

## **Course Syllabus – FALL 2017**

### **GLOBAL to LOCAL SUSTAINABILITY BIOL 647 (74675) and NRM 647 (75266)**

Course Information Location: AHRB 183 Meeting Time: Tu/Th, 2:00-3:30

Instructor: Sarah Trainor, 370 O'Neill Building; [sarah.trainor@alaska.edu](mailto:sarah.trainor@alaska.edu), office: 907.474.7878.  
Office Hours by appointment

#### **Course Description**

This course explores key elements of sustainability science in order to give students a strong foundations for graduate studies and for applying their graduate research to solving important real-world problems. Central topics to be covered include: knowledge co-production; linking science and decision-making; the importance and challenge of cross-scale interactions and feedbacks, multiple stressors, adaptation, indicators of sustainability and evaluating sustainability outcomes. A key theme of the course will be Sustainability in Alaska and the Arctic, including adaptation to climate change.

The course format will include lectures and guest-lectures, but will focus on student lead discussions of required course readings. The theoretical and practical aspects of sustainability will be addressed through central focus on a class group project to analyze interviews of faculty regarding their interactions with stakeholders. The outcome of this class project will inform the [Alaska Experimental Program to Stimulate Competitive Research \(EPSCoR\)](#)<sup>1</sup> in their required reporting to the National Science Foundation.

#### **Student Learning Outcomes:**

Students who are successful in this class will learn:

- How to read, review, and lead a discussion on peer-reviewed published literature
- How to navigate the Institutional Review Board (IRB) requirements for research with human subjects.
- How to code and analyze semi-structured, open-ended interviews and how to manage qualitative data.

By the end of this class, students will:

- Be able to synthesize interdisciplinary peer-reviewed literature related to sustainability.
- Be able to critically discuss the interdisciplinary complexities of sustainability in the Arctic.
- Be able to critically discuss linkages between science and decision-making from the perspective of sustainability.
- Understand the importance and complexities of knowledge co-production

#### **Assignments/Grades/Requirements**

\*\*\*You 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.\*\*\*

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<sup>1</sup> <https://www.alaska.edu/epscor/>

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

You will be graded on a combination of:

- Contributions to ALL class discussions - 10%
- Leading of select class discussions – 10%
- One page reading summary/reflection papers as assigned – 10%
- Final Paper Part 1: Contributions to report and presentation of results for EPSCoR Office – 20%
- Final Paper Part 2: Analysis and discussion of interview results – 20%
- Final Paper Part 3: Reflection on class project – 20%

Assignments handed in after the due dates will receive reduced credit. You are expected to abide by the student code of conduct (see below) for all assignments.

#### Contributions to Class Discussion (10%)

You are expected to come to class prepared to discuss the readings and topic as outlined in the course schedule. This is true also for class sessions in which you are not a designated presenter. The course project is a group project and will involve multiple discussions on project findings, including discussions in which we make collective decisions about key aspects of the project such as the structure for data analysis and the class report to the EPSCoR office. You are expected to contribute constructively to these discussions and to the collective decision-making process and to be respectful of the instructor and class-mates in contributing to all class discussions in thoughtful and meaningful ways. When guest lectures are scheduled, you are expected to complete assigned readings and come prepared with 2-3 questions for discussion with the speaker.

#### Leading Select Class Discussions (10%)

Students will be responsible for organizing, presenting material, and assist in leading discussion about readings. This involves presenting the main points and key concepts of the readings and presenting your thoughtful response. Do you agree with the author's main points? If so, why? If not, why not? In what ways are the ideas and concepts presented novel, or interesting? How do they connect with other material in the course (both readings and interview results)? Are there any key points or elements for consideration that are missing in the readings?

#### One Page Reading Summaries/Reflection Papers (15%)

In this assignment you should demonstrate that you have read the assigned readings and present your analysis of the reading through the lens of critical thinking. Think of these papers as a first draft of a literature review for the Final Paper(s) (see below).

#### Final Paper – Part I: Contributions to Report and Presentation of Results for EPSCoR Office (20%)

We will be collectively creating a report in google docs of our findings for the EPSCoR Office to use in their Report to NSF. The report structure will be discussed and determined collectively in class discussion. Sections will be assigned based on number of students in the class. Students will have some choice in their assigned section. You should report and summarize all interview findings for your

assigned section. Include tables, figures and quotations from the interviews as necessary. When quoting from the interviews, cite with interview ID #. **The written portion of this assignment will be graded on clarity of writing, completeness (inclusion of all results), degree of summary and synthesis, grammar, spelling, and punctuation.** We will present our results to the EPSCoR Core Office at the end of the semester. **You will also be graded on the clarity, completeness, and degree of professionalism in your presentation.**

#### Final Paper – Part 2: Individual Analysis and Discussion of Interview Results (20%)

This paper will be written individually. Each student is to turn in her/his own presentation, analysis and discussion of interview results in the context of assigned readings. The paper is to cite and integrate concepts and examples from **assigned and supplemental readings only**. In text citations and references must be provided. The paper will be no more than 10 double-spaced pages in length (plus references, abstract, figures and tables). Additional guidance will be provided during class discussion.

Analyze and interpret the class interview results (Part 1 above) drawing from the concepts, arguments, and ideas presented in the assigned readings (e.g. boundary organizations, boundary spanning, co-production of knowledge, stakeholder interactions, cross-scale interactions, multiple-stressors, indicators, adaptation, and evaluation). Think of this assignment as if you are writing the results and discussion section of a peer-reviewed paper. Present the findings in the results section and discuss your analysis of them in the context of the peer-reviewed literature for the discussion section. You are to discuss all of the interview results as they are presented in the Report to the EPSCoR Office, not only the section that you wrote for Part 1, however you can focus on interviews with which you are most familiar. Refer to and quote the original data as needed. When quoting from interviews, italicize and give the ID #. The paper should also include an introduction and conclusion section.

Aim for 1000-3000 words, excluding references. **Your paper will be graded on: demonstrated knowledge and understanding of key concepts, demonstrated interpretation of all interview results, framing of interview results in the context of key concepts, clarity of writing, clear and accurate citation and reference of course readings.**

#### Final Paper – Part 3: Reflection on Class Project (20%)

Write 700-3000 words reflecting on your experience of the class EPSCoR project. This should be your personal reflections on the class project analyzing interviews of EPSCoR scientists and staff. Include highlights of the process as well as the findings content that you found particularly interesting or that you anticipate will be particularly useful for your continued graduate study. **Your paper will be graded on: clarity of writing, organization, flow, grammar and punctuation.** (The actual content will not be evaluated.)

Organize your paper accordingly to the outline below.

1. **Methods/Process:** What did you learn about the process of coding and analyzing interview transcripts? What insights do you have about using coding software? About keeping data organized? About conducting a group project?
2. **Findings:** In addition to what you discussed in Part 2, what did you learn about stakeholder engagement from the process of analyzing interviews and writing up the results? What did you learn about complex, interdisciplinary science projects such as EPSCoR?
3. **Group Project Process:** What are your impressions and reflections of working on and learning from this class project? Did you find the class project to be an effective way to learn about

course content? About analyzing qualitative data? What do you feel went particularly well? What specific challenges did you encounter and how do you think they could best be addressed?

### Adaptation

This is the second time this course has been taught with the course project framework. This course involves several guest lectures. The course schedule may be adjusted to meet the aims of the course project and the scheduling needs of guest lectures. Revisions to the schedule will be posted on Blackboard. You are responsible for following announcements on Blackboard to receive these revisions.

### Instructional Methods

The course will use a combination of lectures, student lead discussions, and guest speakers. The course is focused around a class project that is designed to provide both theory and practical experience in knowledge co-production. This class is interactive, relying on strong student contribution. We expect students to contribute to a respectful and productive atmosphere that encourages this joint class exploration of course themes.

### Attendance

Students are expected to attend all classes. If it is necessary to miss a class, contact the instructors beforehand to inform them of your plans and request guidance on how to make up missed classroom learning. We encourage students to join the class remotely (UAF video conferencing or via Skype) if on travel. Missed classes will be reflected in your participation grade.

### Student Code of Conduct

According to the UAF code of conduct "Students will not collaborate on any quizzes, in-class exams, or take-home exams that will contribute to their grade in a course, unless the instructor of the course grants permission.... Students will not represent 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.... No work submitted for one course may be submitted for credit in another course without the explicit approval of both instructors....." Students are expected to abide by the UAF code of conduct.

An explanation of plagiarism and how to properly cite sources are available at the following two sites:

<http://library.uaf.edu/lis101-plagiarism>

<http://library.uaf.edu/lis101-citing>

**Plagiarism is grounds for course failure.**

### 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 <https://classes.alaska.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.

Students in the course may be based in Fairbanks and other sites. Students not located in Fairbanks can connect to the class via Zoom from PC, Mac, Linux, iOS or Android. If you require remote access or are away from town without internet access, contact the instructor. For questions with Zoom connections, contact Steve Peterson: (907) 474 – 7053, [slpeterson@alaska.edu](mailto:slpeterson@alaska.edu).