

Food, Agriculture and the Environment (AGSC 100)



Truman State University. Spring 2009
Dr. Mark R. Campbell,
Lecture MWF 9:30 – 9:20 MG 1096
Laboratory (2 hours) Tuesday 9:30 or 1:30 in MG 2030
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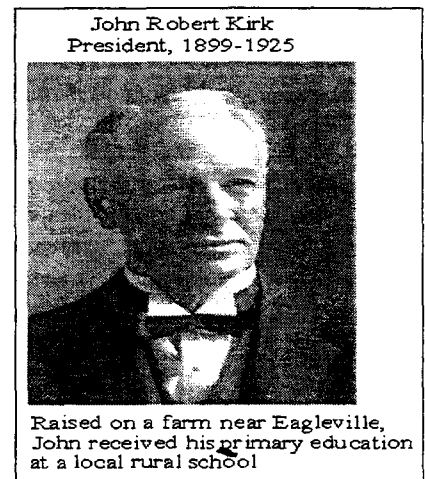
I. Catalog Description:

A study of the structure and function of agricultural systems with emphasis on agricultural science and on the consequences for humanity and the environment of using science and technology in agriculture. Includes laboratory. May not be taken as an elective by agriculture majors. 4 hr.

I. Prerequisites: None

III. Objectives of the course

The objective of this course is to teach knowledge, skills, and attitudes which Truman State University believes are essential for a liberally educated person. John R. Kirk, the fifth President of our institution, said, "Education in agriculture is an essential utility because it is the only means of furnishing adequate conception of the fundamental occupation of mankind upon which all other occupations now depend and forever must depend. But education in agriculture is also a basis of true culture and refinement...by inclusion of agriculture we hope not only to further enrich the curriculum but to strengthen it as a whole and bring its element into unity."



Specific objectives for the course are as follows:

1. To teach about science and scientific method through the study of agriculture. To ask students to consider the social and environmental consequences of using science and technology. To help students learn how to obtain scientific and technical information.
2. To provide students with information about how food is produced and delivered. Educated people should know where their food comes from, how it arrives to them and how to ensure a sustainable supply.
3. To provide students with hands-on experiences which show them the connectedness of what they learn in lecture or reading with what happens in the real world.

4. To ask students to think carefully about their own values and the values of other people with respect to land, water, livestock, and people and to ask students to consider the plight of hungry people and the difficulties of feeding them
5. To provide students with an interdisciplinary course which asks them to integrate and use knowledge from the humanities, sciences, and social sciences to study a single topic, agriculture.

IV. Expectations of the student and basis of student evaluation:

	Points
A. Three examinations	300
B. Comprehensive final examination	100
C. Group Laboratory Project (to be turned in as a group)	
1. Written and oral proposal	50
2. Written and oral reports	150
D. Laboratory reports (to be turned in individually!!!) and attendance	400

Final grades will be awarded on a straight scale. There are 1000 total points possible: minimum points for an A will be 900, for a B 800, for a C 700, for a D 600.

Warning: Do not turn in late assignments!!!!!! All deadlines and examination dates must be met unless you have prior approval from me for alternative deadlines or dates. Failure to meet a deadline or an examination date without prior approval will result in zero points for the activity.

V. Course outline

WEEK	TOPIC	Reading ¹
1	History and Future of Agriculture/ Domestication of Plants and Animal	
2	Scientific Methods and Use of Statistics	
3	Principles of Soil Science	
4	Soil Nutrients and Fertilizers	
5	Nutrient Cycles and the Environment <i>Exam I</i>	
6	Photosynthesis and Energy in Crops	
7	Crops: Nomenclature and Morphology	
8	Cereals, Pulses, Oil Seed and Forages	
9	The Green Revolution/Genetic Diversity	
10	Chemistry, Nutrition and Processing Of Plant Commodities <i>Exam II</i>	
11	Livestock (types and distribution)/ Digestive Systems	
12	Meat (Composition, Food Borne Illnesses)	
13	Dairy (production, processing, rBST/ Introduction to Genetic Principles	
14	Genetics and Biotechnology in Agriculture <i>Exam III</i>	
15	Review <i>Final Exam</i>	

January 2009

AGSC 100

Sun	Mon	Tue	Wed	Thu	Fri	Sat
				1	2	3
4	5	6	7	8	9	10
11	12 class start	13	14	15	16	17
18	19 no class MLK	20	21	22	23	24
25	26	27	28	29	30	31

Phases of the moon: 4 ☉ 10 ☾ 17 ☽ 26 ☾
 Holidays and Observances: 1. New Year's Day, 19. Martin Luther King Day

February 2009

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	3	4	5	6	7
8	9	10	11 Exam 1	12	13 early program report	14
15	16	17	18	19 no class U. Conf	20	21
22	23	24	25	26	27	28

Phases of the moon: 2 ☉ 9 ☾ 16 ☽ 24 ☾
 Holidays and Observances: 14. Valentine's Day, 15. Presidents' Day

March 2009

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	3	4	5	6	7
8	9	10	11	12	13	14
	Spring break					
15	16	17	18	19	20 Exam 2	21
22	23	24	25	26	27	28
29	30	31				

Phases of the moon: 4 ☉ 10 ☾ 18 ☽ 26 ☾

April 2009

Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1	2	3	4
5	6	7 research conference	8	9	10	11
12	13 spring break	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29 Exam 3	30		

Phases of the moon: 2 ☉ 9 ☾ 17 ☽ 24 ☾
 Holidays and Observances: 12. Easter Sunday

May 2009

Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1 Last Day O' class	2
3	4	5 9:30 Final	6 reading day	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

Phases of the moon: 1 ☉ 9 ☾ 17 ☽ 24 ☽ 30 ☾
 Holidays and Observances: 25. Memorial Day