Truman State University

AGSC 100 - Food, Agriculture and the Environment Spring 2009

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MG 3078
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Office Hours for Spring 2009:
Tuesday and Thursday 9:00-11:00 and 3:00–4:30; Wednesday 8:00-9:30 or by appointment

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 hrs.

II. Prerequisites: None

III. Objectives of the course:

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

Specific objectives for the course are as follows:

1. Students will study science and practice the scientific method through the study and practice of agriculture. Students will consider the social and environmental consequences of using science and technology. Students will learn how to obtain scientific and technical information.

2. Students will study how food is produced and delivered. Educated people should know where their food comes from, how it arrives to them, how to ensure a sustainable supply and how our food choices affect the environment.

3. Students will gain hands-on experiences, which show them the connectedness of what they learn in lecture or in reading with what happens in the real world.

4. Students will think carefully about their own values and the values of other people with respect to land, water, livestock, and people and will consider the plight of hungry people and the difficulties of feeding them.

5. Students will be required to integrate and use knowledge from the humanities, science, and social science to study a single topic, agriculture.

IV. Expectations of the students:

A. Three examinations (February 12, March 26, April 23)

B. One comprehensive final examination (Tuesday, May 5, 11:30 - 1:20)

C. One group project
   1. Hypotheses (January 21)
   2. Written and oral proposals (February 12)
   3. Written and oral reports (April 29)

D. Laboratory reports (due one week after completion of laboratory)
   Agricultural Productivity Lab due (April 29)

E. Short papers (#1 Jan 22, #2 Feb 5, #3 Feb 26, #4 March 5, #5 April 16)

V. Course outline and text pages for 10th edition

WEEK	TOPIC	TEXT PAGES
1	Agriculture: Definitions, history	47-51 219-243
2	Science, scientific method	13-16
3	Testing hypotheses, statistics	
4	Land and Soils	194-217
5	Soil formation and erosion	194-217
6	Nutrient cycles	67-73 437-463
7	Crops: kinds and function	
8	Photosynthesis	31-41 60-62
9	Plant composition (nutrients)	
10	Livestock: kinds and function	
11	Reproduction	-
12	Respiration and digestion	62-67
13	Energy flow	58-62 73-74
14	Population growth	117-165
15	Hunger	219-243
16	Finals Week	

VI. **Basis of student evaluation:**

		POINTS
A.	Three examinations (February 12, March 26, April 23)	300
B.	Comprehensive final examination (Tuesday, May 5, 11:30 - 1:20)	100
C.	Group Project	
	1. Hypotheses (January 21)	0
	2. Written and oral proposals (February 12)	50
	3. Written and oral reports (April 29)	150
D.	Laboratory reports	120
E.	Short papers (25 points each)	100

Final grades will be awarded on a straight scale. There are 820 totals points possible; minimum points for an "A" will be 738, for a "B" 656, for a "C" 574, for a "D" 492.

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.

VII. Text

Environmental Science, Richard Wright. 10th edition

AG100 Course Pack, Marshall, Spring 2009.