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FORMAT 1

Submit original with signatures + 1 copy + electronic copy to UAF Governance.

See <http://www.uaf.edu/uafgov/faculty/cd> for a complete description of the rules governing curriculum & course changes.

TRIAL COURSE OR NEW COURSE PROPOSAL

SUBMITTED BY:

Department	UA Geography Program	College/School	SNRAS
Prepared by	Cary de Wit	Phone	X7494
Email Contact	c.dewit@alaska.edu	Faculty Contact	S. Craig Gerlach

1. ACTION DESIRED
(CHECK ONE): Trial Course New Course

2. COURSE IDENTIFICATION: Dept **GEOG** Course # **4xx** No. of Credits **3.0**

Justify upper/lower division status & number of credits:

This course is intended for students who already have a solid grounding in comparative cultures and global development. The course requires a lot of weekly reading, and substantial class time will be devoted to seminar-style discussion of assigned readings and films, so students will need to come into this course with established analytical and verbal communication skills. Students will be required to analyze, summarize, and coherently communicate their interpretations of assigned readings, and will produce a term paper.

3. PROPOSED COURSE TITLE: **Comparative Farming and Sustainable Food Systems**

4. To be CROSS LISTED? YES/NO Yes No If yes, Dept: **NRM/CCS** Course # **4xx**

(Requires approval of both departments and deans involved. Add lines at end of form for such signatures.)

5. To be STACKED? YES/NO No Yes If yes, Dept. Course #

6. FREQUENCY OF OFFERING: Fall, Spring, Summer (Every, or Even-numbered Years, or Odd-numbered Years) — or As Demand Warrants

7. SEMESTER & YEAR OF FIRST OFFERING (if approved) **Fall 2012**

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 (specify lecture, field trips, labs, etc) **Lecture and discussion.**

9. CONTACT HOURS PER WEEK 3 LECTURE hours/weeks LAB hours/week PRACTICUM hours/week

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/cd/credits.html> for more information on number of credits.

OTHER HOURS (specify type)

10. COMPLETE CATALOG DESCRIPTION including dept., number, title and credits (50 words or less, if possible):

CCS/GEOG/NRM 493 Comparative Farming and Sustainable Food Systems
3.0 Credits **Fall**
Principles of food systems geography and food security. Cross-cultural examination of dietary traditions, poverty, hunger, equity, and food access and distribution. Comparison of multiple varieties and scales of agricultural systems in the context of social, ecological and economic sustainability. Considers Alaskan and other high-latitude food systems, including country food, wild game harvest, and rural to urban nutrition transition.

11. COURSE CLASSIFICATIONS: (undergraduate courses only. Use approved criteria found on Page 10 & 17 of the manual. If justification is needed, attach on separate sheet.)

H = Humanities

S = Social Sciences

Will this course be used to fulfill a requirement for the baccalaureate core?

YES

NO

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

O = Oral Intensive, Format 6

W = Writing Intensive, Format 7

Natural Science, Format 8

12. COURSE REPEATABILITY:

Is this course repeatable for credit?

YES

NO

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 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.

LETTER:

PASS/FAIL:

RESTRICTIONS ON ENROLLMENT (if any)

14. PREREQUISITES

Junior standing and ENGL 211X or 213X; or permission of instructor.

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

15. SPECIAL RESTRICTIONS, CONDITIONS

None

16. PROPOSED COURSE FEES

\$

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

Yes/No

17. PREVIOUS HISTORY

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

Yes

Yes/No

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

Spring 2011, CCS/NRM/GEOG 493;

Will be offered Fall 2011. CCS/NRM/GEOG 493

18. ESTIMATED IMPACT

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

None. Uses existing faculty and facilities.

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

N

Yes

N/A

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)

Resource Mgt.

This course will be beneficial to students in the Departments of Geography, Natural Resources, High Latitude Agriculture, and Cross-Cultural Studies. The chairs of each of these departments have been contacted, and all are supportive of this course.

21. POSITIVE AND NEGATIVE IMPACTS

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

Positive Impacts:

This course has already been offered as a Special Topics course, and has drawn students from across several disciplines at UAF, indicating widespread interest in an interdisciplinary treatment of conventional, alternative, and sustainable food production systems. The course has been especially useful to students in the Geography and High Latitude Agriculture programs.

No negative impacts anticipated.

JUSTIFICATION FOR ACTION REQUESTED

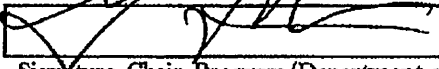
The purpose of the department and campus-wide curriculum committees is to scrutinize course change and new course applications to make sure that the quality of UAF education is not lowered as a result of the proposed change. Please address this in your response. This section needs to be self-explanatory. Use as much space as needed to fully justify the proposed course.

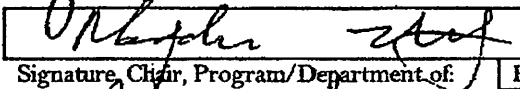
This course offers as an in-depth investigation of the development of food and agricultural systems across world regions and cultures, and an exploration of past and present strategies for food security and sustainable food production. It is intended to give students a solid understanding of the fundamental principles and components underlying both traditional and modern, and both sustainable and unsustainable food systems. This course should be useful to students in Geography, Natural Resource Management, Cross-Cultural Studies, Anthropology, Rural Development, and Economics who have interests in food security and sustainability.


Students taking this course will learn to understand and think critically about where our food comes from; to critically evaluate arguments for and against various forms of food production and the food system; to understand the challenges, problems, and prospects of the industrial food system as we know it; and to better understand new and innovative approaches that are emerging at the local and regional levels.


This course addresses several emerging areas of academic and national interest, including food security, ecological sustainability, and sustainable agricultural practices. Research in these areas is actively going on at UAF and across the U.S., and there is high student demand for courses that cover these topics.

APPROVALS:

	Date	4-25-2011
Signature, Chair, Program/Department of:	Geography	

	Date	4/26/2011
Signature, Chair, Program/Department of:	High Latitude Agriculture	

	Date	5/2/2011
Signature, Chair, College/School Curriculum Council for:	School of Natural Resources and Agricultural Sciences	

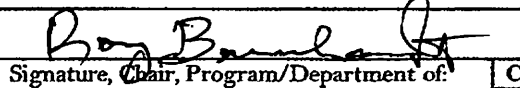
	Date	5-4-11
Signature, Dean, College/School of:	School of Natural Resources and Agricultural Sciences	

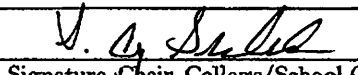
	Date	
Signature of Provost (if applicable)		
Offerings above the level of approved programs must be approved in advance by the Provost.		

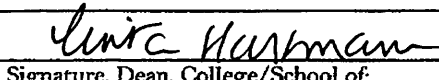
ALL SIGNATURES MUST BE OBTAINED PRIOR TO SUBMISSION TO THE GOVERNANCE OFFICE

	Date	
Signature, Chair, UAF Faculty Senate Curriculum Review Committee		

ADDITIONAL SIGNATURES: (As needed for cross-listing and/or stacking)

	Date	12/13/11
Signature, Chair, Program/Department of:	Cross-Cultural Studies	

	Date	12/17/2011
Signature, Chair, College/School Curriculum Council for:	College of Liberal Arts	

	Date	12-16-11
Signature, Dean, College/School of:	College of Liberal Arts	

**COMPARATIVE FARMING AND SUSTAINABLE FOOD SYSTEMS
CCS/NRM/GEOG 493 SYLLABUS
SPRING SEMESTER, 2011
3 CREDITS**

INSTRUCTOR: CONTACT INFORMATION

Craig Gerlach
Telephone: 474-6752
Email: scgerlach@alaska.edu
Office Location: 109 Bunnell; 351 O'Neill
Office Hours: 10:00-12:00, Friday
Class Time: 11:30-1:00, TR
Class Location: 305 O'Neill

PREREQUISITES

Required: ENGLISH 211 or 213, junior standing, or by permission of instructor. Students with coursework in economics, food systems, animal science, horticulture and crop production, social and community development, and/or geography and other social and natural sciences are welcome and encouraged to participate.

COURSE MATERIALS

On-line materials pertaining to farming and food systems research will be distributed through the semester. Assignments and readings will be discussed in class, and/or will provide resources for written assignments and exams. Supplemental readings will be distributed electronically, and/or as "hard copy." Background material about: (1) human-environment interactions and the role of human action in enhancing or degrading ecosystem structure and function through food production, consumption, collection distribution; and (2) theoretical and applied frameworks from sustainability science, resilience thinking, geography, political ecology, ecosystem ecology and agricultural science, will be available through ERES. This material may be accessed through <http://eres.uaf.edu> (password: sustain).

REQUIRED TEXTS

Ingram, John, Polly Erickson, and Diana Liveman, eds
2010 Food Security and Global Environmental Change. Earthscan Publishers.
Lappe, Anna
2010 Diet For A Hot Planet, The Climate Crisis at the End of Your Fork and What You Can Do About It. Bloomsbury, USA.
Nabhan, Gary,
2009 Where our Food Comes from: Retracing Nikolay Vavilov's Quest to End Famine. Island Press.
Berry, Wendell
2009 Bringing it to the Table, On Farming and Food. Counterpoint Press.
Pretty, Jules (editor)
2005 The Earthscan Reader in Sustainable Agriculture. Earthscan.

Altieri, Miguel
1995 Agroecology, The Science of Sustainable Agriculture. Westview Press, Second Edition.

RECOMMENDED TEXTS (Selected sections to be distributed electronically)

- Friese, Kurt, Kraig Kraft, and Gary Nabhan
2011 Chasing Chiles, Hot Spots Along the Pepper Trail.
- Herrera De, Gabriel Alsonso
2006 Ancient Agriculture, Roots and Application of Sustainable Farming. Ancient City Press.
- Logsdon, Gene
2010 Holy Shit, Managing Manure to Save Mankind. Chelsea Green Publishing.
- Winne, Mark
2010 Food Rebels, Guerilla Gardeners, and Smart-Cookin' Mamas, Fighting Back in an Age of Industrial Agriculture. Beacon Press.
- Weiseger, Marsha
2009 Dreaming of Sheep in Navajo Country. University of Washington Press.
- Kurlansky, Mark
2009 The Food of a Younger Land, A Portrait of American Food. Riverhead Books.
- Beahrs, Andrew
2010 Twain's Feast, Searching for America's Lost Foods in the Footsteps of Samuel Clemens. Penguin Press.
- Thompson, Peter
2010 Seeds, Sex and Civilization, How the Hidden Life of Plants has Changed Our World. Thames and Hudson.
- Dworkin, Susan
2009 The Viking in the Wheat Field, A Scientist's Struggle to Preserve the World's Harvest. Walker Publishing Company, Inc.
- National Research Council
2009 Transforming Agricultural Education for a Changing World. The National Academies Press, Washington D.C.
- Pollan, Michael
2008 In Defense of Food, An Eater's Manifesto. Penguin Press.
- Warner, Keith D.
2007 Agroecology in Action, Extending Alternative Agriculture through Social Networks. MIT Press.
- Salatin, Joel
2007 Everything I want to do is Illegal, War Stories from the Local Food Front. Chelsea Green.
- Sayre, Nathan
2005 Working Wilderness, The Malpais Borderlands Group and the Future of the Western Range. Rio Nuevo Publishers, Tucson.
- Nabhan, Gary Paul
2004 Why Some Like it Hot, Food, Genes and Cultural Diversity. Island Press.

- Kloppenborg, J.R.
2004 *First the Seed, The Political Economy of Plant Biotechnology, 1492-2000.* University of Wisconsin Press.
- Ana G. Valenzuela-Zapata, and Gary Paul Nabhan
2003 *!Tequila! A Natural and Cultural History.* University of Arizona Press.
- Jackson, D. and L. Jackson (eds)
2002 *The Fatal Harvest Reader, The Tragedy of Industrial Agriculture.* Island Press.
- Uphoff, Norman (ed)
Nabhan, Gary Paul
2002 *Coming Home to Eat, The Pleasure and Politics of Local Foods.* W.W. Norton.
- Uphoff, Norman (ed)
2002 *Agroecological Innovations, Increasing Food Production with Participatory Development.* Earthscan.
- Brookfield, H., C. Padoch, H. Parsons, and M. Stocking
2002 *Cultivating Biodiversity, Understanding, Analyzing and Using Agricultural Diversity.* UNEP, United Nations University.
- Jackson, D.L., and L. L. Jackson (eds)
2002 *The Farm as Natural Habitat. Reconnecting Food Systems with Ecosystems.* Island Press.
- Bove, Jose and Francois Dufour
2001 *The World is Not For Sale, Farmers Against Junk Food.* Verso, London and New York (translated from the French Original).
- Manning, Richard
2000 *Food's Frontier, The Next Green Revolution.* University of California Press.
- Pretty, Jules
1995 *Regenerating Agriculture.* Earthscan Publishers.
- Cherikoff, Vic, and Jennifer Isaacs
1990 *The Bush Food Handbook, How to Gather, Grow, Process & Cook Australian Wild Foods.* TI Tree Press.
- Berry, Wendell
1977 *The Unsettling of America, Culture and Agriculture.* Sierra Club Books.
- Bennett, John W.
1969 *Northern Plainsmen, Adaptive Strategy and Agrarian Life.* Aldine Publishing Company.

COURSE DESCRIPTION

In this course we review: the basic principles of food systems geography by comparing various food production strategies, including organic, “alternative,” and industrial farming, crop and livestock production at local, regional and global scales; food and nutritional security, including poverty, hunger and equity in a context of the industrial food system; and through ethnographic case studies we explore cross cultural perspectives on culinary and dietary traditions, food preference, individual and cultural identity.

The bottom line: to understand large, medium and small scale food production systems through comparison of industrial, organic, natural and ecological approaches, and

through the contrast of historically proven crop and livestock production systems with new and innovative strategies for developing strong and resilient/sustainable food systems at multiple scales.

The overall problem: What solutions can we generate to realistically confront contemporary food, farming and agricultural problems? Where is the contemporary agroecological system strong, where is it weak with respect to sustainability, and how can we become better educated and more innovative in dealing with food production, distribution, access, and the promotion of ecosystem health? My own bias is toward the small-scale, local and “slow” crop and livestock production systems, and toward the development of appropriately scaled systems that promote functionally integrated farm models, strong farm economies and healthy rural communities. I am also interested in on-farm innovation and policy barriers and constraints that promote successful farmers who are on the land, and intelligent consumption of healthy foods.

Given that we are in Alaska with an interest in expanding farming and producing local food for local consumption, we review high latitude production and food systems, including emphasis small and mid-size farms, on new initiatives in rural Alaska to restore gardening and food production as a component of the subsistence system; in this context, we will look at the problems and prospects of the country food and wild game harvest, the nutrition transition to increased reliance on highly processed foods from the village stores, a transition that includes the rural and the urban, and that is occurring at different times, rates and places throughout the developing world.

As time allows, we will compare and contrast food and farming systems from around the world, and will situate this discussion in a general context of social, ecological and economic sustainability. The problems posed here are complex and require interdisciplinary perspectives if we are to define and implement integrated and well designed solutions to the problem of food production, consumption, and food security. Interdisciplinary here means the integration of concepts derived from agroecology, geography, political ecology, other relevant social, agricultural and ecosystem sciences, from food and nutritional ecology. While academic disciplines tend to fragment into one-dimensional islands of thought, I rather prefer to work toward cross-disciplinary understanding of problems through the integration of good and workable ideas with applied standards of practice.

Sustainability is a key concept in this class; unfortunately, the word has come to mean everything and nothing through use and abuse, so we can think instead of the Japanese word---*shizen*---something I take to mean a spontaneous, self-renewing sacred and natural world of which humans are inextricably a part, in short, the “Gardeners of Eden” perspective. Through the course we will explore this idea through review and understanding of farming and food as culture, art, science and practice.

COURSE GOALS

The overall course goals: to understand and think critically about where our food comes from; to provide the knowledge base from which you can critically evaluate arguments

for and against various forms of food production and the food system; and, finally, to expose you to the challenges, the problems and prospects of the industrial food system as we know it, and to better understand new and innovative approaches that are emerging at the local and regional levels, local production for local consumption!

(1) We will review and evaluate existing problems in industrial food production, look at alternatives to industrial production, including but not limited to organic, natural systems farming, perennials as opposed to annuals, the appropriate use of heirloom livestock breeds, etc., and we will analyze and discuss the problems and prospects from multiple social, historical and ecological perspectives with information and ideas drawn from many different disciplines;

(2) We will review the role of food systems and nutrition in promoting or degrading individual, community and ecosystem health;

(3) We will examine the forces/stressors (internal, external) that condition food collection/production activities in Alaska and other high latitude systems, with comparison to food and farming systems in Latin America, Africa and Asia;

(4) We will define and analyze where agricultural/farming systems are vulnerable to change in economic, socioeconomic and climatic drivers;

(5) We will review how food production enhances or degrades ecosystem services through human action and practice, examine how and under what conditions small and large-scale agroecological systems integrate or fragment ecosystems, and work toward a better understanding of how and under what conditions appropriately scaled systems that promote or degrade community viability and health are important.

LEARNING OBJECTIVES

(1) To gain an understanding of the development and geographical diffusion of cultivars, cultigens and livestock; land use; and social interaction and trade in relation to food systems.

(2) To develop an understanding of how and why certain agricultural innovations, and food and culinary traditions develop in specific places, within a context of sustainable systems of agricultural development, crop and livestock production.

(3) To examine the role of humans as agents of change, and to view humans as active rather than passive players on dynamic landscapes, and how and under what conditions crop and livestock production systems enhance or degrade ecosystem structure and function over short and long time scales.

(4) To take a broad, interdisciplinary perspective on food production activities, incorporating and synthesizing all aspects of human culture, society and geography to create a more comprehensive, holistic interpretation of how food systems are evolving globally today.

(5) To understand the transitions that farming and food systems have gone through in the past, to review and evaluate the implications of food and farming

transitions for human societies today, and to be able to develop scenarios and models, forecasts and projections about how such transitions may progress in the future.

COURSE REQUIREMENTS/EXPECTATIONS

Lecture and discussion topics are listed by week in the syllabus. Readings are assigned at beginning of each class period. You are expected to read and be prepared to discuss everything that is assigned, and to come to class prepared, ready to participate, and to do all of the assignments.

There will be a take home mid term exam and a take home final. Throughout the semester there will be assignments, including discussion of the readings and oral presentations, with students responsible for leading discussion of selected readings

Specific problem sets will be assigned throughout the semester, with these requiring analysis and formally written answers. You will each have a specific research project to work on, with oral presentations scheduled for the last week of the semester, and the final paper due the day that the final exam is scheduled.

Final grades will be based on effort, interest, contributions to weekly discussions, performance on individual written assignments and research paper (see grade distribution below). Everyone has an A going in; it is your job to maintain it. You are expected to turn in assignments on time. If you have to miss class, be late, leave early, etc., you need to let one of us know.

GRADE DISTRIBUTION

Review/Reaction Paper	20%
Mid-Term Exam	20%
Final Exam	20%
Contributions to class discussion	20%

(Class discussion includes at least two oral presentations about topics and/or articles raised and/or read in class, a final 10-15 minute oral presentation about your research paper, and general weekly informal contributions to class discussion)

Final Paper	20%
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A NOTE ON FINAL RESEARCH PAPER: The final paper should be no longer than 20 pages, including references cited, maps, figures, tables, flow charts, graphs, etc. Appropriate citations and appropriate use of referenced material is a key component, and beware of an over emphasis on citations from the web. All tables, graphs, maps, statistical analyses, etc. should be included within text.

Shorter papers are fine if problem coverage is sufficient, but this requires efficiency in scoping the outline and in the writing. All research topics for the final written research paper must be discussed with instructor and approved within the first two weeks of the class, but you should pick a topic that you are interested in; this is your choice!

A written abstract and overview of the project is due within the first three weeks of the class.

WEEKLY TOPICS AND SCHEDULE

Week 1

Introduction: Overview of course, goals, objectives, expectations, and grading system. Frameworks for analysis of food systems and agricultural/farming systems define the scope of the course.

Assigned reading: "Principles for Framing a Healthy Food System," M. W. Hamm.

Week 2

Defining Food Systems. The "anatomy" of the contemporary food system, what are the components and relationships between and among components, where is the food system strong, weak and vulnerable for both producers and consumers? The first principles of food system analysis outlined, and general discussion of what we eat, how we eat, how we produce what we eat, nutrition and health. The cultural, ecological and political economy of the global food system: Local, regional and global food security problems; hunger, poverty, vulnerabilities in the global food supply.

Assigned readings:

Selections to be assigned from "Food Security and Global Environmental Change" by Ingram, Erickson and Liveman, eds.

Lappe, A., "Eat the Sky: Seven Principles of a Climate -Friendly Diet. In, Diet for a Hot Planet, pp. 201-229.

Week 3

Introduction to the concept(s) of sustainability, sustainability science, and resilience thinking as applied to food and agroecological systems.

Assigned Readings:

Lappe, A., "The Climate Crisis at the End of Our Fork. In, Diet for a Hot Planet, pp. 3-41.

Altieri, M., The Agroecosystem: Determinants, Resources and Sustainability. In Agroecology, The Science of Sustainable Agriculture, pp. 41-68.

Week 4

Overview, history and development of the Industrial Food System: the "Fatal Harvest" Paradox. Industrial agriculture, ecosystem degradation, loss of farms, farmers and farmlands, food quality, health, and problems with industrial and "factory farming" models.

Assigned Reading: Wendell Berry, The Unsettling of America, Culture and Agriculture. Sierra Club Books.

Lappe, A., "Myth-Informed: Answering the Critics", pp. 151-164, and "The Hunger Scare," pp. 165-173. In, "Diet for a Hot Planet."

Week 5

Agroecology and the science of sustainable agriculture: Principles reviewed. The meaning of sustainability, renewability and restoration in a context food production, “on the farm and ranch,” and for the consumer.

Assigned Reading:

Altieri, M. The Evolution of Agroecological Thought, pp. 1-19. In, Agroecology, The Science of Sustainable Agriculture.

Week 6

Modes of agriculture and Cross-Cutting Food Production Issues at High Latitudes. Seasonality, Soil Fertility and tillage, energy budgets, “healthy farms and lifestyles,” economic viability, infrastructure and marketing, community supported agriculture, food cooperatives and more. Introduction to high latitude production systems (Alaskan) that will produce local food for local consumption, with emphasis on production strategies that preserve ecosystem structure and function, produce healthy food (crops) for local (scales and levels of organization discussed) consumption.

Week 7

High Latitude, reduced input systems: organic production systems and natural systems farming; economies of scale, biodiversity, healthy farms, healthy farmers, and healthy ecosystems.

Assigned Reading:

Jackson, D.L. “Food and Biodiversity.” In, The Farm as Natural Habitat, Reconnecting Food Systems with Ecosystems, pp. 247-260. This article will be distributed electronically.

Week 8

High Latitude, reduced input systems continued: permaculture, biodynamic systems, season extension strategies, infrastructure, greenhouses, hoop houses, high tunnels, storage, marketing, education.

Assigned Reading:

Lappe, A. “Cool Food: Five Ingredients of Climate Friendly Farming.” In, “Diet for A Hot Planet, pp. 129-149.

Jordan, N.R. “Sustaining Production with Biodiversity.” In, “The Farm as Natural Habitat,” pp. 155-168 (to be distributed electronically)

TAKE HOME MID-TERM HANDED OUT AND DISCUSSED

Week 9

Rural Alaskan Food Systems: Problems, prospects for the future, village sustainability challenges, food system innovation.

Assigned Reading:

Gerlach, Loring, Turner and Atkinson. “Environmental Change, Food Systems and Community Needs in Rural Alaska.” In, North X 2020, Perspectives on Alaska’s Changing Social-Ecological Systems, Lovecraft and Eicken, editors. University of Alaska Press. 2011.

Paragi, Gerlach and Meadow. "Food Security and Red Meat Production in Alaska." *Agroborealis* (2011) 41 (1): 36-37.

Loring, Gerlach, Atkinson and Murray. "Ways to Help and Ways to Hinder: Governance for Successful and Sustainable Livelihoods in an Uncertain Climate." *Arctic* (2011) 64(1): 73-88.

Loring and Gerlach. "Food Security and Conservation of Yukon River Salmon: Are We Asking too Much of the Yukon River?" *Sustainability* (2010) 2: 2965-2987; doi.

Loring and Gerlach. "Outpost Gardening in Interior Alaska: Food System Innovation and the Alaska Native Gardens of the 1930s-1970s." *Ethnohistory* (2010) 57(2): 183-199.

Loring and Gerlach. "Food, Culture and Human Health: An Integrated Health Approach to Food Security." *Environmental Science and Policy* 12 (2009): 466-478.

Week 10

The Farm as Natural Habitat: Reconnecting Food Systems with Ecosystems. Farming with the wild, enhancing biodiversity, rediscovering the cultural in agricultural, looking at ways to renew healthy farm communities, strong local economies, and healthy ecosystems.

Assigned Reading:

Jackson and Jackson, *The Farm as Natural Habitat: Reconnecting Food Systems with Ecosystems*. Island Press. (Selections from book will be distributed electronically).

MID-TERM HANDED IN

Week 11

Introduction to agropastoral systems: human-livestock, livestock-grass, grass-soil, soil-livestock-livestock-human, human-ecosystem, and biophysical and cultural health interactions as expressed through a better understanding of the historical ecology of food system traditions and distributions (North America and Africa). Modeling agropastoral systems (South Turkana Ecosystem Project, the Malpais Borderlands in the desert SW, US and Mexico, etc).

Assigned Reading:

Lappe, A., "The Shape of Things to Come." In, *Diet for a Hot Planet*, pp. 42-55.

Nathan Sayre

2005 *Working Wilderness, The Malpais Borderlands Group and the Future of the Western Range*. Westview Press. (Selections will be distributed electronically).

Coughenour, M.B., and others

1985 *Energy Extraction and Use in a Nomadic Pastoral Ecosystem*. *Science*, New Series, Vol. 230, No. 4726, pp. 619-625. Article will be distributed electronically.

REACTION PAPER DUE

Week 12

Sustainable Livestock Production and Integrated Farm Systems: Comparative perspectives and examples from high latitudes in Europe and North America. Bison, Elk, Beef, Sheep/goats, Swine, Poultry? Managing for sustainability, grazing systems, management strategies for livestock vs. wildlife.

Assigned reading:

Lappe, A., "Blinded by the Bite." In, Diet for a Hot Planet.

Additional Readings to be assigned from Alan Savory, "Holistic Resource Management (to be distributed electronically).

Week 13

From chilies to chocolate: where our food comes from, and the future of food: Pre-Columbian exchange and food production systems, crop and crop complexes, global review of centers of crop and livestock domestication and production. Farmers, Farmer responses to climatic and social change, seed saving, seed banks, hybrid seed, genetically modified seed, and who controls the food supply?

Assigned Reading:

Gary Nabhan, "Where Our Food Comes from: Retracing Nilolay Vavilov's Quest to End Famine." Island Press.

TAKE HOME FINAL EXAM HANDED OUT

Week 14

The Political Economy of Plant Biotechnology; debates, problems, prospects, pros and cons. Discussion of Borlaug (1914-2009) and the "Green Revolution."

Assigned Readings:

Kloppenburg, J.

1988 "First the Seed, The Political Economy of Plant Biotechnology, 1492-2000. (Selections to be distributed electronically)

Dworkin, Susan

2009 "The Viking in the Wheat Field, A Scientist's Struggle to Preserve the World's Harvest." (Selections to be distributed electronically)

Week 15

Final paper oral presentations and discussion

TAKE HOME FINAL HANDED IN

UAF POLICIES

You are expected to read, understand and adhere to the academic code of honor detailed in the UAF Catalog. If you have a disability or for any reason need special consideration, let us know and we accommodate your special needs as appropriate. There is an elevator in Signer's Hall that provides access to the third floor of Eielson. Priority seating is available according to need. A note on "borrowing": remember-copying one author without attribution is plagiarism; using the results of many with attribution is research.

DISABILITIES SERVICES

The University of Alaska is committed to providing equal access for students with disabilities. The Office of Disabilities Services implements the Americans with Disabilities Act (ADA) to ensure that all students have equal access to campus and course materials. We will work with this office to provide reasonable accommodation to students with disabilities. Please advise in advance in writing if you need special consideration. The telephone number for the Office of Disabilities Services is 474-5695.

CELL PHONES AND IN CLASS COMPUTER USE

It is not a good idea to let your cell phone ring during class, and you are expected to use your computer appropriately.
