

**Career-Technical Credit Transfer (CT)²
Automotive Technology Career-Technical Assurance Guide (CTAG)
February 12, 2015**

The following courses, indicated by a Career-Technical Articulation Number (CTAN), are eligible for post-secondary credit and transfer among Ohio’s public secondary career-technical institutions and state institutions of higher education. The SCTAI alignment document with ODE competencies and post-secondary learning outcomes can be found on the ODHE website at <https://www.ohiohighered.org/sctai/ctags>.

CTAUT005 Introduction to Automotive Service and Repair	Credits: 2 Semester Hours
<p>Advising Notes:</p> <p>To access college credit for this CTAN, secondary students must:</p> <ul style="list-style-type: none"> • Successfully complete the ODE secondary course [<u>Ground Transportation Maintenance (EMIS Code 177000)</u>] with a “C” or better • Pass the ASE/NATEF Student Certification Examination for Maintenance and Light Repair (MLR) or Automobile Service and Technology (AST) and seek credit within three years from the date the examination was taken, or within the currency of the industry certificate <p>To access college credit for this CTAN, adult career-technical students* must:</p> <ul style="list-style-type: none"> • Successfully complete a NATEF accredited program at a (CT)² approved Ohio adult career-technical institution with a “C” or better • Pass the ASE/NATEF Student Certification Examination for Maintenance and Light Repair (MLR) or Automobile Service and Technology (AST) and seek credit within three years from the date the examination was taken, or within the currency of the industry certificate. <p>*Adult career-technical students who possess a current ASE Maintenance and Light Repair (G1) certification are also eligible to receive credit for this CTAN.</p>	<p>Industry Accreditation: The National Automotive Technicians Education Foundation (NATEF) industry credential is required for this CTAN.</p>

CTAUT006 Introduction to Medium and Heavy Transportation Equipment Technology**Credits: 2 Semester Hours**

Advising Notes: Introduction to Medium and Heavy Transportation Equipment Technology is an optional component of Ground Transportation Maintenance (ODE Course 177000). Not all secondary institutions will possess the NATEF accreditation to teach this component.

To access college credit for this CTAN, **secondary students** must:

- Matriculate to an institution of higher education with an approved or comparable program within three years of completing the approved program or within the currency of the of the industry certification
- Pass the ASE/NATEF Student Certification Examination for Medium/Heavy Truck Service and Repair

To access college credit for this CTAN, **adult career-technical students*** must:

- Successfully complete a NATEF accredited program at a (CT)² approved Ohio adult career-technical institution
- Pass the ASE/NATEF Student Certification Examination for Medium/Heavy Truck Service and Repair, and seek credit within three years from the date the examination was taken, or within the currency of the industry certificate

***Adult career-technical students who possess a current ASE Medium/Heavy Truck Service and Repair certification are also eligible to receive credit for this CTAN.**

Industry Accreditation: The National Automotive Technicians Education Foundation (NATEF) industry credential is required for this CTAN.

Each CTAN identifies the learning outcomes that are equivalent or common in introductory technical courses. For students to receive credit under these agreements, the career-technical programs and the state institutions of higher education must document that their course(s) 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. Recognized industry standards are expectations established by business, industry, state agencies, or professional associations. These standards define training program curricular requirements, establish certification or licensure criteria, and often serve as the basis for program accreditation. Where there are not recognized industry standards that define curriculum, statewide faculty panels define the curricular requirements, and seek input and consensus from institutions statewide.

Requirements and Credit Conditions:

1. The receiving institution must have comparable program, major or courses that have been approved through submission to the Ohio Department of Higher Education (CT)² approval process to match to 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 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 secondary or career-technical student seeking credit under the terms of this CTAG must apply and be accepted to the college within three years of graduating from high school or a career center.
5. A secondary or career-technical student who meets all eligibility criteria will receive the credit hour value for the comparable course(s) as offered at the receiving postsecondary institution.
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.

CTAUT005 – Introduction to Automotive Service and Repair

General Course Description: This course introduces students to the automotive service and repair industry. It also includes basic tool usage and shop safety information. The students will learn to effectively perform basic automotive preventive maintenance as well.

Credits: 2 Semester Hours

Learning Outcomes:

1. * Demonstrate the ability to work safely in the automotive shop environment
2. * Identify and demonstrate proper use of hand tools and equipment commonly used in the automotive service and repair industry
3. *Students will be able to list common careers in the automotive service and repair industry
4. *Identify the skills necessary to work in the automotive industry
5. *Perform an oil change on a vehicle
6. *Perform a cooling system basic inspection, flush and fill on a vehicle
7. * Perform transmission and transaxle maintenance
8. * Demonstrate basic usage of a service manual and/or service information system
9. * Perform tire and wheel service
10. * Perform brake system inspection
11. Perform starting and charging system inspection and test
12. Access onboard diagnostic system codes

****Asterisk Indicates Essential Learning Outcomes***

CTAUT006 – Introduction to Medium and Heavy Transportation Equipment Technology

General Course Description: This course introduces the student to information about the medium and heavy transportation service and repair industry. It also includes basic tool usage and shop safety information. The students will also learn how to effectively perform basic preventive maintenance to medium and heavy-duty vehicles.

Credits: 2 Semester Hours

Learning Outcomes:

1. * Orientation to the Medium and Heavy Transportation Industry
2. * Determine the skills needed to work in the medium and heavy transportation industry
3. * Identify basic tools and equipment appropriate to the medium and heavy transportation industry
4. * Demonstrate the appropriate use of basic hand tools to complete work functions
5. * Operate power tools and stationary equipment
6. * Maintain hand and power tools appropriate to the medium and heavy transportation industry
7. * Use appropriate personal protective equipment (PPE)
8. * Perform basic mechanical skills
9. * Perform preventive powertrain system maintenance including: engine system, fuel system, air induction and exhaust system, cooling system, and lubrication system
10. * Perform preventive instruments and controls maintenance
11. * Perform preventive safety equipment maintenance
12. * Perform preventive hardware maintenance
13. * Perform preventive heating, ventilation and air conditioning (HVAC) maintenance
14. * Perform preventive electrical system maintenance including: battery and starting systems, charging systems and lighting systems
15. * Perform preventive brake system maintenance including: air and hydraulic braking systems
16. * Perform preventive drive train maintenance
17. * Perform preventive suspension and steering systems maintenance
18. * Perform preventive tires and wheels maintenance
19. * Perform preventive frame and fifth wheel maintenance

****Asterisk Indicates Essential Learning Outcomes***

**Automotive Technology/Ground Transportation Panel Participants
Spring 2014**

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