

## Washtenaw Community College Comprehensive Report

### MST 112 Advanced Powder Coating Effective Term: Fall 2025

#### Course Cover

**College:** Advanced Technologies and Public Service Careers  
**Division:** Advanced Technologies and Public Service Careers  
**Department:** Transportation Technologies  
**Discipline:** Motorcycle Service Technology (new)  
**Course Number:** 112  
**Org Number:** 14100  
**Full Course Title:** Advanced Powder Coating  
**Transcript Title:** Advanced Powder Coating  
**Is Consultation with other department(s) required:** No  
**Publish in the Following:** College Catalog , Time Schedule , Web Page  
**Reason for Submission:** Inactivation

#### **Change Information:**

**Consultation with all departments affected by this course is required.**

**Rationale:** Course phased-out.

**Proposed Start Semester:** Fall 2025

**Course Description:** In this course, students are exposed to more complex techniques used in the powder coating process. Advanced powder coating is a multiple layered coating process that is an alternative to custom painting. Students will further develop skills in tooling, media and procedures used to powder coat by applying them to larger components. Color matching, powder coating step-by-step process identification and proper media selection for specific applications will be discussed.

#### Course Credit Hours

**Variable hours:** No

**Credits:** 3

**Lecture Hours: Instructor:** 30 **Student:** 30

**Lab: Instructor:** 30 **Student:** 30

**Clinical: Instructor:** 0 **Student:** 0

**Total Contact Hours: Instructor:** 60 **Student:** 60

**Repeatable for Credit:** NO

**Grading Methods:** Letter Grades

Audit

**Are lectures, labs, or clinicals offered as separate sections?:** NO (same sections)

#### College-Level Reading and Writing

College-level Reading & Writing

#### College-Level Math

No Level Required

#### Requisites

**Prerequisite**

MST 106 minimum grade "C"

## General Education

### Request Course Transfer

**Proposed For:**

### Student Learning Outcomes

1. Determine the steps and materials required to complete projects using standard trade practices.

#### **Assessment 1**

Assessment Tool: Chapter test including multiple choice, T/F, and fill in the blank

Assessment Date: Winter 2018

Assessment Cycle: Every Three Years

Course section(s)/other population: All Sections

Number students to be assessed: All Students

How the assessment will be scored: Answer key

Standard of success to be used for this assessment: 70% of the students will score 70% or higher.

Who will score and analyze the data: Departmental Faculty

2. Determine and perform correct surface preparation(s) for powder coating using blasting and sanding to remove rust and/or other contaminants.

#### **Assessment 1**

Assessment Tool: Student achievement checklist

Assessment Date: Winter 2018

Assessment Cycle: Every Three Years

Course section(s)/other population: All Sections

Number students to be assessed: All students

How the assessment will be scored: Departmentally-developed rubric

Standard of success to be used for this assessment: 70% of the students will score 70% or higher.

Who will score and analyze the data: Departmental faculty

3. Identify and correct defects during the powder coating process.

#### **Assessment 1**

Assessment Tool: Student achievement checklist

Assessment Date: Winter 2018

Assessment Cycle: Every Three Years

Course section(s)/other population: All sections

Number students to be assessed: All students

How the assessment will be scored: Departmentally-developed rubric

Standard of success to be used for this assessment: 70% of the students will score 70% or higher.

Who will score and analyze the data: Departmental faculty

4. Differentiate materials and equipment required for large components, and operate equipment to powder coat large motorcycle components.

#### **Assessment 1**

Assessment Tool: Student achievement checklist

Assessment Date: Winter 2018

Assessment Cycle: Every Three Years

Course section(s)/other population: All sections

Number students to be assessed: All students

How the assessment will be scored: Departmentally-developed rubric

Standard of success to be used for this assessment: 70% of the students will score 70% or higher.

Who will score and analyze the data: Departmental faculty

5. Recognize the requirements for time, space and material for complex and large powder coating jobs, and create time schedules and cost estimates.

#### **Assessment 1**

Assessment Tool: Chapter test including multiple choice, T/F, short answer and fill in the blank

Assessment Date: Winter 2018

Assessment Cycle: Every Three Years

Course section(s)/other population: All sections

Number students to be assessed: All Students

How the assessment will be scored: Answer key

Standard of success to be used for this assessment: 70% of the students will score 70% or higher.

Who will score and analyze the data: Departmental Faculty

### **Course Objectives**

1. Research the sources, types and differences of advanced powder coating media.
2. Develop cost estimates for multiple stage powder coating projects.
3. Develop and document a plan for component preparation before and between powder coating stages.
4. Correctly identify the base substrate material.
5. Identify appropriate masking and plugging techniques for multi-stage powder coatings for larger components.
6. Apply appropriate masking and plugging techniques for multi-stage powder coatings for larger components.
7. Select correct powder coating media for the desired type and final surface finish.
8. Select the appropriate application techniques for the desired finish.
9. Apply multiple stage powder coatings for larger component refinishing.

### **New Resources for Course**

#### **Course Textbooks/Resources**

Textbooks

Manuals

Periodicals

Software

#### **Equipment/Facilities**

Level III classroom

<b><u>Reviewer</u></b>	<b><u>Action</u></b>	<b><u>Date</u></b>
<b>Faculty Preparer:</b> <i>Rocky Roberts</i>	<i>Faculty Preparer</i>	<i>Jan 09, 2025</i>
<b>Department Chair/Area Director:</b> <i>Rocky Roberts</i>	<i>Recommend Approval</i>	<i>Jan 09, 2025</i>
<b>Dean:</b> <i>Eva Samulski</i>	<i>Recommend Approval</i>	<i>Jan 17, 2025</i>
<b>Curriculum Committee Chair:</b> <i>Randy Van Wagnen</i>	<i>Reviewed</i>	<i>Apr 15, 2025</i>
<b>Assessment Committee Chair:</b>		

**Vice President for Instruction:**

*Brandon Tucker*

*Approve*

*Apr 15, 2025*

# Washtenaw Community College Comprehensive Report

## MST 112 Advanced Powder Coating Effective Term: Winter 2017

### Course Cover

**Division:** Advanced Technologies and Public Service Careers

**Department:** Motorcycle Technology

**Discipline:** Motorcycle Service Technology

**Course Number:** 112

**Org Number:** 14140

**Full Course Title:** Advanced Powder Coating

**Transcript Title:** Advanced Powder Coating

**Is Consultation with other department(s) required:** No

**Publish in the Following:** College Catalog , Time Schedule , Web Page

**Reason for Submission:** New Course

#### **Change Information:**

**Rationale:** Increasing demand from end-use industries and growing technological advances coupled with favorable regulations has resulted in a significant increase in market demand for powder coating trained personnel across a host of employment markets.

**Proposed Start Semester:** Winter 2017

**Course Description:** In this course, students are exposed to more complex techniques used in the powder coating process. Advanced powder coating is a multiple layered coating process that is an alternative to custom painting. Students will further develop skills in tooling, media and procedures used to powder coat by applying them to larger components. Color matching, powder coating step-by-step process identification and proper media selection for specific applications will be discussed.

### Course Credit Hours

**Variable hours:** No

**Credits:** 3

**Lecture Hours: Instructor: 30 Student: 30**

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**Clinical: Instructor: 0 Student: 0**

**Total Contact Hours: Instructor: 60 Student: 60**

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**Grading Methods:** Letter Grades

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**Are lectures, labs, or clinicals offered as separate sections?:** NO (same sections)

### College-Level Reading and Writing

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### College-Level Math

No Level Required

### Requisites

**Prerequisite**

MST 106 minimum grade "C"

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Proposed For:

### Student Learning Outcomes

1. Determine the steps and materials required to complete projects using standard trade practices.

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Assessment Date: Winter 2018

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Course section(s)/other population: All Sections

Number students to be assessed: All Students

How the assessment will be scored: Answer key

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- Correctly identify the base substrate material.
- Identify appropriate masking and plugging techniques for multi-stage powder coatings for larger components.
- Apply appropriate masking and plugging techniques for multi-stage powder coatings for larger components.
- Select correct powder coating media for the desired type and final surface finish.
- Select the appropriate application techniques for the desired finish.
- Apply multiple stage powder coatings for larger component refinishing.

### **New Resources for Course**

### **Course Textbooks/Resources**

Textbooks  
Manuals  
Periodicals  
Software

### **Equipment/Facilities**

Level III classroom

<b><u>Reviewer</u></b>	<b><u>Action</u></b>	<b><u>Date</u></b>
<b>Faculty Preparer:</b> <i>Shawn Deron</i>	<i>Faculty Preparer</i>	<i>Mar 31, 2016</i>
<b>Department Chair/Area Director:</b> <i>Shawn Deron</i>	<i>Recommend Approval</i>	<i>Apr 05, 2016</i>
<b>Dean:</b> <i>Brandon Tucker</i>	<i>Recommend Approval</i>	<i>Apr 07, 2016</i>
<b>Curriculum Committee Chair:</b> <i>Kelley Gottschang</i>	<i>Recommend Approval</i>	<i>Apr 18, 2016</i>
<b>Assessment Committee Chair:</b> <i>Michelle Garey</i>	<i>Recommend Approval</i>	<i>Apr 21, 2016</i>
<b>Vice President for Instruction:</b> <i>Michael Nealon</i>	<i>Approve</i>	<i>May 02, 2016</i>