SOUTHEAST COMMUNITYCOLLEGE
ADVANCED TECHNOLGIES & SKILLED TRADES DIVISION
POWERSPORTS TECHNOLOGY
COURSE SYLLABUS
December 10, 2025

I. CATALOG DESCRIPTION

Course Number: MSTT1027
Course Title: Chassis I
Prerequisite: AUTT1007, AUTT1110

Catalog Description: Basic chassis maintenance including fork seals, chain and sprockets, and servicing of various types of steering heads, and forks, on powersports vehicles are covered. Theory, operation and proper service procedures of disc and drum brake systems, tires and wheel repair. Pre-delivery, new model setup, and periodic maintenance and safety inspections are covered.

Credit Hour: 3.0
Class Hours: 23
Lab Hours: 68
Total Contact Hours: 91

II. COURSE OBJECTIVES: *Course will:*

A. Cover powersports vehicle suspension systems.
B. Cover motorcycle forks.
C. Cover steering head.
D. Cover swing and control arms.
E. Cover wheel bearings.
F. Cover powersports vehicle drum braking systems.
G. Cover powersports vehicle disc braking systems.
H. Cover brake system inspection and repair.
I. Cover bleeding brakes.
J. Cover powersports vehicle tires.
K. Cover dismounting and mounting powersports vehicle tires.
L. Cover repairing tires.
M. Cover balancing tires.
N. Cover pre-delivery and new model set-up.
O. Cover maintenance and safety inspections.
P. Cover test riding.

III. STUDENT LEARNING OUTCOMES AND GENERAL EDUCATION LEARNING OUTCOMES

A. STUDENT LEARNING OUTCOMES: *Student will be able to:*

1. Explain the theory and operation of the front and rear suspension on powersports vehicles.
2. Disassemble front forks, clean, inspect components, repair and reassemble to manufactures specifications.
3. Maintain steering heads, clean, inspect components and reassemble to manufactures specifications.

4. Remove, service, or replace wheel bearings in powersports vehicles.
5. Explain the theory and principles of mechanical drum brake system used on powersports vehicle brake systems.
6. Explain the theory and principles of hydraulic disc brake system used on powersports vehicles brake systems.
7. Properly bleed the hydraulic brake system on powersports vehicles.
8. Replace brake pads and/or shoes on powersports vehicle brake systems, and reassemble to manufactures specifications.
9. Safely test ride the vehicle with special attention to brakes, suspension and handling.
10. Identify different types of powersports vehicle tires.
11. Dismount and mount powersports vehicle tires on different styles of wheels or rims.
12. Repair all types of powersports vehicle tires following manufacturers recommendations.
13. Balance all types of motorcycle tires.
14. Explain the sizes and profiles of powersports vehicle wheels and rims.
15. Safely test ride the vehicle with special attention to wheels and tires.
16. Inspect, service and replace chain and sprockets on powersports vehicles.
17. Understand set-up and predelivery expectations.
18. Perform maintenance and safety inspections.

B. GENERAL EDUCATION LEARNING OUTCOMES

GELO 3: Critical Thinking and Problem Solving

Outcome(s):

1. Collect, identify, interpret and analyze data.
2. Synthesize information to arrive at reasoned solutions to problems.
3. Evaluate ideas presented in writing, medial, speech, or artistic presentations.
4. Evaluate the validity of arguments, alternatives, data, outcomes, and/or impacts of actions.
5. Acquire and integrate knowledge and construct relationships across disciplines.

IV. CONTENT/TOPICAL OUTLINE

A. Course introduction
B. Required tools
C. Basic powersports vehicle suspension components, brakes, wheels, and tires

V. INSTRUCTIONAL MATERIALS

Required Text(s): Modern Motorcycle Technology with workbook, Edward Abdo

VI. METHODS OF PRESENTATION /INSTRUCTION

A. Methods of presentation typically include a combination of the following:

1. Lecture
2. Small and large group discussion
3. Video presentation
4. Demonstration
5. Project boards
6. Handouts
7. Observations
8. Assigned lab projects
9. Fieldtrips

VII. METHODS OF EVALUATION

A. Methods of evaluation typically include a combination of the following:

1. Average test scores
2. Homework assignments
3. Skill exhibits
4. Class/lab attitude and participation

VIII. SPECIFIC COURSE REQUIREMENTS

A. Average of accumulative test scores must be a minimum of 70%.

B. Student will complete all lab assignments.