

Washtenaw Community College Comprehensive Report

MST 106 Introduction to Powder Coating Effective Term: Fall 2019

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:
Change Information:

Consultation with all departments affected by this course is required.

Rationale: Three year master syllabus update based on course assessment information.

Proposed Start Semester: Spring/Summer 2019

Course Description: In this course, students are introduced to the basic principles and process of powder coating, 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. Other topics such as project management and resource development will be covered.

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 130 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: Student achievement checklist

Assessment Date: Spring/Summer 2019

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

Assessment 2

Assessment Tool: Process mapping assignment

Assessment Date: Spring/Summer 2019

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

2. Create time schedules, identify suppliers and anticipate costs related to powder coating jobs.

Assessment 1

Assessment Tool: Cost-benefit analysis assignment

Assessment Date: Spring/Summer 2019

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. Operate appropriate equipment to powder coat various small 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.
2. Develop cost estimates for powder coating projects.
3. Develop and document a plan for component preparation before powder coating.
4. Correctly identify the base substrate material.
5. Identify appropriate masking and plugging techniques for small components.
6. Apply appropriate masking and plugging techniques for small 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 single stage powder coat for small component refinishing.

New Resources for Course

Course Textbooks/Resources

Textbooks
Manuals
Periodicals
Software

Equipment/Facilities

Level III classroom

<u>Reviewer</u>	<u>Action</u>	<u>Date</u>
Faculty Preparer: <i>Shawn Deron</i>	<i>Faculty Preparer</i>	<i>Feb 28, 2019</i>
Department Chair/Area Director: <i>Shawn Deron</i>	<i>Recommend Approval</i>	<i>Feb 28, 2019</i>
Dean: <i>Brandon Tucker</i>	<i>Recommend Approval</i>	<i>Mar 11, 2019</i>
Curriculum Committee Chair: <i>Lisa Veasey</i>	<i>Recommend Approval</i>	<i>Apr 02, 2019</i>
Assessment Committee Chair: <i>Shawn Deron</i>	<i>Recommend Approval</i>	<i>Apr 03, 2019</i>
Vice President for Instruction: <i>Kimberly Hurns</i>	<i>Approve</i>	<i>Apr 07, 2019</i>