

Submit originals and one copy and electronic copy to **Governance/Faculty Senate Office**. See <http://www.uaf.edu/uafgov/faculty/cd> for a complete description of the rules governing curriculum & course changes.

CHANGE COURSE (MAJOR) and DROP COURSE PROPOSAL

SUBMITTED BY:

Department	Forest Sciences	College/School	SNRAS
Prepared by	John Yarie	Phone	5650
Email Contact	jaryarie@alaska.edu	Faculty Contact	

1. COURSE IDENTIFICATION:

Dept Course # No. of Credits

COURSE TITLE

2. ACTION DESIRED:

Change Course If Change, indicate below what change. Drop Course

NUMBER	<input type="text"/>	TITLE	<input checked="" type="checkbox"/>	DESCRIPTION	<input checked="" type="checkbox"/>
PREQUISITES	<input type="text"/>	FREQUENCY OF OFFERING	<input type="text"/>	COURSE CLASSIFICATION	<input type="text"/>
CREDITS (including credit distribution)	<input type="text"/>	3+0			
CROSS-LISTED	<input type="text"/>	Dept.	<input type="text"/>	(Requires approval of both departments and deans involved. Add lines at end of form for such signatures.)	
STACKED (400/600)	<input type="text"/>	Dept.	<input type="text"/>	Course #	<input type="text"/>
OTHER (please specify)	<input type="text"/>				

3. COURSE FORMAT

NOTE: Course hours may not be compressed into fewer than three days per credit. Any course compressed into fewer than six weeks must be approved by the college or school's curriculum council. Furthermore, any core course compressed to less than six weeks must be approved by the core review committee.

COURSE FORMAT: (check one) 1 2 3 4 5 6 weeks to full semester

OTHER FORMAT (specify)

Mode of delivery (specify lecture, field trips, labs, etc)

4. COURSE CLASSIFICATIONS: (undergraduate courses only. Use approved criteria found on Page 10 & 17 of the manual. If justification is needed, attach on separate sheet.)

H = Humanities N = Natural Science S = Social Sciences

Will this course be used to fulfill a requirement for the baccalaureate core? YES NO

IF YES, check which core requirements it could be used to fulfill:

O = Oral Intensive, Format 6 W = Writing Intensive, Format 7 Natural Science, Format 8

5. COURSE REPEATABILITY:

Is this course repeatable for credit? YES NO

Justification: Indicate why the course can be repeated (for example, the course follows a different theme each time).

How many times may the course be repeated for credit? TIMES

If the course can be repeated with variable credit, what is the maximum number of credit hours that may be earned for this course? CREDITS

6. **CURRENT CATALOG DESCRIPTION AS IT APPEARS IN THE CATALOG:** including dept., number, title and credits

NRM F375 Forest Ecology

3 Credits
Offered Fall

Basic forest ecology concepts, including physical (wind, temperature, water, etc.), biotic (population and community dynamics), genetic and successional and landscape dynamics. Basic physiological characteristics of trees, succession, vegetation classification, and related concepts. Stand structure, diversity, competition, growth, forest-soil interactions, biomass, nutrient distribution and dynamics, energy relations, ecology of disturbances. How this basic information can be used in development of wise management plans for forest ecosystems. Prerequisites: NRM F251. (3+0)

7. **COMPLETE CATALOG DESCRIPTION AS IT WILL APPEAR WITH THESE CHANGES:** (Underline new wording strike through old wording and use complete catalog format including dept., number, title, credits and cross-listed and stacked.) **PLEASE SUBMIT NEW COURSE SYLLABUS.** For stacked courses the syllabus must clearly indicate differences in required work and evaluation for students at different levels.

NRM F375 ~~Forest~~ Natural Resource Ecology

3 Credits
Offered Fall

Basic ~~forest~~ ecology concepts, including physical (wind, temperature, water, etc.), biotic (population and community dynamics), genetic, ~~and~~ successional and landscape dynamics will be covered. Basic physiological characteristics of trees, succession, vegetation classification, and related concepts. Stand structure, diversity, competition, growth, forest-soil interactions, biomass, nutrient distribution and dynamics, energy relations, ecology of disturbances. How this basic information can be used in development of wise management plans ~~for forest ecosystems.~~ Prerequisites: ~~NRM F251~~ NRM F240. (3+0)

8. **IS THIS COURSE CURRENTLY CROSS-LISTED?**

YES/NO NO If Yes, DEPT NUMBER

(Requires written notification of each department and dean involved. Attach a copy of written notification.)

9. **GRADING SYSTEM:**

LETTER: PASS/FAIL:

10. **ESTIMATED IMPACT**

WHAT IMPACT, IF ANY, WILL THIS HAVE ON BUDGET, FACILITIES/SPACE, FACULTY, ETC.

NONE. Existing workloads and space will accommodate the course.

11. **LIBRARY COLLECTIONS**

Have you contacted the library collection development officer (ffklj@uaf.edu, 474-6695) with regard to the adequacy of library/media collections, equipment, and services available for the proposed course? If so, give date of contact and resolution. If not, explain why not.

No Yes **The library currently has sufficient material for this course.**

12. **IMPACTS ON PROGRAMS/DEPTS:**

What programs/departments will be affected by this proposed action?
Include information on the Programs/Departments contacted (e.g., email, memo)

Dept of Forest Sciences, SNRAS. This proposal was discussed during school meetings related to major changes in the degree curriculum. This course will provide the general knowledge regarding ecological principles and applications to natural resources management that the undergraduate students in the NRM program need.

13. POSITIVE AND NEGATIVE IMPACTS

Please specify **positive and negative** impacts on other courses, programs and departments resulting from the proposed action.

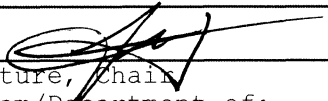
There should be no negative impacts on other courses, programs and departments from the proposed change. The positive impacts will be related to presenting the key ecological information to the Natural Resources Management undergraduate students on ecological concepts and how they relate to the management of the resources.

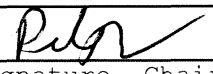
JUSTIFICATION FOR ACTION REQUESTED

The purpose of the department and campus-wide curriculum committees is to scrutinize course change and new course applications to make sure that the quality of UAF education is not lowered as a result of the proposed change. Please address this in your response. This section needs to be self-explanatory. If you ask for a change in # of credits, explain why; are you increasing the amount of material covered in the class? If you drop a prerequisite, is it because the material is covered elsewhere? If course is changing to stacked (400/600), explain higher level of effort and performance required on part of students earning graduate credit. Use as much space as needed to fully justify the proposed change and explain what has been done to ensure that the quality of the course is not compromised as a result.

This course will be presented in a broader subject area context. Although the general knowledge structure of ecology topics between forestry and natural resource issues is similar, the course will be revised to provide information across a broad range of landscape settings. Lecture emphasis will be placed on the ties between general ecology principles and management issues tied to our natural resources.

APPROVALS:

 Date **10-4-13**
Signature, Chair
Program/Department of: **Humans & the Environment**

 Date **10/4/13**
Signature, Chair, College/School Curriculum
Council for: **SNRAS**

SEE NEXT PAGE Date _____
Signature, Dean, College/School
of: _____

Date _____
Signature of Provost (if applicable)

Offerings above the level of approved programs must be approved in advance by the Provost.

ALL SIGNATURES MUST BE OBTAINED PRIOR TO SUBMISSION TO THE GOVERNANCE OFFICE.

Date _____
Signature, Chair, UAF Faculty Senate Curriculum
Review Committee

ADDITIONAL SIGNATURES: (If required)

	Date	
Signature, Chair, Program/Department of:		

	Date	
Signature, Chair, College/School Curriculum Council for:		


<i>J. Gawi</i>	Date	10/4/13
Signature, Dean, College/School of:	SNRAS	



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School of Natural Resources and Agricultural Sciences
Agricultural and Forestry Experiment Station

M E M O R A N D U M

TO: Susan Henrichs, Provost 

FROM: Stephen D. Sparrow, ~~Interim~~ Dean and Director
School of Natural Resources and Agricultural Sciences
Agricultural and Forestry Experiment Station

DATE: September 27, 2013

RE: Signature Authority

I will be in Girdwood for the 8th Circumpolar Agricultural Conference/University of the Arctic Inaugural Food Summit meetings September 29-October 3, and Palmer October 4. During my absence, Professor John Yarie will have signature authority for all routine paperwork for the School of Natural Resources and Agricultural Sciences and Agricultural and Forestry Experiment Station.

ATTACH COMPLETE SYLLABUS (as part of this application).

Note: syllabus must follow the guidelines discussed in the Faculty Senate Guide <http://www.uaf.edu/uafgov/faculty/cd/syllabus.html>.

The department and campus wide curriculum committees will review the syllabus to ensure that each of the items listed below are included. If items are missing or unclear, the proposed course change will be denied.

SYLLABUS CHECKLIST FOR ALL UAF COURSES

During the first week of class, instructors will distribute a course syllabus. Although modifications may be made throughout the semester, this document will contain the following information (as applicable to the discipline):

1. Course information:

Title, number, credits, prerequisites, location, meeting time (make sure that contact hours are in line with credits).

2. Instructor (and if applicable, Teaching Assistant) information:

Name, office location, office hours, telephone, email address.

3. Course readings/materials:

Course textbook title, author, edition/publisher.
 Supplementary readings (indicate whether required or recommended) and
 any supplies required.

4. Course description:

Content of the course and how it fits into the broader curriculum;
 Expected proficiencies required to undertake the course, if applicable.
 Inclusion of catalog description is *strongly* recommended, and
 Description in syllabus must be consistent with catalog course description.

5. Course Goals (general) and Student Learning Outcomes (more specific)

6. Instructional methods:

Describe the teaching techniques (eg: lecture, case study, small group discussion, private instruction, studio instruction, values clarification, games, journal writing, use of Blackboard, audio/video conferencing, etc.).

7. Course calendar:

A schedule of class topics and assignments must be included. Be specific so that it is clear that the instructor has thought this through and will not be making it up on the fly (e.g. it is not adequate to say "lab". Instead, give each lab a title that describes its content). You may call the outline Tentative or Work in Progress to allow for modifications during the semester.

8. Course policies:

Specify course rules, including your policies on attendance, tardiness, class participation, make-up exams, and plagiarism/academic integrity.

9. Evaluation:

Specify how students will be evaluated, what factors will be included, their relative value, and
 how they will be tabulated into grades (on a curve, absolute scores, etc.)

10. Support Services:

Describe the student support services such as tutoring (local and/or regional) appropriate for the course.

11. Disabilities Services:

The Office of Disability Services implements the Americans with Disabilities Act (ADA), and insures that UAF students have equal access to the campus and course materials.

State that you will work with the Office of Disabilities Services (208 WHIT, 474-5655) to provide reasonable accommodation to students with disabilities."

Natural Resource Ecology

NRM375

(3 credits)

Instructor - John Yarie

Email – jyarie@alaska.edu

Telephone No. - 474-5650

Office Hrs - 337 O'Neill, 8A – 11A MTWT – (see weekly schedule outside office)

Lectures - MWF 11:45A-12:45P (183 AHRB)

Prerequisites – NRM 240

Textbook - Forest Ecology, 2004, J. P. Kimmins, 3rd edition, Prentice Hall

Course Description

This course presents the environmental factors and ecological processes that drive forest, range and agricultural establishment, growth, and change. Basic ecology concepts including physical, biotic, genetic, successional and landscape dynamics and how this information can be used in development of wise management plans will be investigated. Examples of various forest, agricultural and range ecosystem factors and processes from major ecosystem types including tropical, temperate, and boreal forests will be presented.

Course Goals

We will examine the basic concepts of ecology. Major areas of emphasis will be on: (a) environmental factors and the effects they have on individual plant species, vegetation community structure and function, (b) community concepts, and (c) ecosystem concepts. Each lecture will have corresponding reading assignments that should be completed prior to the lecture. Class discussions on selected reading assignments will occur periodically. Students are responsible for all information covered in lectures, reading assignments, and discussions. A major goal for the course is to give you a basic understanding of the ecological dynamics of vegetation dominated ecosystems and an introduction to using that knowledge in analysis of human action on a piece of the landscape.

Student Learning Outcomes

Upon completion of this course students should be able to:

- 1) Understand the ecosystem as the basic unit of ecology
- 2) Outline the major “state factors” that control ecosystem development
- 3) Develop a simple understanding of ecosystem classification
- 4) Understand the differences between Population Ecology and Community Ecology

- 5) Develop a basic understanding of genetic principles useful in understanding the variation found in ecosystems
- 6) Understand and discuss natural and human caused abrupt and gradual changes that can occur in ecosystems
- 7) Start to develop a preliminary understanding of landscape ecology
- 8) Discuss the application of ecological knowledge for the management of terrestrial ecosystems

Instructional Methods

Presentation of material for this course will include lectures, instructor and student led discussions. Students are expected to complete reading assignments prior to each lecture. Assigned homework is expected as scheduled on the course outline.

Course Calendar

<u>Lecture #</u>	<u>Topic</u>	<u>Assignment</u>
1	Course description and policies	
2	Introduction – Concepts	Chapters 1 & 2
3	Ecology and the Ecosystem Concept	Barnes et al Chapter 1 Kimmins Chapter 3
4	Forest Trees, Structure and Growth	Barnes et al. Chapters 4 & 6
5	Forest Trees, Structure and Growth	Barnes et al. Chapters 4 & 6
6	Production Ecology	Chapter 4
7	Group Discussion of Production Ecology Lecture and Readings	½ page term paper topic description due today
8	Nutrient Cycling	Chapter 5
9	Nutrient Cycling	Chapter 5
10	Discussion of nutrient cycling in diverse ecosystems	
11	Key environmental factors	
12	Light	Chapter 7

<u>Lecture #</u>	<u>Topic</u>	<u>Assignment</u>
13	First Exam	
14	Temperature	Chapter 8
15	Wind, Physiography	Chapter 9
16	State factor discussion	
17	Moisture / Water	Chapter 10
18	Soil – part 1	Chapter 11
19	Soil – part 2	Chapter 11, term paper draft due today
20	Soil – part 3	Chapter 11
21	Soil – part 4	Chapter 11
22	Group discussion of the soil factor	
23	Regeneration	Barnes et al. Chapter 5
24	Diversity	Chapter 13 Barnes et al. Chapter 20
25	Second Exam	
26	Ecosystem Classification	Chapter 6
27	Population Ecology	Chapter 14
28	Community Ecology	Chapter 15
29	Discuss differences in population and community ecology and how they relate to ecosystem classification	
30	Disturbance – fire, insects and disease	Chapter 12 Barnes et al. Chapter 16
31	Disturbance – climate change	Chapter 18
32	Succession	Chapter 17
33	Succession	
34	Discussion on relationships between disturbance and succession	Term Paper due today
35	Ecological Modeling	Chapter 21
36	Model examples	

<u>Lecture #</u>	<u>Topic</u>	<u>Assignment</u>
37	Third Exam	
38	Forest Management and Renewability	Chapter 22
39	Landscape Ecology Term Paper Due	Chapter 19 Barnes et al. Chapter 21
40	Ecosystem Management and Landscape Ecology	Chapter 19
41	Course summary	
Finals Week	Concept Map Due on Final Date	

Ecology Concept Map

A concept map will be used in place of a final exam. The structure for a concept map is described in a recent article in the Journal of Forestry referenced below.

Thompson, Jan R. and Barb L. Lickliger. 2011. Visualizing urban forestry: Using concept maps to assess student performance in a learning-centered classroom. J. For. 109:402-408.

We will discuss the progress of your concept maps during class periods.

Term Paper for NRM 375

The purpose of the NRM 375 term paper is to give you a chance to research the ecology of your favorite landscape type in more detail than will done in class and to gain practice in synthesizing information from the class and the literature. The paper should be on a vegetation type of interest to you and the ecological factors in which you are interested. I have included a list of example topics at the end of this file; you are **NOT** required to use a topic from the list. Papers will be graded on coverage of topic (i.e. adequate coverage without excess detail), accuracy of information presented, appropriateness of references, organization, ability to discuss the pertinent information from the literature and synthesize it into a coherent body of information, and quality of presentation (how well it is written, including spelling and grammar). A brief (1/2 page) topic description will be due after lecture 7. I will use this to determine if your topic is reasonable for an ecology term paper. You should turn in a draft by lecture 19. I will critique the draft, and then return it to you with comments and suggestions for improvement. The final paper will be due after lecture 34.

The main purposes of the topic description are to help you focus on your topic early in the semester and to help me decide if your topic is appropriate for the class. It should simply be a short description of the subject area you plan to use for your paper. Some time should have been spent searching the literature prior to writing the topic description. At least three references should be included with the topic description.

The paper should **not exceed ten pages** in length not counting reference pages, tables and figures. **At least ten pertinent references from published research papers** should be cited in the paper. Internet sources are acceptable, but must be credible. The internet can be a good source of information, but there is also a lot of bad information on the internet and much of it is unverifiable. **Wikipedia is not an acceptable reference for this class.**

You should list all references cited in a section called References or Literature Cited. This section should be placed at the end of the report starting on a new page. Proper formats for references are given below. Please follow these formats for citing and listing references for you paper.

Example Formats for Literature Citations for Written Reports

Note: all references cited in the text should be listed in the Literature Cited section and all references listed in the Literature Cited section should be cited in the text.

Methods for Citing Literature in the Text

One author: Solinsky (1992) found that organisms in subarctic soils ...
(author's name is part of sentence) **OR**

Research on soil organisms in Alaska (Solinsky 1992) showed that...
(author's name is not part of sentence)

Two authors: Solinsky and Smith (1995) -(authors' names part of sentence) **OR**

(Solinsky and Smith 1995) - (authors' names not part of sentence)

Three or more authors: Solinsky et al. (1997) - (authors' names part of sentence) **OR**

(Solinsky et al. 1997) - (authors' names not part of sentence)

Two or more references cited simultaneously:

(Clay 1994, Chang and Clay 1996, Ellsbury 1997) oldest reference comes first

Listing of Publications in Literature Cited (should be alphabetical)

The publication types listed below are the most commonly cited in ecology papers and related fields. Many other types of publications exist. If you have questions about citation style, please see me.

Single author in journal:

Hall, R. C. 1944. A vernier tree growth band. *J. For.* 42:742.

Multiple authors in journal:

Vaganov, E. A., M. K. Hughes, A. V. Kirilyanov, F. H. Schweingruber, and P. P. Silkin. 1999. Influence of snowfall and melt timing on tree growth in subarctic Eurasia. *Nature* 400:149-151. **Note: list all authors, do not use et al.**

Circulars, bulletins, numbered reports:

Downing, G. L. 1960a. Some seasonal growth data for Paper Birch, White Spruce and Aspen near Fairbanks, Alaska-1958. No. 46, USDA, Forest Service, Juneau, Alaska.

Books:

Schwartz, R.J. 1955. *The Complete Dictionary of Abbreviations*. T.Y. Corwell Co., New York.

Chapter in Book:

Juday, G. P., V. Barber, S. Rupp, J. Zasada, and M. Wilmking. 2003. A 200-year perspective of climate variability and the response of white spruce in interior Alaska. Pages 226-250 *in* D. Greenland, D. G. Goodin, and R. C. Smith, editors. *Climate Variability and Ecosystem Response at Long-Term Ecological Research Sites*. Oxford University Press, New York, New York.

Author is agency, business, etc.:

Alaska Cooperative Extension. 1996. Food for Thought. University of Alaska. Alaska Cooperative Extension Bulletin # 39. Fairbanks, Alaska

Internet:

Holmes, J.K. and Carpenter, P.J. 1995. Guidelines for better writing [Online]. <http://www.usa.net/~vined/home/better-writing.html>.

Some examples of suitable topics for the term paper for NRM 375: (NOTE: these are examples only; you are not required to use a topic from this list)

Important ecological factors related to the successful long-term management of longleaf pine (*Pinus palustris* Mill.)

Fire as important ecological factor in the maintenance of ponderosa pine (*Pinus ponderosa* Laws) ecosystems

Changes in the distribution of white spruce (*Picea glauca* (Moench) Voss) in interior Alaska due to climate change

A comparison of the ecology of birch forest between Alaska and New Hampshire

Course Policies

1. **Attendance**: As part of the "Learning Community" all students are expected to attend and participate in class.
2. **Absences and Make-ups**: If necessary, excused absences must be arranged ahead of time with the Instructor.
3. **Tardiness**: Students are expected to arrive in class prior to the start of each class. If a student does arrive late, they are expected to do so quietly.
4. **Participation and Preparation**: Students are expected to come to class with assigned reading and other assignments completed as noted in the Syllabus.
5. **Assignments**: All assignments must be received by the Instructor no later than 12 p.m. on the due date as noted in the Schedule unless otherwise prior-arranged. Each assignment must have the following: Your Name; Date; Assignment Title.
6. **Graded Assignments**: It is the instructor's intention to grade and respond to student assignments within seven days of their receipt. At any time you may call and ask what you received on a specific assignment if you haven't yet received it back.
7. **Reporting Grades**: All student grades, transcripts and tuition information are available on line at <http://www.uaonline.alaska.edu> and in the blackboard grades section. If you have difficulty accessing this web site, contact the registrar at your local campus.
8. **Written paper assignments**: All papers are expected to be typed and double spaced, with no misspelled words. Sentences should be grammatical and the paper easy to read. The burden is always on the writer to communicate with the reader. UAF has a writing lab and other tutoring services available to students (474-5314). It is also recommended that you have another person review your draft before final submission for a grade. Written assignments may be emailed or turned in during class to the instructor.
9. **Plagiarism**: Plagiarism is using what another person has written, and using it as your own words and thoughts. Plagiarism is never acceptable. According to the University, plagiarism is preventable by students "not representing the work of others as their own. A student will attribute the source of information not original with himself or herself (direct quotes or paraphrases) in compositions, theses and other reports." The UAF Honor Code (Student Code of Conduct) defines the academic standards expected at UAF and is adhered to in this class as well.

10. All UA student academics and regulations are adhered to in this course. You may find these in UAF/UAS Catalogs.
11. **Confidentiality**: An important part of this course is the sharing of insights and experiences with other students. To benefit from this discussion, it is essential that we all maintain the confidentiality of children, families, programs and staff. We do not use names. We talk and write about children, families and staff in respectful ways.
12. **Incompletes, Withdrawal and No Basis Grading**: A student may request an Incomplete grade if there are factors beyond his/her control that effect the completion of the course AND the student has a C grade or higher at the end of the semester/course. A Faculty-Initiated Withdrawal is done by the instructor when the student has not met the criteria for passing the class, and is within the University-allowed drop period. A No Basis (NB) grade is provided if the student has not met attendance/assignment criteria, in lieu of a failing grade, provided it is after the University-allowed drop period. All are at the discretion of the Instructor.

Grading

The course grade consists of the following:

<i>Attendance</i>	5%
<i>Discussion of topics in class</i>	10%
<i>3 Exams (10% each)</i>	30%
<i>Concept Map and one page description</i>	25%
<i>Term Paper</i>	30%
Total	100%

Letter grades for the course will be determined as follows and will reflect the Grading System and Grade Point Average Computation policy stated in the current UAF Catalog

A+ 100–97%	A 96–93%	A-..... 92–90%
B+ 89–87%	B 86–83%	B-..... 82–80%
C+..... 79–77%	C..... 76–70%	D 69–60%
	F.....less than 60%	

Student Support Services

The University has many student support programs. If you need assistance please contact any of the following service programs or departments. The instructor is available during posted office hours and upon appointment for additional assistance outside session hours.

Disabilities Services

The Forest Sciences Department will work with the Office of Disability Services to provide reasonable accommodation to students with disabilities. Disability Services provide a variety of services to assure equal access for all students. Interpreting services, educational assistants, note taking, and exam accommodations for students are the most frequently provided accommodations. Disability services also provides assistance to the university's rural campuses; Tanana Valley Campus, Bristol Bay, Chukchi, Interior-Aleutians, Kuskokwim, and Northwest.

The staff of Disability Services works with faculty in arranging appropriate services in the classroom. Questions should be directed to the Director of Disability Services at (907)-474-5655.

<http://www.uaf.edu/disability/>
UAF Office of Disability Services
612 N. Chandalar, PO Box 755590
University of Alaska Fairbanks
Fairbanks, Alaska 99775-5590

Phone: (907) 474-5655 | TTY: (907) 474-1827 | Fax: (907) 474-5688