Curriculum Framework for Automotive Technology Program

CIP Code: 47.0604

Initial Review Date: 09/05/2023

Eligibility Dates: 09/05/2023 through 10/31/2030

Credit Award: 40 Credits

Course Equivalencies:

Automotive Technology I	Credits	TESU Course Equivalent	Effective Dates	For Staff Use
Automotive Technology	3	AUM-1110	9/5/2023 – 10/31/2030	OCTVSAUTO1
Automotive Technology	3	AUM-1120	9/5/2023 – 10/31/2030	OCTVSAUTO1
Automotive Technology	3	AUM-1130	9/5/2023 – 10/31/2030	OCTVSAUTO1
Automotive Technology	3	AUM-1140	9/5/2023 – 10/31/2030	OCTVSAUTO1
Automotive Technology	3	AUM-1310	9/5/2023 – 10/31/2030	OCTVSAUTO1
Automotive Technology	3	AUM-1520	9/5/2023 – 10/31/2030	OCTVSAUTO1
Automotive Technology	2	AUM-1999	9/5/2023 – 10/31/2030	OCTVSAUTO1

Automotive Technology II	Credits	TESU Course Equivalent	Effective Dates	For Staff Use
Automotive Technology	3	AUM-1400	9/5/2023 – 10/31/2030	OCTVSAUTO2
Automotive Technology	3	AUM-1410	9/5/2023 – 10/31/2030	OCTVSAUTO2
Automotive Technology	3	AUM-1420	9/5/2023 – 10/31/2030	OCTVSAUTO2
Automotive Technology	3	AUM-1510	9/5/2023 – 10/31/2030	OCTVSAUTO2
Automotive Technology	3	AUM-1530	9/5/2023 – 10/31/2030	OCTVSAUTO2
Automotive Technology	3	AUM-1610	9/5/2023 – 10/31/2030	OCTVSAUTO2
Automotive Technology	2	AUM-2999	9/5/2023 – 10/31/2030	OCTVSAUTO2

Gaining Access to the Evaluated Credit Award

The following curriculum was evaluated by Thomas Edison State University (TESU) through its Professional Learning Review (PLR) Process to determine college-credit equivalency for the training program.

The current state approved Career and Technical Education (CTE) programs in New Jersey that have been verified to follow this curriculum, and to be eligible to receive TESU credit upon completion can be found on the Verification Letter.

Question: How does your CTE program become eligible for this credit award for your students?

Answer: To become eligible, and to have your school's name listed on the Verification Letter, please follow these instructions:

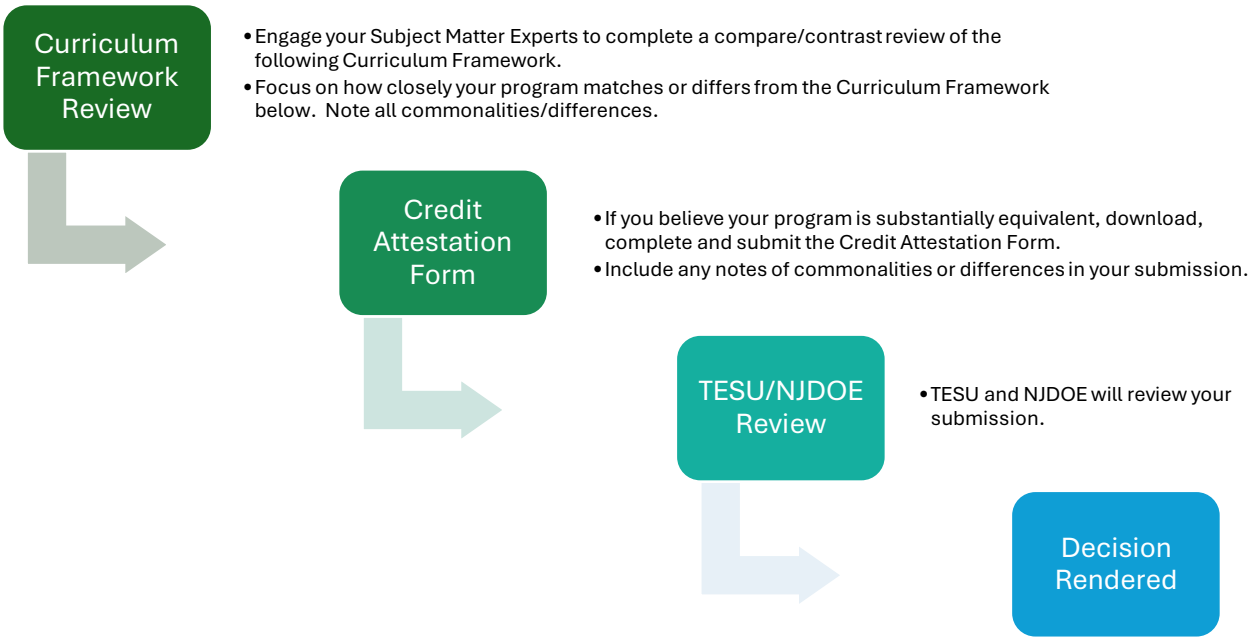
Step 1. Review the following Curriculum Framework and compare it against your school's current state approved CTE program. TESU suggests utilizing your school's subject matter experts for this compare/contrast review. The GOAL of your review is to ensure that the training program in place at your school matches the evaluated program.

Step 2. Complete/Download the Credit Attestation Form for this program on TESU's website.

Step 3. Complete the Credit Attestation Form and email it to plr@tesu.edu.

Step 4. TESU will review the contents and share the attestation form information with the New Jersey Department of Education (NJDOE) for approval.

Step 5. Once approved by TESU and the NJDOE, you will be notified and an updated Verification Letter will be added to the TESU website for this program.



If you have any questions, or if your compare/contrast review is close but off a little, please contact us at plr@tesu.edu.

Curriculum Framework

Approved Program Name: Automotive Technology Program

CIP Code: 47.0604

Length of Program: 2 Years / 900 Hours

Credit Award: 40 Credits

Course Equivalencies:

Automotive Technology I	Credits	TESU Course Equivalent	Effective Dates	For Staff Use
Automotive Technology	3	AUM-1110	9/5/2023 – 10/31/2030	OCTVSAUTO1
Automotive Technology	3	AUM-1120	9/5/2023 – 10/31/2030	OCTVSAUTO1
Automotive Technology	3	AUM-1130	9/5/2023 – 10/31/2030	OCTVSAUTO1
Automotive Technology	3	AUM-1140	9/5/2023 – 10/31/2030	OCTVSAUTO1
Automotive Technology	3	AUM-1310	9/5/2023 – 10/31/2030	OCTVSAUTO1
Automotive Technology	3	AUM-1520	9/5/2023 – 10/31/2030	OCTVSAUTO1
Automotive Technology	2	AUM-1999	9/5/2023 – 10/31/2030	OCTVSAUTO1

Automotive Technology II	Credits	TESU Course Equivalent	Effective Dates	For Staff Use
Automotive Technology	3	AUM-1400	9/5/2023 – 10/31/2030	OCTVSAUTO2
Automotive Technology	3	AUM-1410	9/5/2023 – 10/31/2030	OCTVSAUTO2
Automotive Technology	3	AUM-1420	9/5/2023 – 10/31/2030	OCTVSAUTO2
Automotive Technology	3	AUM-1510	9/5/2023 – 10/31/2030	OCTVSAUTO2
Automotive Technology	3	AUM-1530	9/5/2023 – 10/31/2030	OCTVSAUTO2
Automotive Technology	3	AUM-1610	9/5/2023 – 10/31/2030	OCTVSAUTO2
Automotive Technology	2	AUM-2999	9/5/2023 – 10/31/2030	OCTVSAUTO2

Course Description: This ASE certified, STEM-based program prepares students for entry into the exciting and challenging career field of Automotive Technology. Students will be introduced to major concepts and theories of maintenance, service and repairs on modern automobiles. Students are instructed on shop safety and proper usage of tools and equipment. We use modern and relevant tools and shop equipment for instruction and incorporate work-based learning to expose students to the automotive field. Upon successful completion, students are prepared for entry-level employment in the automotive field and will have acquired the knowledge necessary to take ASE certification tests. This program is evaluated and accredited by the ASE Educational Foundation, and the following subjects are ASE accredited: Maintenance and Light Repair, Engine Repair, Engine Performance, Electrical/Electronic Systems, Brakes, Steering and Suspension, Heating and Air-Conditioning, Automatic Transmissions and Manual Transmission, and Drive-Axle.[1]

The Classification of Instructional Programs (CIP) Code 47.0604, Automobile/Automotive Mechanics Technology/Technician, defines this educational program as "A program that prepares individuals to apply technical knowledge and skills to repair, service, and maintain all types of automobiles. Includes instruction in brake systems, electrical systems, engine performance, engine repair, suspension and steering, automatic and manual transmissions and drive trains, and heating and air condition systems."[2]

The OCVTS Automotive Technology program is a 2-year, 900 clock hour course of study. The OCVTS website describes the fundamental elements and end-results of each year of the program.

1300 - Automotive Technician I

"This course covers automotive fundamentals, as well as basic vehicle maintenance and troubleshooting. Classroom and shop instruction includes proper and safe use of tools and equipment, lubrication procedures, transmission, brakes, steering, engine performance and exhaust systems. This class will cover A-4 steering and suspension diagnosis and repair, independent front and rear suspension, light truck applications, wheel and tire theory and diagnosis, in preparation for the A-1, A-4 and A-5 ASE certification."[3]

1305 - Automotive Technician II

"This is the second-year course for those who have successfully completed Automotive Technician I. This one-year course in advanced automotive technology will include engine computer controls, anti-skid brake systems, automotive electrical fuel and air management systems, as well as automotive power trains and drivelines. This course will help prepare the student for the A-3, A-8, and Intro to A-6 ASE certification."[4]

[1] Retrieved 10/2/2025 from Automobile Program Standards https://aseeducationfoundation.org/uploads/2024-Automobile-Program-Standards-1.pdf

[2] Retrieved 10/6/2025 from the Classification of Instructional Programs https://nces.ed.gov/ipeds/cipcode/cipdetail.aspx?y=55&cipid=88640#:~:text=Title:%20Automobile/Automotive%20Mechanics%20Technology/Technician

[3] Retrieved 10/6/2025 from OCVTS website https://ocvts.digitalsignup.com/Class/11-1300---automotive-technician-i

[4] Retrieved 10/6/2025 from OCVTS website https://ocvts.digitalsignup.com/Class/12-1305---automotive-technician-ii

Program Exhibit

Course Title: Automotive Technology Program

Modality/Location(s): Onsite

CIP Code: 47.0604

Length: 2 years, 900 hours

This ASE certified, STEM-based program prepares students for entry into the exciting and challenging career field of Automotive Technology. Students will be introduced to major concepts and theories of maintenance, service and repairs on modern automobiles. Students are instructed on shop safety and proper usage of tools and equipment. We use modern and relevant tools and shop equipment for instruction and incorporate work-based learning to expose students to the automotive field. Upon successful completion, students are prepared for entry-level employment in the automotive field and will have acquired the knowledge necessary to take ASE certification tests. This program is evaluated and accredited by the ASE Educational Foundation, and the following subjects are ASE accredited: Maintenance and Light Repair, Engine Repair, Engine Performance, Electrical/Electronic Systems, Brakes, Steering and Suspension, Heating and Air-Conditioning, Automatic Transmissions and Manual Transmission, and Drive-Axle.[5]

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1300 - Automotive Technician I

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[5] Retrieved 10/2/2025 from Automobile Program Standards https://aseeducationfoundation.org/uploads/2024-Automobile-Program-Standards-1.pdf

[6] Retrieved 10/6/2025 from the Classification of Instructional Programs https://nces.ed.gov/ipeds/cipcode/cipdetail.aspx?y=55&cipid=88640#:~:text=Title:%20Automobile/Automotive%20Mechanics%20Technology/Technician

[7] Retrieved 10/6/2025 from OCVTS website https://ocvts.digitalsignup.com/Class/11-1300---automotive-technician-i

1305 - Automotive Technician II

"This is the second-year course for those who have successfully completed Automotive Technician I. This one-year course in advanced automotive technology will include engine computer controls, anti-skid brake systems, automotive electrical fuel and air management systems, as well as automotive power trains and drivelines. This course will help prepare the student for the A-3, A-8, and Intro to A-6 ASE certification."[8]

Course Objective: Students are introduced to the automotive technology field and prepared to enter this occupation.

Pre-requisite: None

Global Learning Outcomes: Graduates of the OCVTS Automotive Technology program will be prepared to enter an automotive industry career with the following attributes.

- Technical Proficiency - Demonstrate entry-level proficiency in diagnosing, servicing, and repairing automotive systems according to ASE standards and industry best practices.
- Safety and Environmental Practices – Apply industry-standard safety procedures and environmental regulations in all automotive service operations.
- Technical Communication and Documentation – Effectively communicate automotive technical information using industry-standard terminology and documentation.
- Problem Solving – Demonstrate problem-solving skills in diagnosing and repairing complex automotive issues.
- Use of Tools, Equipment, and Technology – Select and use the appropriate tools, equipment, and technologies for diagnostics and repair of automotive systems.

Program Learning Outcomes: Upon successful course completion, the learner will be able to apply manufacturers' guidelines, industry-standard tools, equipment, and safety practices to perform the following tasks:

- Perform engine diagnosis and repair procedures on gasoline internal combustion engines.
- Inspect, service, and restore manual drive trains and axles.
- Evaluate, maintain, and restore automatic transmissions and transaxles.
- Diagnose, service, and repair suspension and steering systems including electronic steering, alignment, and active suspension components.
- Evaluate, service, and repair automotive brake systems.
- Perform repairs and preventive maintenance on electrical and electronic systems including batteries, starting, charging, lighting, and accessory systems.
- Provide service for hybrid and electric vehicles within the scope of technical ability and shop limitations.
- Perform repair and replacement of the automotive heating, ventilation, and air conditioning (HVAC) systems.
- Diagnose and perform routine maintenance on ignition, fuel, emissions, and computer control systems.
- Apply requirements of Hazard Communication Title 29, Code of Federal Regulations for the storage, handling, use, removal, recycling, and disposal of hazardous materials.

[8] Retrieved 10/6/2025 from OCVTS website https://ocvts.digitalsignup.com/Class/12-1305---automotive-technician-ii

Major Topics:

- Automotive Career
- Safety
- Brakes
- Suspension and Steering
- Automotive Engine Systems
- Automotive Heating and Air Conditioning
- Electrical/Electronics
- Hybrid and Electric Vehicles
- Engine Performance
- Automatic Transmission and Transaxle
- Manual Drive Train and Axles

Methods of Instruction:

Hybrid instruction:

- Recorded demonstration
- Modeling work examples
- Using interactive platforms for class participation
- 900 student clock hours over 2 years

Assessment Methodologies:

- Formative: Project Progress/checkpoints, daily rubric, class participation, classwork, class discussion and questioning, Do Now, observation of practice/hands-on project
- Summative: Safety Tests, Performance/Practical Tests, Unit/Chapter Tests
- Benchmark: Skill Profile Check Point Review, Industry Credential Test

Assessment Criteria:

Passing Score is 70% per OCVTS Policy.

Grade breakdown:

- 67% - Daily Shop Grade
- 20% - Tests/Projects/Classwork
- 10% - Quizzes
- 1% - ICTE Math
- 1% - ICTE English
- 1% - ICTE Science

End of Curriculum Framework

Suggested Degree Programs at TESU

- Associate of Applied Science (AAS) in Mechanics and Maintenance
- Associate of Applied Science (AAS) in Multidisciplinary Technology
- Associate of Science (A.S.) in Technical Studies
- Bachelor of Science (B.S.) in Technical Studies

For more information, please contact Thomas Edison State University's Professional Learning Review Office via email at plr@tesu.edu.