



Agriculture Business & Management Cluster Blueprints

This document contains the 2015 blueprints for the concentration areas in the postsecondary Agriculture Business & Management Cluster.

The testing areas for this cluster are:

Agribusiness Management

- **Career Certificate** Agriculture Business and Management Technology Core (20102Y1-2015) *
- **Technical Certificate** Management and Vegetable Option (20102Y2-2015)

Beef Option/Agriculture Business and Management Technology

- **Career Certificate** Agriculture Business and Management Technology Core (20102Y1-2015) *
- **Technical Certificate** Beef Option /Ag Business Management Tech (20103Y2-2015)

Poultry Option/Agriculture Business and Management Technology

- **Career Certificate** Agriculture Business and Management Technology Core (20102Y1-2015) *
- **Technical Certificate** Poultry Option/Ag Business Management Tech (20104Y2-2015)

Field Crops Option/Agriculture Business and Management Technology

- **Career Certificate** Agriculture Business and Management Technology Core (20102Y1-2015) *
- **Technical Certificate** Field Crops Option/Ag Business Management Tech (20106Y2-2015)

Precision Agriculture Technology

- **Career Certificate** Precision Agriculture Technology (20185Y1-2015)
- **Technical Certificate** Precision Agriculture Technology (20185Y2-2015)

* **Career Certificate** for Agribusiness Management, Beef Option, Poultry Option, and Field Crops will have a core assessment (20102Y1-2015).

MS-CPAS Blueprint Summary

Assessment:	Agriculture Business and Management Technology Core
Test Code:	20102Y1-2015
CIP Code:	010102
Course Codes:	
Type:	PS

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Assessment: Agriculture Business and Management Technology Core	DOK Level(s)			Instructional Hours	Total Items
	1	2	3		
Test Code: 20102Y1-2015 CIP Code: 010102 Total Hours: 14					
AGT 1214 Applied Principles of Animal Production	1	2		4	11
1. Describe the types of production cycle of livestock. 2. Describe and contrast the characteristics of different breeds of livestock. 3. Describe the reproductive processes of livestock. 4. Describe nutritive needs of livestock. 5. Describe the importance of a livestock herd health program.					
AGT 1313 Applied Principles of Plant Production	1	2		3	9
1. Describe the interrelationship of the major parts of a plant and how they have adapted to the environment. 2. Identify the components of a typical plant cell, and describe their function(s). 3. Describe the processes and interrelationships of photosynthesis and respiration in green plants. 4. Describe the methods of weed, insect, and plant disease control. 5. Describe the genetics of plant breeding. 6. Explain the nutritional requirements for plants.					
AGT 1413 Principles of Agricultural Management	1	2		3	9
1. Explain the role and function of management in an agricultural production system. 2. Identify the most important factors to consider when selecting an organizational structure for an agribusiness. 3. Describe the use and importance of financial statements in the management practice of agribusiness today. 4. Discuss the different aspects of financing the agribusiness. 5. Perform whole farm planning and budgeting.					
AGT 1714 Applied Soils--Conservation and Use	1	2		4	11
1. Describe the soil formation process. 2. Describe the different physical properties of soils. 3. Develop soil management strategies for sustaining soil productivity. 4. Describe the properties of soil water.					
Active Items					40
Field-Test Items					10
TOTAL ASSESSED ITEMS					50

MS-CPAS Blueprint Summary

Assessment:	Management & Vegetable Option/Ag Bus Mgt Tech
Test Code:	20102Y2-2015
CIP Code:	010102
Course Codes:	
Type:	PS

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	1	2	3		
Test Code: 20102Y2-2015					
CIP Code: 010102					
Total Hours: 9					
AGT 1613 Agricultural Records	1	2		3	14
1. Describe the components of agriculture records. 2. Describe capital accounts and their financial components. 3. Describe the different types of credit. 4. Develop components for production records. 5. Distinguish between single entry accounting and double entry accounting systems.					
AGT 2263 Applied Agricultural Economics	1	2		3	13
1. Describe agribusiness relationship to the domestic and foreign economies. 2. Discuss demand theory and how a demand curve is developed. 3. Discuss the economic facts associated with single variable inputs. 4. Define the relationship between cost and length of run when used in planning and decision making. 5. Analyze government influence on the production and price of farm commodities.					
AGT 1513 Principles of Agricultural Marketing	1	2		3	13
1. Describe how a marketing system develops. 2. Identify the factors that affect basic commodity prices. 3. Discuss the use of hedging and the futures market with agricultural commodities. 4. Develop an understanding of the basics of meat and livestock marketing. 5. Develop an understanding of the basics of field crops marketing.					
Active Items					40
Field-Test Items					10
TOTAL ASSESSED ITEMS					50

MS-CPAS Blueprint Summary

Assessment:	Beef Option/Ag Bus Mgt Tech
Test Code:	20103Y2-2015
CIP Code:	010302
Course Codes:	
Type:	PS

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Assessment: Beef Option/Ag Bus Mgt Tech Test Code: 20103Y2-2015 CIP Code: 010302 Total Hours: 9	DOK Level(s)			Instructional Hours	Total Items
	1	2	3		
AGT 2663 Applied Animal Nutrition	1	2		3	14
1. Identify the classes of nutrients including protein, fat, carbohydrates, vitamins, minerals, and water. 2. Identify and contrast the differences in the digestive systems of the different species of farm animals. 3. Explain the process by which feedstuffs are analyzed. 4. Formulate rations for all classes of farm animals. 5. Identify the various sources of feedstuffs for livestock.					
AGT 1913 Animal Reproduction	1	2		3	13
1. Differentiate between phenotype and genotype. 2. Explain the male reproductive tract. 3. Explain the function of sperm. 4. Explain the female reproductive tract. 5. Explain the estrus cycle. 6. Perform reproductive management techniques.					
AGT 2613 Forage and Pasture Crops	1		2	3	13
1. Discuss the uses of forages. 2. Compare the composition and nutritive value of forages. 3. Examine the effects that farm management practices have on forage. 4. Identify common forages found in the South. 5. Identify wide control methods utilized in forage and pasture crops.					
Active Items					40
Field-Test Items					10
TOTAL ASSESSED ITEMS					50

MS-CPAS Blueprint Summary

Assessment:	Poultry Option/Ag Bus Mgt Tech
Test Code:	20104Y2-2015
CIP Code:	010907
Course Codes:	
Type:	PS

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Assessment: Poultry Option/Ag Bus Mgt Tech Test Code: 20104Y2-2015 CIP Code: 010907 Total Hours: 9	DOK Level(s)			Instructional Hours	Total Items
	1	2	3		
AGT 2523 Introduction to Poultry Production	1	2		3	14
1. Understand the components of the poultry industry. 2. Describe the anatomy and structure of a fowl. 3. Describe the physiology and reproduction of poultry. 4. Describe the genetics and breeding of poultry. 5. Describe the incubation process in hatchery management. 6. Describe the social behavior of animal welfare in poultry. 7. Discuss environment and housing of poultry. 8. Describe diseases and parasites in poultry. 9. Describe poultry and egg marketing. 10. Describe broiler, egg and turkey production. 11. Discuss various miscellaneous poultry. 12. Discuss waste management systems.					
AGT 2533 Poultry Nutrition	1	2		3	13
1. Label the digestive tract of poultry. 2. Identify the functions of each component of the digestive tract in poultry. 3. Describe the digestive process (metabolism and feeding water) 4. Describe feed components of poultry (protein, carbohydrates, water, vitamins, minerals, energy, etc.) 5. Determine the nutrient requirements of broilers/laying hens. 6. Convert nutritional units of measurement. 7. Understand ration formulation and least cost analysis.					
AGT 2543 Hatchery/Feed Mill Management	1	2		3	13
1. Understand the storage and selection of hatching eggs. 2. Discuss modern incubators. 3. Describe the factors affecting hatchability. 4. Understand the National Poultry Improvement Plan. 5. Understand Hatchery Sanitation. 6. Describe the feedstuffs for poultry diets. (Not on CPAS for this course) 7. Describe the design of a feed mill. 8. Understand feed formulations, ingredients and additives. 9. Understand poultry feed manufacturing. 10. Describe feed storage and transportation.					
Active Items					40
Field-Test Items					10
TOTAL ASSESSED ITEMS					50

MS-CPAS Blueprint Summary

Assessment:	Field Crops Option/Ag Bus Mgt Tech
Test Code:	20106Y2-2015
CIP Code:	010304
Course Codes:	
Type:	PS

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Assessment:							
Test Code:	Field Crops Option/Ag Bus Mgt Tech						
CIP Code:	20106Y2-2015						
Total Hours:	010304						
	12	DOK Level(s)		Instructional Hours		Total Items	
AGT 2373 Fiber and Oilseed Crops		1	2	3		10	
1. Develop and determine knowledgeable skills concerning crop production. 2. Identify natural resources/crop relationships. 3. Classify the different types of environmental problems experienced in crop production in Mississippi. 4. Identify tillage systems and production practices used for crop production in Mississippi. 5. Apply the principles of plant mapping to production of cotton. 6. Explain the inputs used in cotton, peanuts and soybean production. 7. Explain the principles of using chemical growth regulators and their use in controlling cotton growth.							
AGT 2383 Grain Crops		1	2	3		10	
1. Describe the utilization of grain crops. 2. Identify resources/crop relationships. 3. Classify the different types of environmental problems experienced in the production of grain crops in Mississippi. 4. Identify tillage systems and production practices used for the production of grain crops in Mississippi. 5. Identify methods for maintaining soil productivity in Mississippi. 6. Examine water management practices for grain production. 7. Identify machinery needs for grain production. 8. Identify environmental factors that affect grain production in Mississippi.							
AGT 2413 Weed Control		1	2	3		10	
1. Define and identify weeds. 2. Explain ways in which weeds harm agricultural crops. 3. Describe the different types, classes, and formulations of herbicides and how each affects crops and weeds. 4. Explain precautions to be followed to avoid injury to people, animals, and crops when applying herbicides. 5. Interpret information on an herbicide container label. 6. Determine how and when to apply herbicides. 7. Calculate drift, and determine amounts of herbicides to be applied. 8. Calibrate a herbicide applicator to deliver the prescribed amount of an herbicide to a given area. 9. Discuss emerging trends and issues in weed control.							
AGT 2463 Insects and Controls		1	2	3		10	
1. Identify insects associated with field crops. 2. Identify the basic anatomy of insects. 3. Identify types of insect damage incurred in field crops. 4. Explain the life cycle of various insects. 5. Identify different insecticide/pesticide categories. 6. Identify different classes and formulations of insecticides and how each affects insects. 7. Describe precautions to be followed to protect people, animals, and crops when applying insecticides. 8. Interpret information on an insecticide container label. 9. Explain the relationship between how and when to apply insecticides. 10. Compare aerial versus ground applications. 11. Identify alternative methods of insect control. 12. Identify insect damage levels.							
						Active Items	40
						Field-Test Items	10
						TOTAL ASSESSED ITEMS	50

MS-CPAS Blueprint Summary

Assessment:	Precision Agriculture Technology
Test Code:	20185Y1-2015
CIP Code:	011105
Course Codes:	
Type:	PS

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Test Code: 20185Y1-2015				
CIP Code: 011105			DOK	Instructional
Total Hours: 16			Level(s)	Hours
AGT 1354 Remote Sensing	1	2		4
1. Describe fundamental principles of remote sensing. 2. Discuss remote sensing platforms and characteristics of imagery. 3. Describe the characteristics of nonphotographic passive systems. 4. Develop skills in image interpretation, processing, analysis, and classification. 5. Examine data collection and processing processes for airborne remote sensing.				
AGT 1254 GNSS Data Collection	1	2		4
1. Discuss operation of Global Navigation Satellite Systems (GNSS). 2. Discuss basic concepts of precision agriculture. 3. Explain basic concepts of maps and geodesy. 4. Identify GNSS equipment and software used in precision agriculture operations. 5. Collect and apply GNSS data for use in navigation and mapping of agricultural interests.				
AGT 2154 Geographic Information Systems I	1	2		4
1. Define and describe the components of a Geographic Information System (GIS). 2. Practice the use of map views and data layers in a Geographic Information System. 3. Use tables and databases in a Geographic Information System. 4. Construct a layout using map features, tables, and database information. 5. Use the query function to retrieve information in a Geographic Information System. 6. Use spatial analysis to address questions in a Geographic Information System. 7. Describe the components of a mobile Geographic Information System.				
AGT 2434 Crop Management Zones	1	2		4
1. Discuss basic principles of soil mapping. 2. Discuss factors that determine crop production capabilities. 3. Discuss basic principles of remote imaging techniques as applied to crop management zones. 4. Apply sampling strategies. 5. Discuss analysis strategies. 6. Develop management strategies.				
Active Items				40
Field-Test Items				10
TOTAL ASSESSED ITEMS				50

MS-CPAS Blueprint Summary

Assessment:	Precision Agriculture Technology
Test Code:	21386Y2-2015
CIP Code:	011105
Course Codes:	
Type:	PS

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Assessment: Precision Agriculture Technology	DOK Level(s)			Instructional Hours	Total Items
Test Code: 21386Y2-2015					
CIP Code: 011105					
Total Hours: 12					
AGT 2164 Variable Rate Technology	1	2		4	13
1. Describe how variable rate technologies and precision farming techniques benefit agricultural producers and the general public. 2. Describe various components of VRT equipment and their relationship to other components (e.g., GNSS, GIS, controllers, planter, sprayer, nutrient applicator, etc.) 3. Describe how various types of data can be used for VRT. 4. Apply mathematical relationships to convert collected data into prescription application maps (e.g., field scouting data, geo-referenced sensor devices, scanned imagery, remote imagery, historical data, zone management versus pixel based, etc.). 5. Apply principles of VRT equipment operation to include calibration, operation, and troubleshooting (e.g., GNSS planter, sprayer, nutrient applicator, etc.).					
AGT 2174 Agricultural Geographic Information Systems	1	2		4	13
1. Apply GIS for record keeping and spatial analysis of data. 2. Apply spatial data analysis techniques. 3. Apply management and use of files.					
AGT 2474 Site Specific Pest Management	1	2		4	14
1. Review the most common insects, diseases, and weeds associated with agricultural crops in the midsouth and the damage they cause. 2. Explain principles of integrated pest management. 3. Identify different classes and formulations of pesticides and how they affect target pests. 4. Describe how Global Navigation Satellite Systems (GNSS), geographic information systems (GISs), and remote sensing interact to aid in the control of crop pests. 5. Describe and demonstrate how variable rate technology is applied for pest management.					
Active Items					40
Field-Test Items					10
TOTAL ASSESSED ITEMS					50