

AGSC 110

Principles of Plant Agriculture



Truman State University, spring 2009
1:30 - 2:30 MWF MG 1094, Lab 11:30 – 1:20 Thursday MG 2030
Mark R. Campbell, 2072 Magruder Hall
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Office Hours: 8:30 - 9:30 MTWRF or by appointment

I. Catalog Description

A comprehensive introduction to crop science and technology. Emphasizes crop physiology, genetics, and ecology: plus the application of these sciences to understanding and improving crop production systems. Includes laboratory

II. Prerequisites: none

III. Objectives of the course

1. To gain a broad appreciation for the application of plant science to industry.
2. To apply basic concepts of biology to the understanding of crop production
3. To understand traditional practices of crop production and emerging applications of biotechnology.
4. To obtain practical experience through laboratory, greenhouse and field studies
5. To understand how the study of crop plants is essential to understanding other disciplines within agriculture.

IV. Expectations of the student¹

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| A. Three examinations (to be announced)..... | 300 pts |
| B. One comprehensive final examination..... | 200 pts |
| C. Laboratory assignments, reading assignments and
paper..... | 400 pts |
| E. Laboratory, lecture <u>attendance</u> | 100 pts |

Total = 1000 pts

¹Late assignments will not be accepted and “no-shows” for exams will be graded as zero except with prior approval or in special circumstances agreed upon by the instructor. Laboratory attendance is mandatory and will count towards your grade.

V. Text book

Hartmann's Plant Science, Growth, Development, and Utilization of Cultivated Plants
4th Edition, Margaret McMahon, Anton Kofranek, Vincent Rubatzky
Feb 2006, Hardback, 624 pages ISBN13: 9780131140752 ISBN10: 0131140752

VI. Course outline¹

WEEK	TOPIC	READING
1	Crop nomenclature, domestication, diversity	Chapt 15
2	Morphology and Anatomy	Chapt. 8 & 9
3	Cereals/Seed&Grain quality	Chapt. 16
4	Pulses and oil seeds	Chapt. 17
5	Forages	Chapt. 18
Exam I		
6	Tillage and seeding	Chapt. 2
7	Harvesting and storage	Chapt. 3
8	Weeds	Chapt. 26
9	Insects pests	Chapt. 7
10	Plant pathogens	Chapt. 2
Exam II		
11	Plant growth regulators/ Nitrogen fixation	Chapt. 10
12	Photosynthesis/ photoperiodism/ climate	Chapt. 11
13	Plant genetics	Chapt. 14
14	Plant Breeding and Biotechnology	
Exam III		
15	Tropical agriculture	Chapt. 20
16	Finals week (cumulative Exam)	

¹Subject to change at discretion of instructor.