

Course Syllabus – FALL 2021

**SUSTAINABILITY IN A CHANGING NORTH
NRM 647 FX (CRN: 75090), BIO 647 (74613)
REMOTE OPTION NRM 647 FXA (CRN: 77728)
3 Credits**

Course Information

Location: AHRB 183 Meeting Time: Tu/Th, 2:00-3:30
or remotely via Zoom: Meeting ID: 859 9176 0147, Passcode: 318938

Instructor: Sarah Trainor, 370 O'Neill Building; sarah.trainor@alaska.edu, office: 907.474.7878.

Office Hours by appointment. To set up an appointment: see me before or after class, or send an email to sarah.trainor@alaska.edu with NRM 647 in the subject line.

Course Description

Short:

Explores the basic principles of sustainability of environmental and social systems. Principles are applied across a range of scales from local communities to the globe, with an emphasis on examples in Alaska and the Arctic. Specific attention to the theory and practice of boundary spanning and knowledge co-production.

In Depth:

This course explores key elements of sustainability science in order to give students a strong foundation for graduate studies and for applying their graduate research to solving important real-world problems. Core elements of sustainability that will be addressed include environment/ecology, economics/employment, and ethics/equity. Central topics to be covered include: knowledge co-production; translational ecology; linking science and decision-making; the importance and challenge of cross-scale interactions and feedbacks, multiple stressors, adaptation, indicators of sustainability, evaluating sustainability outcomes and partnering with Indigenous Communities. A key theme of the course will be research on 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 and student projects. The course is designed to address sustainability from a range of trans- and inter-disciplinary perspectives. Students from a range of departments are welcome.

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 prepare and deliver a professional presentation of their research

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
- Understand and appreciate the importance of Indigenous Knowledge in sustainability outcomes

Course Type: concurrent in-person + online synchronous (remote via zoom)

Course Reading Materials: This course focuses on up-to-date recent published literature related to sustainability in a changing North. Readings will be provided via email or Canvas

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.

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:

- 10% - Contributions to ALL class discussions
- 15% - Leading of select class discussions
- 15% - Homework and one page reading summary/reflection papers as assigned
- 10% - Abstract and annotated outline for final paper
- 20% - Presentation of Final Paper
- 30% - Final Paper

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. 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 (15%)

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, presenting your thoughtful response, and facilitating a discussion. 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?

Homework and One Page Reading Summaries/Reflection Papers (15%)

Written homework exercises will be assigned periodically. You will also be asked to write one-page summary/reflection papers in which 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.

Abstract and Annotated Outline for Final Paper (10%)

This assignment is designed to help you get a jump start on writing your final paper. Details TBD.

Final Paper Presentation (20%)

Each student will present their final paper. Details TBD.

Final Paper (30%)

Details TBD based on class composition and interests.

Adaptation

The course schedule may be adjusted to meet student enrollment, student interests, and the scheduling needs of guest lectures. Revisions to the schedule will be posted on Canvas and via email. You are responsible for following announcements on Canvas to receive these revisions.

Instructional Methods

The course will use a combination of lectures, student lead discussions, and guest speakers. This class is interactive, relying on strong student contribution. Students are expected 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 if on travel. Remote access is available via Zoom and telephone. Details pasted below. Missed classes will be reflected in your participation grade. If you choose to join the class remotely, you are expected to have your camera on unless you make other arrangement with the instructor.

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/ls101-plagiarism>

<https://library.uaf.edu/citation-styles>. I do not require any specific citation style for this course. You may use which ever style fits with your discipline.

Plagiarism is grounds for course failure.

Student protections statement:

UAF embraces and grows a culture of respect, diversity, inclusion, and caring. Students at this university are protected against sexual harassment and discrimination (Title IX). Faculty members are designated as responsible employees which means they are required to report sexual misconduct. Graduate teaching assistants do not share the same reporting obligations. For more information on your rights as

a student and the resources available to you to resolve problems, please go to the following site:
<https://catalog.uaf.edu/academicsregulations/students-rights-responsibilities/>

COVID-Safe Learning

Students should keep up-to-date on the university's policies, practices, and mandates related to COVID-19 by regularly checking this website: <https://sites.google.com/alaska.edu/coronavirus/uaf?authuser=0>
Further, students are expected to adhere to the university's policies, practices, and mandates and are subject to disciplinary actions if they do not comply.

Disabilities and Other Services

Every qualified student is welcome in my classroom. As needed, I am happy to work with you, disability services, veteran's services, rural student services, etc. to find reasonable accommodation. Students at this university are protected against sexual harassment and discrimination (Title IX), and minor have additional protections. For more information on your rights as a student and the resources available to you to resolve problems, please go to the following site: <https://www.uaf.edu/csrr/resources/campus-resources.php>.

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. I 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 week of class. I will do everything possible to accommodate you in accordance with the Americans with Disabilities Act.

Canvas & Distance Delivery

We will use the UAF Canvas site for this course to post the syllabus, course schedule, send emails and post readings, assignments and other materials. Canvas can be accessed at <https://www.uaf.edu/uaf/current/canvas.php>.

Email notification through Canvas may 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.** Canvas resources, links and support information are available at the UAF website above.

Remote Access

Students in the course may be based in Fairbanks and other sites. You may choose to join the class remotely if you live outside of Fairbanks for the health and safety reasons. Students 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. *Zoom sessions will be recorded. Contact the instructor for access to recordings.

If you will be participating remotely for the duration of the semester, please register for the FXA section of the course: CRN: 77728 NRM F647 FXA

2021 Join Zoom Meeting

<https://alaska.zoom.us/j/85991760147?pwd=NnpWeGhDYWhiRWJHNVZUVHpEODEwZz09>

Meeting ID: 859 9176 0147
Passcode: 318938
One tap mobile
+12532158782,,85991760147# US (Tacoma)
+13462487799,,85991760147# US (Houston)

Dial by your location
+1 253 215 8782 US (Tacoma)
+1 346 248 7799 US (Houston)
+1 669 900 6833 US (San Jose)
+1 301 715 8592 US (Washington DC)
+1 312 626 6799 US (Chicago)
+1 929 205 6099 US (New York)

Meeting ID: 859 9176 0147
Find your local number: <https://alaska.zoom.us/j/kFamNWFSD>

Student Resources:

You are encouraged to utilize the writing, speaking, and other resources available to UAF students:

- Speaking Center (907-474-5470, speak@uaf.edu, Gruening 507)
- Writing Center (907-474-5314, uaf-writing-center@alaska.edu, Gruening 8th floor)
- The Debbie Moses Learning Center at CTC (907-455-2860, 604 Barnette St, Room 120)
- UAF Graduate Student Handbook: https://www.uaf.edu/gradschool/files/old-website/document_student_forms/GS_Handbook_Final%202017.pdf

UA is an AA/EO employer and educational institution and prohibits illegal discrimination against any individual: <https://alaska.edu/nondiscrimination>.

Required Texts:

Petrov, A.N, BurnSilver, S., Chapin, F.S. III, Fondahl, G., Graybill, J.K., Keil, K., Nilsson, A.E., Riedlsperger, R., Schweitzer, P. 2017. *Arctic Sustainability Research*. Routledge.

****Additional readings posted on Canvas ****

Course Schedule:

This course strives to include theoretical framings and scholarly perspectives as well as information that can be helpful for practical solutions. There will be four main components to this course:

- I. Change in the North: Environment, Societal Impacts, Culture + Sustainability Science & Theory (Week 1)
- II. Boundary Spanning, Knowledge Co-Production and Evaluation
- III. Indigenous Peoples and Sustainability in the North
- IV. Practical Solutions to Real Problems
 - a. Governance
 - b. Economies
 - c. Environment
 - d. Justice, People, Values

Student Input to Course Content:

The students will have the opportunity to provide input as to the specific real-world problems that are addressed in this course. Possible issues are listed here:

1. Ambler Road (0)
2. Pebble Mine (0)
3. Pan-Arctic Shipping (0)
4. Rural Economic Development/ Workforce Development – taking advantage of federal initiatives in green jobs, etc. (3)
5. Sustainable Economy for Alaska (1)
6. Food Security (3)
7. Climate Justice (1)
8. Co-Production (4)
9. Wildfire Management in the context of climate change (1)
10. Health and Wellness of people, land, animal, ocean (6)
11. Globalization – Indigenous economies (food economies) (0)
12. Near-shore marine environment (social environmental system) -Bridges between physical and social sciences – ocean chemistry - Ocean acidification, fisheries, marine/terrestrial, families, communities, Indigenous leadership, PCP (food health). Sitka, Angoon, Homer (1)
13. Energy Security (1)
14. K-12 education, community education on sustainability awareness of need (2)
15. Citizen science (0)
16. Ester Dome Mining (0)
- 17.

Presentations and Final Paper:

Student presentations will be the last three weeks of the course.