Washtenaw Community College Comprehensive Report

ATT 203 Lightening Materials in Transportation
Conditional Approval
Effective Term: Fall 2015

Course Cover

Division: Advanced Technologies and Public Service Careers
Department: Automotive Services
Discipline: Automotive & Transportation Tech
Course Number: 203
Org Number: 14100
Full Course Title: Lightening Materials in Transportation
Transcript Title: Lightening Materials
Is Consultation with other department(s) required: No
Publish in the Following:
Reason for Submission: New Course
Change Information:
Rationale: This course is one of three new courses to support the Powertrain Development Technician and Automotive Test Technician programs.
Proposed Start Semester: Fall 2015
Course Description: In this course, students will learn about lightweighting in transportation vehicles. Materials such as advanced reinforced plastics, carbon fiber, and titanium alloys are discussed. Students will research the role of lightweighting materials in reduced vehicle emissions and reduced fuel consumption and gain practical experience in the laboratory by executing a design and manufacturing project plan using carbon fiber layup using compression molding techniques.

Course Credit Hours

Variable hours: No
Credits: 3
Lecture Hours: Instructor: 30 **Student:** 30
Lab: Instructor: 45 **Student:** 45
Clinical: Instructor: 0 **Student:** 0

Total Contact Hours: Instructor: 75 **Student:** 75
Repeatable for Credit: NO
Grading Methods: Letter Grades
Are lectures, labs, or clinicals offered as separate sections?: NO (same sections)

College-Level Reading and Writing

College-level Reading & Writing

College-Level Math

Requisites

Prerequisite
WAF 105 minimum grade "C"
Prerequisite
WAF 200 minimum grade "C"
Prerequisite
MEC 101 minimum grade "C"

General Education

Request Course Transfer

Proposed For:

Student Learning Outcomes

1. Apply a design plan component by creating a carbon fiber layup using compression molding techniques.
   Assessment 1
   Assessment Tool: Project
   Assessment Date: Fall 2016
   Assessment Cycle: Every Three Years
   Course section(s)/other population: All
   Number students to be assessed: All
   How the assessment will be scored: Departmentally-developed rubric
   Standard of success to be used for this assessment: 75% of students will score 75% or better.
   Who will score and analyze the data: MST faculty

Course Objectives

1. Create a carbon fiber replacement for a simple transportation vehicle part that, in its design, takes advantage of the material properties of carbon fiber.
   Matched Outcomes

New Resources for Course

Course Textbooks/Resources

Textbooks
Manuals
Periodicals
Software

Equipment/Facilities

Reviewer	Action	Date
Faculty Preparer:		
Allen Day	*Faculty Preparer*	*Mar 30, 2015*
Department Chair/Area Director:		
Allen Day	*Recommend Approval*	*Apr 06, 2015*
Dean:		
Brandon Tucker	*Recommend Approval*	*Apr 14, 2015*
Vice President for Instruction:		
Bill Abernethy	*Conditional Approval*	*Apr 17, 2015*