

CCS/NRM 656

Course Goals & Learning Objectives

1. To understand the frameworks

Reading Discussions: Each student will lead three group discussions based on the readings. The reading presentations will include a 2-4 page summary sheet e-mailed to all the students and instructor, and a summary presentation in class (5-10 minutes) followed by a class discussion (5-10 minutes).

Overall Grading will be as follows:

Class Participation and Attendance	20%
Reading Discussions (3-4 total)	20%
Problem Set Papers (3 total)	20%
Student Presentation and accompanying in-class discussion	20%
Semester Paper	20%
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	100%

Grading Scale

A + : 98 -100 %	A : 93-97 %	A - : 90-92 %
B + : 87-89 %	B : 83-86%	B - : 80-82 %
C + : 77-79 %	C : 73-76 %	C - : 70

Class & Reading Schedule

The following is the listing of readings for the class for the listed date, along with general class topics. These texts need to be read *before*

September 22nd

Week 5 (Mike doing fieldwork this week; no class or reading discussion, but readings below should be read.)

1. OUR COMMUNITIES AND THE ENVIRONMENT

2. CLIMATE CHANGE AND GLOBAL ENVIRONMENTAL CHANGE

De Fries, R., Asner, G., and J. Foley. (2006). A glimpse out the window: What landscapes reveal about livelihoods, land-use, and environmental consequences. *Environment* 48(8): 22-36.

Lynch, A., & Brunner, R. (2007). Context and climate change: an integrated assessment for Barrow, Alaska. *Climatic Change*, 82, 93-111.

Marino, E. (2009). Immanent Threats, Impossible Moves, and Unlikely Prestige: Understanding the Struggle for Local Control as a Means towards Sustainability. In A. Oliver-Smith & X. Shen (Eds.), *Linking Environmental Change, Migration & Social Vulnerability* (pp. 42-

October 13th

Week 8

FOOD SYSTEMS, FOOD PRODUCTION, SUBSISTENCE, FOOD SECURITY, NUTRITION AND HEALTH

[Webb, P.](#) (2010). Medium to long-run implications of high food prices for global nutrition.

Journal of Nutrition

November 3rd

Week 11

1. ENERGY CONSERVATION AND USE

2. CONVENTIONAL AND ALTERNATIVE ENERGY SYSTEMS IN DESIGN AND PRACTICE

Pickett, C, Cadenasso, M., Grove, J., Nilon, C., Pouyat, R., Zipperer, W., & Costanza, R., (2001). Urban Ecological Systems: Linking Terrestrial Ecological, Physical, and Socioeconomic Components of Metropolitan Areas. *Annual Review of Ecological Systems* 32:12 7-157.—

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Douglass, M. (1998). A Regional Network Strategy for Reciprocal Rural-Urban Linkages. *Third World Planning Review*, 20 (1), 1-33.—[available](#)

Lehrer, J. (2007). The Living City. Seed. July.—[available](#)

Holdmann, G., Wies, R., & Vandermeer, J. (2019). Renewable Energy Integration in Alaska's Remote Islanded Microgrids: Economic Drivers, Technical Strategies, Technological Niche Development, and Policy Implications. *Proceedings of the IEEE*, 107(9).—[available](#)

Semester Paper updates due

November 10th

Week 12

1. MODELS OF SOCIAL AND ECOLOGICAL SYSTEMS ANALYSIS

2. UNDERSTANDING AND APPLICATION IN ECOLOGICAL, ECONOMIC, AND SOCIAL SUSTAINABILITY

Lovelock, J. (1986). Gaia: The World as a Living Organism. *New Scientist*, 112 (1539): 25-31.—[available](#) [Original 1973 article included for reference.]

Walker, B., Holling, C., Carpenter, S., & Kinzig, A. (2004). Resilience, Adaptability and Transformability in Social-ecological Systems. *Ecology and Society*, 9 (2).—[available](#)

Dublin, D.R., & Tanaka, N. (2014). Indigenous Agricultural Development for Sustainability and "Satoyama." *Geography, Environment, Sustainability*, 7(2), pp.86-95.—[available](#)

Johnson, J., Howitt, R., Cajete, G., Berkes, F., Louis, R.P., & Klisky, A. (2015). Weaving Indigenous and sustainability sciences to diversify our methods. *Sustainability Science* 11: 1-1.—[available](#)

November 17nd

Week 13

1.

December 1st

Week 15

First Student Presentations

- | | | | |
|---------------------|---------------------|---------------------|---------------------|
| 1. <i>available</i> | 2. <i>available</i> | 3. <i>available</i> | 4. <i>available</i> |
| 5. <i>available</i> | 6. <i>available</i> | 7. <i>available</i> | 8. <i>available</i> |

December 8th

Week 16

Second Student Presentations

- | | | | |
|---------------------|---------------------|---------------------|---------------------|
| 1. <i>available</i> | 2. <i>available</i> | 3. <i>available</i> | 4. <i>Available</i> |
| 5. <i>available</i> | 6. <i>available</i> | 7. <i>available</i> | 8. <i>available</i> |

Student Protections & Support

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/alask>

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,