

# Washtenaw Community College Comprehensive Report

## MST 106 Introduction to Powder Coating Effective Term: Fall 2014

### Course Cover

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

**Department:** Motorcycle Technology

**Discipline:** Motorcycle Service Technology

**Course Number:** 106

**Org Number:** 14140

**Full Course Title:** Introduction to Powder Coating

**Transcript Title:** Introduction to 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:** New course

**Proposed Start Semester:** Fall 2014

**Course Description:** In this course, students are introduced to the basic principles and process of powder coating. Powder coating is a finishing process for vehicle components that is an alternative to painting. Students will be introduced to tooling, media and procedures used to powder coat small components.

### 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 110 minimum grade "C"

or

**Prerequisite**

ABR 111 minimum grade "C"

or

**Prerequisite**

ASV 151 minimum grade "C"

## General Education

### Request Course Transfer

Proposed For:

### Student Learning Outcomes

1. Recognize and differentiate the basic powder coating processes as they relate to various base materials.

#### **Assessment 1**

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

**Assessment Date:** Fall 2016

**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. Create time schedules and anticipate costs related to powder coating jobs.

#### **Assessment 1**

**Assessment Tool:** Student achievement checklist

**Assessment Date:** Fall 2016

**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. Determine and perform the procedures required for inspecting and preparing parts for refinishing.

#### **Assessment 1**

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

**Assessment Date:** Fall 2016

**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

#### **Assessment 2**

**Assessment Tool:** Student achievement checklist

**Assessment Date:** Fall 2016

**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. Operate appropriate equipment to powder coat various motorcycle components.

## Assessment 1

**Assessment Tool:** Student achievement checklist

**Assessment Date:** Fall 2016

**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

## Course Objectives

1. Research the sources, types and differences of powder coating media.

**Matched Outcomes**

2. Develop cost estimates for powder coating projects.

**Matched Outcomes**

3. Develop and document a plan for component preparation before powder coating.

**Matched Outcomes**

4. Correctly identify the base substrate material.

**Matched Outcomes**

5. Identify appropriate masking and plugging techniques for small components.

**Matched Outcomes**

6. Apply appropriate masking and plugging techniques for small components.

**Matched Outcomes**

7. Select correct powder coating media for the desired type and final surface finish.

**Matched Outcomes**

8. Select the appropriate application techniques for the desired finish.

**Matched Outcomes**

9. Apply single stage powder coat for small component refinishing.

**Matched Outcomes**

## New Resources for Course

### Course Textbooks/Resources

Textbooks

Manuals

Periodicals

Software

### Equipment/Facilities

Level III classroom

### Reviewer

### Action

### Date

#### **Faculty Preparer:**

*Shawn Deron*

*Faculty Preparer*

*Jan 23, 2014*

#### **Department Chair/Area Director:**

*Shawn Deron*

*Recommend Approval*

*Jan 23, 2014*

#### **Dean:**

*Marilyn Donham*

*Recommend Approval*

*Jan 23, 2014*

#### **Vice President for Instruction:**

*Bill Abernethy*

*Approve*

*Feb 10, 2014*