Washtenaw Community College Comprehensive Report

ATT 261 Pre-Production Chassis Design
Effective Term: Fall 2025

Course Cover

College: Advanced Technologies and Public Service Careers
Division: Advanced Technologies and Public Service Careers
Department: Transportation Technologies
Discipline: Automotive & Transportation Tech (new)
Course Number: 261
Org Number: 14100
Full Course Title: Pre-Production Chassis Design
Transcript Title: Pre-Production Chassis Design
Is Consultation with other department(s) required: No
Publish in the Following: College Catalog , Time Schedule , Web Page
Reason for Submission: Course Change
Change Information:
Consultation with all departments affected by this course is required.
Course discipline code & number
Course title
Course description
Pre-requisite, co-requisite, or enrollment restrictions
Outcomes/Assessment
Objectives/Evaluation
Rationale: Update the prerequisites and update the course for the new discipline.
Proposed Start Semester: Fall 2025
Course Description: In this course, students will be introduced to metal fabrication, chassis design and assembly of custom vehicles. Students build their skills using tools such as the iron worker, hand brake and foot or Beverly sheer. Topics such as choosing wheel/tire offset combinations and suspension modifications are covered. Class projects will be based on the design and fabrication of "one-of-a-kind" parts used on a custom vehicle. Working in a team environment, students will develop problem-solving skills and time management skills. Past project vehicles have gained national recognition and awards. This course was previously CCC 215.

Course Credit Hours

Variable hours: No
Credits: 4
Lecture Hours: Instructor: 60 **Student:** 60
Lab: Instructor: 45 **Student:** 45
Clinical: Instructor: 0 **Student:** 0

Total Contact Hours: Instructor: 105 **Student:** 105
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

Requisites

Prerequisite
ATT 111 minimum grade B
or
Prerequisite
ATT 112 minimum grade B

General Education

Request Course Transfer

Proposed For:

Student Learning Outcomes

1. Select and install wheel/tire offset combinations.
   Assessment 1
   Assessment Tool: Outcome-related student project
   Assessment Date: Fall 2025
   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: 70% of the students will score 70% (3.5 (of 5) or higher.
   Who will score and analyze the data: Departmental faculty

2. Raise and lower the suspension while maintaining functionality and aesthetics.
   Assessment 1
   Assessment Tool: Outcome-related student project
   Assessment Date: Fall 2025
   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: 70% of the students will score 70% (3.5 (of 5) or higher.
   Who will score and analyze the data: Departmental faculty

3. Operate appropriate equipment required to fabricate various custom car chassis parts.
   Assessment 1
   Assessment Tool: Outcome-related student project
   Assessment Date: Fall 2025
   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: 70% of the students will score 70% (3.5 (of 5) or higher.
   Who will score and analyze the data: Departmental faculty

Course Objectives

1. Describe the procedures for selecting and installing custom suspension.

2. Identify specific application for current build.
3. Properly install custom suspension.
4. Identify the correct wheel/tire offset combinations required to assemble build.
5. Select the appropriate wheel/tire offset combinations.
6. Perform correct modification of wheel/tire offset combinations required to assemble build.
7. Describe the procedures for selecting ride height and suspension adjustment.
8. Identify specific application for current build.
9. Properly regulate desired ride height and adjust suspension accordingly.
10. Identify the proper selection and operation of equipment required to manufacture custom parts.
11. Operate various types of equipment essential to the process of fabricating custom parts.

New Resources for Course

Course Textbooks/Resources

Textbooks
Manuals
Periodicals
Software

Equipment/Facilities

Level III classroom

Reviewer	Action	Date
Faculty Preparer:		
Timothy VanSchoick	*Faculty Preparer*	*Mar 27, 2024*
Department Chair/Area Director:		
Rocky Roberts	*Recommend Approval*	*Mar 27, 2024*
Dean:		
Eva Samulski	*Recommend Approval*	*Apr 03, 2024*
Curriculum Committee Chair:		
Randy Van Wagnen	*Recommend Approval*	*Mar 20, 2025*
Assessment Committee Chair:		
Jessica Hale	*Recommend Approval*	*Mar 20, 2025*
Vice President for Instruction:		
Brandon Tucker	*Approve*	*Mar 21, 2025*

Washtenaw Community College Comprehensive Report

CCC 215 Custom Fabrication and Chassis Design I
Effective Term: Winter 2014

Course Cover

Division: Advanced Technologies and Public Service Careers
Department: Automotive Body
Discipline: Custom Cars and Concepts
Course Number: 215
Org Number: 14110
Full Course Title: Custom Fabrication and Chassis Design I
Transcript Title: Custom Fab & Chassis Design I
Is Consultation with other department(s) required: No
Publish in the Following: College Catalog , Time Schedule , Web Page
Reason for Submission: Course Change
Change Information:
Consultation with all departments affected by this course is required.
Course discipline code & number
Course description
Pre-requisite, co-requisite, or enrollment restrictions
Outcomes/Assessment
Objectives/Evaluation
Rationale: Because of the length of the advanced certificate programs, student success and completion rates have been below expectations. With students unable to complete all courses because of limited offerings we are revising the program and combining material from CCC 201 and CCC 221 into one course and reducing the number of credit hours in the program.
Proposed Start Semester: Winter 2014
Course Description: In this course, students will be introduced to metal fabrication, chassis design and assembly of custom vehicles. Students build their skills using tools such as the iron worker, hand brake and foot or Beverly sheer. Topics such as choosing wheel/tire offset combinations and suspension modifications are covered. Class projects will be based on the design and fabrication of "one-of-a-kind" parts used on a custom vehicle. Working in a team environment, students will develop problem-solving skills and time management skills. Past project vehicles have gained national recognition and awards. This course contains material previously taught in CCC 201 and CCC 221.

Course Credit Hours

Variable hours: No
Credits: 4
Lecture Hours: Instructor: 60 **Student:** 60
Lab: Instructor: 45 **Student:** 45
Clinical: Instructor: 0 **Student:** 0

Total Contact Hours: Instructor: 105 **Student:** 105
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

Requisites

Prerequisite
ABR 123 minimum grade "B"
and
Prerequisite
ABR 124 minimum grade "B"
and
Prerequisite
ABR 113 minimum grade "B"
or
Prerequisite
ABR 135 minimum grade "B"

General Education

Request Course Transfer

Proposed For:

Student Learning Outcomes

1. Determine and perform the correct procedures and techniques required for selection and installation of wheel/tire offset combinations.
   Assessment 1
   Assessment Tool: final student project (car)
   Assessment Date: Spring/Summer 2015
   Assessment Cycle: Every Three Years
   Course section(s)/other population: all sections
   Number students to be assessed: all students in all sections
   How the assessment will be scored: The final project will be assessed using the NATEF checklist.
   Standard of success to be used for this assessment: The standard of success will be an overall class average of 3.5 (of 5) or higher on the checklist.
   Who will score and analyze the data: Departmental chair and instructors will blind-score the final student project and analyze data.

2. Raise and lower the suspension.
   Assessment 1
   Assessment Tool: final student project (car)
   Assessment Date: Spring/Summer 2015
   Assessment Cycle: Every Three Years
   Course section(s)/other population: all sections
   Number students to be assessed: all students in all sections
   How the assessment will be scored: The final project will be assessed using the NATEF checklist.
   Standard of success to be used for this assessment: The standard of success will be an overall class average of 3.5 (of 5) or higher on the checklist.
   Who will score and analyze the data: Departmental chair and instructors will blind-score the final student project and analyze data.

3. Operate appropriate equipment required to fabricate various custom car parts.
   Assessment 1
   Assessment Tool: final student project (car)
   Assessment Date: Spring/Summer 2015
   Assessment Cycle: Every Three Years
   Course section(s)/other population: all sections

Number students to be assessed: all students in all sections
How the assessment will be scored: The final project will be assessed using the NATEF checklist.
Standard of success to be used for this assessment: The standard of success will be an overall class average of 3.5 (of 5) or higher on the checklist.
Who will score and analyze the data: Departmental chair and instructors will blind-score the final student project and analyze data.

Course Objectives

1. Describe the procedures for selecting and installing air bag suspension.
   Matched Outcomes
2. Identify specific application for current build.
   Matched Outcomes
3. Properly install air bag suspension.
   Matched Outcomes
4. Identify the correct wheel/tire offset combinations required to assemble build.
   Matched Outcomes
   1. Determine and perform the correct procedures and techniques required for selection and installation of wheel/tire offset combinations.
5. Select the appropriate offset combinations.
   Matched Outcomes
   1. Determine and perform the correct procedures and techniques required for selection and installation of wheel/tire offset combinations.
6. Perform correct modification of wheel/tire offset combinations required to assemble build.
   Matched Outcomes
   1. Determine and perform the correct procedures and techniques required for selection and installation of wheel/tire offset combinations.
7. Describe the procedures for selecting ride height and suspension adjustment.
   Matched Outcomes
8. Identify specific application for current build.
   Matched Outcomes
9. Properly regulate desired ride height and adjust suspension accordingly.
   Matched Outcomes
10. Identify the proper selection and operation of equipment required to manufacture custom parts.
    Matched Outcomes
11. Operate various types of equipment essential to the process of fabricating custom parts.
    Matched Outcomes

New Resources for Course

Course Textbooks/Resources

Textbooks
Manuals
Periodicals
Software

Equipment/Facilities

Level III classroom

Reviewer	Action	Date
Faculty Preparer:		
Scott Malnar	*Faculty Preparer*	*Sep 09, 2013*
Department Chair/Area Director:		
Scott Malnar	*Recommend Approval*	*Sep 10, 2013*
Dean:		
Marilyn Donham	*Recommend Approval*	*Sep 24, 2013*

Vice President for Instruction:

Bill Abernethy *Approve* *Oct 11, 2013*