MINNESOTA WEST COMMUNITY & TECHNICAL COLLEGE
COURSE OUTLINE

Faculty members are required to have the outline submitted to the Academic Affairs Office. The course outline is the form used for approval of new courses by the Academic Affairs and Standards Council.

DEPT. PRSP COURSE NUMBER: 1130

NUMBER OF CREDITS: 3 Lecture: 3 Lab: 0

**Course Title:**
ATV/Motorcycle Technology

**Catalog Description:**
This course will cover fundamental operating principles and service techniques for ATV and motorcycle engines and transmissions. Clutches, drive systems and suspensions on each vehicle style will be explained and analyzed to understand performance expectations for the varied design technologies applied in vehicle applications.

**FULFILLS MN TRANSFER CURRICULUM AREA(S)**

Goal 1: Communication: ____ by meeting the following competencies:

Goal 2: Critical Thinking: ____ by meeting the following competencies:

Goal 3: Natural Sciences: ____ by meeting the following competencies:

Goal 4: Mathematics/Logical Reasoning: ____ by meeting the following competencies:

Goal 5: History and the Social and Behavioral Sciences: ____ by meeting the following competencies:

Goal 6: The Humanities and Fine Arts: ____ by meeting the following competencies:

Goal 7: Human Diversity: ____ by meeting the following competencies:

Goal 8: Global Perspective: ____ by meeting the following competencies:

Goal 9: Ethical and Civic Responsibility: ____ by meeting the following competencies:

Goal 10: People and the Environment: ____ by meeting the following competencies:

**Prerequisites or Necessary Entry Skills/Knowledge:**
Passing grade in TRAN1100 *Introduction to Transportation.*
Topics to be Covered

- Shop Safety
- 4-cycle engine theory
- Internal and external components of a 4-cycle engine.
- Necessary maintenance procedures for ATV/Motorcycle.
- Precision measuring equipment and tooling for 4-stroke engines.
- Operating principles of transmissions, clutches, suspensions, cooling, braking, and drive systems on the ATV/Motorcycle.

Student Learning Outcomes

a) Review proper safety protocols.

b) Describe and explain what strokes take place during the running of a 4-cycle engine in the correct order.

c) Discuss the proper sequence of disassembly according to the service manuals.

d) Describe the proper use of precision measuring tools while inspecting the engine during teardown.

Is this course part of a transfer pathway: Yes ☐ No ☒

Revised Date: May 2020