address these issues.

Ethics - Identify ethical issues as they relate to natural resources.

Forest Health and Protection - Discuss forest health issues such as human population, invasive plants and animals, fragmentation and parcelization, rural-urban interface, and water quality and identify ways to address these issues.

Human Dimensions of Natural Resources - Describe the role society plays in framing, causing, and addressing natural resource issues.

Information Literacy - Use the University of Kentucky Library as well as other resources, such as the internet, to find professional publications and popular press items and critically evaluate opposing viewpoints and reliability of the material.

Managerial Leadership - Discuss effective people skills, negotiation techniques, and managerial skills needed by natural resource professionals.

FOR 150 - Computer Applications in Natural Resource Professions — 2 credits

Course Description

Use and application of standard computer software to solve problems. Emphasis will be placed on decision processes and algorithm construction. Additionally, students will learn to construct aesthetic graphs, diagrams, maps and other visual material and will gain experience communicating results in a variety of written formats.

Learning Outcomes

1. When given a task, you will be able to explain the decision process and construct an algorithm for accomplishing the task.

2. When given a forestry and natural resource scenario, you will be able to use the computer to build formulas and create spreadsheets to address the scenario.

3. When given a forestry and natural resource scenario, you will be able to use the computer to construct appropriate and aesthetic graphs, diagrams, maps, presentations, and other visual material.

4. When given a forestry and natural resource project, you will be able to effectively and professionally explain the methods and results of the project to different types of audiences through emails, memos, letters, handouts, posters, and presentations.

Common Threads

Communication - When given a forestry and natural resource project, you will be able to effectively and professionally communicate the methods and results of the project to different types of audiences through emails, memos, letters, handouts, posters, and presentations.

Ethics - Recognize the ethical considerations of accurately portraying visual material such as graphs, diagrams, and maps.

Geospatial - Use the computer to construct appropriate and aesthetic maps.

Information Literacy - Identify sources of reliable information from the internet, journals, newspapers, and television.

FOR 200 - Basics of Geospatial Technology 2 credits

Course Description

A basic introduction to the various types of maps and their uses, field navigation skills, and map making. The course is heavily field and laboratory based, with an emphasis on hands-on learning and practice. Both traditional technologies, such as compasses, U.S. Geological Survey maps, and aerial photographs as well as newer technologies, such as global positioning systems and geographic information system databases will be employed in carrying out course exercises.

Learning Outcomes

1. Interpret individual maps (topographic map, aerial photo, field map, soils map, geology map, digital image) and synthesize data from multiple maps to describe a particular site.

2. Demonstrate the correct usage of a compass to find direction and navigate in the field by taking and following azimuths, triangulating, pacing, and setting a declination.

3. Construct digital and hand-written field and land classification maps using compass and pacing, global positioning systems (GPS), topographic maps, aerial photos, field maps, soils maps, geology maps, and digital images.

4. Demonstrate the correct usage of a GPS unit in the field to collect data and construct maps with the data using computer software to make corrections to the GPS data and incorporate GPS data into existing geographic information system databases.

5. Construct aesthetic, accurate maps using your knowledge of proper map design skills.

6. Knowledge of basic geographic information concepts including remote sensing imagery, map projections, and modeling earth.

Common Threads

Collaborative Problem Solving - Work in teams to collect data and solve problems using various spatial technologies.

Communication - Effectively communicate, both written and oral, map components to a general audience.

Geospatial - Use GPS units, describe basic geographic information concepts, and integrate data from various types of digital and paper maps.

Information Literacy - Identify where to find reliable maps for different applications.

FOR 219 - Dendrology 4 credits

Course Description

A study of the basic concepts of botany related to woody species and their use, along with basic soil and site characteristics in the identification of trees and forest vegetation. Laboratory, four hours per week.

Learning Outcomes

1. Explain basic concepts of botany including photosynthesis and light, reproduction, and parts and processes of trees.

2. When given a particular location, you will be able to identify basic soil and site characteristics (topography, aspect, relief, and drainage) and analyze how these characteristics impact tree location.

3. Explain concepts such as natural and human-caused disturbance; reproduction and regeneration; and succession, competition, and tolerance.

4. When in rural and urban settings, you will be able to identify trees and shrubs based on the bark, twig, leaf, flower, and fruit. You will be able to use taxonomy to identify the trees and shrubs using their family, genus, and species name.

5. Differentiate the general distribution of tree types in the United States including eastern deciduous forests, southern forests, boreal forests, northern hardwood forests, western montane forests, pacific coast forests, and other forest types.

6. Describe the role forest history, urban forestry, fire, and forest health have in the United States.

Common Threads

Ecosystem Approach - Identify basic soil and site characteristics (topography, aspect, relief, and drainage) and analyze how these characteristics impact tree location.

Forest Health and Protection - Identify exotic or invasive plant species and describe the role of forest health in the United States.

Human Dimensions of Natural Resources - Explain the role of forest history, urban forestry, fire, and forest health in the United States.

Information Literacy - Identify reliable sources for tree identification and tree reference information.

FOR 230 - Conservation Biology 3 credits

Course Description

The basic history and principles of conservation biology, including diversity, extinction, evolution, and fragmentation. Students will learn the applications of conservation biology to such topics as forest management and wetland management and study the ethical perspectives related to conservation biology, including environmental ethics, deep ecology, and the land ethic.

Learning Outcomes

1. Explain diversity, in terms of both plants and animals, and how diversity is measured, maintained, and eliminated.

2. Describe the history of conservation biology.

3. Describe conservation values and ethical perspectives such as environmental ethics, deep ecology, and land ethic and apply these values and perspectives to conservation biology issues.

4. Analyze extinction and evolution in terms of both plants and animals and its impact on humans and vice versa. Be able to explain extinction and evolution in terms of its impact on genetics and speciation and names. Be able to describe extinction case studies.

5. Describe fragmentation and explain the causes and biological consequences of fragmentation.

6. Explain the role forest management, wetland management, and land use decisions have in addressing conservation issues.

7. Analyze conservation policy, such as the Endangered Species Act, and its impact on conservation biology.

8. When given a case study, you will be able to explain conservation biology issues at the local, regional, national, and global level.

Common Threads

Communication - Communicate the concepts of conservation biology effectively to classmates through discussions of reading assignments. Interpret media coverage of conservation biology topics through written communication.

Ecosystem Approach - Describe the role forest management, wetland management, and land use decisions have in addressing conservation issues.

Ethics - Describe conservation values and ethical perspectives such as environmental ethics, deep ecology, and land ethic and apply these values and perspectives to conservation biology issues.

Forest Health and Protection - Describe fragmentation and explain the causes and biological consequences of fragmentation.

Human Dimensions of Natural Resources - Discuss the role human values and policy play in shaping conservation biology topics.

FOR 240 - Forestry and Natural Resource Ethics — 2 credits

Course Description

A study of the key ethical concepts of conservation, preservation, deep ecology, land ethic, spiritualism/religion, and multiple value systems as applied to forestry and natural resource issues. Students will gain an understanding of the ethical dilemmas faced by natural resource professionals, and will be able to identify ways of handling these dilemmas, including application of professional associations' codes of ethics.

Learning Outcomes

1. Describe forest history in the United States.

2. Describe and apply key ethical concepts of conservation, preservation, deep ecology, land ethic, spiritual/religion, and multiple value systems to forestry and natural resource issues.

3. Discuss the origins and history of modern environmental ethics.

4. When given an issue such as wild animals or invasive species, you will be able to discuss the ethical dilemmas related to the issue and how different ethical perspectives frame these issues.

5. When given an ethical dilemma, you will be able to apply professional associations' codes of ethics as a guide for addressing the ethical dilemma. Professional associations include Society of American Foresters, The Wildlife Society, Association of Consulting Foresters, and Forest Stewards Guild.

6. Describe ethical issues professionals face, including public natural resource agencies, and identify ways of handling the ethical dilemmas. Ethical issues professionals may face include honesty, conflict of interest, confidentiality, professionalism, and responsibility to an employer.

Common Threads

Communication - Communicate with classmates through facilitating a round-table discussion and participating in discussions of controversial issues. Conduct oral presentations. Synthesize information into a formal outline.

Ethics - Apply key ethical concepts to forestry and natural resource issues. Describe professional codes of ethics and ethical issues professionals face.

Human Dimensions of Natural Resources - Discuss how human values and beliefs affect how natural resource issues are addressed.

Managerial Leadership - Discuss ethical issues professionals face and identify ways of handling the ethical dilemmas. Ethical issues professionals may face include honesty, conflict of interest, confidentiality, professionalism, and responsibility to an employer.

FOR 250 - Statistics and Measurements I 3 credits

Course Description

The application of statistical concepts, computations, and software to forestry sampling and inventory problems. Land, individual tree and timber stand measurement techniques will be covered as will the design and implementation of sampling systems to derive information necessary to meet landowner objectives. *Prerequisites: MA 109 or Calculus, FOR 110, and FOR 200.*

Learning Outcomes

1. Apply basic statistical concepts to analyze and solve a given problem.

2. When given a particular scenario, you will be able to use basic statistical software programs to input the data and solve the problem.

3. While in the field, you will be able to take land and standing tree measurements using a compass, prism, d-tape, global positioning system, Biltmore stick, and increment borer. Using these tools, you will be able to take land measurements to measure distances and determine area, and take standing tree measurements to determine height, form expressions, crowns, age, volume, and weights.

4. For a given field site, you will be able to design and conduct a timber inventory that meets specific landowner objectives. You will be able to apply sampling theory and design concepts to ensure appropriate sampling methods and units of measurement are used when designing and conducting the timber inventory.

5. When given wood product data, including specialty wood products, you will be able to calculate the weight, volume, and cost of the wood product and, as needed, apply log rules to determine volume.

6. Explain the basic concepts of site, stocking, and density.

7. Explain the basic concepts of growth and yield models.

Common Threads

Communication - Communicate in written form the results and interpretation of data collected.

Ethics - Recognize issues associated with appropriate use and interpretation of statistics.

Geospatial - Use global positioning systems to take land measurements.

FOR 260 - Forest Products and Wood Science

4 credits

Course Description

An examination of basic material properties of wood, methods by which it is used, and issues and economic conditions in which domestic and global wood markets operate. Concepts covered include species identification, chemical and mechanical properties and their effect on utilization, utilization technologies and their linkage to silvicultural practices, and affiliated issues such as recycling, product certification, environmental concerns, and alternative products. Laboratory, two hours per week.

Learning Outcomes

1. Describe basic concepts of wood science including chemical and mechanical properties of wood and wood identification. Use computers to perform calculations related to basic wood science.

2. When given a tree or stand, you will be able to determine which mill process and end product would be appropriate taking into consideration the impact of silvicultural practices, tree health (fire, insects, weather) and cultural practices (stock, treatment, fertilization, water) on wood and product quality.

3. Explain issues surrounding the wood product industry including market and economic conditions, wood technologies, recycling, forest product certification, environmental concerns, and public perception of certain forest products.

4. Describe terms associated with the wood product industry and why different woods are used in wood product processes.

5. Discuss state and regional forest product industry and analyze how global markets may affect the region's forest products industry.

6. Describe various forest products, including agroforestry products, and analyze how different management practices affect the types of forest products in a given area.

Common Threads

Communication - Address public concerns through written and oral communication on different aspects of the forest products industry.

Ethics - Describe ethical issues associated with harvesting and/or processing various forest products and different approaches used to address these issues.

Forest Health and Protection - Determine which mill process and end product would be appropriate taking into consideration the impact of silvicultural practices, tree health (fire, insects, weather) and cultural practices (stock, treatment, fertilization, water) on wood and product quality.

Human Dimensions of Natural Resources - Explain issues surrounding the wood product industry including market and economic conditions, wood technologies, recycling, forest product certification, environmental concerns, and public perception of certain forest products.

Information Literacy - Locate information on new technologies and applications of forest products from sources such as the USDA Forest Service Forest Product Labs or the forest products industry.

FOR 370 - Wildlife Biology and Management

4 credits

Course Description

Applications of basic biological concepts such as physiology, energetics, nutrition, digestive systems, and anatomy to the study of wildlife and wildlife management. In addition to basic wildlife biology, students will also learn taxonomy and identification of wildlife and the principles of wildlife management as well as applied field techniques such as trapping and radio telemetry. Laboratory, three hours per week.

Learning Outcomes

1. Explain basic biological concepts such as physiology, energetics, nutrition, digestive systems, and anatomy.
2. Describe the history of wildlife management in North America.
3. Explain principles of wildlife management, including 1) biogeography, distribution of species, habitat requirements, forest structure, and vegetation type; 2) biodiversity, interactions, and structure; 3) taxonomy, wildlife identification, and natural history; and 4) harvesting theory and population dynamics.
4. Describe and apply correct wildlife field techniques such as trapping and radio telemetry.
5. Analyze public perceptions of a given wildlife current event and describe ways to address public concerns surrounding the current event.

Common Threads

Communication - Express in writing wildlife management concepts to scientific audiences and the public.

Ethics - Describe ethical issues related to wildlife management.

Human Dimensions of Natural Resources - Analyze public perceptions of current events and describe ways to address public concerns surrounding the current event.

Information Literacy - Identify where to obtain current, reliable data pertaining to wildlife.

FOR 280 - Forest Policy 2 credits

Course Description

Examine the political process as it relates to the formulation, analysis, evaluation, and implementation of forest policies. Assess the impacts of various policy decisions and employ the policy process to address such forestry issues as urbanization, fragmentation, demographic shifts, invasive species, global competition, forest certification, climate change, and bioenergy.

Learning Outcomes

1. When given a forest policy, you will be able to explain the political process including how policy is formed, analyzed, evaluated, and implemented. Differentiate between proactive and reactive policy.

2. Identify participants in the political process and explain the role these participants play in the political process. Participants may include government branches (legislative, executive, judicial), government agencies (Dept. of Energy, Dept. of Agriculture, Environmental Protection Agency, Bureau of Land Management, and U.S. Forest Service), interest groups, and media.

3. Explain how various programs, laws, and regulations impact forestry. These programs, laws, and regulations may include public ownership and management of land, federal environmental regulations, wildlife policy, forestry regulations, public assistance for private owners, and global forest policy issues.

4. When given a forest threat or issue at the local, regional, national, or global level, you will be able to explain how current and future policy approaches at the local, state, and federal level can address the threat. You will also be able to explain opposing viewpoints on the threat. These threats may include urbanization, fragmentation, demographic shifts, invasive species, global competition, forest certification, climate change, and bioenergy.

Common Threads

Collaborative Problem Solving - Listen and understand opposing viewpoints and rationally and fairly address a particular issue.

Communication - Address public concerns related to policy through non-technical written documents and oral presentations. Explain communication avenues important in the policy arena.

Forest Health and Protection - Explain how current and future policy approaches at the local, state, and federal level can address forest health issues such as urbanization, fragmentation, demographic shifts, and invasive species.

Human Dimensions of Natural Resources - Explain how policy is used to address forest issues and identify participants in the political process.

Information Literacy - Locate reliable sources of information when faced with policy issues in forestry.

FOR 310 - Introduction to Forest Health and Protection — 3 credits

Course Description

Modular course with one-third devoted to forest entomology, one-third to forest pathology, and one-third to other topics such as abiotic agents and invasive species. Identify various agents that affect forest health, assess the impacts of these agents on forest health, and learn different methods for addressing these impacts. *Prerequisites: BIO 103 or BIO 150.*

Learning Outcomes

1. When presented with a forest health problem, you will be able to describe the problem, how it got there, and what can be done about it.

2. Describe the basic concepts and terminology associated with forest health and protection.

3. When given historical forest health issues, you will be able to describe different aspects and consequences of historical forest health issues.

4. When presented with invasive or exotic plants in a rural or urban area, you will be able to identify the plants, describe how they affect the rural and/or urban area, and identify methods of addressing the problem.

5. When presented with a pest or disease, you will be able to identify the pest or disease, describe how it affects forest health and forest products, and identify methods of addressing the problem.

6. Describe forest health issues in urban areas and at the rural-urban interface.

7. Identify the impacts various elements such as fire, wind, water, freeze, and drought have on forest health. Identify the impacts animals, such as deer and elk, have on forest health. Describe different methods of addressing these elements.

8. Describe forest health issues in Kentucky and the region. These issues may include southern pine beetle, gypsy moth, hemlock woolly adelgid, oak decline, emerald ash borer, dogwood anthracnose, and sudden oak death.

Common Threads

Collaborative Problem Solving - Work together to determine management actions necessary to avoid/resolve existing problems locally.

Communication - Address questions landowners and the public may have about forest health issues through written and oral communication.

Ecosystem Approach - Discuss how insect and disease problems alter the landscape.

Ethics - Explain ethical issues associated with forest health and protection.

Forest Health and Protection - When presented with a forest health problem, you will be able to describe the problem, how it got there, and what can be done about it.

Geospatial - Examine digital map projections of the progress of insects and disease.

Human Dimensions of Natural Resources - Discuss how forest health issues impact rural and urban areas and social considerations of dealing with forest health issues.

Information Literacy - Locate reliable information on forest health and protection issues.

Managerial Leadership - Develop skills and knowledge to be a proactive person dealing with forest health issues.

FOR 320 - Forest Valuation and Economics — 3 credits

Course Description

Apply economic concepts to silvicultural practices, land values, and values affiliated with various forest uses. Apply supply and demand concepts and financial computations to identify and quantify economic consequences of a silvicultural actions or management practices. Effects of taxation as well as the societal trend toward monetizing ecosystem services will be discussed. *Prerequisites: MA 109 or Calculus.*

Learning Outcomes

1. Apply economic concepts to silvicultural practices, land values, timber values, wildlife, and hunting.

2. When given a forestry scenario, you will be able to apply appropriate economic formulas to address the given scenario and use computer programs to calculate forest economic formulas.

3. When given timber and timberland data, you will be able to estimate the market value of the timber and timberland.

4. When given a silvicultural practice or management plan, you will be able to identify the economic consequences of the particular silvicultural practice or management plan.

5. Describe and apply antitrust regulations to forestry practices.

6. When given a forestry scenario, you will be able to apply supply and demand concepts and identify the impact on timber and other forestry based markets. These forestry scenarios may include forest reserve practices, globalization, consumer preferences, landowner demographics, determinants of timber price, non-timber products and services, market failures and peculiarities of timber products, new market trends, certification, change in forestland ownership, and incentive base policies.

7. Identify how federal, state, and local tax regulations, including property tax, income tax, estate tax, and severance/yield tax, govern the practice of forestry.

8. Identify societal trends toward monetizing ecosystem services and recognize the multiple benefits of forests are often public goods. Be able to explain the difference between value and price.

Common Threads

Communication - Synthesize and analyze forest valuation and economic concepts by writing and presenting the material to diverse audiences.

Ecosystem Approach - Identify societal trends toward monetizing ecosystem services and recognize the multiple benefits of forests are often public goods.

Ethics - Apply professional associations' Code of Ethics to scenarios involving forest economics and valuation.

Human Dimensions of Natural Resources - Apply supply and demand concepts to identify the impact on timber and other forestry-based markets taking into consideration factors such as consumer preferences, landowner demographics, certification, and change in forestland ownership.

Information Literacy - Identify sources for obtaining accurate information on current rates, prices, and taxes.

FOR 330 - GIS and Spatial Analysis 3 credits

Course Description

Principles and operations of Geographic Information Systems (GIS) applied to forestry and natural resources Students will learn to collect necessary field data to create GIS maps and digital spatial data sets, perform basic spatial analysis, and integrate social and economic data to solve spatially related natural resource problems. *Pre-requisites: MA 109 or Calculus, FOR 150, and FOR 200.*

Learning Outcomes

1. Describe the principles of geographic information systems (GIS) including data layers, data models, and map projections.

2. When given a natural resource problem, you will be able to create digital spatial data sets, perform basic spatial analysis, and integrate social and economic data to solve spatially related natural resource problems.

3. Locate and retrieve spatial data sets from public domain sources.

4. When given a field site, you will be able to use a global positioning unit to collect data and integrate the field data into a GIS map.

5. Explain trends in GIS technology and recognize challenges and opportunities related to GIS.

Common Threads

Collaborative Problem Solving - Work in teams to develop GIS projects that address a real-world public concern.

Communication - Communicate spatially related natural resource problems using a map.

Geospatial - Explain the principles of GIS and create digital spatial data sets, perform basic spatial analysis, and integrate social and economic data to solve spatially related natural resource problems.

Human Dimensions of Natural Resources - Integrate social and economic data into GIS maps to aid in addressing spatially related natural resource problems.

Information Literacy - Identify sources of spatial data sets and recognize how they can be applied to the forestry sector.

FOR 340 - Forest Ecology 4 credits

Course Description

The study of the forest as a biological community, covering ecosystem concepts such as energy flow, forest nutrition, nutrient cycling, and decomposition. Interrelationships between trees and other organisms comprising the community is also examined through concepts of disturbance, succession, population dynamics, biological and ecosystem diversity, ecosystem management, and ecosystem services. Laboratory, four hours per week. *Prerequisites: BIO 103 or BIO 150.*

Learning Outcomes

1. Explain human and forest history and have a basic understanding of forestry, forest ecology, forest geography, and forest communities.

2. When discussing the forest as an ecosystem, you will be able to describe ecosystem concepts and processes such as energy flow, forest soils, forest hydrology, forest nutrition, nutrient cycling, and decomposition.

3. When discussing forest community dynamics and population ecology, you will be able to describe concepts and processes such as community ecology, disturbance, forest site and disturbance, succession, fire ecology, population ecology, tree life history, population dynamics, dendrochronology, and invasive species.

4. When discussing the forest and tree environment, you will be able to explain concepts and processes such as structure and function of forest trees; radiation, water and carbon balance; water and trees; temperature and tree growth; biological and ecosystem diversity; and ecosystem management and ecosystem services.

5. When in the field, you will be able to use proper field note taking and data collection techniques. After returning from the field, you will be able to analyze and interpret data using statistics. You will use computers to conduct data analysis and present the data in graph format.

Common Threads

Collaborative Problem Solving - Work in teams in the field to collect, analyze, and interpret data.

Communication - Communicate through written reports methods and results of fieldwork. Give oral presentations using PowerPoint.

Ecosystem Approach - Describe concepts and processes related to ecosystem diversity, ecosystem management, and ecosystem services.

Forest Health and Protection - Describe concepts and processes related to invasive species, disturbance, and forest community dynamics.

FOR 350 - Silviculture 4 credits

Course Description

A study of ecologically based manipulations of forests to achieve desired management objectives. Develop and apply silvicultural prescriptions and learn the effects of these prescriptions on timber and non-timber forest benefits, forest health and biodiversity, soil, and water resources as well as their effect on broader social, economic, and ecological issues. Laboratory, three hours per week. *Prerequisites: FOR 219 and FOR 250.*

Learning Outcomes

1. Describe common silvicultural terms and techniques used in establishing and influencing composition, growth, and quality of forests.

2. When given a silvicultural prescription, you will be able to describe how the silvicultural prescription influences timber production, forest health, biodiversity, soil and water resources, and non-timber products/benefits. You will also be able to describe how the silvicultural prescription influences social, economic, and ecological issues.

3. When given land management objectives, you will be able to develop silvicultural prescriptions using various silvicultural concepts.

4. When given a silvicultural practice, you will be able to analyze the interconnections between biological principles and the silvicultural practice.

5. Describe the ecology and management of forest ecosystems common to Kentucky and the surrounding region.

6. When given inventory data, you will be able to perform statistical calculations for projecting future forest, stand, and tree conditions and use computer simulations to understand temporal aspects of silviculture.

Common Threads

Collaborative Problem Solving - Work in teams to write and present basic silvicultural prescriptions.

Communication - Write and present basic silvicultural prescriptions.

Ecosystem Approach - Explain how silvicultural practices influence timber production, forest health, biodiversity, soil and water resources, non-timber products, and society.

Ethics - Describe ethical issues related to silvicultural practices and be able to address these ethical issues.

Forest Health and Protection - Describe how silvicultural practices affect forest health.

Human Dimensions of Natural Resources - Identify issues and different perspectives forest landowners, government, and the public may have with various silvicultural practices.

FOR 400 - Human Dimensions of Forestry and Natural Resources — 3 credits

Course Description

In an issues based format, students will study societal trends and their impact on natural systems, the disconnect between society and nature, wildlife-human interactions, as well as problems related to globalization and urbanization. *Prerequisites: Senior Standing or consent of the instructor. This is a writing-intensive (W) course approved to fulfill the upper tier of the graduation writing requirement (GWR). To receive W credit for this course, you must have successfully completed the first-year writing requirement (ENG 104 or its equivalent) and have completed at least 30 hours of coursework. Forestry majors must complete this course and FOR 470 to fulfill the upper tier graduation writing requirement.*

Learning Outcomes

1. Explain the history of humans and natural resources and how changes in values and trends have altered the use of natural resources.

2. When given a forestry or natural resource scenario, you will be able to identify stakeholders involved, explain different stakeholder perspectives (values and beliefs), and critically evaluate opposing viewpoints. Based on the stakeholders involved, you will be able to describe decision making and public participation options and recognize potential power issues involved in the scenario.

3. When given a situation such as recreation, forest certification, globalization, rural-urban interface, ecosystem services, wildlife, and forest health, you will be able to explain the interconnection between society and natural resources across a range of societies. These situations may involve the role of communities, employment, extractive industries, resource dependency, poverty, land ownership patterns, and property rights.

4. Describe the Tragedy of the Commons and apply this concept to natural resource issues such as forestry, fisheries, and water.

5. Explain the environmental movement in the United States including the role of mainstream, grassroots, and radical groups. This course is a writing intensive course and by the end of the course you will be able to successfully complete the Writing Learning Outcomes. The **Writing Learning Outcomes** include:

   a. Write a paper that is essentially free of mechanical errors (grammar, punctuation, spelling, and syntax) and awkwardness, using a style that is appropriate to the purpose and audience.
   b. Demonstrate an ability to discover, evaluate, and clearly present evidence in support of an argument in the subject area and utilize documentation that conforms to the formats and the citation conventions of the subject area.
   c. Be aware that composing a successful text frequently takes multiple drafts, with varying degrees of focus on generating, revising, editing, and proofreading.
   d. Write a capable, interesting essay about a complex issue in forestry and natural resources for a general university audience.

Common Threads

Collaborative Problem Solving - Recognize collaborative problem solving opportunities and involve various stakeholders in the decision making process.

Communication - Effectively communicate (written and oral) with various stakeholders.

Ethics - Identify moral and ethical issues associated with human dimensions of forestry and natural resources.

Forest Health and Protection - Discuss the social aspects of forest health and protection.

Human Dimensions of Natural Resources - Explain different social aspects of natural resource issues.

Information Literacy - Locate reliable information pertaining to human dimension issues.

FOR 425 - Forest Management 4 credits

Course Description

The principles of sustained yield forest management, management objectives, forest regulation, allowable cut, and timing of timber harvests. Students will identify management objectives for various properties and ownership types and integrate scientific knowledge and both timber and non-timber considerations with landowner objectives to derive management decisions. Laboratory, three hours per week. *Prerequisites: Completion of the Field Semester or consent of instructor.*

Learning Outcomes

1. Apply concepts such as growth and yield, mean annual increment, periodic annual increment, and site quality to forest management decisions.

2. When given a field site, you will use global positioning systems and geographic information systems to create a stand map consisting of various map layers including tree and wildlife layers.

3. When given a field site, you will be able determine what timber needs to be cut, how much should be cut, and when the cutting should occur. You will be able to describe forest regulation terms such as growing stock, annual harvest, volume control, area control, and equivalence acres and perform calculations using these concepts.

4. When preparing a forest management plan, you will be able to identify management objectives for various properties and ownership types and integrate scientific knowledge with landowner objectives.

5. When given data, you will be able to use linear programming to determine harvest scheduling and rotation.

6. Apply non-timber considerations such as wildlife, water quality, and recreation to forest management decisions.

7. Identify the key components of a forest management plan and explain how to prepare a professional forest management plan.

8. Integrate financial analysis into forest management decisions.

Common Threads

Communication - Describe how to prepare a professional forest management plan and prepare sample components of a forest management plan.

Ethics - Describe ethical issues associated with preparing management plans.

Geospatial - When given a field site, you will use global positioning systems and geographic information systems to create a stand map consisting of various map layers including tree and wildlife layers.

Human Dimensions of Natural Resources - Apply non-timber considerations such as wildlife, water quality, and recreation to forest management decisions.

FOR 460 - Forest Hydrology and Watershed Management — 4 credits

Course Description

Principles and techniques involved in watershed management as it relates to the practice of forestry. Emphasis is placed on understanding the hydrologic cycle, plant-soil interactions from a land-use and landscape perspective, and the need for implementation of forestry best management practices. Laboratory, three hours per week. *Pre-requisites: CHE 104 or CHE 105, MA 109 or Calculus, FOR 200, and PLS 366.*

Learning Outcomes

1. Use your knowledge of the hydrologic cycle to explain how climate, soils, vegetation, and land-use affect the amount, timing, and quality of water.
2. Explain the plant-soil water relationship from the hydrologic perspective.
3. Explain hydrologic interactions from a land-use and landscape perspective.
4. Comprehend the need for forestry best management practices in relation to hydrology and watershed management.
5. Quantitatively measure and calculate hydrologic variables and describe analytical procedures for evaluating precipitation, evapotranspiration, infiltration, and stream flow.
6. Analyze current issues in watershed management in relation to social and economic impacts.
7. Interpret hydrology data and graphs as related to hydrology and watershed management.

Common Threads

Communication - Express through written and oral communication forest hydrology and watershed management issues.

Ethics - Discuss watershed issues within the context of the water-land ethic.

Human Dimensions of Natural Resources - Identify social impacts of watershed management.

Information Literacy - Locate accurate information related to water resources.

FOR 470 - Interdependent Natural Resource Issues — 3 credits

Course Description

Culmination of the student's study of public concerns and problems related to natural resources. Working in teams, students will learn to find and verify information on diverse topics, listen to and address public concerns, communicate natural resource information to a wide range of audiences, and be effective professionals in working toward solutions. *Prerequisites: Senior Standing. This is a writing-intensive (W) course approved to fulfill the upper tier of the graduation writing requirement (GWR). To receive W credit for this course, you must have successfully completed the first-year writing requirement (ENG 104 or its equivalent) and have completed at least 30 hours of coursework. Forestry majors must complete this course and FOR 400 to fulfill the upper tier graduation writing requirement.*

Learning Outcomes

1. Describe professional and leadership skills needed to be a 'Society Ready' forester and demonstrate effective habits and leadership skills of professionals.

2. Explain effective methods for alternative dispute resolution and be able to identify and address stakeholders involved in a dispute.

3. Demonstrate effective listening and communication skills and be able to address diverse audiences such as landowners, government agencies, media, and scientists.

4. Analyze different social, economic, and ecological approaches to address forest health issues or threats. Forest health issues and threats may include requirements of a healthy forest ecosystem, invasive plants and animals, fragmentation and parcelization, changes in land ownership patterns, global change, climate change, and pollution.

5. Analyze (based on readings, class discussions, and previous courses) issues that cause a disconnect between society and natural resources.

6. Broadly describe how to manage forest ecosystems to meet ecological, economic, and social needs. This includes incorporating conservation biology concepts and the influence of urban areas and communities on forest ecosystems.

7. Communicate forestry concepts to youth using programs such as Project Learning Tree.

8. This course is a writing intensive course and by the end of the course you will be able to successfully complete the Writing Learning Outcomes, which include - (a) Write a paper that is essentially free of mechanical errors (grammar, punctuation, spelling, and syntax) and awkwardness, using a style that is appropriate to the purpose and audience; (b) Demonstrate an ability to discover, evaluate, and clearly present evidence in support of an argument in the subject area and utilize documentation that conforms to the formats and the citation conventions of the subject area; (c) Be aware that composing a successful text frequently takes multiple drafts, with varying degrees of focus on generating, revising, editing, and proofreading; and (d) Write a capable, interesting essay about a complex issue in forestry and natural resources for a general university audience.

Common Threads

Collaborative Problem Solving - Explain effective methods for alternative dispute resolution and identify and address stakeholders involved in a dispute. Work in teams to collaborate with specialists to address issues.

Communication - Develop effective listening skills and be able to address diverse audiences. Use written and oral communication to explain forest related threats and solutions and address public concerns.

Ecosystem Approach - When given a forest ecosystem from the local to global scale, you will be able to broadly describe how to manage the system to meet ecological, economic, and social needs.

Ethics - Describe various ethical issues foresters face in terms of forestry and natural resource issues.

Forest Health and Protection - When given a forest health issue or forest threat, identify different social, economic, and ecological approaches to addressing these issues.

Geospatial - Discuss forest ecosystems from the local to global scale. Use and/or construct maps to aid in discussion of forest issues.

Human Dimensions of Natural Resources - Broadly describe how to manage forest ecosystems to meet ecological, economic, and social needs. Identify issues that cause a disconnect between society and natural resource.

Information Literacy - Locate accurate information on diverse natural resource topics from various sources.

Managerial Leadership - Develop professional and leadership skills needed to be a 'Society Ready' forester. Identify and develop effective habits and leadership skills of professionals. Explain Roberts Rules of Order.

FOR 480 - Integrated Forest Resource Management — 5 credits

Course Description

This is the other capstone course in the forestry curriculum. Students will be presented with a real life management scenario in a forested location in Kentucky. Working in teams, students will collect data, determine management objectives, and develop action plans for managing the forest according to the desires of the owner, subject to realistic legal, economic, ethical, and social constraints. Students will be required to produce a professional management plan and present the plan in a public forum at the end of the semester. *Prerequisites: Completion of Field Semester, FOR 425, FOR 460, and Senior Standing.*

Learning Outcomes

1. Relate your knowledge of forestry concepts with information collected on a forested property to design and implement a comprehensive inventory proposal, including describing a property's biophysical properties, historical and present land use by using land records and legal descriptions.

2. Relate your knowledge of forestry concepts with information collected on a forested property to develop a detailed management prescription incorporating the landowner's objectives and administering the objectives in light of ethical forestry and stewardship guidelines.

3. Demonstrate effective interaction skills and professional conduct with various types of landowners and the public.

Common Threads

Collaborative Problem Solving - Work in teams to develop management plans.

Communication - Prepare a professional written report and communicate technical information to non-technical audiences.

Ecosystem Approach - Understand the ecosystems and recognize relationships and trade-offs among forest resources.

Ethics - Identify ethical issues associated with preparing management plans.

Forest Health and Protection - Recognize forest health and protection issues on the forested property. Incorporate health and protection issues into the management plan.

Geospatial - Reinforce and further develop spatial literacy skills by incorporating maps into the management plans.

Human Dimensions of Natural Resources - Develop a detailed management prescription while incorporating the landowner's objectives and administering the objectives in light of ethical forestry and stewardship guidelines.

Information Literacy - Understand where to obtain information to complete a management plan including the courthouse, internet, and library.

Managerial Leadership - Apply professional and leadership skills to preparing the management plans.

Field Semester

This section describes the overall concept of the field semester, course descriptions, course learning outcomes, and suggested activities for each week. Activities for the field semester may change depending on instructors, weather, and new opportunities.

Field semester information was collected through individual meetings, primarily with members of the Department of Forestry teaching faculty. Several faculty mentioned specific learning outcomes to be covered in the field semester and suggested activities to accomplish these learning outcomes.

The basic framework for the field semester is shown in Figure 3. Figure 4 shows how the field semester framework fits with the University of Kentucky Spring Semester schedule.

During the first few days of the field semester, prior to the first full week of class, students will participate in team-building exercises to build trust among the students and develop leadership skills.

Throughout the spring field semester, students will visit numerous sites to see different ecosystems in the region. Students will periodically return to one site, or sample property, that will be used for in depth analysis to show integration and application of field semester concepts.

Not all sites students visit will be "model" sites. Some sites may have best management practices that were violated. This will allow students to think critically about a property, observe both good and bad practices, and discuss what could have been done differently.

Visits to field sites will be carefully coordinated to maximize information learned at a particular site. Learning outcomes will be integrated throughout the semester at different field sites. For example, if students visit Mammoth Cave to learn about soils and hydrology, they would also learn about how the land is managed for recreation, forest health issues, fire history, etc.

The prerequisites for the field semester include:

> *FOR 150, FOR 219, FOR 250, FOR 370, FOR 330, FOR 340, FOR 350, PLS 366 or consent of the field semester coordinator. Completion of the Field Semester will lead to the following certifications: U.S. Forest Service Red Card, Kentucky Master Logger, Herbicide and Pesticide Applicator.*

Figure 3. Field Semester Framework

Red Card Fire Certification

One week Red Card Fire Certification taught by the U.S. Forest Service

Dendrology, Inventory and Measurements, Wildlife, Soils, Hydrology, Health and Protection, Wood Utilization, Fire, Geospatial

Landscape Assessment

- Dendrology (Winter)
- Wildlife
- Soils
- Hydrology
- Health and Protection
- Inventory and Measurements

Integration: Use geospatial techniques to map layers and create a site assessment report on sample property.

Silvicultural Practices for Multiple Use Objectives

- Alteration of Forest Canopy
- Regeneration
- Prescription

Integration: Develop silvicultural prescriptions for forest products, wildlife, health and protection, and recreation objectives on the sample property.

Operation and Utilization

- Harvesting - Road building, BMPs, chainsaw
- Technical Aspects - Prescribed burn, site preparation, herbicides, tree planting
- Utilization - Primary and secondary

Integration: Design harvesting operations on sample property using geospatial techniques, good business sense, and ethical considerations.

Synthesis

Evaluate where we have been this spring. Were there issues where one objective conflicted with another objective? Where do you see problems?

Figure 4. Field Semester Framework and Schedule

Red Card Fire Certification

FOR 355: Forest Fire Control and Use (1 credit)

Week 1: Red Card Fire Certification

Dendrology, Inventory and Measurements, Wildlife, Soils, Hydrology, Health and Protection, Wood Utilization, Fire, Geospatial

Landscape Assessment

FOR 356: Landscape Assessment (5 credits)

Week 2: Dendrology (Winter)
Week 3: Wildlife
Week 4: Soils
Week 5: Hydrology
Week 6: Health and Protection

FOR 357: Inventory and Measurements II (2 credits)

Week 7-8: Inventory and Measurements

Silvicultural Practices for Multiple Use Objectives

FOR 358: Silvicultural Practices (3 credits)

Week 9-10: Alteration of Forest Canopy, regeneration, regional applications
Week 11: Prescription

Operation and Utilization

FOR 359: Forest Operations and Utilization (3 credits)

Week 12: Harvesting
Week 13: Technical Aspects
Week 14: Utilization

Synthesis

Evaluate where we have been this spring. Were there issues where one objective conflicted with another objective? Where do you see problems?

FOR 355 - Forest Fire Control and Use 1 credit

Course Description

A study of fire related concepts as they relate to trees, soils, landscapes, water quality, hydrology, wildlife, timber products, ecology and silviculture. In completing this course, students will become Red Card Certified through the U.S. Forest Service.

Learning Outcomes and Suggested Activities

Week 1: Red Card Fire Certification

1. Explain fire concepts and Become Red Card Certified through the U.S. Forest Service.

Suggested Activities

- One week classroom setting taught by Forest Service.
- Discuss prehistoric fire - what we know, how we know it, and why fire is tied to these sites.

Additional Comments

During this module, students will become Red Card Certified through the U.S. Forest Service. Fire related concepts will be incorporated throughout the semester to show students how fire affects trees, soils, landscapes, water quality, hydrology, wildlife, timber products, forest ecology, and how fire is used for silviculture. Students will also learn policy, economic, ethical, and social impacts of fire throughout the semester.

FOR 356 - Landscape Assessment 5 credits

Course Description

Students will learn to assess various landscape types through week-long, in-depth studies of five topic areas, while studying how the topics are interrelated. The topic areas are winter dendrology, wildlife, soils, hydrology, and health and protection. During the module, students will visit sites throughout Kentucky and the region.

Learning Outcomes and Suggested Activities

Week 2: Dendrology (Winter)

1. Identify trees in the winter landscape by using tree components such as buds, twigs, and bark.
2. Use your knowledge of site quality characteristics to understand why certain tree species are located on different sites.

Suggested Activities

- Technical course in the classroom to cover buds, twigs, and bark.
- Field trips to learn buds, twigs, and bark.
- Integration of landscapes and tree identification will be reinforced throughout the field semester at all sites.
- Conduct an exercise to look at the moisture regime for a mountain. Students would start at the top of a mountain, dig a soil pit, and continue this process at periodic points down the mountain until ending up at the stream. This exercise highlights interconnections between landscape, trees, soils, and water chemistry.

Week 3: Wildlife

1. Apply knowledge of sampling theory in wildlife to practical applications such as taking vegetation measurement samples.
2. Evaluate cover at the ground, mid-story, and canopy level to determine how vegetation impacts wildlife habitat.
3. Apply knowledge of home range and patch size to select appropriate wildlife management principles for a given area.

Suggested Activities

- Collect field data such as conducting bird and herpetology surveys, input data into spreadsheets, interpret data, and present.
- Sample habitat for food, cover, and snags.
- Visit Griffith Woods to examine different habitats of savannah, woodland, old farm and fields.

Week 4: Soils

1. Relate how soil properties influence a given landscape
2. Analyze the difference between soil types and evaluate soil site quality.

Suggested Activities

- See dendrology activity mentioned above regarding identifying a moisture regime for a mountain.

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Learning Outcomes and Suggested Activities

Week 5: Hydrology

1. Demonstrate proper sampling procedures for measuring flow, water quality, and other hydrologic variables.
2. Use collected data to analyze the variation between different landscapes and watersheds.

Suggested Activities

- Analyze a watershed to see how flow and water quality vary within a watershed. Students will start in the headwater and measure flow and water quality. Then as they move downstream into larger areas of the watershed students observe how flow and water quality changes with an increase in roads, agriculture, or urban areas. Students can use GIS to map the watershed highlighting percentages of land use in the watershed.
- Students will begin in Kentucky visiting sites, working their way through the Appalachian Mountains, and stopping at the Asheville Forest Service Lab. Students will continue through the pine plantations of South Carolina and ultimately end up at the coast to see the wetlands. This could be done in one week.

Week 6: Health and Protection

1. Identify exotic and invasive plants. Explain exotic and invasive plant characteristics and relate how these characteristics impact rural and urban areas.
2. Identify forest health threats (pests, disease, wind, ice, water, drought, fire, wildlife, invasive plants) and use your knowledge of forest practices to describe ways to protect the forest from these threats.
3. Analyze ecosystems and critical habitat areas and the related silvicultural practices that should or should not be conducted in these areas.

Suggested Activities

- Visit Robinson Forest where harvesting has occurred and show students ways to eradicate invasive species.
- After receiving pesticide certification, students could revisit sites later in the semester to eradicate some invasive species. Students could track the invasive species on a given site.
- Students can visit different sites such as dry forest communities, mesic forests, cumberland highlands forest, flatwoods, glades, prairies, woodlands, cliffs, wetlands, marshes, wet meadow, seeps, and gravel/cobble bars.

Additional Comments

During this module, students will learn to assess landscapes. Students will receive week long in-depth knowledge on a main topic area, while incorporating material from other topics. These topics include dendrology, wildlife, soils, hydrology, health and protection, and inventory and measurements. Students will visit different ecosystems in the region to understand both plant and animal communities that exist and how soils and hydrology help shape the landscape.

Integration: Throughout this module, students will return to the sample property to understand dendrology, wildlife, soils, hydrology, health and protection, inventory and measurements at the sample property. During visits to the sample property, students will gather data on particular topic areas to create GIS map layers for the sites. At the end of the module, students will have assessed the sample property and created a digital map of the site containing GIS layers for trees, wildlife, soils, hydrology, stand inventory data, and forest health.

FOR 357 - Inventory and Measurements II 2 credits

Course Description

This course teaches students how to conduct forest inventories using a variety of criteria and measurements. Students will use GPS to establish area boundaries and GIS to construct area maps. They will learn how to use inventory data to determine economic value.

Learning Outcomes and Suggested Activities

Week 7-8: Inventory and Measurements II

1. Demonstrate the correct procedures for conducting and writing a timber inventory. This includes using proper techniques to measure height, diameter, crown width, and stand basal area and using global positioning systems to collect stand borders, navigate, and conduct sampling.
2. Analyze different sites by comparing measurements and recognize other ways to classify a site besides site index.
3. Evaluate how silvicultural prescriptions impact wood product value.

Suggested Activities

- Have a consulting forester describe what goes into a timber inventory report and how the timber inventory report should look.
- Compare sites by taking measurements such as plot based sampling, nested plots looking at seedling and saplings. This could also include taking samples of soil water, soil texture, and insulation differences.
- Conduct hands-on lumber, log, tree, and crosstie grading.
- Calculate an economic evaluation of a log with hands-on log breakdown.
- Conduct an economic evaluation of standing timber.

Additional Comments

See Additional Comments section on previous page (Landscape Assessment).

FOR 358 - Silvicultural Practices 3 credits

Course Description

A study of the silvicultural practices for altering the forest canopy and regenerating the forest. Students will learn to apply these practices to meet multiple use objectives such as forest products, wildlife, health and protection, watershed, and recreation and develop silvicultural prescriptions.

Learning Outcomes and Suggested Activities

Week 9 – 10: Alteration of forest canopy, regeneration, and regional applications

1. Analyze how to alter the forest canopy to meet a given objective.
2. Assess stand stocking and demonstrate the correct procedures for marking the stand for a thinning or other intermediate treatment.
3. Demonstrate the correct procedures for conducting a natural regeneration assessment.
4. Demonstrate the correct procedures for conducting artificial regeneration.
5. Compare various silvicultural practices throughout the region.

Suggested Activities

- Students will receive hands-on site preparation techniques in the following module on operation and utilization.
- Visit sites within Kentucky and throughout the South to see different applications of silvicultural practices.

Week 11: Prescriptions

1. Describe the components of a silvicultural prescription for multiple objectives such as recreation, wildlife, health and protection, and forest products.
2. Analyze critical habitat areas and explain how to incorporate critical habitat areas into management prescriptions.

Suggested Activities

- As mentioned in Week 6, students can visit different sites such as dry forest communities, mesic forests, cumberland highlands forest, flatwoods, glades, prairies, woodlands, cliffs, wetlands, marshes, wet meadow, seeps, and gravel/cobble bars.

Additional Comments

During this module, students will learn silvicultural practices for altering the forest canopy and regenerating the forest. Students will apply these practices to meet multiple use objectives such as forest products, wildlife, health and protection, and recreation. Students will visit sites within Kentucky and throughout the South to see various silvicultural applications.

Integration: By the end of the module students will develop silvicultural prescriptions for forest products, wildlife, health and protection, and recreation objectives on the sample property.

FOR 359 - Forest Operations and Utilization — 3 credits

Course Description

Plan and design timber harvests, mark a stand for harvest, and describe the effects of harvesting. Use herbicides and pesticides to eradicate invasive species, perform tree planting, conduct thinnings, and participate in prescribed burns. Become familiar with major timber utilization technologies and learn to determine value added in converting standing trees into lumber and lumber into finished products.

Learning Outcomes and Suggested Activities

Week 12: Harvesting

1. Apply best management practices (BMPs) to forestry practices.
2. Explain various harvesting practices and the related costs associated with these practices.
3. Apply harvesting layout and design principles and describe the correct procedures for creating roads, landings, skids, stream crossings, fires lanes, logging roads, and marking a stand to survive a harvest. Apply BMPs to harvesting layout and design.
4. Use your knowledge of harvesting, forests, soils, watersheds, and wildlife to examine the impact of harvesting on the landscape.
5. Use your knowledge of forestry and logging to become certified as a Master Logger, which includes chainsaw training.

Suggested Activities

- Examine harvesting impacts by examining soil compaction, soil moisture, infiltration, water quality, etc., on a harvested site. Then go to an adjacent site that was not harvested and take the same measurements. Repeat the measurements in a wetland area and a burned area. Return to the lab to analyze the data and prepare a lab report.

Week 13: Technical Aspects

1. Explain the costs (economic, social, and environmental) associated with harvesting, site preparations, and prescribed burns.
2. Use your knowledge of proper herbicide and pesticide application techniques to become certified in herbicide and pesticide application.
3. Demonstrate the correct techniques for tree planting.
4. Demonstrate the correct procedures for conducting a thinning operation.
5. Examine prescribed burns and recognize how fire affects wildlife habitat structure and environmental conditions impacting understory plant response.
6. Describe genetic concepts after visiting a breeding program seed orchard.

Suggested Activities

- Work in an urban area to eradicate invasive species in a particular area.
- Visit forest owners such as the Forest Service, Learning Fire Network, or The Nature Conservancy to see how and why land owners use or do not use fire.
- Visit a breeding program seed orchard located in Tennessee.

Learning Outcomes and Suggested Activities

Week 14: Utilization – Primary and Secondary

1. Compare various mill processes and mill facilities such as facility size, process, wood input, tree type, and supply.
2. Calculate value added at secondary processing facilities.

Suggested Activities

- Visit various mills such as a sawmill, dimension mill, flooring mill, veneer mill, composite mill, and paper mill. This activity can be accomplished throughout the semester when traveling between field sites.
- Visit furniture manufactures. Observe various technologies such as computer number control routing and laser engraving.

Additional Comments

During this module, students will examine harvesting practices, including layout and design. Students will use silvicultural prescriptions learned in the previous module and apply those prescriptions to this module. Students will receive hands-on training in prescribed burns, site preparation, herbicide and pesticide application, and tree planting and learn the costs associated with these activities.

Integration: Students will design harvesting operations on the sample property using geospatial techniques, good business sense, and ethical considerations.

Field Semester Threads

Collaborative Problem Solving - Students will work in teams to conduct measurements, analyze data, and prepare final reports. When meeting with different landowners or land managers, students will learn about any social or policy concerns at the property and how these concerns were addressed.

Communication - Communicate with individuals that have different knowledge of forestry. For example, meet with natural resource professionals, landowners that have attended Extension workshops, and landowners with little forestry background. Effectively communicate site assessments, silvicultural prescriptions, and harvest layout and design using graphics and written text.

Ecosystem Approach - Students will be able to conduct landscape assessments taking into consideration the entire ecosystem. Trees, wildlife, soils, hydrology, health and protection, social and economic concepts will be considered when preparing a silvicultural prescription and designing a harvesting operation.

Ethics - Ethical considerations will be applied throughout the semester. Students will explore ethical considerations when conducting a site assessment, preparing silvicultural prescriptions, and conducting harvesting applications.

Forest Health and Protection - Identify exotic and invasive plants and recognize the impacts these plants have in both rural and urban areas. Identify forest health threats such as pests, disease, wind, ice, water, drought, fire, wildlife, invasive plants, and describe ways to protect the forest from these threats. Awareness of ecosystems and critical habitat and the silvicultural practices that should or should not be conducted in a particular area.

Geospatial - Use GIS to create map layers for trees, wildlife, soils, hydrology, stand inventory, and forest health for sample property. Use GIS to design harvesting operations of the sample property by identifying locations for logging roads, landings, skids, stream crossings, and fire lanes.

Human Dimensions of Natural Resources - When meeting with landowners or land managers, students will learn about legal, political, social, and economic concerns related to the property as well as the different perspectives or ideologies of the land owner.

Information Literacy - Students will learn to find data related to prescribed burns, wildfires, winter tree identification, wildlife sampling, soils, hydrology, forest health and protection, measurements, and inventory. Students will locate current information on wood product values and best management practices.

Managerial Leadership - Students will participate in team building exercises at the beginning of the semester. When meeting with land managers, students will discuss job descriptions and managerial aspects of the land managers job.

Section III

Curriculum Summary

This section provides an overview of the common threads in the curriculum, Society of American Foresters (SAF) requirements, and Pinchot Report competencies.

Table 1 shows a summary of how the common threads are integrated throughout the proposed curriculum.

Tables 2 and 3 show how the proposed forestry curriculum meets SAF Accreditation Requirements. The fields with a yellow box represent courses whose main learning outcomes cover a particular SAF requirement. Although many courses cover multiple topics mentioned in the SAF guidelines, a box was highlighted yellow only if one of the course's main learning outcomes met the requirement.

Table 4 shows how the proposed forestry curriculum meets general skills and technical competencies identified in a Pinchot Institute for Conservation Report (Sample et al 2000)[1]. This report examined the skills needed to be a successful practicing forester.

1 Sample, V.A., N.E. Block, P.C. Ringgold, and J.W. Giltmier. 2000. The evolution of forestry education in the United States: Adapting to changing demands of professional forestry. Pinchot Institute for Conservation, Washington, D.C. 62 p.

Table 1. Common Threads Summary

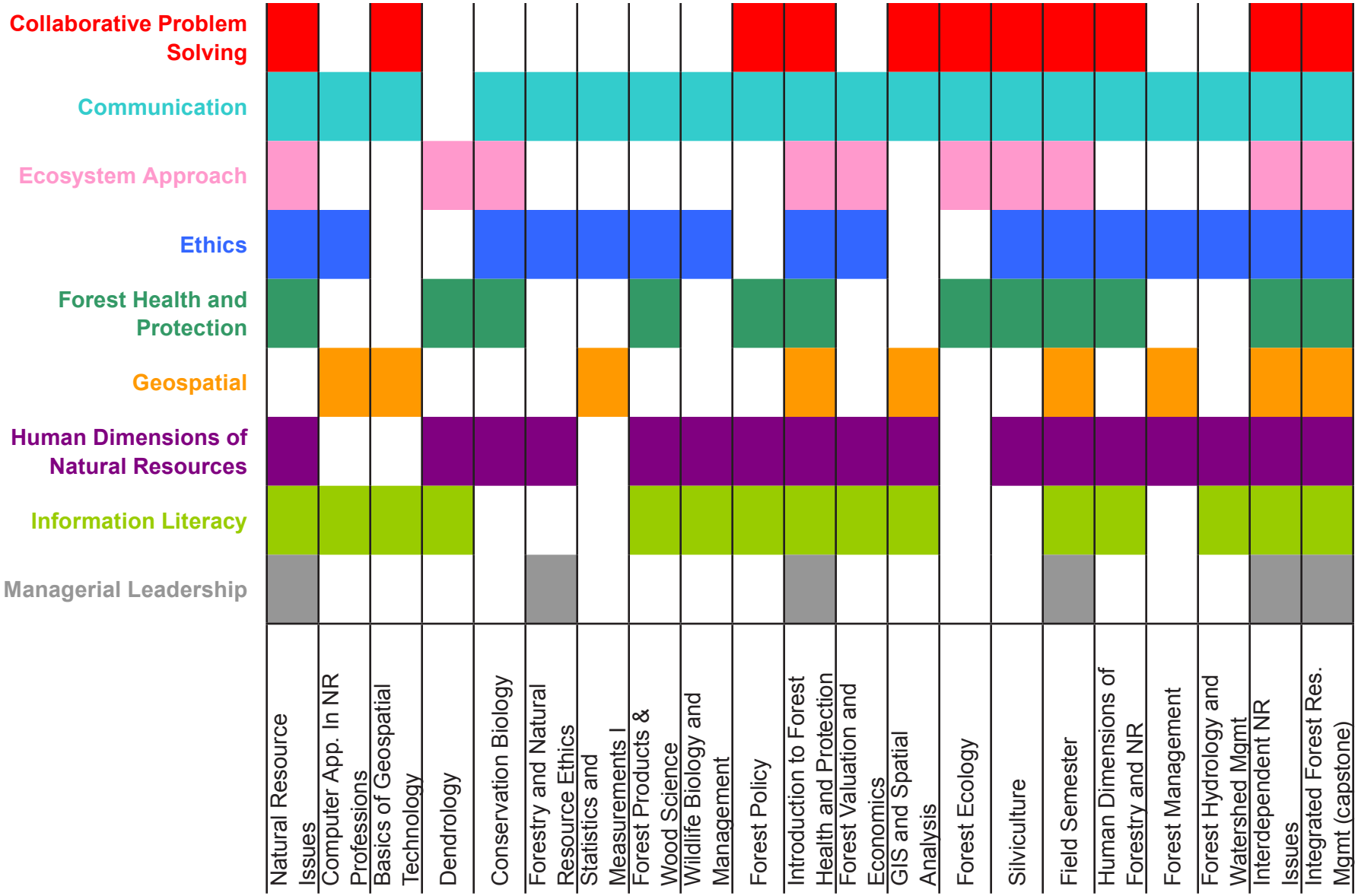

Table 2. SAF General Accreditation Requirements

Society of American Foresters 2007 Accreditation Handbook **General Education**	Natural Res. Issues	Computer App. In NR Professions	Basics of Geospatial Technology	Fundamentals of Soil Science (PLS 366)	Dendrology	Conservation Biology	Forestry and Natural Resource Ethics	Statistics and Measurements I	Forest Products & Wood Science	Wildlife Biology and Management	Forest Policy	Intro. to Forest Health and Prot.	Forest Valuation and Economics	GIS and Spatial Analysis	Forest Ecology	Silviculture	Field Semester	Human Dimensions of Forestry and NR	Forest Management	Forest Hydrology & Watershed Mgmt	Interdependent NR Issues	Integrated Forest Res. Mgmt
Communications																						
A1. Prepare & deliver effective oral presentations																						
A2a. Proficiency in English composition, technical/business writing, & writing for nonprofessional audiences																						
A2b. Read with comprehension of various documents & critically evaluate opposing viewpoints																						
Science & Mathematics																						
B1a. Understand components, patterns, & processes of biological & ecological systems across spatial & temporal scales																						
B1b. Understand molecular biology, cells, organisms, populations, species, communities, & ecosystems																						
B2. Understand physical & chemical properties, measurements, structure, & states of matter																						
B3. Understand & use basic approaches & applications of mathematics & statistics for analysis & problem solving																						
Social Sciences & Humanities																						
C1. Understand and address moral & ethical questions & use critical reasoning skills																						
C2. Understand human behavior & social & economic structures, processes, & important institutions across a range of societies																						
C3. Understand diverse dimensions of human experience & culture																						
Computer Literacy																						
D. Use computers & other contemporary electronic technologies in professional life																						
Course Contains Significant Content in:																						
Field Work																						
Ethics																						
Oral and Written Communications																						
Integrated Resource Management																						

Table 3. SAF Professional Accreditation Requirements

Society of American Foresters 2007 Accreditation Handbook **Professional Education**	Natural Res. Issues	Computer App. In NR Professions	Basics of Geospatial Technology	Fundamentals of Soil Science (PLS 366)	Dendrology	Conservation Biology	Forestry and Natural Resource Ethics	Statistics and Measurements I	Forest Products & Wood Science	Wildlife Biology and Management	Forest Policy	Intro. To Forest Health and Prot.	Forest Valuation and Economics	GIS & Spatial Anal.	Forest Ecology	Silviculture	Field Semester	Human Dimensions of Forestry and NR	Forest Management	Forest Hydrology & Watershed Mgmt	Interdep. NR Issues	Integrated Forest Res. Mgmt.
Ecology & Biology																						
A1. Understand taxonomy & identify forest & other tree species, their distribution, & associated vegetation & wildlife					■					■					■		■					■
A2. Understand soil properties & processes, hydrology, water quality, & watershed function				■	■										■	■	■			■		■
A3. Understand ecological concepts & principles including structure & function of ecosystems, plant & animal communities, competition, diversity, population dynamics, succession, disturbance, & nutrient cycling					■	■				■		■			■	■	■					
A4. Make ecosystem, forest, & stand assessments										■		■			■	■	■		■			■
A5. Understand tree physiology & effects of climate, fire, pollutants, moisture, nutrients, genetics, insects & diseases on tree & forest health & productivity					■	■			■			■			■	■	■					■
Measurement of Forest Res.																						
B1. Identify & measure land areas & conduct spatial analysis			■					■						■			■					■
B2. Design & implement comprehensive inventories that meet specific objectives using appropriate sampling methods & units of measurement								■									■		■			■
B3. Analyze inventory data & project future forest, stand, & tree conditions								■								■	■		■			■
Management of Forest Resources																						
C1. Develop & apply silvicultural prescriptions appropriate to management objectives, including methods of establishing & influencing composition, growth, & quality of forests, & understand impacts of those prescriptions										■						■	■		■			■
C2. Analyze economic, environmental, & social consequences of forest resource management strategies & decisions						■	■				■	■	■	■		■	■	■	■	■	■	■
C3. Develop management plans with specific multiple objectives & constraints																			■			■
C4. Understand valuation procedures, market forces, processing systems, transportation & harvesting activities that translate human demands for timber-based & other consumable forest products into availability of those products									■				■						■			■
C5. Understand valuation procedures, market, & non-market forces that avail humans opportunities to enjoy non-consumptive products & services of forests									■				■									■
C6. Understand administration, ownership, & organization of forest management enterprises.											■						■		■			■
Forest Res. Policy, Ec., & Admin.																						
D1. Understand forest policy & processes by which it is developed	■					■					■											
D2. Understand how federal, state, & local laws & regulations govern the practice of forestry	■					■					■											
D3. Understand professional ethics, including SAF Code, & recognition of responsibility to adhere to ethical standards in forestry decision making on behalf of clients & public	■	■				■	■		■	■		■	■			■	■	■	■	■	■	■
D4. Understand integration of technical, financial, human resources, & legal aspects of public & private enterprises											■											

Table 4. Pinchot Report Competencies

Pinchot Institute for Conservation *The Evolution of Forestry Education in the United States: Adapting to Changing Demands of Professional Forestry* Sample et. al (2000)			Natural Res. Issues	Computer App. In NR Professions	Basics of Geospatial Technology	Fundamentals of Soil Science (PLS	Dendrology	Conservation Biology	Forestry and Natural Resource Ethics	Statistics and Measurements I	Forest Products & Wood Science	Wildlife Biology and Management	Forest Policy	Intro. to Forest Health and Prot.	Forest Valuation and Economics	GIS and Spatial Analysis	Forest Ecology	Silviculture	Field Semester	Human Dimensions of Forestry and NR	Forest Management	Forest Hydrology and Watershed	Integrated Forest Res. Mgmt	Interdependent NR Issues
General Skills	1	Work in teams																						
	2	Address public concerns																						
	3	Understand sustainable ecosystem management																						
	4	Innovative approaches to forest management																						
	5	Innovative approaches to working with public																						
	6	Evaluate and synthesize information																						
	7	Landscape level-understanding																						
Specific Technical Competencies	1	Ethics																						
	2	Written communication																						
	3	Oral communication																						
	4	Silvicultural systems																						
	5	Managerial leadership																						
	6	Collaborative problem solving																						
	7	Resource management																						
	8	Forest ecology																						
	9	Forest inventory/biometry																						
	10	Landscape analysis/GIS																						
	11	Tree/plant species identification																						
	12	Human resource management																						
	13	Watershed management																						
	14	Resource economics																						
	15	Financial management																						
	16	Alternative dispute resolution																						
	17	Fire dynamics																						
	18	Organizational development																						
	19	Forest soils																						
	20	Resource policy/law																						
	21	Wildlife biology																						
	22	Government relations																						
	23	Forest pathology																						
	24	Conservation biology																						
	25	Forest operations and harvesting																						

Appendix A

Existing Curriculum

Freshman Year

Fall		Spring	
ENG 104 Writing	4	BIO 150 Prin. of Biology	3
CHE 105 Gen. Chemistry I	3	BIO 151 Prin. of Biology Lab	2
FOR 100 Intro. to Forestry	3	CHE 107 Gen. Chemistry II	3
MA 123 Elem. Calculus	3	CHE 115 Gen. Chemistry Lab	3
USP Requirement	3	USP Requirements	6
	16		17

Sophomore Year

Fall		Spring	
BIO 152 Prin. of Biology II	3	FOR 200 Map Reading and Photogrammetry	2
BIO 153 Prin. of Biology Lab II	2	SOC 260 Population, Resources, & Change OR GEO 210 Pollution, Hazards, & Env. Mgmt.	3
FOR 205 For. & Wildland Soils & Landscapes	4	STA 291 Statistical Method	3
FOR 219 Silvics and Tree Identification	3	PHY 151 Intro. to Physics	3
Second Writing Course	3	AEC 101 Economics of Food & Ag. OR ECO 201Principles of Economics	3
	15	USP Requirement	3
			17

Junior Year

Fall		Spring		Forestry Field Camp (early May - early June)	
FOR 300 Forest Measurements	4	FOR 350 Silviculture	4	FOR 375 Taxonomy of Forest Vegetation	1
FOR 340 Forest Ecology	3	FOR 360 Wood Technology and Utilization	4	FOR 376 Silv. Practices	2
FOR 402 Forest Entomology	3	FOR 599-002 Forest Ethics	3	FOR 377 Forest Surveying	1
MA 162 Finite Math and Its Application	3	Electives	6	FOR 378 Forest Mensuration	2
Elective	3		17	FOR 379 Harvest and Wood Utilization	2
	16				8

Senior Year

Fall		Spring	
FOR 425 Timber Management	4	FOR 480 Integrated Forest Resource Mgmt.	5
FOR 430 Forest Wildlife Management	3	Electives	7
FOR 460G Forest Watershed Management	3		12
Electives	6		
	16		

Total Credit Hours 134

Source: Curriculum Revision Handbook 2006/2007)

Appendix B

Questions and Answers

How is the proposed curriculum different from the existing curriculum?

- New courses in the proposed curriculum include:
  - FOR 150 Computer Applications in Natural Resource Professions
  - FOR 280 Forest Policy
  - FOR 310 Introduction to Forest Health and Protection
  - FOR 320 Forest Valuation and Economics
  - FOR 330 GIS and Spatial Analysis
  - FOR 400 Human Dimensions of Forestry and Natural Resources
  - FOR 470 Interdependent Natural Resource Issues

- The proposed curriculum contains several courses offered under the existing curriculum but have been modified in terms of course learning outcomes, level change (i.e., senior to sophomore level course), and/or a course name change. These modifications include:
  - FOR 110 Introduction to Forestry is now Natural Resource Issues.
  - FOR 200 Map Reading and Photogrammetry is now Basics of Geospatial Technology.
  - FOR 219 Silvics and Tree Identification is now Dendrology.
  - FOR 300 Forest Measurements is now FOR 250 Statistics and Measurements I
  - FOR 315 Conservation Biology (not required) is now FOR 230 Conservation Biology
  - FOR 360 Wood Technology and Utilization is now Forest Products and Wood Science.
  - FOR 425 Timber Management is now Forest Management.
  - FOR 430 Forest Wildlife Management is now FOR 370 Wildlife Biology and Management.
  - FOR 460 Forest Watershed Management is now Forest Hydrology and Watershed Management.
  - FOR 599-002 Forest Ethics is now FOR 240 Forestry and Natural Resource Ethics.

- The proposed curriculum has a spring field semester instead of a summer field semester. The spring field semester courses include:
  - FOR 355 Forest Fire Control and Use
  - FOR 356 Landscape Assessment
  - FOR 357 Inventory and Measurements II
  - FOR 358 Silvicultural Practices
  - FOR 359 Forest Operations and Utilization

Does the proposed forestry curriculum use the existing University Studies Program (USP) requirements?
The proposed curriculum follows the existing USP core requirements. It is not clear when and if a modified USP curriculum will be approved by the University. The modified USP curriculum will be brought to the University Senate around March 2008. Once the modified USP curriculum has been approved by the University, a revised forestry curriculum will be submitted.

The proposed curriculum contains different math and science requirements from the existing curriculum. The proposed curriculum would require the following USP courses:

Natural Science 1 – CHE 104 Intro. General Chemistry or CHE 105 General College Chemistry I
Natural Science 2 – BIO 103 Basic Ideas of Biology or BIO 150 Principles of Biology I
Math – MA 109 College Algebra or Calculus

Additional sciences are incorporated into the curriculum. Dendrology is now a four hour course, with the extra credit hour for additional instruction on plant biology. Wildlife Biology and Management is now a four hour course with the extra credit hour for additional instruction on animal biology.

Will the proposed forestry curriculum give students the background needed for graduate school?
Yes. Students that would like to continue on to a graduate program can adjust their program to ensure they have the math and sciences needed for graduate school. For example, a student could take more advanced chemistry, biology, and calculus courses. The student would also have six elective hours.

How does the proposed forestry curriculum impact transfer students?
The curriculum was designed to make it easy for students to transfer to forestry. The Curriculum Revision Committee identified the optimal transfer point as after the freshman year. The freshman year consists mainly of USP required courses. This should make it easier for a transfer student to have most of the general USP requirements met and take forestry courses during the sophomore year.

If you have any questions or comments on the proposed curriculum please contact:

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Appendix B

Update on tentative changes to the proposed undergraduate forestry curriculum. Document emailed to Dr. Mike Mullen, Assistant Dean Academic Programs, College of Agriculture on September 17, 2008.

Update on Tentative Changes to the Proposed Undergraduate Forestry Curriculum
9/16/08

In March 2008, the Department of Forestry submitted an application request to revise the undergraduate forestry curriculum. In April 2008, the College of Agriculture's Undergraduate Curriculum Committee (UCC) reviewed and commented on the proposed undergraduate forestry curriculum.

The proposed undergraduate forestry curriculum has been revised (Version 9/16/08) based on comments from the College of Agriculture's UCC. Listed below is a brief summary of UCC's comments and how the Department of Forestry's Curriculum Revision Committee has addressed these comments. **On Monday, September 29, 2008, the Department of Forestry will vote whether to approve Version 9/16/08 of the undergraduate forestry curriculum.**

1. *Suggest using PLS 366 Fundamentals of Soil Science in place of FOR 205 Forest Landscapes and Soils. A general soils class would also help to mix forestry students with other majors.*
   FOR 205 Forest Landscapes and Soils (fall of Year 2) was replaced with PLS 366 Fundamentals of Soil Science (spring of Year 2). The USP Cross-Cultural requirement was moved from spring of Year 2 to spring of Year 4 since PLS 366 raised the number of credit hours for spring semester of Year 2.

2. *Concern over reducing the Wildlife Management course from a 400-level to 200-level. Since this change may affect students in NRCM and Animal Science, suggest moving FOR 270 Wildlife Biology and Management to a 300-level course.*
   FOR 270 Wildlife Biology and Management was changed to a 300-level course, FOR 370 Wildlife Biology and Management.

3. *Concern over heavy course loads, especially having 17 hours the first semester of Year 1.*
   USP Social Science 1 requirement was moved from fall of Year 1 to fall of Year 4. Social Science 1 and 2 were renamed to be in chronological order. The number of credit hours for FOR 200 Basics of Geospatial Technology was reduced from 3 credit hours to 2 credit hours. Since the USP Cross-Cultural requirement was moved to spring of Year 4, FOR 470 Interdependent Natural Resource Issues was reduced from 5 credit hours to 3 credit hours. FOR 470 will meet the first nine Thursdays in the semester.

4. *Concern over the teaching logistics for faculty teaching regular spring semester courses as well as spring field semester courses.*
   FOR 250 Statistics and Measurements I was moved from spring of Year 2 to fall of Year 2. Attached is a Transition Schedule that shows the implementation of the proposed undergraduate forestry curriculum.

5. *Revise the 'common threads' matrix to show how the common thread topics progress throughout the curriculum.*
   The 'common threads' within the forestry curriculum have been mapped to show how the topics progress throughout the curriculum. (see attached)

Attached documents include:
1. Revised proposed undergraduate forestry curriculum (Version 9/16/08)
2. Original proposed undergraduate forestry curriculum (Version 3/3/08)
3. Curriculum revision transition schedule for required forestry undergraduate courses
4. Common Threads Summary

Proposed Forestry Undergraduate Curriculum - Version 9/16/08
(Revised based on comments from College of Agriculture and Forestry Curriculum Revision Committee)

YEAR 1 - Fall		YEAR 1 - Spring	
Math - MA 109 or calculus	3	Inference-Logic - calculus or (stats. and logic)	3
Written - ENG 104	4	Natural Sciences 2 - BIO 103 or BIO 150	3
Natural Sciences 1 - CHE 104 or CHE 105	3	Social Science 1	3
GEN 100 Issues in Agriculture	3	Humanities 1	3
FOR 110 Natural Resource Issues	1	FOR 150 Computer App. in N.R. Professions	2
	14		14

YEAR 2 - Fall		YEAR 2 - Spring	
FOR 200 Basics of Geospatial Technology	2	PLS 366 Fundamentals of Soil Science	4
FOR 250 Statistics and Measurements I	3	Humanities 2	3
FOR 219 Dendrology	4	FOR 370 Wildlife Biology and Management	4
FOR 230 Conservation Biology	3	FOR 280 Forest Policy **	2
FOR 260 Forest Products and Wood Science	4	FOR 240 Forestry and Natural Resource Ethics **	2
	16	**Half semester policy and half ethics	15

YEAR 3 - Fall		YEAR 3 – Spring (Field Semester)	
FOR 310 Intro. to Forest Health & Protection	3	FOR 355 Forest Fire Control and Use	1
FOR 320 Forest Valuation and Economics	3	FOR 356 Landscape Assessment	5
FOR 330 GIS and Spatial Analysis	3	FOR 357 Inventory and Measurements II	2
FOR 340 Forest Ecology	4	FOR 358 Silvicultural Practices	3
FOR 350 Silviculture	4	FOR 359 Forest Operations and Utilization	3
	17		14

YEAR 4 - Fall		YEAR 4 - Spring	
Elective 1	3	Cross-Cultural	3
Social Science 2	3	Elective 2	3
FOR 400 Human Dim. of Forestry & N.R.	3	FOR 470 Interdependent N. R. Issues	3
FOR 425 Forest Management	4	FOR 480 Integrated Forest Res. Mgmt (Capstone)	5
FOR 460 Forest Hyd. & Watershed Mgmt.	4		14
	17		

Total Credit Hours 121
Forestry Hours 84
USP Hours 37

NOTE: Version 9/16/08 will be voted on by the Forestry Faculty on September 29, 2008.

Proposed Forestry Undergraduate Curriculum - Version 3/3/08
(Version submitted to College of Agriculture in March 2008)

YEAR 1 - Fall		YEAR 1 - Spring	
Math - MA 109 or calculus	3	Inference-Logic - calculus, stats., or logic	3
Written - ENG 104	4	Natural Sciences 2 - BIO 103 or BIO 150	3
Natural Sciences 1 - CHE 104 or CHE 105	3	Social Science 2	3
Social Science 1	3	Humanities 1	3
GEN 100 Issues in Agriculture	3	FOR 150 Computer App. in N.R. Professions	2
FOR 110 Natural Resource Issues	1		14
	17		

YEAR 2 - Fall		YEAR 2 - Spring	
FOR 200 Basics of Geospatial Technology	3	Cross-Cultural	3
FOR 205 Forest Landscapes and Soils	3	Humanities 2	3
FOR 219 Dendrology	4	FOR 250 Statistics and Measurements I	3
FOR 230 Conservation Biology	3	FOR 270 Wildlife Biology and Management	4
FOR 260 Forest Products and Wood Science	4	FOR 280 Forest Policy **	2
	17	FOR 240 Forestry and Natural Resource Ethics **	2
		**Half semester policy and half ethics	17

YEAR 3 - Fall		YEAR 3 – Spring (Field Semester)	
FOR 310 Intro. to Forest Health & Protection	3	FOR 355 Forest Fire Control and Use	1
FOR 320 Forest Valuation and Economics	3	FOR 356 Landscape Assessment	5
FOR 330 GIS and Spatial Analysis	3	FOR 357 Inventory and Measurements II	2
FOR 340 Forest Ecology	4	FOR 358 Silvicultural Practices	3
FOR 350 Silviculture	4	FOR 359 Forest Operations and Utilization	3
	17		14

YEAR 4 - Fall		YEAR 4 - Spring	
Elective 1	3	Elective 2	3
FOR 400 Human Dim. of Forestry & N.R.	3	FOR 470 Interdependent N. R. Issues	5
FOR 425 Forest Management	4	FOR 480 Integrated Forest Res. Mgmt (Capstone)	5
FOR 460 Forest Hyd. & Watershed Mgmt.	4		13
	14		

Total Credit Hours 123
Forestry Hours 86
USP Hours 37

Curriculum Revision Transition Schedule for Required Forestry Undergraduate Courses
DRAFT - 9/16/08

LEGEND

	Field Semester
Red Text	Existing forestry curriculum course
Black Text	New forestry curriculum course

	Fall 2009	Spring 2010	Summer 2010	Fall 2010	Spring 2011	Summer 2011	Fall 2011	Spring 2012	Fall 2012	Spring 2013
Arthur	FOR 340 Ecology			FOR 340 Ecology						
							FOR 340 Ecology		FOR 340 Ecology	
Barton	FOR 460 Watershed Mgmt			FOR 460 Watershed Mgmt			FOR 460 Watershed Mgmt			
								{1 week worth of hydrology during Field Semester}		*{1 week worth of hydrology during Field Semester}*
									FOR 460 Hydrology and Watershed Mgmt	
Bullard									FOR 400 Human Dimensions	
Conners			Summer Camp			Summer Camp				
								FOR 359 Forest Op. (Week12-14) (co-taught Stringer)		FOR 359 Forest Op. (Week12-14) (co-taught Stringer)
(Cox?)		FOR 315 Con. Bio *(not required)*								
				FOR 230 Con. Bio.			FOR 230 Con. Bio.		FOR 230 Con. Bio.	
Cushing	FOR 425 Management			FOR 425 Management			FOR 425 Management			
		FOR 480 Capstone (co-taught Lhotka)			FOR 480 Capstone (co-taught Lhotka)			FOR 480 Capstone (co-taught Lhotka)		
							FOR 320 Economics		FOR 320 Economics	
									FOR 425 Management	
										FOR 480 Capstone (co-taught Lhotka)
Fei	FOR 599 GIS *(not required)*			FOR 599 GIS *(not required)*						
			Summer Camp			Summer Camp				
							FOR 330 GIS		FOR 330 GIS	

Curriculum Revision Transition Schedule for Required Forestry Undergraduate Courses
DRAFT - 9/16/08

LEGEND

	Field Semester
Red Text	Existing forestry curriculum course
Black Text	New forestry curriculum course

	Fall 2009	Spring 2010	Summer 2010	Fall 2010	Spring 2011	Summer 2011	Fall 2011	Spring 2012	Fall 2012	Spring 2013
Kalisz	FOR 205 Forest Soils									
	FOR 300 Measurements			FOR 300 Measurements						
		FOR 599-002 Ethics			FOR 599-002 Ethics					
					FOR 240 Ethics *(taught 2nd half of semester)*			FOR 240 Ethics *(taught 2nd half of semester)*		FOR 240 Ethics *(taught 2nd half of semester)*
							FOR 310 Forest Health (co-taught Rieske-Kinney)		FOR 310 Forest Health (co-taught Rieske-Kinney)	
				FOR 250 Stats & Measurements			FOR 250 Stats & Measurements		FOR 250 Stats & Measurements	
								FOR 356 Lndscp Assmt. (Week 2-6)		FOR 356 Lndscp Assmt. (Week 2-6)
								FOR 357 Inv. & Measmt. (Week 7-8)		FOR 357 Inv. & Measmt. (Week 7-8)
Lacki	FOR 430 Wildlife Mgmt			FOR 430 Wildlife Mgmt			FOR 430 Wildlife Mgmt			
					FOR 370 Wildlife Mgmt			FOR 370 Wildlife Mgmt		FOR 370 Wildlife Mgmt
								{1 week worth of wildlife during Field Semester}		*{1 week worth of wildlife during Field Semester}*
Lhotka		FOR 350 Silviculture			FOR 350 Silviculture					
		FOR 480 Capstone (co-taught Cushing)			FOR 480 Capstone (co-taught Cushing)			FOR 480 Capstone (co-taught Cushing)		
										FOR 480 Capstone (co-taught Cushing)
							FOR 350 Silviculture		FOR 350 Silviculture	
								FOR 358 Silv. Pract. (Week 9-11)		FOR 358 Silv. Pract. (Week 9-11)

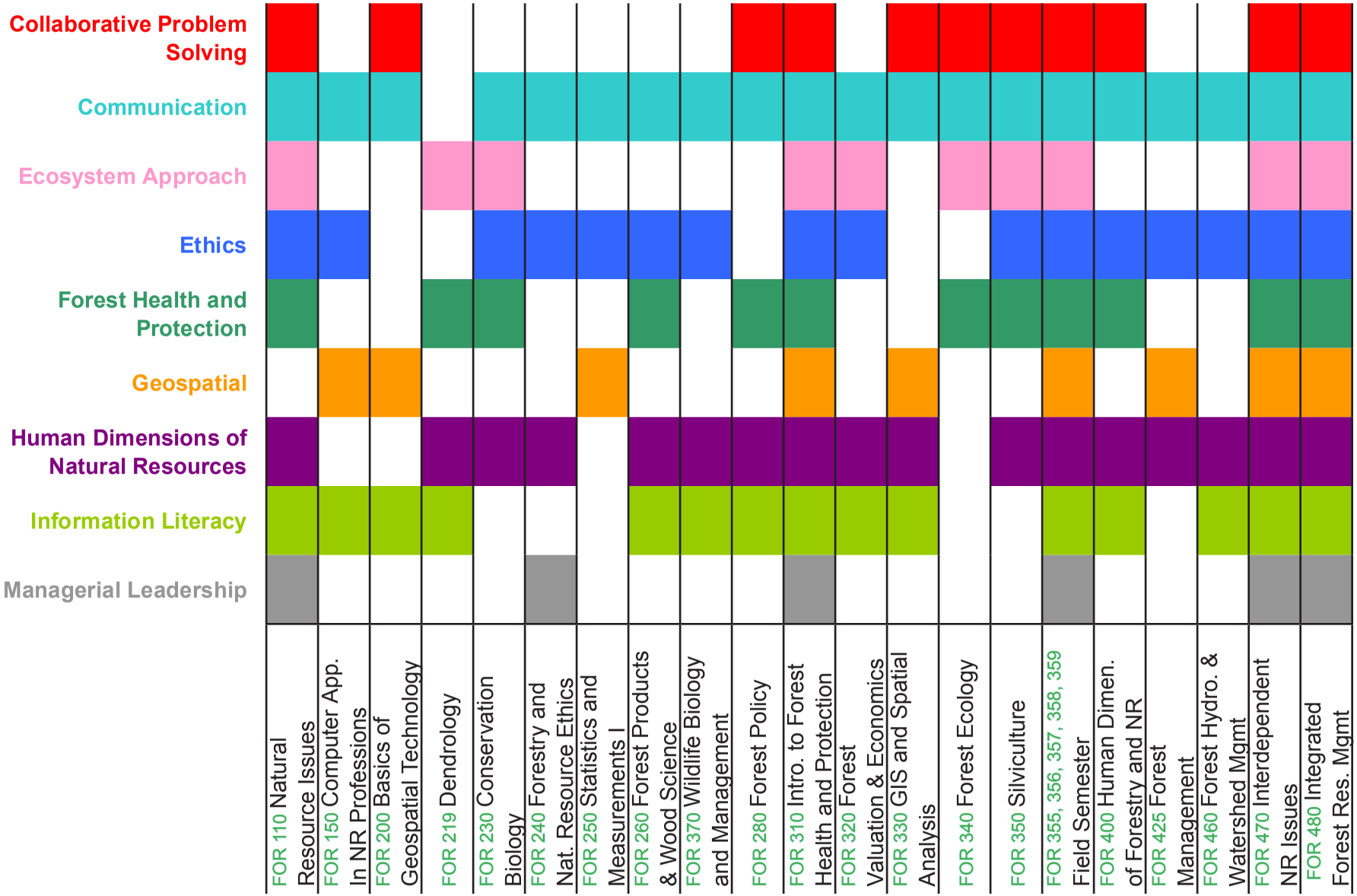
Curriculum Revision Transition Schedule for Required Forestry Undergraduate Courses
DRAFT - 9/16/08

LEGEND

	Field Semester
Red Text	Existing forestry curriculum course
Black Text	New forestry curriculum course

	Fall 2009	Spring 2010	Summer 2010	Fall 2010	Spring 2011	Summer 2011	Fall 2011	Spring 2012	Fall 2012	Spring 2013
Paratley	FOR 219 Tree ID									
				FOR 219 Dendro			FOR 219 Dendro		FOR 219 Dendro	
								{1 week worth of winter dendrology during Field Semester}		*{1 week worth of winter dendrology during Field Semester}*
Policy Position					FOR 280 Policy			FOR 280 Policy		FOR 280 Policy
Rieske-Kinney	FOR 402 Entomology			FOR 402 Entomology						
							FOR 310 Forest Health (co-taught Kalisz)		FOR 310 Forest Health (co-taught Kalisz)	
Ringe		FOR 200 Map Reading								
		FOR 360 Wood Technology			FOR 360 Wood Technology					
		FOR 150 Computer Appli.			FOR 150 Computer Appli.			FOR 150 Computer Appli.		FOR 150 Computer Appli.
				FOR 200 Bas. Geosp. Tech			FOR 200 Bas. Geosp. Tech		FOR 200 Bas. Geosp. Tech	
				FOR 260 Forest Products			FOR 260 Forest Products		FOR 260 Forest Products	
			Summer Camp			Summer Camp				
								FOR 355 Fire (Week 1)		FOR 355 Fire (Week 1)
Stringer			Summer Camp			Summer Camp				
								FOR 359 Forest Op. (Week12-14) (co-taught Conners)		FOR 359 Forest Op. (Week12-14) (co-taught Conners)
Wagner	FOR 110 N.R. Issues			FOR 110 N.R. Issues			FOR 110 N.R. Issues		FOR 110 N.R. Issues	
										FOR 470 Interdep. N.R Issues
Wildlife Position	(courses to be determined)									

Common Threads Summary



Collaborative Problem Solving

Senior Spring		Explain effective methods for alternative dispute resolution and identify and address stakeholders involved in a dispute. Work in teams to collaborate with specialists to address issues. FOR 470	Work in teams to develop management plans. FOR 480	
Senior Fall		Recognize collaborative problem solving opportunities and involve various stakeholders in the decision making process. FOR 400		
Junior Spring		Students will work in teams to conduct measurements, analyze data, and prepare final reports. When meeting with different landowners or land managers, students will learn about any social or policy concerns at the property and how these concerns were addressed. Field Semester		
Junior Fall	Work together to determine management actions necessary to avoid/resolve existing problems locally. FOR 310	Work in teams to develop GIS projects that address a real-world public concern. FOR 330	Work in teams in the field to collect, analyze, and interpret data. FOR 340	Work in teams to write and present basic silvicultural prescriptions. FOR 350
Sophomore Spring		Listen and understand opposing viewpoints and rationally and fairly address a particular issue. FOR 280		
Sophomore Fall		Work in teams to collect data and solve problems using various spatial technologies. FOR 200		
Freshman Spring				
Freshman Fall		Discuss effective people skills, negotiation techniques, and managerial skills needed by natural resource professionals to effectively address natural resource issues. FOR 110		

Communication

Senior Spring		Develop effective listening skills and be able to address diverse audiences. Use written and oral communication to explain forest related threats and solutions and address public concerns. FOR 470		Prepare a professional written report and communicate technical information to non-technical audiences. FOR 480	
Senior Fall		Effectively communicate (written and oral) with various stakeholders. FOR 400	Describe how to prepare a professional forest management plan and prepare sample components of a forest management plan. FOR 425	Express through written and oral communication forest hydrology and watershed management issues. FOR 460	
Junior Spring		Communicate with individuals that have different knowledge of forestry. For example, meet with natural resource professionals, landowners that have attended Extension workshops, and landowners with little forestry background. Effectively communicate site assessments, silvicultural prescriptions, and harvest layout and design using graphics and written text. Field Semester			
Junior Fall	Address questions landowners and the public may have about forest health issues through written and oral communication. FOR 310	Synthesize and analyze forest valuation and economic concepts by writing and presenting the material to diverse audiences. FOR 320	Communicate spatially related natural resource problems using a map. FOR 330	Communicate through written reports methods and results of fieldwork. Give oral presentations using PowerPoint. FOR 340	Write and present basic silvicultural prescriptions. FOR 350
Sophomore Spring	Communicate with classmates through facilitating a round-table discussion and participating in discussions of controversial issues. Conduct oral presentations. Synthesize information into a formal outline. FOR 240	Communicate in written form the results and interpretation of data collected. FOR 250	Express in writing wildlife management concepts to scientific audiences and the public. FOR 370	Address public concerns related to policy through non-technical written documents and oral presentations. Explain communication avenues important in the policy arena. FOR 280	
Sophomore Fall		Effectively communicate, both written and oral, map components to a general audience. FOR 200	Communicate the concepts of conservation biology effectively to classmates through discussions of reading assignments. Interpret media coverage of conservation biology topics through written communication. FOR 230	Address public concerns through written and oral communication on different aspects of the forest products industry. FOR 260	
Freshman Spring		When given a forestry and natural resource project, you will be able to effectively and professionally communicate the methods and results of the project to different types of audiences through emails, memos, letters, handouts, posters, and presentations. FOR 150			
Freshman Fall		Explain natural resource issues through written work and oral presentations using effective writing styles and presentation techniques to clearly and succinctly discuss the material in a manner appropriate for the audience at hand. FOR 110			

Ecosystem Approach

Senior Spring		When given a forest ecosystem from the local to global scale, you will be able to broadly describe how to manage the system to meet ecological, economic, and social needs. FOR 470	Understand the ecosystems and recognize relationships and trade-offs among forest resources. FOR 480	
Senior Fall				
Junior Spring		Students will be able to conduct landscape assessments taking into consideration the entire ecosystem. Trees, wildlife, soils, hydrology, health and protection, social and economic concepts will be considered when preparing a silvicultural prescription and designing a harvesting operation. Field Semester		
Junior Fall	Discuss how insect and disease problems alter the landscape. FOR 310	Identify societal trends toward monetizing ecosystem services and recognize the multiple benefits of forest are often public goods. FOR 320	Describe concepts and processes related to ecosystem diversity, ecosystem management, and ecosystem services. FOR 340	Explain how silvicultural practices influence timber production, forest health, biodiversity, soil and water resources, non-timber products, and society. FOR 350
Sophomore Spring				
Sophomore Fall		Identify basic soil and site characteristics (topography, aspect, relief, and drainage) and analyze how these characteristics impact trees. FOR 219	Describe the role forest management, wetland management, and land use decisions have in addressing conservation issues. FOR 230	
Freshman Spring				
Freshman Fall			Describe ecosystem services and ecosystem issues and identify ways to address these issues. FOR 110	

Ethics

Senior Spring	Describe various ethical issues foresters face in terms of forestry and natural resource issues. FOR 470	Identify ethical issues associated with preparing management plans. FOR 480	
Senior Fall	Identify moral and ethical issues associated with human dimensions of forestry and natural resources. FOR 400	Describe ethical issues associated with preparing management plans. FOR 425	Discuss watershed issues within the context of the water-land ethic. FOR 460
Junior Spring	Ethical considerations will be applied throughout the semester. Students will explore ethical considerations when conducting a site assessment, preparing silvicultural prescriptions, and conducting harvesting applications. Field Semester		
Junior Fall	Explain ethical issues associated with forest health and protection. FOR 310	Apply professional associations' Code of Ethics to scenarios involving forest economics and valuation. FOR 320	Describe ethical issues related to silvicultural practices and be able to address these ethical issues. FOR 350
Sophomore Spring	Apply key ethical concepts to forestry and natural resource issues. Describe professional codes of ethics and ethical issues professionals face. FOR 240	Recognize issues associated with appropriate use and interpretation of statistics. FOR 250	Describe ethical issues related to wildlife management. FOR 370
Sophomore Fall	Describe conservation values and ethical perspectives such as environmental ethics, deep ecology, and land ethic and apply these values and perspectives to conservation biology issues. FOR 230	Describe ethical issues associated with harvesting and/or processing various forest products and different approaches used to address these issues. FOR 260	
Freshman Spring	Recognize the ethical considerations of accurately portraying visual material such as graphs, diagrams, and maps. FOR 150		
Freshman Fall	Identify ethical issues as they relate to natural resources. FOR 110		

Forest Health and Protection

Senior Spring	When given a forest health issue or forest threat, identify different social, economic, and ecological approaches to addressing these issues. FOR 470	Recognize forest health and protection issues on the forested property. Incorporate health and protection issues into the management plan. FOR 480	
Senior Fall	Discuss the social aspects of forest health and protection. FOR 400		
Junior Spring	Identify exotic and invasive plants and recognize the impacts these plants have in both rural and urban areas. Identify forest health threats such as pests, disease, wind, ice, water, drought, fire, wildlife, invasive plants, and describe ways to protect the forest from these threats. Awareness of ecosystems and critical habitat and the silvicultural practices that should or should not be conducted in a particular area. Field Semester		
Junior Fall	When presented with a forest health problem you will be able to describe the problem, how it got there, and what can be done about it. FOR 310	Describe concepts and processes related to invasive species, disturbance, and forest community dynamics. FOR 340	Describe how silvicultural practices affect forest health. FOR 350
Sophomore Spring	Explain how current and future policy approaches at the local, state, and federal level can address forest health issues such as urbanization, fragmentation, demographic shifts, and invasive species. FOR 280		
Sophomore Fall	Identify exotic or invasive plant species and describe the role of forest health in the United States. FOR 219	Describe fragmentation and explain the causes and biological consequences of fragmentation. FOR 230	Determine which mill process and end product would be appropriate taking into consideration the impact of silvicultural practices, tree health (fire, insects, weather) and cultural practices (stock, treatment, fertilization, water) on wood and product quality. FOR 260
Freshman Spring			
Freshman Fall	Discuss forest health issues such as human population, invasive plants and animals, fragmentation and parcelization, rural-urban interface, and water quality and identify ways to address these issues. FOR 110		

Geospatial

Senior Spring	Discuss forest ecosystems from the local to global scale. Use and/or construct maps to aid in discussion of forest issues. FOR 470	Reinforce and further develop spatial literacy skill by incorporating maps into the management plans. FOR 480
Senior Fall	When given a field site, you will use global positioning systems and geographic information systems to create a stand map consisting of various map layers including tree and wildlife layers. FOR 425	
Junior Spring	Use GIS to create map layers for trees, wildlife, soils, hydrology, stand inventory, and forest health for sample property. Use GIS to design harvesting operations of the sample property by identifying locations for logging roads, landings, skids, stream crossings, and fire lanes. Field Semester	
Junior Fall	Examine digital map projections of the progress of insects and disease. FOR 310	Explain the principles of GIS and create digital spatial data sets, perform basic spatial analysis, and integrate social and economic data to solve spatially related natural resource problems. FOR 330
Sophomore Spring	Use global positioning systems to take land measurements. FOR 250	
Sophomore Fall	Use GPS units, describe basic geographic information concepts, and integrate data from various types of digital and paper maps. FOR 200	
Freshman Spring	Use the computer to construct appropriate and aesthetic maps. FOR 150	
Freshman Fall		

Human Dimensions of Natural Resources

Senior Spring	Broadly describe how to manage forest ecosystems to meet ecological, economic, and social needs. Identify issues that cause a disconnect between society and natural resources. FOR 470		Develop a detailed management prescription while incorporating the landowner's objectives and administering the objectives in light of ethical forestry and stewardship guidelines. FOR 480	
Senior Fall	Explain different social aspects of natural resource issues. FOR 400	Apply non-timber considerations such as wildlife, water quality, and recreation to forest management decisions. FOR 425	Identify social impacts of watershed management. FOR 460	
Junior Spring	When meeting with landowners or land managers, students will learn about legal, political, social, and economic concerns related to the property as well as the different perspectives or ideologies of the landowner. Field Semester			
Junior Fall	Discuss how forest health issues impact rural and urban areas and social considerations of dealing with forest health issues. FOR 310	Apply supply and demand concepts to identify the impact on timber and other forestry-based markets taking into consideration factors such as consumer preferences, landowner demographics, certification, and change in forestland ownership. FOR 320	Integrate social and economic data into GIS maps to aid in addressing spatially related natural resource problems. FOR 330	Identify issues and different perspectives forest landowners, government, and the public may have with various silvicultural practices. FOR 350
Sophomore Spring	Discuss how human values and beliefs affect how natural resource issues are addressed. FOR 240	Analyze public perceptions of current events and describe ways to address public concerns surrounding the current event. FOR 370	Explain how policy is used to address forest issues and identify participants in the political process. FOR 280	
Sophomore Fall	Explain the role of forest history, urban forestry, fire, and forest health in the United States. FOR 219	Discuss the role human values and policy play in shaping conservation biology topics. FOR 230	Explain issues surrounding the wood product industry including market and economic conditions, wood technologies, recycling, forest product certification, environmental concerns, and public perception of certain forest products. FOR 260	
Freshman Spring				
Freshman Fall		Describe the role society plays in framing, causing, and addressing natural resource issues. FOR 110		

Information Literacy

Senior Spring		Locate accurate information on diverse natural resource topics from various sources. FOR 470	Understand where to obtain information to complete a management plan including the courthouse, internet, and library. FOR 480
Senior Fall		Locate reliable information pertaining to human dimension issues. FOR 400	Locate accurate information related to water resources. FOR 460
Junior Spring		Students will learn to find data related to prescribed burns, wildfires, winter tree identification, wildlife sampling, soils, hydrology, forest health and protection, measurements, and inventory. Students will locate current information on wood product value and best management practices. Field Semester	
Junior Fall	Locate reliable information on forest health and protection issues. FOR 310	Identify sources for obtaining accurate information on current rates, prices, and taxes. FOR 320	Identify sources of spatial data sets and recognize how they can be applied to the forestry sector. FOR 330
Sophomore Spring		Identify where to obtain current, reliable data pertaining to wildlife. FOR 370	Locate reliable sources of information when faced with policy issues in forestry. FOR 280
Sophomore Fall	Identify where to find reliable maps for different applications. FOR 200	Identify reliable sources for tree identification and tree reference information. FOR 219	Locate information on new technologies and applications of forest products from sources such as the USDA Forest Service Forest Product Labs or the forest products industry. FOR 260
Freshman Spring		Identify sources of reliable information from the internet, journals, newspapers, and television. FOR 150	
Freshman Fall		Use the University of Kentucky Library as well as other resources, such as the internet, to find professional publications and popular press items and critically evaluate opposing viewpoints and reliability of the material. FOR 110	

Managerial Leadership

Senior Spring	Develop professional and leadership skills needed to be a 'Society Ready' forester. Identify and develop effective habits and leadership skills of professionals. Explain Roberts Rules of Order. FOR 470	Apply professional and leadership skills to preparing the management plans. FOR 480
Senior Fall		
Junior Spring	Students will participate in team building exercises at the beginning of the semester. When meeting with land managers, students will discuss job descriptions and managerial aspects of the land mangers job. Field Semester	
Junior Fall	Develop skills and knowledge to be a proactive person dealing with forest health issues. FOR 310	
Sophomore Spring	Discuss ethical issues professionals face and identify ways of handling the ethical dilemmas. Ethical issues professionals may face include honesty, conflict of interest, confidentiality, professionalism, and responsibility to an employer. FOR 240	
Sophomore Fall		
Freshman Spring		
Freshman Fall	Discuss effective people skills, negotiation techniques, and managerial skills needed by natural resource professionals. FOR 110	