NRM 210 Principles of Sustainable Agriculture

3 credits

Instructors MP Shipka, MG Karlsson, M Zhang Offered spring semester - T TH 2:00-3:30 PM Murie Auditorium and Online

Text Toward Sustainable Agricultural Systems in the 21st Century

Course Outline

Week 1	Chapter 1 in TSAS* (p. 15-41) What is Sustainable Agriculture?	Shipka
1/16	Overview	
	Concepts and themes	
1/18	Three legs of sustainable agriculture	
	Economic, social, and political context Quiz 1 - Due 1/23 before 2:00 PM	
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Week 2	Chapter 2 in TSAS* (p. 43-82) Farming and Natural Resources	Shipka
1/23	Is organic agriculture the same as sustainable	
., = 0	agriculture?	
1/25	Agroecology	
	Quiz 2 - Due 1/30 before 2:00 PM	
	Assignment I (covers material in weeks 1 & 2) Lundberg Family Farms (p. 371-376)	
	Due 2/1 by 2:00 PM	
Week 3	Chapter 3 in TSAS* (p. 83-97)	Zhang
	Sustainable Soil Management	
1/30	Conservation tilling	
2/1	Cover cropping Quiz 3 - Due 2/6 before 2:00 PM	
Week 4	Chapter 3 in TSAS* (p. 122-131)	Zhang
	Sustainable Soil Management	
2/6	Mass balance	
2/8	Soil tests	
2/0	Compost Quiz 4 - Due 2/13 before 2:00 PM	
Week 5	Chapter 3 in TSAS* (p. 110-122)	Zhang
	Sustainable Field Crop Production Concepts Agronomy	G .
2/13	Irrigation	
2/15	Water quality management Quiz 5 - Due 2/20 before 2:00 PM	
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Week 6	Chapter 3 in TSAS* (p. 97-110) Sustainable Field Crop Production Concepts Agronomy	Zhang
2/20	Crop rotations	
	Intercropping	
2/22	Cultivar mixtures	
	Quiz 6 - Due 2/27 before 2:00 PM	

Week 7	Reading Assignment: Sustainable Soil Management System Guide (available on Blackboard one week prior to class period)				
2/27	Sustainable Soil Management Systems Management				
	Principles and characteristics of sustainable Soil				
3/1	Management steps to improve soil quality				
	Examples of sustainable soil builders				
	Quiz 7 - Due 3/6 before 2:00 PM				
	Assignment II				

Week 14	Chapter 5 in TSAS* (p. 233-249)	Shipka
	Sustainable Animal Production Concepts	
4/17	Animal welfare	
	Animal behavior	
4/19	Quiz 13 - Due 4/24 before 2:00 PM	
Week 15	Chapter 5 in TSAS* (p. 233-249)	Shipka
	Sustainable Animal Production Concepts	
4/24	Integrated livestock management system	
	Systems management	
4/26	Ecological & sustainable livestock production systems	
	Quiz 14 - Due 5/1 before 2:00 PM	
	Assignment IV (covers material in weeks 13, 14 & 15)	
	Brookview Farm (p. 366-370) & Goldmine Farm (p. 463-472)	
	Due 5/1 by 10:00 AM	

^{*}Towards Sustainable Agriculture Systems in the 21st Century.

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 take-home quizzes and the four case study assignments on time.

Course Grading:

Students will have weekly take-home quizzes. The quizzes will be available on UAF Blackboard on Thursday and due the following Tuesday before 2:00 PM. Each quiz is worth 10 points for a total of 140 points. There will also be four web-based case study assignments administered through Blackboard. Each assignment will cover topics since the previous assignment as well as build on materials presented throughout. Each assignment is worth 100 points for a total of 400 points. The students will have one week to complete each case study assignment from the time it is available on Blackboard.

Ten points will be p