

SEC – Agricultural Technology and Mechanical (Core)

Blueprints

This document contains the blueprints for the concentration areas in secondary Agricultural Technology and Mechanical (Core).

Course Code(s)	Test Code	Program Name	Supplemental Materials/Notes
991300, 991302, 991303	10104Y1-2014	Agricultural Technology and Mechanical (Core)	

Curriculum	Perkins Assessment 2016-17		Teacher Evaluation Pilot 2016-17			
	Y1 Post-Test	Y2 Post-Test	Y1 Baseline	Y1 Post-Test	Y2 Baseline	Y2 Post-Test
Agricultural Technology and Mechanical (Core)	MS-CPAS2*	MS-CPAS2*	NA*	NA*	NA*	NA*

* These assessments are subject to change based on funding and policy changes/updates.

Information for test coordinators will be disseminated on the ordering process for the national certification by the Research and Curriculum Unit at Mississippi State University.



MS-CPAS2 Blueprint Summary

Assessment: Agricultural Technology and Mechanical (Core)
Test Code: 10104Y1-2014
CIP Code: 010205
Course Codes: 991300, 991302, 991303
Type: CP

The MS-CPAS2 Blueprint Summary indicates the number of assessment questions related to each unit on the assessment and indicates the relative emphasis placed on each unit. All of the listed competencies will appear on the assessment, but because of the length of the assessment, not every competency will be equally represented in the assessment.

The MS-CPAS2 Blueprint Summary includes a variety of information, which is explained below:

Terms and Definitions	
Assessment:	This signifies the name of the assessment, which corresponds with the name of the pathway or program.
CIP Code:	Developed by the U.S. Department of Education's National Center for Education Statistics (NCES), CIP codes are a federal coding system utilized for assessment and reporting of fields of study and program completions activity tracking.
Test Code:	A unique code that serves to numerically identify a specific assessment
DOK Levels:	Based on Webb's Depth of Knowledge (DOK), this signifies the assessment item difficulty factor to be expected in each unit. The three levels are as follows: <i>1 = Recall and Reproduction, 2 = Skills and Concepts, 3 = Short-term Strategic Thinking</i> Some postsecondary programs will not use DOK levels until the next revision.
Instructional	The total number of hours assigned to a unit per the pathway's curriculum
Total Items:	The total number of items assigned to each unit on the assessment. It is calculated as follows: <i>(Unit Instructional Hours / Total Instructional Hours) * Total Active Items</i>
Active Items:	The number of items on the assessment that will be graded
Field-test Items:	The number of items that are being field-tested, or piloted, to determine their eligibility for inclusion as an Active Item on future assessments. These items are not graded and, thus, will not impact the student's final score.
Total Assessed Items:	The total number of items on the given assessment. It is calculated as follows: <i>Active Items + Field-test Items</i>

For more information regarding this MS-CPAS2 Blueprint Summary, please contact the Mississippi Assessment Center by phone at 1.866.901.7433 or by e-mail at helpdesk@rcu.msstate.edu.



Assessment: Agricultural Technology and Test Code: 10104Y1-2014 CIP Code: 010205 Total Hours: 170	DOK Level(s)			Instructional Hours	Total Items
	1	2	3		
Unit 1: Not on CPAS					
Unit 2: Safety	1	2		15	7
1. Explain the general laboratory safety requirements for Agriculture Technology and Mechanical Systems. 2. Identify hazardous material that may be found in the laboratory or on a job site and describe procedures for handling/avoidance or removal of materials. 3. Explain procedures for applying fire safety in the Agriculture Technology and Mechanical Systems shop. 4. Demonstrate the proper use of hand tools used in Agriculture Technology and Mechanical Systems. 5. Demonstrate the proper use of portable power tools found in the Agriculture Technology and Mechanical Systems. 6. Demonstrate the proper use of stationary tools used in Agriculture Technology and Mechanical Systems. 7. Demonstrate the proper use of lifting, hoisting, and supporting equipment used in Agriculture Technology and Mechanical Systems.					
Unit 3: Measurement	1	2		15	7
1. Identify types of measuring devices used in Agriculture Technology and Mechanical Systems. 2. Apply English and metric systems of measurement.					
Unit 4: Fasteners	1	2		10	5
1. Select typical fasteners used in Agriculture Technology and Mechanical Systems including bolts, nuts, washers, keys, snap rings, screws, pins, and studs.					
Unit 5: Oxyfuel Cutting	1	2		25	12
1. Assemble and handle oxyfuel cutting equipment. 2. Operate oxyfuel cutting equipment.					
Unit 6: Arc Welding (SMAW)	1	2	3	40	19
1. Set up SMAW welding equipment. 2. Demonstrate procedures for SMAW arc welding.					
Unit 7: Mechanics and Power Transmission	1	2	3	15	7
1. Demonstrate machines used for transmitting power in agricultural equipment. 2. Explain the concepts of power including work, force, and torque, and the elements of power including power take off (PTO) horsepower, drawbar horsepower, and brake horsepower. 3. Not on CPAS.					
Unit 8: Compact Engines Service and Repair	1	2	3	50	23
1. Describe the operation of the four cycle engine. 2. Describe the operation of the two cycle engine. 3. Describe the basic operation and service of electrical systems. 4. Perform compact gasoline engine service. 5. Read and interpret operator's manual to determine daily maintenance on compact gasoline engines, 6. Disassemble, inspect, and reassemble a compact gasoline engine.					
Unit 9: Not on CPAS					
Active Items					80
Field-Test Items					20



TOTAL ASSESSED ITEMS

100