

Curriculum Assessment Plan: Plant Science (Crop Science (CS) Option)

May 15, 2017: Alan Dyer and Mac Burgess, CS Program Co-Leaders

Crop Science promotes commercial crop production expertise through interdisciplinary and inter-college instruction.

College of Agriculture: *Plant Science and Plant Pathology, Agricultural Economics, Agricultural Education, Land Resources and Environmental Science*, Jake Jobs College of Business and Entrepreneurship.

Core Faculty: Alan Dyer, Mac Burgess, Perry Miller.

Crop science students seek preparation for careers in: Commercial Farm Practice-Agricultural Support Industries-Integrated Cropping Systems Research

Learning Outcomes:

Students who graduate with a Crop Science option will master:

Core Outcomes:

1. **Effective communication.** Students will achieve mastery in written and oral communications. In public settings, students will engage audiences and convey positions in an effective, organized manner. Student compositions will convey clear, thoughtful arguments.
2. **Critical Thinking.** Students will assess situations from a multi-positional awareness. They will critically evaluate positions for benefits and costs. They will actively identify problems, understand underlying dynamics and evaluate solutions.

CS Specific Outcomes:

3. **Leading Agricultural Public Discourse.** Students will understand the roles local, state, federal and international policies play in agricultural production. They foresee changes in agricultural production through shifts in public opinion and will lead effective change.
4. **Designing effective cropping systems.** Students will master the design of cropping systems to make efficient use of system resources. They will understand the underlying factors that restrict production potential and how changes in production practices shift resource use patterns.
5. **Financially assessing cropping practices.** Students will master the skills necessary to financially appraise cropping decisions. They will identify market forces and market conditions. They will appraise accounting spreadsheets to identify potential cost savings and profit gains.
6. **Addressing production problems.** Students will master troubleshooting of agricultural systems. They will be able to identify diverse causes. They will evaluate potential solutions relative to system benefits and challenges.

Curriculum Map for Outcome Instruction:

Eighty percent of Program Curriculum provides opportunities for Core Development and at least 3 courses address each CS Specific Outcome. The program will conduct annual reviews to assure content coverage of outcomes and assessment thresholds.

Table 1. Outcome map displaying the outcome instruction relative to program courses. (I=introduce, D= develop, M= mastery).

Course Number	Course Titles	Outcomes					
		1	2	3	4	5	6
Core							
WRIT 101	College Writing	I					
US 101	University Seminar	I	I				
BMGT 205, WRIT201, WRIT221 (2 courses)	Prof. Business Com. College Writ. II/Technical Writing	M	I				
(BIOB318 or STAT216	Biometry/ Intro Stats.		I		D		D
Business Man.							
ECSN 101	Economic Way of Thinking					D	
Accounting and Business ¹ (2 courses)	(ACTG, AGBE, ECNS, BMKT, BMGT, BGEN)		D	D		M	D
Cropping Challenges							
AGSC 356	Plant Nutrition and Soil Fert.		M	D			
BIOO 262	Introduction to Entomology		D				X
ENSC 443.	Weed Ecology		D	D	D		D
BIOM 421	Concepts in Plant Pathology		D	M	D		M
Integrated Crop Sys.							
AGSC 341	Field Crop Production		D	D	D	D	D
AGSC 342	Forages		D	D	M	M	
AGSC 428	Sustainable Cropping Systems		M	M	M	M	M
Agriculture:							
Special Topics in Agriculture ¹ (2 courses)	(BIOE, AGSC, ENSC, HORT, ERTH, GPHY)		D	M	M		

¹Restricted electives provide for specialization based on students chosen career interest while still providing vital instruction in a particular area.

Program Assessment: Data Sources

The Crop Science Program will conduct multi-stage and multi-source assessment of program performance (Table 2.1). Students will evaluate curricula quality (during studies) and Program Performance (at graduation). Program leaders will evaluate curriculum content (survey of content), and outcome performance of students (Entrance and Exit). During studies, evaluation of student outcomes will occur in specified classes (Table 2.2). A core faculty meeting will provide overall input on program status and program response to needs.

Table 2.1 Assessment Design: Source, Description, Program Goals.

SOURCE	OUTCOMES						Program Goals
	1	2	3	4	5	6	
Student Evaluation of Course Quality	Semiannual student evaluations of courses conducted at faculty advisor meetings						Running Average >4.3 no course below 4.0
Graduate Evaluation of Program	Survey of graduating seniors of program quality						>90% satisfaction scores (3 year running average)
Survey of Course Content	Survey of course syllabi to establish relevance to program						>80% Curriculum provides opportunities for Core Development. ≥3 courses address each Specific Outcome.
Evaluation of Outcomes	Two courses were chosen to evaluate student mastery of outcomes (see table 2.2)						75% Student mastery of Core outcomes 80% Mastery of Specific Outcomes
Core Faculty Meeting	Spring meeting of core faculty for program evaluation and response to needs						Active management of program needs

Table 2.2 Proposed map of student assessments by course and outcome.

Course	Assessment of Student Learning Outcomes					
	1	2	3	4	5	6
AGSC 341			X	X	X	
BIOM 421	X	X				X

Performance Reporting and Response Plan:

Student Outcome Performance as well as **Crop Science Program Performance** will be compiled and distributed to core faculty prior to **Core Faculty Meeting**. At the meeting, core faculty will discuss the assessments and provide additional input with regards to program performance as well as recommendations with regards to program needs. The latter may include curriculum and content adjustments, alternate course substitutions, and augmented instruction (Invited Speakers, Extracurricular Instruction, and Student Organization). The program leaders will combine a final student outcome performance, Crop Science program performance and the program response to identified needs into an **Annual Crop Science Assessment** submitted to the Provost's Office in the HHD Department's Annual Assessment Activities report.

Reporting for 2016-2017:

Leadership for Crop Science concentration changed in April due to the retirement of the past faculty advisor, Dr. Jack Martin. The new faculty advisor Dr. Alan Dyer along with the new co-leader Dr. Mac Burges will initiate program assessments starting this fall.