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Aviation Technology Cluster Blueprints

This document contains the 2014 blueprints for postsecondary Aviation Technology concentrations.

Aviation Technology—Air Traffic Control Concentration

- **Career Certificate** (21640Y1-2014) *
- **Technical Certific**ate (21640Y2-2014)

Aviation Technology—Unmanned Aerial Systems Concentration

- **Career Certificate** (21640Y1-2014) *
- **Technical Certificate (assessment to be developed)**

***Career Certificate** for Aviation Technology (Air Traffic Control Concentration) and Aviation Technology (Unmanned Aerial Systems Concentration) have a core assessment (21640Y1-2014).

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MS-CPAS2 Blueprint Summary

Assessment: Aviation Technology
Test Code: 21640Y1-2014
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: Aviation Technology **Test Code:** 21640Y1-2014 **CIP Code:** NA **Total Hours:** 15	**DOK Level(s)**			**Instructional Hours**	**Total Items**
ANT 1113: Introduction to Aviation	**1**	**2**		**3**	**8**
1. Define the aviation environment and the air traffic control environment. 2. Investigate career opportunities as it relates to aviation technology. 3. Describe the history and development of the National Airspace System (NAS). 4. Describe the airport environment. 5. Become oriented with the various navigation systems including ground and satellite based systems. 6. Discuss the basics of aviation communications. 7. Identify aircraft recognition factors (single engine, multi-engine, transport, etc.).					
ANT 1213: Private Pilot Ground I	**1**	**2**		**3**	**8**
1. Comprehend and demonstrate understanding of: a. Airplane systems b. Power plants and related systems c. Flight instrument d. Four forces of flight and the aerodynamics of flight e. Airports, aeronautical charts, and airspace f. Radar and ATC services, radio procedures, and sources of flight information					
ANT 1313: Airport Management and Operations	**1**	**2**		**3**	**8**
1. Identify general structure and discuss the components of: a. Commercial airports b. General aviation airports 2. Describe airport operations management under 14 CFR Part 139. 3. Explain components of the airport terminal design. 4. Explain airport security requirements and relationships with federal agencies. 5. Discuss airport planning, capacity, and delays.					
ANT 1513: Aviation Security	**1**	**2**		**3**	**8**
1. Discuss the history and development of aviation security regulations. 2. Demonstrate an understanding of: a. Security measures related to aviation security b. Screening process for passengers and cargo at airports c. Security technology d. Access controls and perimeter security					
ANT 2113: Applied Meteorology	**1**	**2**		**3**	**8**
1. Demonstrate knowledge and an understanding of: a. Basic weather theory including air masses and weather patterns. b. Hazardous weather conditions and its effects on aviation. c. Weather data, including routine weather reports and forecasts. d. Controller responsibilities regarding the presentation of current weather conditions. e. Techniques for providing weather information to the flying public					
				Active Items	**40**
				Field-Test Items	**10**
				TOTAL ASSESSED ITEMS	**50**

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MS-CPAS2 Blueprint Summary

Assessment: Aviation Technology (Air Traffic Control Concentration)
Test Code: 21640Y2-2014
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.
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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
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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*

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Assessment: Aviation Technology (Air Traffic Test Code: 21640Y2-2014 CIP Code: NA Total Hours: 12	DOK Level(s)			Instructional Hours	Total Items
ANT 2133: Tower Operations and Procedures	1	2		3	10
1. Interpret aviation charting and identify data pertinent to airport control duties. 2. Apply air traffic control systems and duties to pertinent airport situations. 3. Interpret orders, manuals, standard operating practices and the FARs. 4. Apply the principles of flight and the pilot's environment. 5. Apply the appropriate rules regarding critical phases of flight in the airport environment. 6. Interpret and apply procedures to aircraft and vehicle emergencies.					
ANT 2143: Radar Operations and Procedures	1	2		3	10
1. Interpret aviation charting and identify data pertinent to airport control duties. 2. Apply air traffic control systems and duties to pertinent airport situations. 3. Interpret orders, manuals, standard operating practices and the FARs. 4. Apply the principles of flight and the pilot's environment. 5. Apply the appropriate rules regarding critical phases of flight in the airport environment. 6. Interpret and apply procedures to airborne aircraft in emergencies and distress.					
ANT 2153: Tower Applications	1	2		3	10
1. Prioritize the separating and sequencing of airport traffic 2. Utilize judgment in prioritizing airport control actions, i.e., timely and appropriately. 3. Analyze adverse and emergency situations and take timely corrective actions. 4. Comprehend equipment capabilities and requirements. 5. Listens effectively and applies solutions to situations. 6. Utilize prescribed tower phraseology.					
ANT 2163: Radar Applications	1	2		3	10
1. Prioritize the separating of radar arrivals and departures. 2. Initiate, coordinate, and utilize traffic management procedures appropriately. 3. Utilize judgment in prioritizing radar control actions, i.e., timely and appropriately. 4. Analyze adverse and emergency radar situations and takes timely corrective actions. 5. Comprehend equipment capabilities and requirements. 6. Listens effectively and applies solutions to situations. 7. Utilize prescribed phraseology.					
				Active Items	**40**
				Field-Test Items	**10**
				TOTAL ASSESSED ITEMS	**50**