Submit original with signatures + 1 copy + electronic copy to Faculty Senate (Box 7500). See http://www.uaf.edu/uafgov/faculty-senate/curriculum/course-degree-procedures/ for a complete description of the rules governing curriculum & course changes.

**TRIAL COURSE OR NEW COURSE PROPOSAL**

<table>
<thead>
<tr>
<th>SUBMITTED BY:</th>
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<tbody>
<tr>
<td>Department</td>
<td>NRM</td>
</tr>
<tr>
<td>Prepared by</td>
<td>J Joly</td>
</tr>
<tr>
<td>Email Contact</td>
<td><a href="mailto:Julie.joly@alaska.edu">Julie.joly@alaska.edu</a></td>
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<tr>
<td>College/School</td>
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<tr>
<td>Phone</td>
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<tr>
<td>Faculty Contact</td>
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<td>6794</td>
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**1. ACTION DESIRED (CHECK ONE):**

- Trial Course
- New Course

**2. COURSE IDENTIFICATION:**

- Dept: NRM
- Course #: 111
- No. of Credits: 3

Justify upper/lower division status & number of credits:

This is an introductory course for students beginning our program.

**3. PROPOSED COURSE TITLE:**

Introduction to Sustainability Science

**4. To be CROSS LISTED?**

- Yes/No

If yes, Course №, Dept:

NOTE: Cross-listing requires approval of both departments and deans involved. Add lines at end of form for additional required signatures.

**5. To be STACKED?**

- Yes/No

If yes, Course №, Dept.

How will the two course levels differ from each other? How will each be taught at the appropriate level?:

Stacked course applications are reviewed by the (Undergraduate) Curricular Review Committee and by the Graduate Academic and Advising Committee. Creating two different syllabi—undergraduate and graduate versions—will help emphasize the different qualities of what are supposed to be two different courses. The committees will determine: 1) whether the two versions are sufficiently different (i.e., is there undergraduate and graduate level content being offered); 2) are undergraduates being overtaxed?; 3) are graduate students being undertaxed? In this context, the committees are looking out for the interests of the students taking the course. Typically, if either committee has qualms, they both do. More info online - see URL at top of this page.

**6. FREQUENCY OF OFFERING:**

- Every Spring
- Fall, Spring, Summer (Every, or Even-numbered Years, or Odd-numbered Years) — or As Demand Warrants

**7. SEMESTER & YEAR OF FIRST OFFERING**

- (AY2013-14 if approved by 3/1/2013; otherwise AY2014-15)

Spring AY14-15

**8. 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 all that apply)

- 1
- 2
- 3
- 4
- 5
- 6 weeks to full semester

**OTHER FORMAT (specify):**

Mode of delivery: Lecture and discussion

(specify lecture, field trips, labs, etc)

- Lecture and discussion
9. CONTACT HOURS PER WEEK:

<table>
<thead>
<tr>
<th></th>
<th>LECTURE</th>
<th>LAB</th>
<th>PRACTICUM</th>
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<td>3 hours/weeks</td>
<td>1600 minutes</td>
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Note: # of credits are based on contact hours. 800 minutes of lecture=1 credit. 2400 minutes of lab in a science course=1 credit. 1600 minutes in non-science lab=1 credit. 2400-4800 minutes of practicum=1 credit. 2400-8000 minutes of internship=1 credit. This must match with the syllabus. See [http://www.uaf.edu/uafgov/faculty-senate/curriculum/course-degree-procedures-guidelines-for-computing/] for more information on number of credits.

OTHER HOURS (specify type)

10. COMPLETE CATALOG DESCRIPTION including dept., number, title, credits, credit distribution, cross-listings and/or stacking (50 words or less if possible):

Example of a complete description:

**FISH F487 W, 0** Fisheries Management
3 Credits
Offered Spring
Theory and practice of fisheries management, with an emphasis on strategies utilized for the management of freshwater and marine fisheries. Prerequisites: COMM F131X or COMM F141X; ENGL F111X; ENGL F211X or ENGL F213X: ENGL F414; FISH F425; or permission of instructor. Cross-listed with NRM F487. (3+0)

**NRM F111** Introduction to Sustainability Science
3 Credits
Offering Spring
Introduction to theory and concepts of sustainability science, with a focus on natural resource applications. Prerequisites: NRM 101. (3+0)

11. COURSE CLASSIFICATIONS: Undergraduate courses only. Consult with CLA Curriculum Council to apply S or H classification appropriately; otherwise leave fields blank.

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<tr>
<th></th>
<th>S = Social Sciences</th>
<th>H = Humanities</th>
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</table>

Will this course be used to fulfill a requirement for the baccalaureate core? If YES, attach form.

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

- O = Oral Intensive, Format 6
- W = Writing Intensive, Format 7
- X = Baccalaureate Core

11A Is course content related to northern, arctic or circumpolar studies? If yes, a "snowflake" symbol will be added in the printed Catalog, and flagged in Banner.

YES | NO

12. COURSE REPEATABILITY:

Is this course repeatable for credit?

YES | NO | X

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 for credit, what is the maximum number of credit hours that may be earned for this course?

CREDITS

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

13. GRADING SYSTEM: Specify only one. Note: Changing the grading system for a course later on constitutes a Major Course Change - Format 2 form.

LETTER: X | PASS/FAIL:
14. **PREREQUISITES**

   NRM 101

   These will be required before the student is allowed to enroll in the course.

15. **SPECIAL RESTRICTIONS, CONDITIONS**

16. **PROPOSED COURSE FEES**

   $______________

   Has a memo been submitted through your dean to the Provost for fee approval?

   Yes/No

17. **PREVIOUS HISTORY**

   Has the course been offered as special topics or trial course previously?

   Yes/No

   If yes, give semester, year, course #, etc.:

18. **ESTIMATED IMPACT**

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

   There are no expected impacts.

19. **LIBRARY COLLECTIONS**

   Have you contacted the library collection development officer (kljensen@alaska.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 [X] Yes [ ] We do not anticipate impacts to the library.

20. **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)

   There should be no negative impacts to other departments.

21. **POSITIVE AND NEGATIVE IMPACTS**

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

   Given the increased emphasis on sustainability at UAF (e.g., the RISE initiative to incorporate sustainability into curriculum and classroom activities, this course should have a positive impact on UAF.

**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. Use as much space as needed to fully justify the proposed course.

We are in the process of changing the NRM degree. As part of that change our program will now place a stronger emphasis on sustainability, as such in introductory course in sustainability science is needed to introduce students to the concepts they will be expected to apply in more advance courses.
**APPROVALS:** Add additional signature lines as needed.

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<th>Signature, Chair, Program/Department of:</th>
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Offerings above the level of approved programs must be approved in advance by the Provost.

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<th>Signature of Provost (if above level of approved programs)</th>
<th>Date</th>
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**ALL SIGNATURES MUST BE OBTAINED PRIOR TO SUBMISSION TO THE GOVERNANCE OFFICE**

<table>
<thead>
<tr>
<th>Signature, Chair</th>
<th>Date</th>
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<tr>
<td>Faculty Senate Review Committee:</td>
<td>Curriculum Review</td>
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<tr>
<td>Core Review</td>
<td>SADAC</td>
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**ADDITIONAL SIGNATURES:** (As needed for cross-listing and/or stacking)

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ATTACH COMPLETE SYLLABUS (as part of this application). This list is online at:
http://www.uaf.edu/uafgov/faculty-senate/curriculum/course-degree-procedures-/uaf-syllabus-requirements/
The Faculty Senate 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
(or changes to it) may 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 (see #6)

6. Student Learning Outcomes (more specific)

7. 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.).

8. 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.

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

10. 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.)
    - Publicize UAF regulations with regard to the grades of "C" and below as
      applicable to this course. (Not required in the syllabus, but is a convenient way to
      publicize this.) Link to PDF summary of grading policy for "C":

11. Support Services:
    - Describe the student support services such as tutoring (local and/or regional)
      appropriate for the course.

12. Disabilities Services: Note that the phone# and location have been updated.
    http://www.uaf.edu/disability/ The Office of Disability Services implements the Americans
    with Disabilities Act (ADA), and ensures that UAF students have equal access to the
    campus and course materials.
    - State that you will work with the Office of Disabilities Services (208 WHITAKER
      BLDG, 474-5655) to provide reasonable accommodation to students with disabilities.

5/21/2013
Introduction to Sustainability Science
NRM 111
Instructor TBD

Course Description
This course studies the basic principles of sustainability science. Emphasis throughout will be on societal goals, tradeoffs, drivers of stability and change, thresholds, feedbacks and human-environment interactions. One purpose of the course is to provide students with the frameworks needed to explore the many questions of sustainability and provide the foundation in sustainability science, social-ecological resilience theory, and vulnerability analysis that will be necessary for students as they move into higher division courses. Another purpose is to provide tools for students to apply in their own analysis of sustainability challenges. We will explore opportunities for practical application of course topics.

Course Goals/Learning Objectives
- Develop understanding of conceptual frameworks for exploring sustainability and resilience
- Develop skills for analyzing real-world issues related to sustainability

Assignments/Grades/Requirements
Students are expected to complete all of the assigned readings in advance of the class for which they are assigned and to come to every class prepared to discuss these readings. You will be graded on a combination of your:
- Contributions to class discussion - 20%
- Mid-term exam - 20%
- Homework assignments and Reflection Papers- 30%
- Final exam – 30%

The following grading scale will apply:
A - 90 to 100 (A- 90-91; A+ 99-100)
B - 80 to 89 (B- 80-81; B+ 88-89)
C - 70 to 79 (C- 70-71; C+ 78-79)
D - 60 to 69 (D- 60-61; D+ 68-69)
F - < 60

UAF Policies Disabilities Services
The University of Alaska Fairbanks is committed to providing equal access for students with disabilities. 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. We will work with the Office of Disabilities Services (203 WHIT, 474-5655) to provide reasonable accommodation to students with disabilities. If you have a physical or learning disability, please advise us in writing of any special consideration necessary by the beginning of the second class. We will do everything possible to accommodate you in accordance with the Americans with Disabilities Act. Priority seating close to the board and screen is provided for students who need to be in close proximity to the board.
Blackboard & Distance Delivery
We will use the UAF Blackboard site for this course to send emails and post readings, assignments and other materials. Blackboard can be accessed at http://classes.uaf.edu. Email notification through Blackboard will not work for a non-UAF email address. If you principally use a non-UAF email service, (such as yahoo) go to your UAF account and forward your UAF email to that address. You are responsible for all emails sent to your UAF email account. Blackboard resources, links and support information are available at the UAF Blackboard homepage.

Course text:
Introduction to Sustainability: Road to a Better Future, by Nolberto Munier, 2005.

Class Schedule of Topics

1. Introduction: defining and understanding sustainability, resilience, and ecological footprint

2. Measuring Sustainability: indicators, thresholds, and carrying capacity

3. Waste and Sustainability: what is waste? Recycling, conservation, and other consumption reduction mechanisms

4. Sustainability and Society: sustainability at the individual, household, and community levels

5. Sustainability and Industry: life cycle assessment and materials flow analysis

6. Sustainability and Energy: energy conversion and renewable v. non-renewable sources