

NRM 210 Principles of sustainable Agriculture

3 cr

Instructors – MP Shipka, MG Karlsson. M Zhang

Offered fall semester - TTH 8:00-9:30 AM

Text – Toward Sustainable Agricultural Systems in the 21st Century (2010)

Committee on Twenty-First Century Systems Agriculture; National Research Council

978-0-309-14896-2

Course Objectives: The student will develop a basic understanding of sustainable agriculture concepts and will be exposed to principles and ideas of sustainable agricultural practices. Agroecology is introduced as a backdrop for the development of sustainable techniques for soil, plant, and animal agriculture. Throughout the semester, sustainable agriculture concepts and principles will be related to current issues such as population growth, resource use and availability, and changing social structures and preferences.

Student Learning Outcomes: The student will demonstrate by the end of the semester a basic understanding of the concepts and principles of sustainable agricultural management in soil, plant, and animal contexts. Student Learning Outcomes include:

- 1) Ability to critically apply knowledge and integrate the science of sustainable agriculture with economic, social and environmental sustainability for agricultural practices in modern culture and societies.
- 2) The development of a basic understanding of sustainability science in global and U.S. agriculture and an appreciation for the biological, physical and social sciences that make up sustainable agriculture.

Course Outline

Week	Topic	Instructor
1	What is Sustainable Agriculture Overview Concepts and Themes Three legs of sustainable agriculture Economic, social, and political context	Shipka
2	Farming and Natural Resources Is Organic Agriculture the same as Sustainable Agriculture? Agroecology Exam I	Shipka
3	Sustainable soils management	Zhang

4	Sustainable soils management	Zhang
5	Sustainable soils management – systems management Exam II	Zhang
6	Sustainable field crop production concepts - Agronomy	Zhang or Karlsson
7	Sustainable field crop production concepts – Agronomy Exam III	Zhang or Karlsson
8	Sustainable plant production concepts - Horticulture	Karlsson
9	Sustainable plant production concepts – Horticulture Exam IV	Karlsson
10	Sustainable plant production concepts – Controlled environments	Karlsson
11	Sustainable plant production concepts – Controlled environments Exam V	Karlsson
12	Sustainable animal production concepts – Nutrition Animal welfare	Shipka
13	Sustainable animal production concepts – Grazing Animal Behavior Exam VI	Shipka
14	Sustainable animal production concepts – Integrated Livestock Management System Systems management	Shipka
15	Sustainable animal production concepts – Ecological & Sustainable Livestock Production Systems Reducing the Carbon Footprint Exam VII	Shipka

Best way to do well in this class:

- 1) Attend the lectures,
- 2) Take good notes,
- 3) Read the assigned readings before class,
- 4) Download the PPT before or right after class,
- 5) Go back through your notes and the PPT soon after class, and
- 6) Complete seven exam/assignments on time.

Course Grading:

Students will have seven web based exams/assignments, available on UAF Blackboard when assigned, each covering the time period since the previous assignment, but also building on material that was presented since the course began. Each assignment is worth 100 points for a total of 700 points available for the entire class. The student will have one week to complete each assignment from the time the assignment is available on UAF Blackboard. Ten points will be deducted for each day an assignment is turned in late

<u>Assignment #</u>	<u>Week of assignment</u>	<u>Week due</u>	<u>Points</u>
I	End of Week 2	End of Week 3	100 points
II	End of Week 5	End of Week 6	100
III	End of Week 7	End of Week 8	100
IV	End of Week 9	End of Week 10	100
V	End of Week 11	End of Week 12	100
VI	End of Week 13	End of Week 14	100
VII	End of Week 15	Final Exam period	100
Total			700 points

Final course grades will be assigned on the following basis:

≥ 97%	= A+	> 679 points
92 - 96.9%	= A	644 to 678 points
90 - 91.9%	= A-	630 to 643 points
87 - 89.9%	= B+	609 to 629 points
82 - 86.9%	= B	574 to 608 points
80 - 81.9%	= B-	560 to 573 points
77 - 79.9%	= C+	539 to 559 points
72 - 76.9%	= C	504 to 538 points
70 - 71.1%	= C-	490 to 503 points
Etc.		

For important UAF grading policy information, see the 2013-14 UAF Catalog, pages 47-49.

Disabilities Services: 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. Course instructors will work with the Office of Disabilities Services (203 WHIT, phone: 474-5688) to provide reasonable accommodation to students with disabilities.

UAF may also be able to provide other services to benefit students. Students are advised to visit <http://www.uaf.edu/sss/resources/> to view other services that may be available to students at UAF.