**Continuous Improvement Plan Report to be Completed in Years 2/4 of Program Review Cycle**

**Date: 03/28/2025 Name of Program: Automotive Technology**

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**Table 1: CIP Student/Program Level Learning Outcomes Targeted for Improvement, Description of Assessment Measure(s) and Targets Levels of Success Table (focus on at least one student/program level outcome for the next two years)**

**Description of Fields in CIP Table 1:**

**A. Student Learning Outcome(s)** -Results expected in this program (e.g., students will be able to compare/contrast conflict and structural functional theories). Outcomes must be quantifiable and measurable.

**B. Assessment Measure(s)** –Assessmentinstrument(s)/process(es) used to measure results (e.g., embedded test questions 6 & 7 from final exam)

**C. Targeted Level(s) of Success** -Level of success expected (e.g., X% of students will score at least Y on the indicated assessment)

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| 1. **Student/Program Level Learning Outcome(s)**   **Targeted for Improvement**  (e.g., “Students will be able to…”) | **B. Description of Assessment Measure(s)**  (Assessment instrument(s)/process(es) used to measure results - Include course in which assessment will be given) | **C. Targeted Level(s) of Success**  (e.g., X% of students will score at least Y on the indicated assessment.) |
| Increase AAS – Automotive Technology completion rate. | Compare enrollment data and major selection against the rate at which the AAS – Automotive Technology is earned. | 30% of Automotive Technology students complete an AAS – Automotive Technology within two academic years from enrollment in the Automotive Technology program. |
| Improve the timely completion rates of Cooperative Education classes within the Automotive Technology degrees and certificates. | Compare AUMT-2380 and AUMT-2381 enrollment data against declared majors and program start dates for new students to ensure the course, or courses, are completed within the prescribed timeframes for the selected awards | 75% of students enrolled in the Automotive Technology program with any award declared to complete Cooperative Education courses as outlined within the prescribed timelines for the individual awards |
| Students will be able to properly remove, inspect, evaluate and reinstall or replace a brake rotor. | Course AUMT-1310: ASE Task V.D.6, Remove and reinstall/replace rotor. Job Sheet 31, Automotive Brake Systems Shop Manual | 80% of students score 70% or higher on the rubric for assignment. |

**Add additional rows if necessary.**

**Table 2. CIP Student Learning Outcomes 1–3 (focus on at least one for the next two years)**

**Description of Fields in CIP Table 2:**

**A. Student/Program Level Learning Outcome(s) Targeted for Improvement** -Results expected in this program (e.g., Students will be able to compare/contrast conflict and structural functional theories). Outcomes must be quantifiable and measurable.

**B. Assessment Measure(s)** – **Assessment** Instrument(s)/process(es) used to measure results (e.g., embedded test questions 6 & 7 from final exam)

**C. Targeted Level(s) of Success** -Level of success expected (e.g., X% of students will earn a score of Y or greater on the embedded test questions)

**D. Description of Action Plan to Improve Learning** -Describe action(s) to be taken to improve student attainment of the indicated student/program level outcome. What will you do?

**E. Summary of Results/Data** - Summarize the information and data collected in year 1/3 when action plan was implemented.

**F. Findings** - Explain how the information and data has impacted the expected student learning outcome.

**G. Implementation of Findings** – Describe how you have used or will use your findings and analysis of the data to make improvements.

**Student/Program Level Learning Outcome Targeted for Improvement #1**

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| 1. **Student/Program Level Learning Outcome Targeted for Improvement #1:** Increase completion rate of AAS – Automotive Technology | |
| 1. **Assessment Measure(s):** To verify completion rates, we will compare new student enrollment numbers against the declared majors, then again at the end of the second academic year. | 1. **Targeted Level(s) of Success:** 30% of new students enrolled in the Automotive Technology program with an AAS – Automotive Technology declared as their major to complete the AAS within two academic years. |
| 1. **Description of Action Plan to Improve Learning:** The Automotive Technology Department has partnered with the Academic Department on the Technical Campus to offer the general education courses required for the AAS in the Automotive classrooms for Automotive students within the existing Automotive course scheduling. This is intended to allow the Automotive students to remain with a core group of students to improve engagement and completion of the general education courses, ultimately resulting in higher completion rates of the AAS within the prescribed timeframe. | |
| 1. **Summary of Results/Data:** Action plan is still underway and will require two years to obtain data which will take place when the Spring 2025 semester concludes. | |
| 1. **Findings:** Currently, more than 30% of students in the Automotive Technology program are enrolled in core classes, which passes the target for students obtaining an AAS. | |
| 1. **Implementation of Findings:** Students are encouraged to pursue the AAS over other awards and courses required for their degree are scheduled and offered in the same classrooms as their AUMT classes. Additionally, they are scheduled at times immediately after AUMT classes, so it is more convenient and accessible. The next CIP and action plan will focus on student learning outcomes as the current action plan does not. | |

**Student/Program Level Learning Outcome Targeted for Improvement #2**

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| 1. **Student/Program Level Learning Outcome Targeted for Improvement #2:** Improve the timely completion rates of Cooperative Education classes within the Automotive Technology degrees and certificates for new Automotive Technology students. | |
| 1. **Assessment Measure(s):** Compare AUMT-2380 and AUMT-2381 enrollment data against declared majors and program start dates for new students to ensure the course or courses, are completed within one academic year for Level 1 Certificates and two academic years for Level 2 Certificates and AAS from initial program enrollment. | 1. **Targeted Level(s) of Success:** 75% of new students enrolled in the Automotive Technology program with any award declared to complete the required Cooperative Education course or courses as outlined in the awards within the prescribed timelines for the individual awards |
| 1. **Description of Action Plan to Improve Learning:** Work with the assigned Workforce Career Coach to continue to survey students regarding employment required for enrollment in and completion of AUMT-2380 and AUMT-2381 to ensure students are on track to enroll in and complete the course or courses within the prescribed sequencing of courses and award timelines. | |
| 1. **Summary of Results/Data:** The second action plan is currently a success due to all students being required to meet with program career coach before any permits are granted for classes, including AUMT-2380 and AUMT-2381. Nearly all students are enrolled in AUMT-2380 within the second and third semesters. | |
| 1. **Findings:** By having all students meet with program coach prior to permits being granted, this ensures students are on track and enrolling in proper courses. This also helps promote students seeking employment and enrolling into AUMT-2380 and AUMT-2381. | |
| 1. **Implementation of Findings:** Automotive Technology department will continue to require all students to meet with program coach to ensure students are on track.The next CIP and action plan will focus on student learning outcomes as the current action plan does not. | |

**Student/Program Level Learning Outcome Targeted for Improvement #3**

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| 1. **Student/Program Level Learning Outcome Targeted for Improvement #3:** Students will be able to properly remove, inspect, evaluate and reinstall or replace a brake rotor. | |
| 1. **Assessment Measure(s):** Course AUMT-1310: ASE Task V.D.6, Remove and reinstall/replace rotor. Job Sheet 31, Automotive Brake Systems Shop Manual | 1. **Targeted Level(s) of Success:** 80% of students score 70% or higher on the rubric for assignment. |
| 1. **Description of Action Plan to Improve Learning:** Job Sheet 31 is designed to teach the required processes and procedures for the student to become competent at performing the task, which is built from automotive manufacturers service information and specifications. The department will use this job sheet and information to educate the students what the proper procedure is, why it must be used, and what the importance of the information. | |
| 1. **Summary of Results/Data:** 48.4% of students scored 70% or better on the assignment. (Data collected from two class sections with 31 total students). | |
| 1. **Findings:** Target was not met. The majority of students were not competent at the assigned task. The assessment data shows that additional time on task and revisions to the job support sheet should help to increase performance rates. Faculty will implement additional instructional refinements and collect data to determine if the changes made have improved student success in this learning outcome. | |
| 1. **Implementation of Findings:** Feedback from students and faculty has stated that improvements in the design of the job sheet that better illustrates with pictures, improved descriptions of components and clearer, precise language of the job sheet overall. | |

**Program Assessment Data Report**

**Program: Automotive Technology Terms Data Collected: 2023-2024**

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| Program-Level Learning Outcome- (From Assessment Plan) | Assessment Measure(s) and Where Implemented in Curriculum – (From Assessment Plan) | Target Outcome(s)- Level of Success Expected – (From Assessment Plan) | Assessment Results – (Provide data in a form related to targeted levels of success to left. Indicate if targeted level of success was met, partially met, or not met.) |
| PLO #1  Students will be able to apply repair facility safety protocols, classify the eight Automotive Service Excellence (ASE) light vehicle subsystems, utilize service information systems, and perform basic light vehicle maintenance. | Students are to perform a final lab assessment in AUMT 1305 in which they will perform a preventative maintenance inspection that requires them to identify various light vehicle sub-systems and components while exercising relevant safety protocols. | 70% of students score 80% or more on the rubric for lab assignments. | Target met.  83.5% of students scored 80% or better on the rubric for lab assignments. |
| PLO #2  Students will be able to perform maintenance, diagnosis, and repair of hydraulic and mechanical brake systems, perform resurfacing of drums and rotors with current industry-standard equipment. | Students are to perform a final lab assessment in AUMT 1410 in which they will perform the removal, resurfacing, and reinstallation of light vehicle brake rotors to include the removal and proper reinstallation of the hydraulic brake caliper and friction pads. | 70% of students score 70% or more on the rubric for lab assignments. | Target met.  73.1% of students scored 70% or better on the rubric for lab assignments. |
| PLO #3  Students will be able to perform maintenance, diagnosis, and repair of steering and suspension systems, operate industry standard 4-wheel alignment equipment and determine required adjustments or repairs, and operate industry standard tire service and repair equipment and execute repair procedures. | Students are to perform a final lab assessment in AUMT 1316 in which they will perform a light vehicle 4 wheel-alignment inspection in which they will be required to determine alignment symptoms and required adjustments. Students will then perform required adjustments to vehicle manufacturer specifications. | 70% of students score 70% or more on rubric for lab assignments. | Target met.  94.8% of students scored 70% or better on the rubric for lab assignments. |
| PLO #4  Students will be able to implement relevant safety procedures including proper refrigerant handling in accordance with Environmental Protection Agency (EPA) Clean Air Act 609 guidelines and requirements, and perform maintenance, diagnosis, and repair of light vehicle climate control systems. | Students will perform a final lab assessment in AUMT 1345 in which they will perform diagnosis of a light vehicle air conditioning system followed by a refrigerant evacuation and recharge using industry standard equipment to EPA 609 standards. | 70% of students score 80% or more on rubric for lab assignments. | Target met.  79.4% of students scored 80% or better on the rubric for lab assignments. |
| PLO #5  Students will be able to perform diagnosis, maintenance, and repair of light vehicle manual and automatic transmissions/transaxles, perform diagnosis, maintenance, and repair of light vehicle differentials, and perform diagnosis, maintenance, and repair of light vehicle constant velocity joints and universal joints. | Students will perform a final lab assessment in AUMT 2325 in which they will overhaul a light vehicle constant velocity axle. | 70% of students score 70% or more on rubric for lab assignments. | Target met.  98.2% of students scored 70% or better on the rubric for lab assignments. |
| PLO #6  Students will be able to explain and identify light vehicle gasoline engine operating principles, perform diagnosis, maintenance, and repair of light vehicle gasoline engine mechanical, lubrication, and cooling systems. | Students will perform a final lab assessment in AUMT 1319 in which they will complete a light vehicle engine cylinder compression test, cylinder leakage test, engine vacuum test, and cooling system pressure test to be used to determine mechanical faults. | 70% of students score 70% or more on rubric for lab assignments. | Target met.  93.75% of students scored 70% or better on the rubric for lab assignments. |
| PLO #7  Students will be able to identify and perform diagnosis, and repair of light vehicle electrical, accessory, and instrumentation systems, apply knowledge of electronics principles to the diagnosis of light vehicle microcomputers, analysis of network and communication circuits, and interpretation of sensor data from various light vehicle subsystems. | Students will perform a final lab assessment in AUMT 2337 in which they will demonstrate proper diagnostic application and operation of a digital storage oscilloscope (DSO). Students will then apply the data obtained from the DSO to determine the required diagnostic operations of a light vehicle computer-controlled system. | 70% of students score 70% or more on rubric for lab assignments. | Target met.  100% of students scored 70% or better on the rubric for lab assignments. |
| PLO #8  Students will be able to explain gasoline engine performance dynamics, perform diagnosis and repair of emissions control systems, computerized engine performance systems, and advanced ignition and fuel delivery systems, and utilize advanced engine performance diagnostic equipment. | Students will perform a final lab assessment in AUMT 2334 in which they will retrieve vehicle data using a diagnostic scan tool. Students will then interpret the data to determine and diagnose light vehicle fuel, ignition, and emissions control system faults. | 70% of students score 70% or more on rubric for lab assignments. | Target met.  76.9% of students scored 70% or better on the rubric for lab assignments. |
| PLO #9  Students will be able to use hybrid and/or Battery Electric Vehicle (BEV) safety procedures, explain the operation of hybrid and/or BEV vehicles, and diagnose and repair hybrid and/or BEV systems. | Students will perform a final lab assessment in AUMT 2307 in which they will demonstrate the procedure for rendering and confirming a Hybrid and/or Battery Electric Vehicle high voltage system safe for service and repair. | 70% of students score 70% or more on rubric for lab assignments. | Target met.  89.5% of students scored 70% or better on the rubric for lab assignments. |