

AUTOMOTIVE TECHNOLOGY

Associate in Applied Science

Why Study Automotive Technology?

The automotive industry continues to increase its reliance on hi-tech solutions to improve safety and better protect the environment. Sophisticated modern autos require highly-skilled and well-trained technicians to keep them running well. In addition to their technical skills, modern automotive technicians must also develop good critical thinking and communication skills. This degree prepares students to meet the challenges of current technologies and future trends in the automotive field.

Occupational Objectives

The Department of Labor states that the need for qualified automotive service technicians and mechanics is expected to grow 17% through 2020. This degree provides graduates with the training needed to work in any size business environment, from small, privately owned companies, to larger corporate entities. Graduates may find work as dealership service specialists, in fleet operations, or in manufacturing research and development. Students who wish to pursue their bachelor's degree with transfer to an Automotive Business Management program will need additional general education credits to attain full junior status at the four-year institution.

Program Goals

This degree provides students with a rigorous and dynamic technology-based program and prepares them to become diagnostic leaders in the high-tech automotive industry. Students enhance their professional and personal development, learn to become leaders in the automotive service industry, and develop the skills necessary for effective communication.

Opportunities at Rockland Community College

Work with state-of-the-art equipment to master the skills needed to service today's hi-tech vehicles. Students are encouraged to take and pass the eight ASE Certification Exams to earn ASE Master Tech Certification. RCC is one of only 120 Certification centers worldwide for NC3 and Snap-On. Students will be challenged to learn the full use of today's computer diagnostic tools. Campus activities include intramural sports programs and over 40 student clubs and organizations.



5 Top Reasons To Study Automotive Technology at RCC

1. **VALUE:** Affordable tuition, financial aid, scholarships.
2. **FLEXIBILITY:** Part-time study can accommodate work, family, or other time commitments.
3. **CAREER:** Earn NC3 and Snap-On certifications that have real world benefits.
4. **SUPPORT:** Small class sizes, more individual attention, free tutoring.
5. **FACULTY:** All instructors are certified by the National Institute for Automotive Service Excellence and are certified by the National Collation of Certification centers have extensive industry and factory training.



STATE UNIVERSITY OF NEW YORK

Admissions 845-574-4224

www.sunyrockland.edu

145 College Road, Suffern, NY 10901

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Student Learning Outcomes:

Upon successful completion of this program, students will:

- Develop and practice proper safety skills.
- Diagnose and repair automotive problems with a high tech vehicle.
- Develop critical thinking skills.
- Develop the skills necessary for effective written and oral communication.



Courses:

AUT 101

Intro to Automotive

Modern automobile systems and services. Shop orientation, automotive detailing, steering, suspension, driveline, brakes, chassis, electrical, exhaust, vehicle inspection, safety operations, vehicle performance and careers.

ELT 101

DC Electrical Theory

The theory and scientific understand of direct current that is used in automotive systems

AUT 102

Automotive Engine I

Principles and components of internal combustion engine. Learn to diagnose engines for internal problems. Remove, disassemble, inspect and prepare engines for rebuilding.

AUT 104

Automotive Engine II

Engine rebuilding and in-chassis engine servicing. Procedures for engine repair and overhaul. Learn to replace an engine according to federal emissions specifications. After AUT 102 and AUT 104, students are prepared to take the ASE certification exam for engine repair and performance.

AUT 105, 106, and 201

Automotive Electrical/ Electronic Systems I, II, and III

Use of test equipment to diagnose and repair electrical problems. Modern autos may have as many as 80 computers to control the brakes, suspension, engine, and transmission.

AUT 111 *Automotive Steering/Suspension*

Steering, suspension and chassis systems, and performing alignments. Students are prepared for the ASE steering and suspension certification exam.

AUT 113

Automotive Brakes

Mechanics and physics of brake systems, from early hydraulics to ABS systems. Diagnostics, component replacement and repair. Hydraulic systems pressure tests and total overhaul of brake systems including ABS. Successful completion of the course prepares students to pass the ASE certification exam for brakes

AUT 205 & 206

Automotive Engine Performance I and II

Engine condition, computerized fuel control, ignition, and emission controls. Students are prepared to take the ASE engine performance exam.

AUT 211

Auto Transmission/Transaxle

Students remove, inspect, diagnose, and rebuild automatic transmissions/transaxles. Students are prepared to take the ASE certification exam automatic transmissions and transaxles.

AUT 212

Manual Transmission/Drivetrain

Manual transmissions/transaxles, clutches, drive shafts, and rear ends. Students are prepared to take the ASE certification exam in manual transmissions, transaxles and drivetrains.

AUT 220

Heating and Air Conditioning

EPA regulations, R-134a air conditioning systems, testing and diagnostic for proper performance and for inspection. Students are prepared to take ASE certification exam in auto heating and air condition. Students must pass the refrigerant recovery and recycling exam to meet EPA Section 609 of the Clean Air Act of 1990.

"RCC was the basis of my success."

- Joshua Ronquillo,
Class of 1998,
owner of 260 Auto Repair
in Haverstraw.

To learn more about
this program call
845-574-4161

RCC | Rockland
Community
College

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