

Are you interested in snowmobiles, motorcycles, ATV's, boats...all vehicles people use for excitement and fun? If so, you know that someone needs to keep these machines in top running condition. In the **Outdoor Power Equipment & Powersports Technology Program (OPE)**, students will learn the skills necessary to work on a variety of equipment ranging from small 2-cycle chain saws to large V-8 marine engines. Students perform live work on customer equipment and learn all engine parts and procedures from tear-down to reassembly.



Program Content...

Safety

- Maintaining a Safe Shop Environment
- Proper Use of safety Equipment
- Safe Use of Hand Tools
- Safe Use of Power Tools
- Safe Use of Air Tools
- Avoiding Accidents

Basic Engine Principles and Design

- Energy & Motion
- Simple Machines & Heat Engines
- Engine Designs/Spark Ignition
- Engine Designs/Diesel
- Formula for Work, Horsepower & Torque
- Engine cooling Systems
- Hydraulics & Brake Systems
- Hydrostatic Transmissions (Lawn & Garden)
- Standard Transmissions (Lawn & Garden)

Motorcycle

- Clutch Systems
- Transmission & Drive Systems
- Wheels, Suspension & Frames
- Fuel & Starting Systems
- Brake Systems
- New York State Inspection

Principles of Operation

- Engine Components
- Multi-cylinder Engine
- Camshaft Types
- Valve Timing & Overlap
- Valve Arrangements & Crankshafts
- Piston & Connection Rod Assemblies
- Fuel Induction Systems
- Exhaust System Design

Marine

- Remote Control Assembly
- Cooling & Exhaust Systems
- Electric Shift & Hydraulic Electric Gear Case
- Mechanical Gear Case
- Fuel Systems

Internship Experiences...

Students can participate in an internship experience where they will apply their knowledge while working with professionals in authentic career settings. Students will have an opportunity to dialog with practitioners via guest presentations while developing professional insights and future educational plans.

Portfolio...

All second year students will complete a Career and Technical Education Portfolio that exhibits necessary elements for CTE Endorsement and demonstrates competencies in Outdoor Power Equipment & Powersports Technology.

Benefits...

- Articulation Agreements/College Credit*
- Pennsylvania College of Technology
 - Motorcycle Mechanics Institute
 - Cayuga Online—Cayuga Community College

Completed Career Portfolio

Integrated Math Credit

Internship Experience

For more information, contact ...

**Your High School Guidance Office or
The Guidance Office at the BOCES**

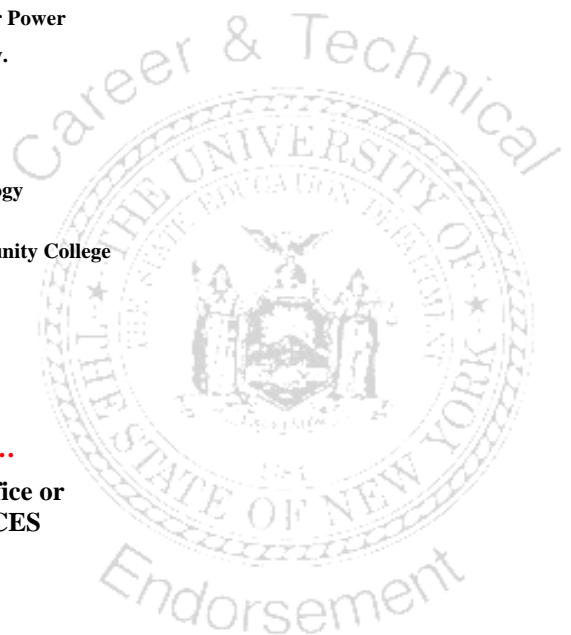
Cayuga-Onondaga BOCES
1879 W. Genesee Street Road
Auburn, NY 13021
315.253.0361
www.caybores.org

Outdoor Power Equipment & Powersports Technology could lead to careers in...

- Small Engine Mechanic
- Power Saw Mechanic
- Lawnmower Mechanic
- Outboard Motor Mechanic

Careers with additional training and education:

- Marine Engine Mechanic
- Motorcycle/ATV Mechanic



Students enrolling in this program will be responsible for the cost of protective clothing and some materials.

No student shall on the basis of gender, race, color, national origin, disability or age, be excluded from participation in, be denied the benefits of or otherwise be subjected to unlawful discrimination under any career and technical program or activity.