Washtenaw Community College Comprehensive Report

MST 120 Motorcycle Service Technology II
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: 120
Org Number: 14100
Full Course Title: Motorcycle Service Technology II
Transcript Title: Motorcycle Serv Technology II
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: The motorcycle programs have been inactivated. We have decided to inactivate the courses that are not part of the existing programs in the transportation department.
Proposed Start Semester: Winter 2021
Course Description: In this course, students will be introduced to the operation and maintenance of motorcycle driveline components and the theory behind frame designs. Students will learn how to inspect, service and repair primary and final drive systems, clutch assemblies and transmissions. Frame geometry, wheel lacing, brake component rebuilding, brake system servicing and suspension component rebuilding and set up will also be covered.

Course Credit Hours

Variable hours: No
Credits: 4
Lecture Hours: Instructor: 45 **Student:** 45
Lab: Instructor: 60 **Student:** 60
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
MST 110 minimum grade "C"

General Education

Request Course Transfer

Proposed For:

Student Learning Outcomes

1. Diagnose and service motorcycle brake systems.
   Assessment 1
   Assessment Tool: Student achievement worksheet
   Assessment Date: Winter 2023
   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 75% or higher.
   Who will score and analyze the data: Department faculty

2. Identify motorcycle chassis components that effect handling characteristics.
   Assessment 1
   Assessment Tool: Module exam
   Assessment Date: Winter 2023
   Assessment Cycle: Every Three Years
   Course section(s)/other population: All
   Number students to be assessed: All
   How the assessment will be scored: Answer key
   Standard of success to be used for this assessment: 75% of the students will score 70% or higher.
   Who will score and analyze the data: Department faculty

3. Measure and assess motorcycle chassis geometry to evaluate handling characteristics.
   Assessment 1
   Assessment Tool: Student achievement worksheet
   Assessment Date: Winter 2023
   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 75% or higher.
   Who will score and analyze the data: Department faculty

4. Inspect and repair motorcycle powertrain drive components.
   Assessment 1
   Assessment Tool: Student achievement worksheet
   Assessment Date: Winter 2023
   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 75% or higher.
   Who will score and analyze the data: Department faculty

Course Objectives

1. Discuss the operational theory of frame geometry and design.
2. Identify frame design differences.
3. Recognize key components that comprise frame design.
4. Identify the locations on the frame to measure rake.
5. Recognize the procedure to measure trail.
6. Inspect and service primary drive systems.
7. Inspect and service final drive systems.
8. Diagnose and service clutch assemblies.
9. Diagnose and service transmission assemblies.
10. Discuss suspension component set up and the effects on vehicle handling.
11. Inspect and service front suspension components.
12. Inspect and service rear shocks.
13. Discuss brake system operation.
14. Inspect brake components and systems.
15. Diagnose mechanical and hydraulic brake systems.
16. Service mechanical and hydraulic brake systems.
17. Rebuild or replace brake system components.
18. Discuss the assembly process of a laced wheel.
19. Discuss the inspection process of a laced wheel.

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*	*Mar 27, 2024*
Department Chair/Area Director:		
Rocky Roberts	*Recommend Approval*	*Mar 31, 2024*
Dean:		
Eva Samulski	*Recommend Approval*	*Apr 03, 2024*
Curriculum Committee Chair:		
Randy Van Wagnen	*Reviewed*	*Feb 11, 2025*
Assessment Committee Chair:		
Vice President for Instruction:		
Brandon Tucker	*Approve*	*Feb 12, 2025*

Washtenaw Community College Comprehensive Report

MST 120 Motorcycle Service Technology II
Effective Term: Spring/Summer 2021

Course Cover

Division: Advanced Technologies and Public Service Careers
Department: Transportation Technologies
Discipline: Motorcycle Service Technology (new)
Course Number: 120
Org Number: 14100
Full Course Title: Motorcycle Service Technology II
Transcript Title: Motorcycle Serv Technology II
Is Consultation with other department(s) required: No
Publish in the Following: College Catalog , Time Schedule , Web Page
Reason for Submission: Three Year Review / Assessment Report
Change Information:
Consultation with all departments affected by this course is required.
Course description
Outcomes/Assessment
Objectives/Evaluation
Rationale: Three-year master syllabus update based on assessment report.
Proposed Start Semester: Winter 2021
Course Description: In this course, students will be introduced to the operation and maintenance of motorcycle driveline components and the theory behind frame designs. Students will learn how to inspect, service and repair primary and final drive systems, clutch assemblies and transmissions. Frame geometry, wheel lacing, brake component rebuilding, brake system servicing and suspension component rebuilding and set up will also be covered.

Course Credit Hours

Variable hours: No
Credits: 4
Lecture Hours: Instructor: 45 **Student:** 45
Lab: Instructor: 60 **Student:** 60
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
MST 110 minimum grade "C"

General Education

Request Course Transfer

Proposed For:

Student Learning Outcomes

1. Diagnose and service motorcycle brake systems.
   Assessment 1
   Assessment Tool: Student achievement worksheet
   Assessment Date: Winter 2023
   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 75% or higher.
   Who will score and analyze the data: Department faculty

2. Identify motorcycle chassis components that effect handling characteristics.
   Assessment 1
   Assessment Tool: Module exam
   Assessment Date: Winter 2023
   Assessment Cycle: Every Three Years
   Course section(s)/other population: All
   Number students to be assessed: All
   How the assessment will be scored: Answer key
   Standard of success to be used for this assessment: 75% of the students will score 70% or higher.
   Who will score and analyze the data: Department faculty

3. Measure and assess motorcycle chassis geometry to evaluate handling characteristics.
   Assessment 1
   Assessment Tool: Student achievement worksheet
   Assessment Date: Winter 2023
   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 75% or higher.
   Who will score and analyze the data: Department faculty

4. Inspect and repair motorcycle powertrain drive components.
   Assessment 1
   Assessment Tool: Student achievement worksheet
   Assessment Date: Winter 2023
   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 75% or higher.

Who will score and analyze the data: Department faculty

Course Objectives

1. Discuss the operational theory of frame geometry and design.
2. Identify frame design differences.
3. Recognize key components that comprise frame design.
4. Identify the locations on the frame to measure rake.
5. Recognize the procedure to measure trail.
6. Inspect and service primary drive systems.
7. Inspect and service final drive systems.
8. Diagnose and service clutch assemblies.
9. Diagnose and service transmission assemblies.
10. Discuss suspension component set up and the effects on vehicle handling.
11. Inspect and service front suspension components.
12. Inspect and service rear shocks.
13. Discuss brake system operation.
14. Inspect brake components and systems.
15. Diagnose mechanical and hydraulic brake systems.
16. Service mechanical and hydraulic brake systems.
17. Rebuild or replace brake system components.
18. Discuss the assembly process of a laced wheel.
19. Discuss the inspection process of a laced wheel.

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*	*Dec 04, 2020*
Department Chair/Area Director:		
Allen Day	*Recommend Approval*	*Dec 10, 2020*
Dean:		
Jimmie Baber	*Recommend Approval*	*Dec 18, 2020*
Curriculum Committee Chair:		
Lisa Veasey	*Recommend Approval*	*Feb 01, 2021*
Assessment Committee Chair:		
Shawn Deron	*Recommend Approval*	*Feb 01, 2021*
Vice President for Instruction:		
Kimberly Hurns	*Approve*	*Feb 04, 2021*