

## Program Information Report

## Advanced Manufacturing

## Transportation Technologies (APOETT)

## Associate in Applied Science Degree

Program Effective Term: Fall 2024

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, EV service or auto body repair 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 Body, Auto Service, or Electric Vehicle Service & Repair. 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 Electric Vehicle Service & Repair.

**Transportation Technologies Concentrations****Auto Body (ABDY) (60 credits)****First Semester (15 credits)**

ABR 111	Introduction to Auto Body Repair	4
ABR 112	Introduction to Automotive Refinishing	4
ABR 114	Applied Auto Body Welding	2
ABR 119	The Art of Metal Shaping	2
Elective	Writing Elective(s)	3

**Second Semester (15 credits)**

ABR 123	Technical Auto Body Repair	4
ABR 124	Technical Automotive Refinishing	4
ABR 140	Aluminum Welding for Automotive Applications	4
Elective	Math Elective(s)	3

**Third Semester (14 credits)**

ASV 130	Automotive Maintenance	4
Elective	Nat. Sci. Elective(s)	3
Elective	Soc. Sci. Elective(s)	3
Elective	Restricted Elective(s): ABR 116, ABR 130, ABR 209, ABR 231, ASV 131, MST 106, MST 230	4

**Fourth Semester (16 credits)**

ABR 121	Automotive Estimating	2
ABR 201	Lightweighting Composite Repair	4
Elective	Speech Elective(s)	3
Elective	Arts/Human. Elective(s)	3
Elective	Restricted Elective(s): ABR 116, ABR 130, ABR 209, ABR 231, ASV 131, MST 106, MST 230	4

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

## Program Information Report

**Auto Service (ASVC) (62 credits)****First Semester (13 credits)**

ABR 114	Applied Auto Body Welding	2
ASV 130	Automotive Maintenance	4
ASV 131	Automotive Electrical	4
Elective	Writing Elective(s)	3

**Second Semester (17 credits)**

ABR 140	Aluminum Welding for Automotive Applications	4
ASV 132	Automotive Engines	4
ASV 133	Automotive Fuel Systems	4
ASV 254	Suspension and Steering	2
Elective	Math Elective(s)	3

**Third Semester (16 credits)**

ASV 134	Automotive Transmissions	4
ASV 251	Engine Diagnosis and Repair	2
ASV 256	Electrical and Electronic Systems	4
Elective	Speech/Comp. Elective(s)	3
Elective	Soc. Sci. Elective(s)	3

**Fourth Semester (16 credits)**

ASV 255	Brakes	2
ASV 258	Engine Drivability	2
ASV 266	Advanced Transmissions	2
Elective	Nat. Sci. Elective(s)	3
Elective	Arts/Human. Elective(s)	3
Elective	Restricted Elective(s): ABR 111, ASV 135, ASV 174, ASV 257, ASV 266, ASV 274, ASV 277, ASV 279, CSS 200, CSS 205, CSS 285, CST 185, MST 110	4

**Minimum Credits Required for the Concentration or Option: 62****Electric Vehicle Service & Repair (EVSr) (60 credits)****First Semester (16 credits)**

ASV 130	Automotive Maintenance	4
ASV 131	Automotive Electrical	4
ATT 180	Alternative Vehicle Fundamentals & Safety	2
Elective	Writing Elective(s)	3
Elective	Math Elective(s)	3

**Second Semester (15 credits)**

ABR 114	Applied Auto Body Welding	2
ASV 256	Electrical and Electronic Systems	4
ATT 280	Introduction to Electric Vehicles (EV)	4
Elective	Nat. Sci. Elective(s)	3
Elective	Restricted Elective(s): ABR 111, ASV 135, ASV 174, ASV 257, ASV 266, ASV 274, ASV 277, ASV 279, CSS 200, CSS 205, CSS 285, CST 185	2

**Third Semester (14 credits)**

ASV 254	Suspension and Steering	2
ASV 257	Heating and Air Conditioning Systems	2
ATT 282	Electric Vehicle (EV) Energy Management	4
Elective	Speech/Comp. Elective(s)	3
Elective	Arts/Human. Elective(s)	3

**Fourth Semester (15 credits)**

ASV 255	Brakes	2
ATT 284	Electric Vehicle (EV) Drivelines & Chassis	4
ATT 286	Electric Vehicle (EV) Dynamometer Testing	2
Elective	Soc. Sci. Elective(s)	3
Elective	Restricted Elective(s): ABR 111, ASV 135, ASV 174, ASV 257, ASV 266, ASV 274, ASV 277, ASV 279, CSS 200, CSS 205, CSS 285, CST 185	4

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

**Program Information Report**

**Minimum Credits Required for the Program:**

**60**

**PROGRAM CHANGE FORM**

<b>Program Code: APOETT</b>	<b>Current Program Name: Transportation Technologies</b>	<b>Effective Term: Fall 2024</b>
<b>Division Code: ATP</b>	<b>Department: TRPD</b>	

**Directions:**

1. Attach the current program listing from the WCC catalog or website and indicate any changes to be made.
2. Draw lines through any text that should be deleted and write in additions. Extensive narrative changes can be included on a separate sheet.
3. Check the boxes below for each type of change being proposed. Changes to courses, discontinuing a course, or adding new courses as part of the proposed program change, must be approved separately using CurricUNET, but should be submitted at the same time as the program change form.
4. If changes affect the program assessment plan or if program outcomes are updated, please submit a Program Assessment Plan Change form. These changes must be approved separately from the program change form and should be submitted at the same time. Current program assessment plans can be found on the Curriculum and Assessment Program Information page.

**Requested Changes:**

- |   |   |
|---|---|
| <input type="checkbox"/> Remove course(s): _____                                    | <input type="checkbox"/> Program outcomes (may also result from removing or adding a course)*             |
| <input checked="" type="checkbox"/> Add course(s): <u>adding EVSR concentration</u> | <input checked="" type="checkbox"/> Program assessment plan*  |
| <input type="checkbox"/> Program title (new title is _____)                         | <input type="checkbox"/> Accreditation information  |
| <input checked="" type="checkbox"/> Description                                     | <input checked="" type="checkbox"/> Other <u>Layout changes for existing ABDY and ASVC concentrations</u> |
| <input type="checkbox"/> Advisors   |   |
| <input type="checkbox"/> Program admission requirements                             |   |
| <input type="checkbox"/> Continuing eligibility requirements                        |   |

Note: A change to the Award Type requires the submission of a new program proposal form and a separate program inactivation form. Contact the Director of Curriculum & Assessment for more information.

Show all changes on the catalog page you attach.

\* Please submit a Program Assessment Plan Change form.

**Rationale for proposed changes:**

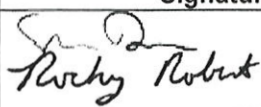
The EVSR concentration is being developed in coordination with the electric vehicle (EV) DOE training grant known internally as the Power Project and as a result of collaboration with the EV jobs academy (EVJA), Center for Connected and Automated Transportation (CCAT), Detroit Drives Degrees Community College Collaborative (D3C3) along with the ATT advisory board discussions consisting of industry partners and leaders. These groups and employers were able to identify the key areas and skills needed for students to be successful in this career field.

Division is updating layouts to align with forthcoming part-time layouts.

**Financial/staffing/equipment/space implications:**

**List departments that have been consulted regarding their use of this program.**

**Signatures:**

Reviewer	Print Name	Signature	Date
Initiator	Shawn Deron Rocky Roberts		2/1/24

PROGRAM CHANGE FORM

Department Chair	Rocky Roberts	<i>Rocky Roberts</i>	2/1/24
Division Dean/Administrator	Jimmie Baber	<i>Jimmie Baber</i>	2/1/24
<b>Please return completed form to the Office of Curriculum &amp; Assessment, SC 257</b> <b>or by e-mail to curriculum.assessment@wccnet.edu</b> <b>Once reviewed by the appropriate faculty committees we will secure the signature of the VPI.</b>			
<b>Reviewer</b>	<b>Print Name</b>	<b>Signature</b>	<b>Date</b>
Curriculum Committee Chair	Randy Van Wagnen	<i>RVanWagnen</i>	2-12-24
Assessment Committee Chair	Jessical Hale	<i>Jessica Hale</i>	2-13-24
Interim Vice President for Instruction	Dr. Brandon Tucker	<i>BT</i>	2/15/24
Do not write in shaded area. Entered in: Banner _____ C&A Database _____ Log File _____			

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

## Program Information Report

## Manufacturing & Automotive

### Transportation Technologies (APOETT)

#### Associate in Applied Science Degree

Program Effective Term: **Fall 2023**

**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 or auto body repair 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 or Auto Body. 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:

**62**

Select a specialized track in one of the following areas, each of which has its own associated certificated program(s): Auto Service or Auto Body.

#### Transportation Technologies Concentrations

##### Auto Body (ABDY) (62 credits)

##### First Semester (15 credits)

ABR 111	Introduction to Auto Body Repair	4
ABR 112	Introduction to Automotive Refinishing	4
ABR 114	Applied Auto Body Welding	2
ABR 119	The Art of Metal Shaping	2
Elective	Writing Elective(s)	3

##### Second Semester (18 credits)

ABR 123	Technical Auto Body Repair	4
ABR 124	Technical Automotive Refinishing	4
ABR 140	Aluminum Welding for Automotive Applications	4
Elective	Speech/Comp. Elective(s)	3
Elective	Math Elective(s)	3

##### Third Semester (14 credits)

ASV 130	Automotive Maintenance	4
Elective	Restricted Elective(s): ABR 116, ABR 130, ABR 209, ABR 231, ASV 131, MST 106, MST 230	4
Elective	Soc. Sci. Elective(s)	3
Elective	Arts/Human. Elective(s)	3

##### Fourth Semester (15 credits)

ABR 113	Estimating and Shop Operations	4
ABR 201	Lightweighting Composite Repair	4
Elective	Restricted Elective(s): ABR 116, ABR 130, ABR 209, ABR 231, ASV 131, MST 106, MST 230	4
Elective	Nat. Sci. Elective(s)	3

**Minimum Credits Required for the Concentration or Option: 62**

## Program Information Report

### Auto Service (ASVC) (62 credits)

#### First Semester (16 credits)

ABR 114	Applied Auto Body Welding	2
ASV 130	Automotive Maintenance	4
ASV 131	Automotive Electrical	4
Elective	Writing Elective(s)	3
Elective	Math Elective(s)	3

#### Second Semester (18 credits)

ABR 140	Aluminum Welding for Automotive Applications	4
ASV 132	Automotive Engines	4
ASV 133	Automotive Fuel Systems	4
ASV 134	Automotive Transmissions	4
Elective	Restricted Elective(s): ABR 111, ASV 135, ASV 174, ASV 257, ASV 266, ASV 274, ASV 277, ASV 279, CSS 200, CSS 205, CSS 285, CST 185, MST 110	2

#### Third Semester (14 credits)

ASV 251	Engine Diagnosis and Repair	2
ASV 254	Suspension and Steering	2
ASV 256	Electrical and Electronic Systems	4
Elective	Speech/Comp. Elective(s)	3
Elective	Arts/Human. Elective(s)	3

#### Fourth Semester (14 credits)

ASV 255	Brakes	2
ASV 258	Engine Drivability	2
ASV 266	Advanced Transmissions	2
Elective	Restricted Elective(s): ABR 111, ASV 135, ASV 174, ASV 257, ASV 266, ASV 274, ASV 277, ASV 279, CSS 200, CSS 205, CSS 285, CST 185, MST 110	2
Elective	Nat. Sci. Elective(s)	3
Elective	Soc. Sci. Elective(s)	3

**Minimum Credits Required for the Concentration or Option: 62**

**Minimum Credits Required for the Program: 62**

**Program Discontinuation Form**

<b>Program Code:</b> APOETT-MSVC	<b>Program Name:</b> Transportation Technologies <b>(Motorcycle Service Concentration)</b>	<b>Effective Term:</b> Fall 2023
<b>Division Code:</b> ATP	<b>Department:</b> Transportation Technology	

**Directions:** Complete all information below.

**Rationale for discontinuation:**

APOETT - MSVC				
	<u>2018-19</u>	<u>2019-20</u>	<u>2020-21</u>	<u>2021-22</u>
Enrollment	56	40	34	29
Awards	0	0	0	2

Over the last five years, we have seen a downward trend in enrollment in the MSVC concentration, with only two degrees awarded. We are discontinuing this concentration as part of the transition toward an electric vehicle (EV) focus.

**Describe the discontinuation, transition and course phase-out plan. Please include the number of currently enrolled students.**

There are 14 students enrolled in this program code. Motorcycle course offerings will be significantly reduced by 2025 as students finish or transition to other programs, and will be eliminated by the end of the three-year phase-out period (end of Summer 2026). Students were notified on June 5<sup>th</sup> via letter.

**List departments using this program and the date they were notified of the planned discontinuation.**

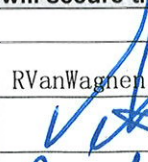

N/A

**Signatures:**

Reviewer	Print Name	Signature	Date
Initiator	Jimmie Baber	Jimmie Baber	6/23/23
Department Chair	Rocky Roberts/Mike Duff	Rocky Roberts/Mike Duff	6/23/23
Division Dean/Administrator	Jimmie Baber	Jimmie Baber	6/23/23

**Please submit completed form to the Office of Curriculum and Assessment (SC 257) or by e-mail to curriculum.assessment@wccnet.edu**

**Once reviewed by the appropriate faculty committees we will secure the signature of the VPI and President.**

Reviewer	Print Name	Signature	Date
Curriculum Committee Chair	Randy Van Wagnen	RVanWagnen	08-31-23
Vice President of Instruction	Victor Vega		9/5/2023
President	Rose B. Bellanca		9/5/23

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Reviewed by C&A Committees 8/3/23



## Program Information Report

## Manufacturing & Automotive

### Transportation Technologies (APOETT)

#### Associate in Applied Science Degree

Program Effective Term: Fall 2022

**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:

**61**

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) (62 credits)

##### First Semester (15 credits)

ABR 111	Introduction to Auto Body Repair	4
ABR 112	Introduction to Automotive Refinishing	4
ABR 114	Applied Auto Body Welding	2
ABR 119	The Art of Metal Shaping	2
Elective	Writing Elective(s)	3

##### Second Semester (18 credits)

ABR 123	Technical Auto Body Repair	4
ABR 124	Technical Automotive Refinishing	4
ABR 140	Aluminum Welding for Automotive Applications	4
Elective	Speech/Comp. Elective(s)	3
Elective	Math Elective(s)	3

##### Third Semester (14 credits)

ASV 130	Automotive Maintenance	4
Elective	Restricted Elective(s): ABR 116, ABR 130, ABR 209, ABR 231, ASV 131, MST 106, MST 230	4
Elective	Soc. Sci. Elective(s)	3
Elective	Arts/Human. Elective(s)	3

##### Fourth Semester (15 credits)

ABR 113	Estimating and Shop Operations	4
ABR 201	Lightweighting Composite Repair	4
Elective	Restricted Elective(s): ABR 116, ABR 130, ABR 209, ABR 231, ASV 131, MST 106, MST 230	4
Elective	Nat. Sci. Elective(s)	3

**Minimum Credits Required for the Concentration or Option: 62**

## Program Information Report

**Auto Service (ASVC) (62 credits)****First Semester (16 credits)**

ABR 114	Applied Auto Body Welding	2
ASV 130	Automotive Maintenance	4
ASV 131	Automotive Electrical	4
Elective	Writing Elective(s)	3
Elective	Math Elective(s)	3

**Second Semester (18 credits)**

ABR 140	Aluminum Welding for Automotive Applications	4
ASV 132	Automotive Engines	4
ASV 133	Automotive Fuel Systems	4
ASV 134	Automotive Transmissions	4
Elective	Restricted Elective(s): ABR 111, ASV 135, ASV 174, ASV 257, ASV 266, ASV 274, ASV 277, ASV 279, CSS 200, CSS 205, CSS 285, CST 185, MST 110	2

**Third Semester (14 credits)**

ASV 251	Engine Diagnosis and Repair	2
ASV 254	Suspension and Steering	2
ASV 256	Electrical and Electronic Systems	4
Elective	Speech/Comp. Elective(s)	3
Elective	Arts/Human. Elective(s)	3

**Fourth Semester (14 credits)**

ASV 255	Brakes	2
ASV 258	Engine Drivability	2
ASV 266	Advanced Transmissions	2
Elective	Restricted Elective(s): ABR 111, ASV 135, ASV 174, ASV 257, ASV 266, ASV 274, ASV 277, ASV 279, CSS 200, CSS 205, CSS 285, CST 185, MST 110	2
Elective	Nat. Sci. Elective(s)	3
Elective	Soc. Sci. Elective(s)	3

**Minimum Credits Required for the Concentration or Option: 62****Motorcycle Service (MSVC) (61 credits)****First Semester (16 credits)**

ABR 114	Applied Auto Body Welding	2
MST 110	Motorcycle Service Technology I	4
Elective	Restricted Elective(s): ABR 119, ABR 201, ABR 209, ASV 130, MST 106, MST 112, MST 235	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
MST 230	Advanced Motorcycle Fabrication	3
Elective	Nat. Sci. Elective(s)	3

**Third Semester (16 credits)**

MST 140	Motorcycle Service Technology IV	4
MST 220	Dynamometer Operations	4
Elective	Restricted Elective(s): ABR 119, ABR 201, ABR 209, ASV 130, MST 106, MST 112, MST 235	2
Elective	Speech/Comp. Elective(s)	3
Elective	Arts/Human. Elective(s)	3

**Fourth Semester (15 credits)**

ABR 140	Aluminum Welding for Automotive Applications	4
MST 210	Performance Engine Technology	4
MST 225	Advanced Dynamometer Tuning Systems	4
Elective	Soc. Sci. Elective(s)	3

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

PROGRAM CHANGE FORM

<b>Program Code:</b> APOETT	<b>Current Program Name:</b> Transportation Technologies	<b>Effective Term:</b> Fall 2022
<b>Division Code:</b> ATP	<b>Department:</b> Transportation Technologies	

**Directions:**

1. Attach the current program listing from the WCC catalog or website and indicate any changes to be made.
2. Draw lines through any text that should be deleted and write in additions. Extensive narrative changes can be included on a separate sheet.
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**Requested Changes:**

- |   |   |
|---|---|
| <input checked="" type="checkbox"/> Remove course(s): <u>See attached</u> | <input type="checkbox"/> Program outcomes (may also result from removing or adding a course)* |
| <input checked="" type="checkbox"/> Add course(s): <u>See attached</u>    | <input type="checkbox"/> Program assessment plan*   |
| <input type="checkbox"/> Program title (new title is _____)               | <input type="checkbox"/> Accreditation information  |
| <input type="checkbox"/> Description                                      | <input type="checkbox"/> Other _____  |
| <input type="checkbox"/> Advisors   |   |
| <input type="checkbox"/> Program admission requirements                   |   |
| <input type="checkbox"/> Continuing eligibility requirements              |   |

Note: A change to the Award Type requires the submission of a new program proposal form and a separate program inactivation form. Contact the Director of Curriculum & Assessment for more information.

Show all changes on the catalog page you attach.

\* Please submit a Program Assessment Plan Change form.

**Rationale for proposed changes:**

Minor changes and corrections to: Course contact hours, Course(s) removed that were inactivated and replaced with concentration applicable course(s), Reviewed and refined the restricted elective course list(s) per concentration and reviewed the students' pathway to completion based on frequency of scheduling (Sun/Moon chart).

**Financial/staffing/equipment/space implications:**




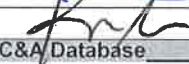
**List departments that have been consulted regarding their use of this program.**

All departments that are affected have been consulted.

**Signatures:**

Reviewer	Print Name	Signature	Date
Initiator	<i>Alison Day</i>	<i>Alison Day</i>	12/6/2021
Department Chair	Rocky Roberts/Mike Duff	<i>Rocky Roberts</i>	12/6/21
Division Dean/Administrator	<i>J. Brown</i>	<i>J. Brown</i>	12/9/2021
Please return completed form to the Office of Curriculum & Assessment, SC 257 or by e-mail to curriculum.assessment@wccnet.edu Once reviewed by the appropriate faculty committees we will secure the signature of the VPI and President.			
Reviewer	Print Name	Signature	Date

PROGRAM CHANGE FORM

Curriculum Committee Chair	Randy Van Wagnen		2-7-22
Assessment Committee Chair			2.11.22
Vice President for Instruction	Kimberly Hurns		2/10/22
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Reviewed by C&A Committees 1/27/22

## Program Information Report

## Manufacturing & Automotive

### Transportation Technologies (APOETT)

#### Associate in Applied Science Degree

**Program Effective Term: Fall 2022**

**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.

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#### 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	4
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 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 WAF 105	Applied Auto Body Welding Introduction to Welding Processes	2
	Restricted Elective(s): Select a minimum 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 MST 230	Machining for the Technologies 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 WAF 103	Aluminum Welding for Automotive Applications 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**

## Program Information Report

## Manufacturing &amp; 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	4
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 WAF 105	Applied Auto Body Welding Introduction to Welding Processes	2
	Restricted Elective(s): Select a minimum 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 MST 230	Machining for the Technologies 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 WAF 103	Aluminum Welding for Automotive Applications 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**

**PROGRAM PROPOSAL FORM**

- 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.

<b>Program Name:</b>	<u>Transportation Technologies (APOETT)</u>	<b>Program Code:</b>
<b>Division and Department:</b>	<u>ATP Division - Transportation Technologies</u>	<u>APOETT</u>
<b>Type of Award:</b>	<input type="checkbox"/> AA <input type="checkbox"/> AS <input checked="" type="checkbox"/> AAS	
<b>Effective Term/Year:</b>	<input type="checkbox"/> Cert. <input type="checkbox"/> Adv. Cert. <input type="checkbox"/> Post-Assoc. Cert. <input type="checkbox"/> Cert. of Comp.	
<b>Initiator:</b>	<u>Fall 2020</u> <u>Transportation Technologies Faculty (Allen Day, Robert Lowing, Shawn Deron)</u>	<b>CIP Code:</b> <u>47.0604</u>
<b>Program Features</b> Program's purpose and its goals.  Criteria for entry into the program, along with projected enrollment figures.  Connection to other WCC programs, as well as accrediting agencies or professional organizations.  Special features of the program.	<p>This program is intended to allow for a degree path for the newly combined/formed Transportation Technologies Department.</p> <p>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.</p> <p>Students will select a specialized track in one of the following areas, each of which currently has its own certificate programs.</p> <p>Automotive Service (CTASVT, CVASV2) Auto Body Repair (CTAUBR) Motorcycle Service Technology (CTMST1, CVMST2)</p>	
<b>Need</b>  Need for the program with evidence to support the stated need.	<p>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.</p>	

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

<p><b>Curriculum</b></p> <p>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.</p> <p>Associate degree programs must provide a semester by semester program layout.</p>	<p>Please see the attached spreadsheet for the semester breakdown for each concentration.</p>																							
<p><b>Budget</b></p> <p>Specify program costs in the following areas, per academic year:</p> <ul style="list-style-type: none"> <li>All of the programs that are involved are already established and currently have an existing budget. The ongoing cost are already forecast into the current budget.</li> </ul>	<table border="1"> <thead> <tr> <th data-bbox="561 995 862 1041"></th> <th data-bbox="862 995 1187 1041">START-UP COSTS</th> <th data-bbox="1187 995 1471 1041">ONGOING COSTS</th> </tr> </thead> <tbody> <tr> <td data-bbox="561 1041 862 1087"><b>Faculty</b></td> <td data-bbox="862 1041 1187 1087">\$ .</td> <td data-bbox="1187 1041 1471 1087">\$ .</td> </tr> <tr> <td data-bbox="561 1087 862 1134"><b>Training/Travel</b></td> <td data-bbox="862 1087 1187 1134">.</td> <td data-bbox="1187 1087 1471 1134">.</td> </tr> <tr> <td data-bbox="561 1134 862 1180"><b>Materials/Resources</b></td> <td data-bbox="862 1134 1187 1180">.</td> <td data-bbox="1187 1134 1471 1180">.</td> </tr> <tr> <td data-bbox="561 1180 862 1226"><b>Facilities/Equipment</b></td> <td data-bbox="862 1180 1187 1226">.</td> <td data-bbox="1187 1180 1471 1226">.</td> </tr> <tr> <td data-bbox="561 1226 862 1272"><b>Other</b></td> <td data-bbox="862 1226 1187 1272">.</td> <td data-bbox="1187 1226 1471 1272">.</td> </tr> <tr> <td data-bbox="561 1272 862 1325" style="text-align: right;"><b>TOTALS:</b></td> <td data-bbox="862 1272 1187 1325">\$ .</td> <td data-bbox="1187 1272 1471 1325">\$ .</td> </tr> </tbody> </table>				START-UP COSTS	ONGOING COSTS	<b>Faculty</b>	\$ .	\$ .	<b>Training/Travel</b>	.	.	<b>Materials/Resources</b>	.	.	<b>Facilities/Equipment</b>	.	.	<b>Other</b>	.	.	<b>TOTALS:</b>	\$ .	\$ .
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<b>Other</b>	.	.																						
<b>TOTALS:</b>	\$ .	\$ .																						
<p><b>Program Description for Catalog and Web site</b></p>	<p>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.</p> <p>Students will select a specialized track in one of the following areas, each of which has its own Associated Certificate Program(s).</p> <ul style="list-style-type: none"> <li>Auto Service</li> <li>Auto Body</li> <li>Motorcycle Service</li> </ul> <p>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</p>																							

	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	<p>Accreditation/Licensure -</p> <p>Advisors - Allen Day, Justin Morningstar, Bob Lowing, Tim VanSchoick, Shawn Deron, Niki Lee</p> <p>Advisory Committee - Automotive - Auto Body</p> <p>Admission requirements - College entry scores in Math (3), Reading (6) and Writing(6)</p> <p>Articulation agreements - None</p> <p>Continuing eligibility requirements -</p>

**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.	<p>MST 140 Capstone course project</p> <p>MST 225 capstone course project</p> <p>ABR 123 capstone course project</p> <p>ASV 256 capstone course project</p> <p>ASV 258 capstone course project</p>	Fall 2024	<p>All Sections of MST 140 and MST 225</p> <p>All Sections of ABR 123</p> <p>All Sections of ASV 256 and 258</p>	All Students
Apply critical thinking skills to solve an identified problem in the students technical concentration.	<p>MST 140 Capstone course project</p> <p>MST 225 capstone course project</p> <p>ABR 123 capstone course project</p> <p>ASV 256 capstone course project</p> <p>ASV 258 capstone course project</p>	Fall 2024	<p>All Sections of MST 140 and MST 225</p> <p>All Sections of ABR 123</p> <p>All Sections of ASV 256 and 258</p>	All Students
Demonstrate and apply required industry related safety standards.	<p>MST 140 Capstone course project</p> <p>MST 225 capstone course project</p> <p>ABR 201 capstone course project</p> <p>ASV 256 capstone course project</p> <p>ASV 258 capstone course project</p>	Fall 2024	<p>All Sections of MST 140 and MST 225</p> <p>All Sections of ABR 201</p> <p>All Sections of ASV 256 and 258</p>	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	Alexander <sup>Justin</sup> <sup>Morgan</sup>		12/12/2019
Dean	Brandon Tucker		12/17/19
Curriculum Committee Chair	Lisa Veasey		1/30/20
<p>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.</p>			
Vice President for Instruction <input type="checkbox"/> Approved for Development <input type="checkbox"/> Final Approval	Kimberly Hurns		2/3/2020
President	Rose Bellanca		5/20/20
Board Approval			4/28/20

*Reviewed by C&A Committees  
1/23/20*

ASV OETT				MST OETT				ABR OETT			
1st Semester		3rd Semester		1st Semester		3rd Semester		1st Semester		3rd Semester	
ASV 130	4	ASV 254	2	MST 110	4	MST 140	4	ABR 111	4	ABR 135 or ASV 130	4
ASV 131	4	ASV 255	2	Restricted Electives 2	4	MST 220	4	ABR 112	4	ABR 140	4
Restricted Electives 1	3	ASV 256	4	ABR 114 or WAF 105	2	Restricted Electives 2	2	ABR 114	2	Restricted Electives 3	2
Math	3	ASV 258	2	Math	3	Arts/Humanity	3	Math	3	Arts/Humanity	3
Writing/Composisiton	2	Arts/Humanity	3	Writing/Composisiton	3	Writing/Composisiton	3	Writing/Composisiton	3	Writing/Composisiton	3
Total	16	Writing/Composisiton	3	Total	16	Total	16	Total	16	Total	16
		Total	16								
2nd Semester		4th Semester		2nd Semester		4th Semester		2nd Semester		4th Semester	
ASV 135	2	ASV 257	2	MST 120	4	MST 225	4	ABR 123	4	ABR 201	4
ASV 132	4	ASV 264	2	MST 130	4	MST 210	4	ABR 124	4	Restricted Electives 3	2
ASV 133	4	ASV 251	2	MTT 102 or MST 230	2	Natural Sciences	3	ABR 113	4	Natural Sciences	3
ASV 134	4	Natural Sciences	3	Restricted Electives 2	2	Social/Behaviorial	3	ABR 119	2	Social/Behaviorial	3
Restricted Electives 4	2	Social/Behaviorial	3	ABR 140 or WAF 103	2	Total	14	Restricted Electives 3	2	Total	12
Total	16	Total	12	Total	14			Total	16		
		Total	60			Total	60			Total	60
RE list 1 - ASV 174, ASV 269, ASV 270, ASV 277, ASV 279,				RE list 2 - ABR 119, ABR 201, ASV 130, MST 106, MST 112				RE list 3 - ABR 116, ABR 130, ABR 231, MST 106, MST 230			
RE list 4 - ABR 140, WAF 103											