

MARINE, MOTORCYCLE AND POWERSPORTS TECHNICIAN CERTIFICATE - 30 CREDITS

About this program

Powersports technicians maintain, troubleshoot and repair equipment found in the powersports industry, including marine, all-terrain vehicle (ATV), snowmobile, motorcycle and lawn equipment. In this program, students perform services on modern products using specialty tools and factory-tested equipment. Along with taking factory certification exams, students learn how to plan and perform repairs according to manufacturers' recommended procedures. Students gain knowledge and hands-on experience to perform maintenance and repairs competently at the dealership level.

Program outcomes

- 1. Demonstrate professionalism and related soft skills.
- 2. Apply theory of vehicle operating systems.
- 3. Diagnose vehicle operating systems.
- 4. Repair vehicle operating systems.
- 5. Interpret service information.
- 6. Exhibit safety practices and procedures.

Curriculum overview

Crds Requirement type

- 27 Required courses
- 3 Restricted electives in course types
- 30 Total

Developmental courses note: A student may be required to enroll in developmental courses in reading, writing and math. A student's scores on the Accuplacer assessment will determine enrollment in developmental courses. The purpose of developmental courses is to prepare students for the demands of a college-level curriculum. *Credits may vary.*

Accreditation: Minnesota State Community and Technical College is accredited by the Higher Learning Commission, a regional accreditation agency recognized by the U.S. Department of Education. The Higher Learning Commission 230 South LaSalle Street, Suite 7-500 Chicago, IL 60604-1411 http://www.ncahigherlearningcommission.org Phone: 312.263.0456 / 800.621.7440



Curriculum requirement details

Required courses

CourseCrdsPWST1000 - Introduction to PowerSports3PWST1002 - Snowmobile, Off Road Vehicle and
Motorcycle Maintenance3PWST1014 - Personal Watercraft and Marine Engine
Maintenance3PWST1017 - PowerSports Fuel Systems3PWST1021 - Ignition, Charging and Starter Systems3PWST1025 - Marine Fuel Systems3PWST1080 - Snowmobile Engines3PWST1115 - Electrical Foundations3PWST2304 - Motorcycles I3

Other requirements or restricted electives

3 credits from these Course Types:

• General Education w/MnTC Goals



Course summaries

PWST1000 - Introduction to PowerSportsThis course is the study of powersports occupational safety, shop orientation procedures, and power and hand tool usage. The use of shop equipment applications, fasteners, measuring instruments and service literature will be addressed, along with appropriate service department etiquette. Two- and four-stroke engine theory along with their proper lubricants will be covered. PWST1002 - Snowmobile, Off Road Vehicle and Motorcycle Maintenance (3 credits) This course is designed to train the student in proper maintenance techniques for on- and off-road land-based recreational vehicles. Students are encouraged to bring their personal recreational vehicle(s) or use the up-to-date industry products that the college offers or both. Trailer maintenance also will be covered. This is an excellent course for getting equipment ready for an upcoming winter or summer season. This course is designed to train the student on proper maintenance techniques for water-based recreational vehicles. Students are encouraged to bring their personal boats, outboards or personal watercraft or use the up-to-date industry products that the college offers, or both. This is an excellent course for getting personal watercraft and boats ready for an coming spring. PowerSports Fuel Systems covers the theory and operation of both carbureted and fuel injection fuel systems. Included in the course are inspection, troubleshooting, seasonal service requirements and fuel quality testing. This course is a continuation of the Electrical Foundation course and will cover the study of electrical systems used on power sports equipment. It will focus primarily on ignition and starting systems. Students will learn and apply the theories of ignition, induction, charging and starting systems. Emphasis will be on proper use of test equipment along with the generation and flow of electricity. Students will apply the theories of ignition, induction, charging and starting systems. PWST1025 - Marine Fuel Systems (3 credits) Marine Fuel Systems covers carbureted and electronic fuel injection systems on marine products. Students apply the theories of fuel system operation to both two- and four-stroke engines. Included in the course are inspection, troubleshooting, seasonal service requirements and fuel quality testing. PWST1080 - Snowmobile Engines (3 credits) This course covers snowmobile engine designs, component identification and engine service procedures, as well as snowmobile fuel systems and service. Electrical Foundations covers the theory and practical operation of electricity. Multi-meters and test instruments are used, giving students the solid foundation they need to understand the more advanced electrical systems covered in future coursework.

Students will also learn about motorcycle fuel systems and related components.



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Program Plan — "Marine, Motorcycle & Powersports Technician" Locations: Moorhead

1st Fall Term (15 credits)

Courses

Course	Crds
PWST1000 - Introduction to PowerSports	3
PWST1017 - PowerSports Fuel Systems	3
PWST1021 - Ignition, Charging and Starter Systems	
PWST1025 - Marine Fuel Systems	3
PWST1115 - Electrical Foundations	3

1st Spring Term (15 credits)

Courses

Course		Crds
PWST1002 - Snowmobile, Motorcycle Maintenance	Off Road Vehicle and	3
PWST1014 - Personal Wate Maintenance	ercraft and Marine Engine	3
PWST1080 - Snowmobile E	Engines	3
PWST2304 - Motorcycles I		3

3 credits in one or more of the following:

General Education w/MnTC Goals