

Motorcycle Maintenance and Repair

Degree Type Certificate

The 24-credit Motorcycle Technology program will prepare students for entry-level positions in service, repair, and maintenance of motorcycles. Topics will include pre-delivery inspection (PDI), tires, wheel bearings, brakes, scheduled service, oil change, moving motorcycles, road tests, model theories, understanding and managing shop workflow, establishing a strong work ethic, conducting multi-point inspections, state inspections, and related lifelong learning.

Program Outcomes

The goal of the Motorcycle Technician program is to prepare students to work in the increasingly sophisticated and complex field of motorcycle technology through a combination of classroom instruction and hands-on skill development. Technicians must be able to work with electronic diagnostic equipment, read and understand technical manuals, investigate to find the cause of a problem, and connect effectively with the customer. Students will use a variety of tools, including both manual and high tech equipment, to assess and identify problems and perform repairs.

After successful completion of the program, students will be able to:

- Demonstrate skills and knowledge required to assume the role of a qualified, entry-level motorcycle maintenance professional, including pre-delivery inspection (PDI), tires, wheel bearings, brakes, scheduled service, oil changes, moving motorcycles, road testing, shop workflow, multi-point inspections, and state inspections.
- Demonstrate safe and appropriate use and care of tools and equipment in the motorcycle maintenance lab.
- Diagnose, repair and document motorcycle systems including powertrains, electrical systems, wheels, tires, and brakes.
- Inspect a vehicle, use a diagnostic approach to determine cause of operating problems, and decide action to take; complete a NH State Motorcycle Inspection.
- Compare and contrast alternate actions to determine whether to repair or replace a part.
- Use appropriate software and digital equipment to retrieve information, diagnose and analyze problems, and report outcomes.
- Communicate effectively with coworkers and customers.

Admission Requirements

- Complete an application for the program.
- Provide proof of high school completion or equivalent.
- Provide Admissions with your valid driver's license with motorcycle endorsement. Contact Admissions for information on motorcycle operator training.

Health, Safety, and Internship Considerations

The program includes work in a motorcycle technology lab where potentially hazardous equipment and materials are used. Students will be taught industry safety standards and expected to follow all safety procedures. Personal protective equipment including safety glasses and footwear must be worn while in the lab.

Tools and Equipment

MOTR Certificate Required Tool List.

The following tools are required to complete the Motorcycle Maintenance and Repair Technology Certificate. The required tools will serve as an entry-level tool kit for initial employment as a Motorcycle Service Technician. The GBCC lab at Seacoast Harley Davidson has additional tools and service equipment used in motorcycle maintenance and repair. Your instructors are the best resource regarding the tools used by more advanced technicians in the field. You should meet with your instructor on the first day of class before making significant investments in tools. Student discounts are available from multiple vendors. Tools are required by week 3.

Locking tool storage

AC/DC DIGITAL MULTIMETER (DVOM)

SCREWDRIVER SETS:

FLAT TIP 1/8"-3/8"

PHILLIPS #1,2,3,4

PLIERS:

COMMON SLIP JOINT

NEEDLE NOSE

SIDE CUT

CHANNEL-LOCK

STRAIGHT LOCK RING

SNAP RING INT/EXT

1/4" HAND RATCHET

1/4" EXTENSIONS

1/4" 6PT SOCKET SET TO 9/16"

1/4" 6PT DEEP SOCKET SET

1/4" 12PT SOCKETS, 1/4-9/16"

1/4" WOBBLE SOCKETS, 6 or 12PT

3/8" HAND RATCHET

3/8" SOCKET SET, 6PT SHALLOW

3/8" SOCKET SET, 6PT DEEP

3/8" WOBBLE SOCKET SET

3/8" EXTENSIONS

3/8 ALLEN SOCKETS, SHORT

3/8 ALLEN LONG SOCKETS, BALL

3/8 METRIC ALLEN SOCKETS

3/8 TORX SOCKETS T10-T50

3/8 HAND IMPACT DRIVER & BITS

3/8 10 & 12mm DEEP 12PT SOCKETS

SPARK PLUG SOCKET 5/8 & 13/16"

SPARK TESTER

SPARK PLUG BOOT PULLER

1/2 RATCHET

1/2 BREAKER BAR

1/2 SOCKET SET, 6PT, 12PT

1/2 IMPACT SOCKETS, 6PT

1 1/2" 1/2"DR 6PT SOCKET

1/2 EXTENSIONS

SOCKET DRIVE ADAPTERS

COMBINATION SQUARE

TORQUE WRENCHES, 1/4, 3/8, 1/2"

TORQUE ADAPTER SET, 1/4-3/4"

RATCHETING BOX WRENCHES, SAE

COMBINATION WRENCH SET, SAE

METRIC COMB WRENCH SET

ADJUSTABLE WRENCH, 6/8"

SOLDERING IRON (90-120W)

MAGNETIC PICK UP EXTENDING TOOL

ALLEN L-WRENCH SET BALL END SAE

ALLEN L-WRENCHES METRIC BALL END

16oz BALL PEEN HAMMER

2 lb DEAD BLOW HAMMER
TAPE MEASURE, 6ft
PUNCH & CHISEL SET
TAP & DIE SET, SAE
MICROMETER, 0-1" RANGE
DIAL/DIGITAL 0-6" CALIPER
BOLT/SCREW EXTRACTOR SET
FEELER GAUGES, FLAT & WIRE TYPE
6" STEEL RULE
DRILL BIT SET 1/16-1/2"
KNIFE/BOX CUTTER
INSPECTION MIRROR
TIRE PRESSURE GAUGE
TIRE VALVE CORE REMOVER
TREAD DEPTH GAUGE
SPOKE WRENCH
FLASHLIGHT (RECHARGEABLE)
BLOW NOZZLE
AIR TOOL FITTINGS
SM/LG WIRE BRUSH
SMALL PICK SET
TEST LIGHT
HEAT GUN
FUEL HOSE PINCHER
AIR CHUCK W/GAUGE
VISE GRIPS

Technical Standards

This program includes work in a motorcycle lab and requires participants to physically perform functions that require the following:

- Normal vision for reading instructions and performing tasks, including inspecting parts for quality. (Corrective vision is acceptable.)
- Mobility and strength for performing tasks that require reaching, walking, standing, and safely lifting and moving motorcycles of varying sizes and weights.
- Ability to hear sounds of equipment, for equipment operation and safety.

Transfer Credit Policy

- Students with certificates in technical fields (in areas in which Great Bay does not offer a degree) may complete the Associate's Degree in Technical Studies.
- Students enrolled in the Motorcycle Maintenance and Repair Technology Certificate program may elect to enroll in the Associate Degree in Technical Studies. Dual enrollment is contingent upon current matriculation or completion of the certificate. Completing the Motorcycle Maintenance and Repair Technology Certificate satisfies the 24 credits required for the technical specialty core of the Technical Studies degree.

Certificate Requirements

Fall Semester

Item #	Title	Theory Hours	Lab Hours	Credits
MOTR110G	Product, PDI, and Dealer Experience	2	4	4
MOTR120G	Powertrains: Engine, Drivetrain, and Transmission	2	4	4
MOTR130G	Electrical Systems and Electrical Service Procedures	2	4	4
Sub-Total Credits		6	12	12

Spring Semester

Item #	Title	Theory Hours	Lab Hours	Credits
MOTR140G	Wheels, Tires, and Brakes	2	4	4
MOTR150G	Capstone: Servicing Motorcycle Families	4	8	8
Sub-Total Credits		6	12	12
Total Credits				24