

MS-CPAS Blueprint Summary

Assessment:	Process Operations Technology
Test Code:	21386Y0-2008
CIP Code:	150699
Course Codes:	
Type:	PS

The MS-CPAS 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-CPAS 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 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: <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-CPAS Blueprint Summary, please contact the Research and Curriculum Unit by phone at 1.866.901.7433 or by e-mail at helpdesk@rcu.msstate.edu.

Assessment: Process Operations Technology	DOK Level(s)			Instructional Hours	Total Items
Test Code: 21386Y0-2008					
CIP Code: 150699					
Total Hours: 32					
PPT 1133: Introduction to Process Technology				3	7
1. Discuss the history and development of various types of process industries. 2. Identify and describe the duties, responsibilities, and expectations of a process technician. 3. Explore the concepts of health, safety, environmental, and quality concerns as related to the process industry. 4. Identify and describe the function of process equipment. 5. Identify fundamental process systems. 6. Investigate the relationship of math, physics, and chemistry to process technology.					
PPT 1424: Process Technology I (Equipment)				4	9
1. Describe various types of piping equipment commonly found in refining and petro-chemical industries. 2. Describe various types of rotating equipment commonly found in refining and petro-chemical industries. 3. Describe various types of fixed equipment commonly found in refining and petro-chemical industries. 4. Use process and piping diagrams and drawings to explain process flows and identify equipment in a unit/system.					
PPT 1434: Process Technology II (Systems)				4	9
1. Describe and identify the types of systems used in the process industry. 2. Describe typical process technician responsibilities for the following systems.					
PPT 1444: Process Technology III (Operations)				4	9
1. Describe and apply procedures for a normal startup. 2. Describe and apply procedures for normal operations. 3. Describe and apply procedures for abnormal/emergency operations and situations. 4. Describe and apply procedures for normal shutdown of a process unit.					
PPT 1513: Safety, Health, and Environment				3	6
1. Identify and describe common types of hazards in process technology. 2. Identify and describe government regulations and agencies that regulate worker and environmental safety. 3. Describe policies, procedures, and controls that are designed to ensure and promote worker safety.					
PPT 1714: Process Instrumentation I				4	9
1. Describe and apply the major elements of process technology. 2. Describe and explain the functions and components of process control. 3. Describe and interpret the types of process industry drawings. 4. Describe the role and function of advanced controls and controllers in process operations.					
PPT 2313: Quality Concepts				3	6
1. Describe the relationship between plant economics and total quality management (TQM). 2. Discuss the relationship between customer relationships and productivity/profit. 3. Apply effective communication and team skills. 4. Describe concepts related to processes, systems, and organizational learning. 5. Discuss and apply principles of variance and operating consistency. 6. Describe, apply, and interpret basic statistics and statistical process control procedures.					
PPT 2323: Process Troubleshooting				3	6
1. Identify and describe the methods and tools of troubleshooting process systems. 2. Apply the troubleshooting steps and tools to solve simulated problems.					



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PPT 2724: Process Instrumentation II				4	9
1. Discuss the types of instruments used in industry to monitor and control processes. 2. Discuss the function and use of control schemes in industry. 3. Discuss the various advanced control schemes. 4. Explore the use of instrument power supply. 5. Explore emergency shutdowns, interlocks, and protection devices. 6. Explain the different practices related to process technicians' troubleshooting process instruments.					
Active Items					70
Field-Test Items					30
TOTAL ASSESSED ITEMS					100