Marine and Powersports Technology

Active as of Summer Session 2021

I. General Information

1. Course Title:
Introduction to Marine and Powersports

2. Course Prefix & Number:
MAPS 1100

3. Course Credits and Contact Hours:

Credits: 1

Lecture Hours: 1

4. Course Description:

This course is designed to provide the basic understanding of safety, tools and measuring instruments used in a marine and powersports shop.

5. Placement Tests Required:

Accuplacer (specify test): No placement tests required

6. Prerequisite Courses:

There are no prerequisites for this course.

9. Co-requisite Courses:

There are no corequisites for this course.

II. Transfer and Articulation

III. Course Purpose

1. Program-Applicable Courses – This course is required for the following program(s):

Marine and Powersports, Diploma

IV. Learning Outcomes

1. College-Wide Outcomes

College-Wide Outcomes/Competencies	Students will be able to:
Demonstrate reading and listening skills	Apply the knowledge from lecture and online safety training to daily practice in the marine and powerports shop.
Analyze and follow a sequence of operations	Demonstrate the knowledge of proper handling of hazardous materials in a shop setting.
Utilize appropriate technology	Operate computers to create estimates, service orders and maintain inventory controls.

2. Course Specific Outcomes - Students will be able to achieve the following measurable goals upon completion of the course:

- Apply safe work practices in a manner compatible with OSHA requirements and industry expectations;
- Demonstrate accurate measuring using a variety of measuring instruments;
- Demonstrate industry standard applications of selected tools and equipment for small engine maintenance, diagnostic and repair;
- Use a variety of computer, Web and technical resources to find information, troubleshoot problems and prepare estimates;
- Demonstrate proper completion of a service order;
- Demonstrate the ability to maintain a clean and professional shop setting; and
- Demonstrate the knowledge of proper handling of hazardous materials in a shop setting.

V. Topical Outline

Listed below are major areas of content typically covered in this course.

1. Lecture Sessions

1. Safety in the Small Gas Engine Shop
    - Basic shop safety
    - Review shop safety rules and consequences
    - Industry leading SP/2 safety and hazardous waste training
2. Tools and Measuring Instruments
    - Review hand tools and their proper uses
    - Review torque and why it's used
        - Inch pounds
        - Foot pounds
        - Torque formula for adapters
3. Fasteners, Sealants, and Gaskets
    - Standard fasteners
        - Sizes
        - Grades
    - Metric Fasteners
        - Sizes
        - Grades
    - Sealants and Chemicals
        - Types and proper uses of them
    - Gaskets
        - Proper use and importance of removal of old gaskets
4. Measuring

- How to measure components
  - Micrometers
  - Telescoping gauges
  - Small hole gauges
  - Go – No Go gauges
  - Dial calipers
  - Dial bore gauges

VI. Textbook and Supplemental Reading Materials

Hand outs, videos, class notes, and service manuals.