



SEC – Science of Agricultural Plants Blueprints

This document contains the blueprints for the concentration areas in secondary Science of Agricultural Plants.

| Course Code(s) | Test Code | Program Name | Supplemental Materials/Notes |
|----------------|--------------|--------------------------------|------------------------------|
| 991003 | 10172Y1-2010 | Science of Agricultural Plants | |

| 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 |
| Science of Agricultural Plants | MS-CPAS2* | NA* | 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: Science of Agricultural Plants
Test Code: 10172Y1-2010
CIP Code: 011101
Course Codes: 991003
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: Science of Agricultural Plants | | | | | | |
|---|---|---|--|---------------------|-----------------------------|--------------------|
| Test Code: 10172Y1-2010 | | | | DOK Level(s) | Instructional Hours | Total Items |
| CIP Code: 011101 | | | | | | |
| Total Hours: 90 | | | | | | |
| Unit 1: Not on CPAS | | | | | | |
| Unit 2: Not on CPAS | | | | | | |
| Unit 3: Plant Growth and Nutrition | 1 | 2 | | | 15 | 13 |
| 1. Examine the principles of plant growth. 2. Discuss basic principles of plant nutrition and soil pH. 3. Analyze soil fertility, and calculate fertilizer application rates for a specific crop. | | | | | | |
| Unit 4: Plant Classification and Physiology | 1 | 2 | | | 15 | 13 |
| 1. Examine plant classification methods. 2. Investigate plant anatomy. 3. Assess physiological principles of plants. | | | | | | |
| Unit 5: Plant Reproduction and Propagation | 1 | 2 | | | 20 | 18 |
| 1. Examine the principles of genetics. 2. Distinguish between sexual and asexual reproduction. | | | | | | |
| Unit 6: Plant Growing Structures | 1 | 2 | | | 10 | 9 |
| 1. Describe the use of various plant growing structures and their environmental control systems. | | | | | | |
| Unit 7: Cultural and Harvesting Practices | 1 | 2 | | | 15 | 13 |
| 1. Examine types of growing media. 2. Explore tillage, irrigation practices, harvesting methods, and harvest timing. 3. Examine sustainable agriculture practices in plant production. | | | | | | |
| Unit 8: Pest Management | 1 | 2 | | | 10 | 9 |
| 1. Assess the effects of pests on plant production. 2. Examine concepts of plant pest control | | | | | | |
| Unit 9: Marketing in Plant Production | 1 | 2 | | | 5 | 5 |
| 1. Examine marketing practices used in crop and plant production. 2. Explore the economics of plant production. | | | | | | |
| | | | | | Active Items | 80 |
| | | | | | Field-Test Items | 20 |
| | | | | | TOTAL ASSESSED ITEMS | 100 |