RESEARCH & CURRICULUM UNIT
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Industrial Maintenance Cluster Blueprints

This document contains the 2014 blueprints for postsecondary Industrial Maintenance concentrations.

Industrial Maintenance— Advanced Manufacturing Concentration

- **Career Certificate** (21357Y1-2014) *
- **Technical Certific**ate (21357Y2-2014)

Industrial Maintenance— Industrial Maintenance Concentration

- **Career Certificate** (21357Y1-2014) *
- **Technical Certificate (assessment to be developed)**

***Career Certificate** for Industrial Maintenance (Industrial Maintenance Concentration) and Industrial Maintenance (Advanced Manufacturing Concentration) have a core assessment (21357Y1-2014).

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MS-CPAS2 Blueprint Summary

Assessment: Industrial Maintenance
Test Code: 21357Y1-2014
CIP Code: NA
Course Codes:
Type: PS

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: *1 = Recall and Reproduction, 2 = Skills and Concepts, 3 = Short-term Strategic Thinking* **Some postsecondary programs will not use DOK levels until the next revision.**
Instructional Hours:	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: *(Unit Instructional Hours / Total Instructional Hours) * Total Active Items*
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: *Active Items + Field-test Items*

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: Industrial Maintenance **Test Code:** 21357Y1-2014 **CIP Code:** NA **Total Hours:** 7	DOK Level(s)	Instructional Hours	Total Items
IMM 1214: Introduction to Industrial Maintenance	1 2	4	23
1. NCCER Electrical and Instrumentation Level I: Module 40101-07 – Orientation to the Trade			
2. NCCER Electrical and Instrumentation Level I: Module 40102-07 – Tools of the Trade			
3. NCCER Electrical and Instrumentation Level I: Module 40103-07 – Fasteners and Anchors			
4. NCCER Electrical and Instrumentation Level I: Module 40104-07 – Oxyfuel Cutting			
5. NCCER Electrical and Instrumentation Level I: Module 40105-07 – Gaskets and Packing			
6. NCCER Electrical and Instrumentation Level I: Module 40106-07 – Craft-Related Mathematics			
7. NCCER Electrical and Instrumentation Level I: Module 40107-07 – Construction Drawings			
8. NCCER Electrical and Instrumentation Level I: Module 40108-07 – Pumps and Drivers			
9. NCCER Electrical and Instrumentation Level I: Module 40109-07 – Introduction to Valves			
10. NCCER Electrical and Instrumentation Level I: Module 40110-07 – Introduction to Test Equipment			
11. NCCER Electrical and Instrumentation Level I: Module 40111-07 – Material Handling and Hand Rigging			
12. NCCER Electrical and Instrumentation Level I: Module 40112-07 – Mobile and Support Equipment			
13. NCCER Electrical and Instrumentation Level I: Module 40113-07 – Lubrication			
IMM 1243: Mechanical Industrial Maintenance I	1 2	3	17
1. NCCER Maintenance Mechanic Level: Module 32301-08 – Advanced Trade Math			
2. NCCER Maintenance Mechanic Level: Module 32302-08 – Precision Measuring Tools			
3. NCCER Maintenance Mechanic Level: Module 32303-08 – Installing Bearings			
4. NCCER Maintenance Mechanic Level: Module 32304-08 – Installing Couplings			
Active Items			40
Field-Test Items			10
TOTAL ASSESSED ITEMS			50

MS-CPAS2 Blueprint Summary

Assessment: Industrial Maintenance (Advanced Manufacturing Technician Concentration)
Test Code: 21357Y2-2014
CIP Code: NA
Course Codes:
Type: PS

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.

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Assessment: Industrial Maintenance (Advanced Manufacturing Technician Concentration) **Test Code:** 21357Y2-2014 **CIP Code:** NA **Total Hours:** 7	DOK Level(s)	Instructional Hours	Total Items
IMM 2613: Programmable Logic Controllers	1 2	3	17
1. Explain principles of PLCs. 2. Identify different types of PLC hardware. 3. Explain numbering systems, encoding/decoding, and logical operations. 4. Program all types of internal and discrete instructions. 5. Troubleshoot and maintain different programmable controllers systems.			
IMM 2424: Solid State Motor Control	1 2	4	23
1. Apply general safety and safety requirements for working on and around electrical motors. 2. Troubleshoot solid state motor controls. 3. Operate AC and DC variable speed drives.			
		Active Items	**40**
		Field-Test Items	**10**
		TOTAL ASSESSED ITEMS	**50**