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**AGSC 108: Introduction to Agricultural Systems (Fall 2005)**

**MWF 10:30 – 11:20 am CH 130, R 1:30 – 3:20 pm MG 2026**

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Instructor: Dr. Charlie Apter  
Office: 3084 Magruder Hall  
Phone: 785-4584 (office) or 665-1225 (home)  
Office Hours: M, W 1:30 – 3:20 pm, T, F 8:30 – 10:20 am, or by appointment  
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**Description and Objectives**

Extended Truman Week course. Provides a broad-based overview of soil, plant and animal science for beginning students of agriculture which encourages them to consider the interconnectivity of these agricultural sub-disciplines. This interconnectivity becomes a foundation to consider sustainable approaches to food and fiber production, and the impact of agricultural systems on humanity and the environment. Specific objectives for the course are:

1. to teach about science and the scientific method through the study of agriculture;
2. to consider the social and environmental consequences of using science and technology;
3. to learn how to obtain scientific and technical information;
4. to provide information about how food is produced, delivered and how to ensure its sustainable supply;
5. to provide hands-on experiences which show the connectedness of technical information covered in lecture or through readings with what happens in the real world;
6. to ask students to think carefully about their own values and the values of others with respect to land, water, livestock, and people, and to ask students to consider the plight of the hungry and the difficulties of feeding them;
7. 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;
8. to continue to acclimate and integrate freshman AGSC students into student and academic life at Truman.

**Text:** *No textbook is required*; assigned readings will be provided as handouts.

**Lecture Schedule**

<b>WEEK</b>	<b>TOPIC(S)</b>
1 (8/29).....	Agriculture: definitions, history, domestication, sustainability; <i>reading:</i> Ian Bowler, 2002. “Developing Sustainable Agriculture”, <i>National Geography</i> 87:205-212
2 (9/5).....	Scientific method, hypothesis testing, use of statistics; <i>reading:</i> Robert Pirsig, 1974. “Reflections on the Scientific Method”, excerpted from <i>Zen and the Art of Motorcycle Maintenance</i> ( <a href="http://coretest.ecu.edu/exss/estesst/2323/Readings/pirsig.html">http://coretest.ecu.edu/exss/estesst/2323/Readings/pirsig.html</a> )
3 (9/12).....	Land and soils
4 (9/19).....	Soil nutrients and fertilizers
5 (9/26).....	Nutrient cycles and the environment; <i>reading:</i> “Carbon and Energy in the Agroecosystem” and “Nutrient Cycling and Decomposition”, both excerpted from <i>Ecological Principles of Agriculture</i> , Powers and McSorley, 2000
EXAM 1 Friday September 30 (13 lectures)	
6 (10/3).....	Photosynthesis and energy
7 (10/10).....	Crops: types, kinds, nomenclature, functions
8 (10/17).....	Cropping systems; <i>reading:</i> “Cropping Systems”, from <i>Ecological Principles of Agriculture</i> , Powers and McSorley, 2000
9 (10/24).....	The green revolution and genetic diversity; <i>reading:</i> Michelle Marvier, 2001. “Ecology of Transgenic Crops”, <i>American Scientist</i> 89:160-167
EXAM 2 Monday October 31 (11 lectures)	
10 (10/31).....	Livestock: Types and distribution
11 (11/7).....	Digestive systems, nutrients
12 (11/14).....	Meat: Composition, food-borne illnesses
13 (11/21).....	Reproduction
14 (11/28).....	Dairy: Production, processing, rBST
EXAM 3 Monday December 5 (12 lectures)	
15 (12/5).....	Conclusions; <i>reading:</i> Orr, David, 1991. “Biological Diversity, Agriculture, and the Liberal Arts”. <i>Conservation Biology</i> 5: 268-270; Michael Bell, 2004, “Overture: Cultivating Sustainability”, excerpted from <i>Farming for Us All</i>

FINAL EXAM Tuesday, December 15, 2005, 9:30-11:20 am.

## **Examinations and Grading**

Exam 1 (September 30) .....	100 pts
Exam 2 (October 31) .....	100 pts
Exam 3 (December 5) .....	100 pts
Final (December 15) .....	200 pts (comprehensive)
Laboratory group research project .....	
Group hypotheses .....	0 pts
Written proposal .....	50 pts
Written and oral reports .....	150 pts
Laboratory reports (total of 120 points)	
Familiarization with scientific publications .....	20 pts
Soil Sampling, Surveys, and Testing .....	20 pts
Soil Texture Analysis worksheet .....	20 pts
Seed Viability .....	20 pts
Crop productivity lab .....	20 pts
Statistics exercise .....	20 pts

Grades will be calculated as a percentage of the 820 total points possible. Letter grades will be assigned as follows:

90 - 100	A
80 - 89	B
70 - 79	C
60 - 69	D
Below 60	F

Please note that students are not allowed to keep their tests; after grading, tests are returned to the student for review, but are then re-collected.

## **Policy on absences and missed work**

1. Excuses for unauthorized absences will not be accepted.
2. An authorized absence does not excuse you from any missed work.
3. Permission for making up any missed work will be granted only for authorized absences arranged in advance of the absence or in the case of sickness, injury, or death in the family. In these cases, it is your responsibility to notify me as soon as is possible. In the case of absence due to sickness, the student must present verification of the illness from the Student Health Center or a family doctor.
4. Work missed due to unauthorized absence cannot be made up and a grade of zero will be recorded. Work missed due to an authorized absence must be made up or will be assigned a grade of zero.

## **Academic Dishonesty**

Students are expected to do their own academic work. Any student caught cheating on an examination or on any other assignment will be subject to disciplinary action, including but not limited to the one of the following actions:

1. punitive grading such as receiving an "F" on the assignment or in the class;
2. being reported to the Division Head, the Vice President for Academic Affairs, and the Dean of Student Affairs;
3. University Conduct action for violating the Student Conduct Code;
4. being suspended or expelled from the major or division by the Division Head;
5. being suspended or expelled from the University as a sanction for violating the Student Conduct Code.

To learn more about academic integrity, please visit the following website:

[http://conduct.truman.edu/docs/Academic\\_Integrity\\_booklet\\_2005.pdf](http://conduct.truman.edu/docs/Academic_Integrity_booklet_2005.pdf)

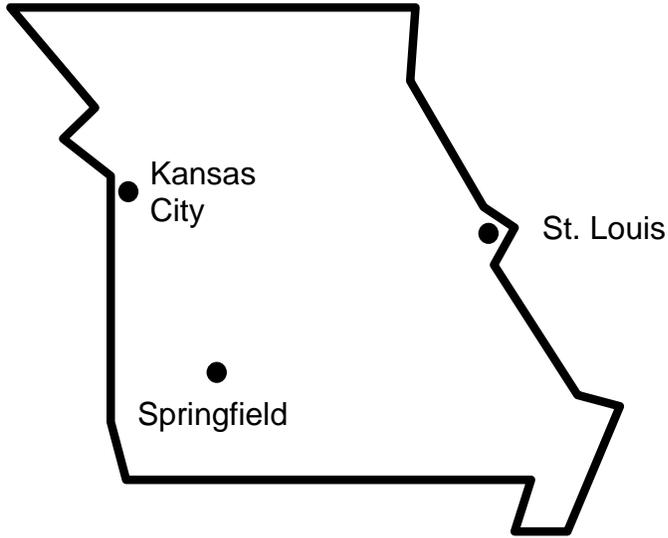
**AGSC 108 Student Information Sheet**

Name and SSN \_\_\_\_\_

Campus address \_\_\_\_\_

Campus phone \_\_\_\_\_

Where are you from? If from Missouri, please mark the location on the map.



Please describe your experiences with agriculture (if any).

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What are your current perceptions of agriculture (either plant or animal)? Are they positive or negative?

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