

Course Syllabus – FALL 2023

**SUSTAINABILITY IN A CHANGING NORTH
NRM 647 (CRN 73242), BIO 647 (CRN. 72531)**

3 Credits

Course Information

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

or **remotely via Zoom:** Link available from instructor.

Instructor: Sarah Trainor, 370 O'Neill Building; sftrainor@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 sftrainor@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.

** Whenever possible we will focus on addressing current challenges to sustainability and possible solutions.

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
- How to listen with an open mind and open heart to diverse perspectives

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
- Reflect on the significance and role of Indigenous knowledge systems in building a sustainable future
- Build an understanding of the importance of a whole human approach to sustainability

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 and other assignments in advance of the class for which they are assigned and to come to every class prepared to participate in discussion and class activities. ***

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:

- 15% - Contributions to class discussions and activities
- 25% - Homework and one page reading summary/reflection papers as assigned
- 10% - Abstract and annotated outline for final paper
- 20% - Presentation of Final Paper/Project
- 30% - Final Paper/Project

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.

****FOR ALL WRITTEN ASSIGNMENTS**** Unless otherwise instructed, you must turn in an output from chatGPT in addition to your own written work. You may choose to:

- a) use your own brain for the entire assignment and generate the chatGPT output after you complete the assignment, or
- b) consult chatGPT first, then edit and modify the chatGPT output based on your own thinking, what you have learned in the class, and your own research.

If you choose a), indicate at the top of the assignment that the work is entirely your own.

If you choose b), highlight where, how, and why you have modified the chatGPT output. You will not receive a grade for the assignment unless/until you follow these directions.

*You must turn in **both** the chatGPT output and either a) or b) above.

Contributions to Class Discussion and Activities (15%)

You are expected to come to class prepared to participate in activities and discussions. 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. If you are unable to attend and participate in class, please contact the instructor.

Homework and One Page Reading Summaries/Reflection Papers (25%)

Homework exercises will be assigned periodically. This may include identifying and sharing information, readings, videos or other relevant information for the class. It may also include preparing 1-page write-ups on assigned readings that demonstrate that you have read the read and share 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 will be posted on Canvas.

Final Paper Presentation (20%)

Each student will present their final paper. Details will be posted on Canvas.

Final Paper (30%)

Details will be posted on Canvas. Topics will be 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, in-class activities, 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. Students are encouraged to join the class remotely if on travel. Remote access is available via Zoom and telephone. Details pasted above. 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/l101-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.

COVID-19 statement: 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.

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/academics-regulations/students-rights-responsibilities/>.

Disability services statement: I will work with the Office of Disability Services to provide reasonable accommodation to students with disabilities.

ASUAF advocacy statement: The Associated Students of the University of Alaska Fairbanks, the student government of UAF, offers advocacy services to students who feel they are facing issues with staff, faculty, and/or other students specifically if these issues are hindering the ability of the student to succeed in their academics or go about their lives at the university. Students who wish to utilize these services can contact the Student Advocacy Director by visiting the ASUAF office or emailing asuaf.office@alaska.edu.

Student Academic Support:

- Speaking Center (907-474-5470, uaf-speakingcenter@alaska.edu, Gruening 507)
- Writing Center (907-474-5314, uaf-writing-center@alaska.edu, Gruening 8th floor)
- UAF Math Services, uaf-traccloud@alaska.edu, Chapman Building (for math fee paying students only)
- Developmental Math Lab, Gruening 406
- The Debbie Moses Learning Center at CTC (907-455-2860, 604 Barnette St, Room 120, <https://www.ctc.uaf.edu/student-services/student-success-center/>)

- For more information and resources, please see the Academic Advising Resource List (https://www.uaf.edu/advising/lr/SKM_364e19011717281.pdf)

Student Resources:

- Disability Services (907-474-5655, uaf-disability-services@alaska.edu, Whitaker 208)
- Student Health & Counseling [**6 free counseling sessions**] (907-474-7043, <https://www.uaf.edu/chc/appointments.php>, Gruening 215)
- Center for Student Rights and Responsibilities (907-474-7317, uaf-studentrights@alaska.edu, Eielson 110)
- Associated Students of the University of Alaska Fairbanks (ASUAF) or ASUAF Student Government (907-474-7355, asuaf.office@alaska.edu, Wood Center 119)

Nondiscrimination statement: The University of Alaska is an affirmative action/equal opportunity employer and educational institution. The University of Alaska does not discriminate on the basis of race, religion, color, national origin, citizenship, age, sex, physical or mental disability, status as a protected veteran, marital status, changes in marital status, pregnancy, childbirth or related medical conditions, parenthood, sexual orientation, gender identity, political affiliation or belief, genetic information, or other legally protected status. The University's commitment to nondiscrimination, including against sex discrimination, applies to students, employees, and applicants for admission and employment. Contact information, applicable laws, and complaint procedures are included on UA's statement of nondiscrimination available at www.alaska.edu/nondiscrimination. For more information, contact:

UAF Department of Equity and Compliance
 1692 Tok Lane, 3rd floor, Constitution Hall, Fairbanks, AK 99775
 907-474-7300
uaf-deo@alaska.edu

Additional syllabi statement for courses including off-campus programs and research activities:

University Sponsored Off-Campus Programs and Research Activities

We want you to know that:

1. UA is an AA/EO employer and educational institution and prohibits illegal discrimination against any individual: www.alaska.edu/nondiscrimination.
2. Incidents can be reported to your university's Equity and Compliance office (listed below) or online reporting portal. University of Alaska takes immediate, effective, and appropriate action to respond to reported acts of discrimination and harassment.
3. There are supportive measures available to individuals that may have experienced discrimination.
4. University of Alaska's Board of Regents' Policy & University Regulations (UA BoR P&R) 01.02.020 Nondiscrimination and 01.04 Sex and Gender-Based Discrimination Under Title IX, go to: <http://alaska.edu/bor/policy-regulations/>.
5. UA BoR P&R apply at all university owned or operated sites, university sanctioned events, clinical sites and during all academic or research related travel that are university sponsored.

For further information on your rights and resources [click here](#).

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. Zoom log-in information is at the top of this document.

Additional 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:

A detailed course schedule will be uploaded and distributed separately.

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
- II. Sustainability Science, Boundary Spanning, and Knowledge Co-Production
- 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 topics include but are not limited to:

1. Rural economic development/ workforce development – taking advantage of federal initiatives in green jobs, etc.
2. Food security
3. Fisheries
4. Climate Justice
5. Co-Production
6. Wildfire Management in the context of climate change
7. Health and Wellness of people, land, animal, ocean and climate change
8. Energy and Minerals Development in the context of Sustainability
9. K-12 education, community education on sustainability awareness of need
10. Citizen science

Presentations and Final Paper:

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