

**Career Technical Credit Transfer (CT)²
Air Transportation Career-Technical Assurance Guide (CTAG)
March 4, 2015**

The following programs/courses, indicated by a Career-Technical Articulation Number (CTAN), are eligible for transfer among Ohio's Public Secondary (CT)² approved programs/courses and state institutions of higher education. The SCTAI alignment document with ODE competencies and post-secondary learning outcomes can be found at <https://www.ohiohighered.org/transfer/ct2/ctags>.

CTAIR001 - Air Transportation	Credits: 3 Semester Hours
<p>Advising Notes: In order to access post-secondary college credit for this CTAN, the student must:</p> <ul style="list-style-type: none"> • Matriculate to an institution of higher education with an approved or comparable program within 3 years after completing the approved secondary program • Successfully complete <u>ODE course Aviation Airport Management (177020)</u> and earn a qualifying score of 73 or higher on the corresponding End of Course examination 	<p>Secondary institutions must have pathway approval from the Ohio Department of Education. Certificate of Affirmation assurances are now incorporated into the CTE-26 application process.</p>
CTAIR002 - Aircraft Ground Operations	Credits: 3 Semester Hours
<p>Advising Notes: In order to access post-secondary college credit for this CTAN, the student must:</p> <ul style="list-style-type: none"> • Matriculate to an institution of higher education with an approved or comparable program within 3 years after completing the approved secondary program • Successfully complete <u>ODE course Aviation Maintenance General (177014)</u> and earn a qualifying score of 71 or higher on the corresponding End of Course examination • Sending school must be approved by the Federal Aviation Regulations with Part 147 certification to be eligible to transfer credit to a Part 147 program. Students from sending schools that are not Part 147 certified can only transfer credit to a non-Part 147 certified institution that offers this content. 	<p>Secondary institutions must have pathway approval from the Ohio Department of Education. Certificate of Affirmation assurances are now incorporated into the CTE-26 application process.</p>

CTAIR003 - Aviation Meteorology	Credits: 3 Semester Hours
<p>Advising Notes: In order to access post-secondary college credit for this CTAN, the student must:</p> <ul style="list-style-type: none"> • Matriculate to an institution of higher education with an approved or comparable program within 3 years after completing the approved secondary program • Successfully complete <u>ODE course Aviation Meteorology (177019)</u> and earn a qualifying score of 72 or higher on the corresponding End of Course examination 	<p>Secondary institutions must have pathway approval from the Ohio Department of Education. Certificate of Affirmation assurances are now incorporated into the CTE-26 application process.</p>
CTAIR004 - Introduction to Aviation	Credits: 3 Semester Hours
<p>Advising Notes: In order to access post-secondary college credit for this CTAN, the student must:</p> <ul style="list-style-type: none"> • Matriculate to an institution of higher education with an approved or comparable program within 3 years after completing the approved secondary program • Successfully complete <u>ODE course Aviation (177013)</u> and earn a qualifying score of 74 or higher on the corresponding End of Course examination 	<p>Secondary institutions must have pathway approval from the Ohio Department of Education. Certificate of Affirmation assurances are now incorporated into the CTE-26 application process.</p>

Requirements and Credit Conditions:

1. The receiving institution must have a comparable program, major, or courses that have been approved through submission to the Ohio Department of Higher Education (CT)² approval process for the CTANs listed in this document.
2. Credits apply to courses in the specified technical area at Ohio's Public Institutions of Higher Education, provided that the institution offers courses in the specific technical area. In the absence of an equivalent course, and when the institution offers the technical program, the receiving institution will guarantee to grant and apply an equivalent credit value of the Career-Technical Articulation Number (CTAN) toward the technical requirements of the specific degree/certificate program.
3. The applicant must provide proof to the receiving institution that she/he completed a course or program that has been approved through the (CT)² approval process and that she/he holds the appropriate credential.
4. A career-technical student seeking credit under the terms of this CTAG must enroll and submit their verification form to the college within three years of completing a career-technical course. Students may earn credit within the currency of the industry certificate or license.
5. A career-technical student who meets all eligibility criteria will receive the credit hour value for the comparable course(s) as offered at the receiving state institution of higher education.
6. The admission requirements of individual institutions and/or programs are unaffected by the implementation of (CT)² outcomes.
7. The transfer of credit through this CTAG will not exempt a student from the residency requirements at the receiving institution.

Each CTAN identifies the learning outcomes that are equivalent or common in introductory technical courses. In order for students to be able to receive credit under these agreements, the career-technical programs and the state institutions of higher education must document that their course/program content matches the learning outcomes in the CTANs. In accordance with Ohio Revised Code 3333.162, industry standards and certifications provide documentation of student learning.

CTAIR001 - Air Transportation

General Course Description: An in-depth look at air transportation with an emphasis on commercial air carrier operations. Topics include history and development of air transportation, air carrier operations, and regulation and control of air carriers.

Credits: 3 Semester Hours

Learning Outcomes:

1. *Demonstrate basic knowledge of the history, development, evolution and current and future trends of air transportation.
2. *Demonstrate basic knowledge of the airport and NAS environment in the United States.
3. *Demonstrate an in-depth understanding of the structure and operation of air carriers.
4. *Demonstrate basic understanding of business aviation.
5. *Demonstrate basic knowledge of the regulatory environment governing air carriers in the United States.

***Indicates Essential Learning Outcome**

CTAIR002 - Aircraft Ground Operations

General Course Description: An introduction to aircraft maintenance ground operations and servicing. Students must demonstrate their knowledge and ability to correctly perform aircraft maintenance-related ground operations and aircraft servicing, and properly use required technical manuals, technical data, publication, and forms.

Credits: 3 Semester Hours

Learning Outcomes:

1. *Demonstrate, through written and oral examination, an in-depth understanding of various aircraft maintenance-related ground operations and procedures including:
 - a. *Aircraft ground towing and movement
 - b. *Aircraft parking and mooring
 - c. *Aircraft marshaling
 - d. *Ground vehicle operation
 - e. *Engine starting
 - f. *Engine operation
 - g. *Aircraft jacking and hoisting
 - h. *Aircraft servicing
 - i. *Aircraft cleaning
 - j. *Aircraft fuels and fueling
 - k. *Aircraft de-icing
 - l. *Ramp/flight line safety
 - m. *Hanger/shop safety
 - n. *Aircraft weight and balance assessment

2. *Perform various aircraft maintenance-related tasks and procedures for the following ground operations:
 - a. *Aircraft ground towing and movement
 - b. *Aircraft parking and mooring
 - c. *Aircraft marshaling
 - d. *Ground vehicle operation
 - e. *Engine starting
 - f. *Engine operation
 - g. *Aircraft jacking and hoisting
 - h. *Aircraft servicing
 - i. *Aircraft fueling
 - j. *Aircraft de-icing

- k. *Aircraft cleaning
 - l. *Determining aircraft weight and center of gravity
3. *Demonstrate, through written and oral examination, an understanding of the use of various required maintenance forms and records.
 4. *Properly prepare required maintenance forms and records.
 5. *Demonstrate, through written and oral examination, an understanding of the use of maintenance manuals and publications.
 6. *Properly identify and use maintenance manuals and publications.

**** Indicates Essential Learning Outcome***

CTAIR003 - Aviation Meteorology

General Course Description: Fundamental concepts of aviation meteorology. Topics include atmospheric properties and process, basic weather theory, weather hazards to flight, and aviation weather information and services.

Credit: 3 Semester Hours

Learning Outcomes:

1. *Demonstrate basic knowledge of the structure and properties of the atmosphere.
2. *Demonstrate an understanding of the basic causes and characteristics of aviation weather.
3. *Demonstrate an understanding of aviation weather hazards and hazardous conditions.
4. *Describe the different types of aviation weather resources and services.
5. *Analyze and interpret different types of aviation weather forecasts, charts, and other weather reports to determine and predict flight conditions.

**** Indicates Essential Learning Outcome***

CTAIR004 - Introduction to Aviation

General Course Description: An overview of the history, development, and evolution of aeronautics and aviation. Course also explains the national aviation system in the United States, describes different sectors of the aviation industry, and explores various opportunities and career paths in aviation.

Credit: 3 Semester Hours

Learning Outcomes:

1. *Demonstrate basic knowledge of the history, development, and evolution of aviation.
2. *Demonstrate basic knowledge of different sectors of the air transportation industry.
3. *Demonstrate basic knowledge of the airport environment in the United States.
4. *Demonstrate basic knowledge of the NAS and the air traffic control system in the United States.
5. *Demonstrate basic knowledge of aviation industry career specialties, opportunities, and trade/professional organizations.
6. *Demonstrate basic knowledge of the manufacturing and maintenance industries for military, commercial, and general aviation aircraft.

**** Indicates Essential Learning Outcome***

**Air Transportation Panel Participants
Fall 2014**

Dr. John Duncan	Kent State University	SCTAI Panel Lead Expert
Dr. Royce Ann Martin	Bowling Green State University	SCTAI Panel Expert
Mark Reed	Columbus State Community College	SCTAI Panel Expert
James Schmid	Cincinnati State Technical and Community College	SCTAI Panel Expert
Kent Wingate	Sinclair Community College	SCTAI Panel Expert
Jeff Gruber	Columbus State Community College	Item Writer
Don Stark	Sinclair Community College	Item Writer
Brian Strzempkowski	The Ohio State University	Item Writer
Brad Early	The Ohio State University	Item Writer
Dale Gelter	The Ohio State University	Item Writer
Doug Hammon	The Ohio State University	Item Writer
Jim Opperman	The Ohio State University	Item Writer
Cyndi Brill	Ohio Department of Education	
John Wiseman	Ohio Department of Education	
Dr. Jim Austin	Center on Education and Training for Employment at OSU	
Brooke Parker	Center on Education and Training for Employment at OSU	
Pete Ross	Ohio Department of Higher Education	SCTAI Special Coach
Jamilah Tucker	Ohio Department of Higher Education	Director of Career-Technical Transfer Initiatives
Anne Skuce	Ohio Department of Higher Education	Senior Associate Director, SCTAI
Misty McKee	Ohio Department of Higher Education	Assistant Director, SCTAI
Jessi Spencer	Ohio Department of Higher Education	Administrative Coordinator of SCTAI