Received by C&A 2/2/24

**WASHTENAW COMMUNITY COLLEGE**

**PROGRAM ASSESSMENT PLAN CHANGE FORM**

| **Program Code:** APOETT | **Program Title:** Transportation Technologies (APOETT) | **Effective Term:** Fall 2024 |
|---|---|---|

**List the outcome(s) to be revised, and identify changes (add rows as needed):**

| Learning outcomes to be assessed | Assessment tool | When assessment will take place | Course/other populations | Number of students to be assessed |
|---|---|---|---|---|
| Demonstrate the mastery of skills related to the student's technical concentration | ATT 282 Capstone course project<br>ATT 284 capstone course project<br>ABR 123 capstone course project<br>ASV 256 capstone course project<br>ASV 258 capstone course project | Fall 2028 | All sections of ATT 282 and ATT 284<br><br>All Sections of ABR 123<br><br>All Sections of ASV 256 and 258 | All students |
| Apply critical thinking skills to solve an identified problem in the student's technical concentration. | ATT 284 Capstone course project<br>ATT 286 capstone course project<br>ABR 123 capstone course project<br>ASV 256 capstone course project<br>ASV 258 capstone course project | Fall 2028 | All sections of ATT 284 and ATT 286<br><br>All sections of ABR 123<br><br>All sections of ASV 256 and 258 | All students |
| Demonstrate and apply required industry-related safety standards. | ATT 282 Capstone course project<br>ATT 284 capstone course project<br>ABR 201 capstone course project<br>ASV 256 capstone course project<br>ASV 258 capstone course project | Fall 2028 | All sections of ATT 282 and ATT 284<br><br>All sections of ABR 201<br><br>All sections of ASV 256 and 258 | All students |

**Scoring and analysis of assessment:**

1. Indicate how the above assessment(s) will be scored and evaluated (e.g. departmentally-developed rubric, answer key, checklist, other). Please attach rubric if available.

   All outcomes will be scored using a departmentally-developed rubric(s).

2. Indicate the standard of success to be used for this assessment:

   On all outcomes, 70% of all students will score 70% or higher on the outcome-related rubric items.

3. Indicate who will score and analyze the data:

   Departmental Faculty

**Signatures:**

| Reviewer | Print Name | Signature | Date |
|---|---|---|---|
| **Initiator** | Shawn Deron | | 1/31/24 |
| **Department Chair** | Rocky Roberts | | 2/2/24 |
| **Division Dean/Administrator** | Jimmie Baber | | 2/2/24 |
| ***Please return completed form to the Office of Curriculum & Assessment, SC 257*** **or by e-mail to curriculum.assessment@wccnet.edu** | | | |
| **Curriculum Committee Chair** | Randy Van Wagnen | | 2-12-24 |
| **Assessment Committee Chair** | Jessica Hale | | 2/13/24 |

Reviewed by C&A committees on 2/8/24

**PROGRAM ASSESSMENT PLANNING FORM**

**Program to be assessed:**

Title: APOETT
Division: ATP Department: Transportation Technologies Program Code: APOETT

Type of Award: ☐ A.A. ☐ A.S **X** A.A.S.
☐ Cert. ☐ Adv. Cert. ☐ Post-Assoc. Cert. ☐ Cert. of Completion

**Assessment plan:**

| Learning outcomes to be assessed | Assessment tool | When assessment will take place | Describe population to be assessed | Number of students to be assessed |
|---|---|---|---|---|
| **Demonstrate the mastery of skills related to the student's technical concentration.** | **MST 140 Capstone course project**<br>**MST 225 capstone course project**<br>**ABR 123 capstone course project**<br>**ASV 256 capstone course project**<br>**ASV 258 capstone course project** | Fall 2024 | All Sections of MST 140 and MST 225<br>All Sections of ABR 123<br>All Sections of ASV 256 and 258 | All Students |
| **Apply critical thinking skills to solve an identified problem in the student's technical concentration.** | **MST 140 Capstone course project**<br>**MST 225 capstone course project**<br>**ABR 123 capstone course project**<br>**ASV 256 capstone course project**<br>**ASV 258 capstone course project** | Fall 2024 | All Sections of MST 140 and MST 225<br>All Sections of ABR 123<br>All Sections of ASV 256 and 258 | All Students |
| **Demonstrate and apply required industry- related safety standards.** | **MST 140 Capstone course project**<br>**MST 225 capstone course project**<br>**ABR 201 capstone course project**<br>**ASV 256 capstone course project**<br>**ASV 258 capstone course project** | Fall 2024 | All Sections of MST 140 and MST 225<br>All Sections of ABR 201<br>All Sections of ASV 256 and 258 | All Students |

**Scoring and analysis of assessment:**

1. Indicate how the above assessment(s) will be scored and evaluated (e.g. departmentally developed rubric, external evaluation, other). Attach the rubric/scoring guide.

   All outcomes will be scored using a departmentally-developed rubric(s).

2. Indicate the standard of success to be used for this assessment.

   On all outcomes, 70% of all students will score 70% or higher on the outcome-related rubric items.

3. Indicate who will score and analyze the data (data must be blind-scored).

   Department faculty

**Submitted by:**

Name: [signature] SHAWN DERON Date: 12.12.2019
Print/Signature

Dept. Chair: [signature] Justin Messinger Date: 12/12/2019
Print/Signature

Dean: Brandon Tucker Date: 12/17/19
Print/Signature

***Please return completed form to the Office of Curriculum & Assessment, SC 257.***

**Program Information Report**

# Manufacturing & Automotive

## Transportation Technologies (APOETT)

### Associate in Applied Science Degree

**Program Effective Term: Fall 2020**

**High Demand Occupation High Skill Occupation High Wage Occupation**

In this AAS degree, students have a choice to follow any of three different specialty tracks that will prepare them for employment in the transportation industry. This option can be selected if an associate's degree is required for employment or advancement in a field. Each track features a variety of application level classes where students perform lab-oriented practice for the required skills in the automotive service related, auto body repair or motorcycle service fields. Students will learn using the latest technology, methods and tooling in their area of concentration.

Students will select a specialized track in one of the following areas, each of which has its own associated certificated program(s): Auto Service, Auto Body or Motorcycle Service. The program prepares the student for the State of Michigan Mechanics Certification tests as well as the National Institute for Automotive Service Excellence (ASE) Certification Exams. Meet with a divisional advisor or faculty.

**Program Admission Requirements:**
Academic Reading and Writing Levels of 6; Academic Math Level 3

**Minimum Concentration Credits Required for the Program: 60**
Select a specialized track in one of the following areas, each of which has its own associated certificated program(s): Auto Service, Auto Body or Motorcycle Service.

**Transportation Technologies Concentrations**

| Auto Body (ABDY) | | (60 credits) |
|---|---|---|
| **First Semester** | | **(16 credits)** |
| ABR 111 | Introduction to Auto Body Repair | 4 |
| ABR 112 | Introduction to Automotive Refinishing | 4 |
| ABR 114 | Applied Auto Body Welding | 2 |
| Elective | Writing Elective(s) | 3 |
| Elective | Math Elective(s) | 3 |
| **Second Semester** | | **(16 credits)** |
| ABR 113 | Estimating and Shop Operations | 4 |
| ABR 119 | The Art of Metal Shaping | 2 |
| ABR 123 | Technical Auto Body Repair | 4 |
| ABR 124 | Technical Automotive Refinishing | 4 |
| | Restricted Elective(s): Select a minimum of 2 credits from ABR 116, ABR 130, ABR 231, MST 106, or MST 230. | 2 |
| **Third Semester** | | **(16 credits)** |
| ABR 140 | Aluminum Welding for Automotive Applications | 4 |
| ABR 135 or | Collision-Related Mechanical and Electrical Repairs | |
| ASV 130 | Automotive Maintenance | 4 |
| | Restricted Elective(s): Select a minimum of 2 credits from ABR 116, ABR 130, ABR 231, MST 106, or MST 230. | 2 |
| Elective | Speech/Comp. Elective(s) | 3 |
| Elective | Arts/Human. Elective(s) | 3 |
| **Fourth Semester** | | **(12 credits)** |
| ABR 201 | Lightweighting Composite Repair | 4 |
| | Restricted Elective(s): Select a minimum of 2 credits from ABR 116, ABR 130, ABR 231, MST 106, or MST 230. | 2 |
| Elective | Nat. Sci. Elective(s) | 3 |
| Elective | Soc. Sci. Elective(s) | 3 |

***Minimum Credits Required for the Concentration or Option: 60***

# Program Information Report

| Auto Service (ASVC) | | (61 credits) |
|---|---|---|
| **First Semester** | | **(16 credits)** |
| ASV 130 | Automotive Maintenance | 4 |
| ASV 131 | Automotive Electrical | 4 |
| | Restricted Electives: Select a minimum of 2 credits from ABR 111, ABR 114, ASV 174, ASV 269, ASV 270, ASV 277, ASV 279, CST 185, MST 110, MTT 102, or WAF 105. | 2 |
| Elective | Math Elective(s) | 3 |
| Elective | Writing Elective(s) | 3 |
| **Second Semester** | | **(17 credits)** |
| ASV 132 | Automotive Engines | 4 |
| ASV 133 | Automotive Fuel Systems | 4 |
| ASV 134 | Automotive Transmissions | 4 |
| ASV 135 | Facility Operations | 3 |
| | Restricted Elective(s): Select a minimum of 2 credits from ABR 140 or WAF 103. | 2 |
| **Third Semester** | | **(16 credits)** |
| ASV 254 | Suspension and Steering | 2 |
| ASV 255 | Brakes | 2 |
| ASV 256 | Electrical and Electronic Systems | 4 |
| ASV 258 | Engine Drivability | 2 |
| Elective | Speech/Comp Elective(s) | 3 |
| Elective | Arts/Human Elective(s) | 3 |
| **Fourth Semester** | | **(12 credits)** |
| ASV 251 | Engine Diagnosis and Repair | 2 |
| ASV 257 | Heating and Air Conditioning Systems | 2 |
| ASV 266 | Advanced Transmissions | 2 |
| Elective | Nat. Sci. Elective(s) | 3 |
| Elective | Soc. Sci. Elective(s) | 3 |

***Minimum Credits Required for the Concentration or Option: 61***

| Motorcycle Service (MSVC) | | (60 credits) |
|---|---|---|
| **First Semester** | | **(16 credits)** |
| MST 110 | Motorcycle Service Technology I | 4 |
| ABR 114 or | Applied Auto Body Welding | |
| WAF 105 | Introduction to Welding Processes | 2 |
| | Restricted Elective(s): Select a mimimum of 4 credits from ABR 119, ABR 201, ASV 130, MST 106, or MST 112. | 4 |
| Elective | Writing Elective(s) | 3 |
| Elective | Math Elective(s) | 3 |
| **Second Semester** | | **(14 credits)** |
| MST 120 | Motorcycle Service Technology II | 4 |
| MST 130 | Motorcycle Service Technology III | 4 |
| MTT 102 or | Machining for the Technologies | |
| MST 230 | Advanced Motorcycle Fabrication | 2 |
| | Restricted Elective(s): Select a minimum of 2 credits from ABR 119, ABR 201, ASV 130, MST 106, or MST 112. | 2 |
| ABR 140 or | Aluminum Welding for Automotive Applications | |
| WAF 103 | Introduction to Gas Tungsten Arc Welding | 2 |
| **Third Semester** | | **(16 credits)** |
| MST 140 | Motorcycle Service Technology IV | 4 |
| MST 220 | Dynamometer Operations | 4 |
| | Restricted Elective(s): Select a minimum of 2 credits from ABR 119, ABR 201, ASV 130, MST 106, or MST 112. | 2 |
| Elective | Speech/Comp. Elective(s) | 3 |
| Elective | Arts/Human. Elective(s) | 3 |
| **Fourth Semester** | | **(14 credits)** |
| MST 210 | Performance Engine Technology | 4 |
| MST 225 | Advanced Dynamometer Tuning Systems | 4 |

# Program Information Report

| | | |
|---|---|---|
| Elective | Nat. Sci. Elective(s) | 3 |
| Elective | Soc. Sci. Elective(s) | 3 |

***Minimum Credits Required for the Concentration or Option: 60***

**Minimum Credits Required for the Program: 60**

**Washtenaw Community College**

# PROGRAM PROPOSAL FORM

X **Preliminary Approval** – Check here when using this form for preliminary approval of a program proposal, and respond to the items in general terms.

☐ **Final Approval** – Check here when completing this form after the Vice President for Instruction has given preliminary approval to a program proposal. For final approval, complete information must be provided for each item.

| | | |
|---|---|---|
| **Program Name:**<br><br>**Division and Department:**<br><br>**Type of Award:**<br><br>**Effective Term/Year:**<br><br>**Initiator:** | Transportation Technologies (APOETT)<br><br>ATP Division - Transportation Technologies<br><br>☐ AA ☐AS **X** AAS<br><br>☐ Cert. ☐ Adv. Cert. ☐ Post-Assoc. Cert. ☐ Cert. of Comp.<br><br>Fall 2020<br><br>Transportation Technologies Faculty (Allen Day, Robert Lowing, Shawn Deron) | **Program Code:**<br><br>APOETT<br><br>**CIP Code:**<br><br>47.0604 |
| **Program Features**<br>Program's purpose and its goals.<br><br>Criteria for entry into the program, along with projected enrollment figures.<br><br>Connection to other WCC programs, as well as accrediting agencies or professional organizations.<br><br>Special features of the program. | This program is intended to allow for a degree path for the newly combined/formed Transportation Technologies Department.<br><br>This program allows students to design a program of study to meet specific needs, and is a desirable option for students who are focusing on a career in the transportation industry. This program allows for customization of coursework to meet the requirements of the transfer college or university. An advisor can help students determine interests, career and educational goals, as well as provide transfer and career information.<br><br>Students will select a specialized track in one of the following areas, each of which currently has its own certificate programs.<br><br>Automotive Service (CTASVT, CVASV2)<br>Auto Body Repair (CTAUBR)<br>Motorcycle Service Technology (CTMST1, CVMST2) | |
| **Need**<br><br>Need for the program with evidence to support the stated need. | Employers in the transportation sectors are experiencing a gap between the supply of skilled workers and the demand for job ready employees. Indeed.com currently lists over 80,000 job openings around the United States in these fields and over 2,000 in Michigan. The Bureau of labor statistics anticipates an average projected growth (4-9%) between 2018-2028. The median salary in 2019 was $15.00-$24.50 hourly or $36,790 to $47,350 annually. This degree program is the combination of several existing programs that have existed successfully at WCC. All of these programs are active and have graduates every academic year. This program proposal (APOETT) will be accompanied with program updates(CTAUBR, CTASVT) and proposal (CVASV2) to align and streamline a student's chosen concentration within the Transportation Technologies Department. All of the proposed programs and program updates focus on a guided pathway for students to complete certificates and degrees for their selected concentrations. These proposals and updates are intended to produce a better prepared student for employment opportunities and lead to an increased completion rate. | |

| Program Outcomes/Assessment<br><br>State the knowledge to be gained, skills to be learned, and attitudes to be developed by students in the program.<br><br>Include assessment methods that will be used to determine the effectiveness of the program. | Outcomes<br><br>1. **Demonstrate the mastery of skills related to the student's technical concentration.**<br>2. **Apply critical thinking skills to solve an identified problem in the student's technical concentration.**<br>3. **Demonstrate and apply required industry related safety standards.** | Assessment method<br>1. **Technical artifacts embedded in the certificate capstone courses within the chosen concentration.**<br>2. **Technical artifacts embedded in the certificate capstone courses within the chosen concentration.**<br>3. **Technical artifacts embedded in the certificate capstone courses within the chosen concentration.** |
|---|---|---|

| **Curriculum**<br><br>List the courses in the program as they should appear in the catalog. List minimum credits required. Include any notes that should appear below the course list.<br><br>Associate degree programs must provide a semester by semester program layout. | Please see the attached spreadsheet for the semester breakdown for each concentration. |
|---|---|

**Budget**

Specify program costs in the following areas, per academic year:

- All of the programs that are involved are already established and currently have an existing budget. The ongoing coast are already forecast into the current budget.

| | START-UP COSTS | ONGOING COSTS |
|---|---|---|
| **Faculty** | $ . | $ . |
| **Training/Travel** | . | . |
| **Materials/Resources** | . | . |
| **Facilities/Equipment** | . | . |
| **Other** | . | . |
| TOTALS: | $ . | $ . |

**Program Description for Catalog and Web site**

In this AAS Degree, students have a choice to follow any of three different specialty tracks that will prepare them for employment in the transportation industry. This option can be selected if an associate's degree is required for employment or advancement in a field. Each track features a variety of application level classes where students perform lab-oriented practice for the required skills in the automotive service related, auto body repair or motorcycle service fields. Students will learn using the latest technology, methods and tooling in their area of concentration.

Students will select a specialized track in one of the following areas, each of which has its own Associated Certificate Program(s).

- Auto Service
- Auto Body
- Motorcycle Service

The program prepares the student for the State of Michigan Mechanics Certification tests as well as the National Institute for Automotive Service Excellence (ASE) Certification Exams. Meet with a divisional advisor or faculty

| | |
|---|---|
| | advisor for assistance in developing a concentration of study. An advisor can help determine career interests and educational goals, as well as provide transfer and career information. |
| Program Information | **Accreditation/Licensure -**<br><br>**Advisors - Allen Day, Justin Morningstar, Bob Lowing, Tim VanSchoick, Shawn Deron, Niki Lee**<br><br>**Advisory Committee - Automotive - Auto Body**<br><br>**Admission requirements - College entry scores in Math (3), Reading (6) and Writing(6)**<br><br>**Articulation agreements - None**<br><br>**Continuing eligibility requirements -** |

Assessment plan:

| Program outcomes to be assessed | Assessment tool | When assessment will take place | Courses/other populations | Number of students to be assessed |
|---|---|---|---|---|
| **Demonstrate the mastery of skills related to the students technical concentration.** | **MST 140 Capstone course project**<br>**MST 225 capstone course project**<br>**ABR 123 capstone course project**<br>**ASV 256 capstone course project**<br>**ASV 258 capstone course project** | Fall 2024 | All Sections of MST 140 and MST 225<br>All Sections of ABR 123<br>All Sections of ASV 256 and 258 | All Students |
| **Apply critical thinking skills to solve an identified problem in the students technical concentration.** | **MST 140 Capstone course project**<br>**MST 225 capstone course project**<br>**ABR 123 capstone course project**<br>**ASV 256 capstone course project**<br>**ASV 258 capstone course project** | Fall 2024 | All Sections of MST 140 and MST 225<br>All Sections of ABR 123<br>All Sections of ASV 256 and 258 | All Students |
| **Demonstrate and apply required industry related safety standards.** | **MST 140 Capstone course project**<br>**MST 225 capstone course project**<br>**ABR 201 capstone course project**<br>**ASV 256 capstone course project**<br>**ASV 258 capstone course project** | Fall 2024 | All Sections of MST 140 and MST 225<br>All Sections of ABR 201<br>All Sections of ASV 256 and 258 | All Students |

**Scoring and analysis plan:**

1. Indicate how the above assessment(s) will be scored and evaluated (e.g. departmentally-developed rubric, external evaluation, other). Attach the rubric.

   All outcomes will be scored using a departmentally developed rubric(s)

2. Indicate the standard of success to be used for this assessment.

   On all outcomes 70% of all students will score 70% or higher on the outcome related rubric items.

3. Indicate who will score and analyze the data.

   Department Faculty.

| REVIEWER | PRINT NAME | SIGNATURE | DATE |
|---|---|---|---|
| Department Chair/Area Director | Justin Mormanstar | | 12/12/2019 |
| Dean | Brandon Tucker | | 12/17/19 |
| Curriculum Committee Chair | Lisa Veasey | Lisa Veasey | 1/30/20 |
| **Please submit completed form to the Office of Curriculum and Assessment (SC 257). Once reviewed by the appropriate faculty committees, we will secure the signature of the VPI and President.** | | | |
| Vice President for Instruction<br>☐ Approved for Development<br>☐ Final Approval | Kimberly Hurns | | 2/3/2020 |
| President | Rose Bellanca | Rose B. Bellanca | 5/20/20 |
| Board Approval | | | 4/28/20 |

Reviewed by C&A Committees 1/23/20

## ASV OETT

| 1st Semester | | 3rd Semester | |
|---|---|---|---|
| ASV 130 | 4 | ASV 254 | 2 |
| ASV 131 | 4 | ASV 255 | 2 |
| Restrictied Electives 1 | 3 | ASV 256 | 4 |
| Math | 3 | ASV 258 | 2 |
| Writing/Composisiton | 2 | Arts/Humanity | 3 |
| Total | **16** | Writing/Composisiton | 3 |
| | | Total | **16** |

| 2nd Semester | | 4th Semester | |
|---|---|---|---|
| ASV 135 | 2 | ASV 257 | 2 |
| ASV 132 | 4 | ASV 264 | 2 |
| ASV 133 | 4 | ASV 251 | 2 |
| ASV 134 | 4 | Natual Sciences | 3 |
| Restrictied Electives 4 | 2 | Social/Behavorial | 3 |
| Total | **16** | Total | **12** |
| | | Total | **60** |

RE list 1 - ASV 174, ASV 269, ASV 270, ASV 277, ASV 279,

RE list 4 - ABR 140, WAF 103

## MST OETT

| 1st Semester | | 3rd Semester | |
|---|---|---|---|
| MST 110 | 4 | MST 140 | 4 |
| Restrictied Electives 2 | 4 | MST 220 | 4 |
| ABR 114 or WAF 105 | 2 | Restrictied Electives 2 | 2 |
| Math | 3 | Arts/Humanity | 3 |
| Writing/Composisiton | 3 | Writing/Composisiton | 3 |
| Total | **16** | Total | **16** |

| 2nd Semester | | 4th Semester | |
|---|---|---|---|
| MST 120 | 4 | MST 225 | 4 |
| MST 130 | 4 | MST 210 | 4 |
| MTT 102 or MST 230 | 2 | Natual Sciences | 3 |
| Restrictied Electives 2 | 2 | Social/Behavorial | 3 |
| ABR 140 or WAF 103 | 2 | Total | **14** |
| Total | **14** | | |
| | | Total | **60** |

RE list 2 - ABR 119, ABR 201, ASV 130, MST 106, MST 112

## ABR OETT

| 1st Semester | | 3rd Semester | |
|---|---|---|---|
| ABR 111 | 4 | ABR 135 or ASV 130 | 4 |
| ABR 112 | 4 | ABR 140 | 4 |
| ABR 114 | 2 | Restrictied Electives 3 | 2 |
| Math | 3 | Arts/Humanity | 3 |
| Writing/Composisiton | 3 | Writing/Composisiton | 3 |
| Total | **16** | Total | **16** |

| 2nd Semester | | 4th Semester | |
|---|---|---|---|
| ABR 123 | 4 | ABR 201 | 4 |
| ABR 124 | 4 | Restrictied Electives 3 | 2 |
| ABR 113 | 4 | Natual Sciences | 3 |
| ABR 119 | 2 | Social/Behavorial | 3 |
| Restrictied Electives 3 | 2 | Total | **12** |
| Total | **16** | | |
| | | Total | **60** |

RE list 3 - ABR 116, ABR 130,ABR 231, MST 106, MST 230