

# **Career Majors in Transportation**

**Aircraft Technology**

**Auto Body Repair**

**Automotive Technology**

**Aviation Science/Flight**

**Marine & Motor Sports Technology**



# Aircraft Technology

FAA approved to operate as a part 147 school, Member of Aviation Technical Education Council, and Member of Council of Airline Maintenance Managers



AIRCRAFT TECHNOLOGY provides both the hands-on experience and the related knowledge to service, repair and overhaul reciprocating and turbine engines and components, powerplant control systems, instrumentation, induction and exhaust systems. Students will work toward the Powerplant license by studying under regulations of the Federal Aviation Administration (FAA).

## Work Environment

Students will practice skills in airframe structures and powerplant overhaul, working under very rigid procedures and the close supervision of inspectors. Students will observe strict federal safety rules and regulations.

## Career Opportunities

Aviation Lawyer  
Aircraft Manufacturer  
Airframe & Powerplant Technician  
Airline Supervisor  
Avionics Technician  
Engineering Technician  
FAA Airworthiness Inspector  
Local Utility Powerplant Operator  
Military Crew Chief  
Repair Station Repairman  
Security Specialist  
Transportation

## Advanced Standing Available\*

Dowling College  
Embry Riddle Aeronautical University  
Mohawk Community College  
Pennsylvania College of Technology  
Vaughn College of Aeronautics  
Check with the Aviation Technical Education Council. Further information on post-secondary schools may be provided at: [www.atecamt.org/schoolsmembers.htm/](http://www.atecamt.org/schoolsmembers.htm/)

\*Advanced Standing may be available to those who successfully complete this Tech course. See Articulation Agreements in Handbook.

## Student Supplies

1. Black button down uniform shirt
2. Black Dickie work pants
3. Hard soled, safety work shoes

## Post-Secondary Opportunities

Upon successful completion of the Aircraft Maintenance Technology Program and enrollment in a college or university, students can be granted up to 64 credits because of Federal License Regulations. Wilson Tech has Articulation Agreements offering advanced standing with many post-secondary institutions that offer degrees in Aviation Technology and Aeronautical Science.

## Academic credits integrated:

Tech Math, Tech Phys Sci, Eng 12, Art, CFM, Comp App

## CTE Endorsement

Students must successfully meet the academic and attendance criteria for a two-year Wilson Tech Certificate of Completion, be High School diploma eligible, and pass the following national certification exam: Federal Aviation Administration (FAA) General Qualification Exam.

## Course Outline

Federal Aircraft Safety Procedures  
Aircraft Blueprints/Drawings  
Basic Electricity  
Airframe and Powerplant Electrical Systems  
Airframe and Powerplant Hydraulic Systems  
Airframe Structures  
Material & Processes  
Reciprocating and Turbine Engine Repair and Overhaul  
Powerplant Inspection and Operation  
Powerplant Systems and Components

\*Note: In order to meet FAA licensure requirements, students must attend a seven-week summer session and have no more than 10 absences per academic year. Juniors who can make transportation arrangements and have parental permission may attend immediately after their junior year. The summer session is at no additional cost to districts.

## Average Annual Wage

National entry-level to experienced:  
\$45,670 - \$65,750  
NY entry-level to experienced:  
\$44,090 - \$62,360  
For more information:  
[www.careerzone.ny.gov](http://www.careerzone.ny.gov)



# Auto Body Repair

National Automotive Technical Education Foundation (NATEF) Approved



AUTO BODY REPAIR provides instruction in basic and advanced auto body repair, with as much emphasis on theory as practical applications. Using up-to-date equipment, students explore the use of auto body plastics, specialized tools, and spray painting; develop the mechanical ability to restore damaged vehicles to their original condition; and how to estimate jobs.

## Work Environment

Auto body shops are noisy and dusty by nature where strict safety rules must be followed for welding, metal straightening, painting and replacing auto glass. Protective goggles, work shoes, ear protection, masks and work clothing are required.

## Career Opportunities

Automotive Detailing  
Fiberglass Body Repairperson  
Frame Alignment and Unitized Body Tech.  
Heavy Collisionperson  
Insurance Adjuster  
Masker/Helper  
Parts Counterperson  
Repair Shop Owner  
Shop Foreperson and Service Manager  
Spray Painter (custom painting)

## Advanced Standing Available\*

Lincoln Technical Institute  
Morrisville State College  
New York Automotive & Diesel Institute  
Ohio Technical College  
Pennsylvania College of Technology  
SUNY Alfred  
Wilson Tech Automotive Technology Adult Program

\*Advanced Standing may be available to those who successfully complete this Tech course. See Articulation Agreements in Handbook.

## Student Supplies

1. Dark blue work shirt/work pants
2. Work shoes (hard-soled)
3. Safety glasses
4. Disposable paint respirator

## Academic credits integrated:

Tech Math, Tech Phys Sci, Eng 12, CFM, Comp App

## CTE Endorsement

Students must successfully meet the academic and attendance criteria for a two-year Wilson Tech Certificate of Completion, be High School diploma eligible, and pass the following national certification exam: National Occupational Competency Testing Exam (NOCTI) exam in Collision Repair and Assessment & Automobile Service Excellence Student Certification

## Average Annual Wage

National entry-level to experienced:  
\$29,930 - \$50,520  
NY entry-level to experienced:  
\$23,870 - \$44,150  
For more information:  
[www.careerzone.ny.gov](http://www.careerzone.ny.gov)

## Course Outline

Paint mixing, Color matching  
Shop and Field Safety Procedures  
Power Tools  
Frame Straightening/Unibody Repair & Terminology  
Auto Body Plastics and Fiberglass  
Compounding and Polishing  
Hand Tools  
MIG Welding and Equipment  
Metal Stretching & Shrinking  
Painting-Spot Repair and Overall Refinishing  
Glass Replacement  
Estimating  
Automotive Detailing



# Automotive Technology

National Automotive Technical Education Foundation (NATEF) Approved



AUTOMOTIVE TECHNOLOGY provides the theory and skills needed for light and heavy duty repairs to the automobile engine, transmission, chassis and suspension system. Students use up-to-date test equipment to precisely diagnose today's sophisticated automobiles. This is a NATEF/ASE certified training program.

## Work Environment

The auto technician may work in service stations, small repair shops or new car dealerships to maintain, troubleshoot and repair the various automotive systems. The number of employees may vary from two to 20. The work week may vary from 40–50 hours. The work is primarily indoors; however, there is a percentage of on-the-road work.

## AYES Program

The Wilson Tech Automotive Technology program has met the requirements to participate in the Automotive Youth Educational Systems (AYES) program. In conjunction with local dealerships, students can participate in job shadowing, mentoring, and paid work study experience. Through the AYES program many of our students, both from the Northport and Dix Hills campuses are employed at dealerships such as: Huntington Honda, Habberstad BMW, Huntington Audi, and Babylon Honda to name a few.

## Career Opportunities

Automotive Technician  
Business Owner  
Parts Department  
Service Manager  
Service Writer  
Shop Supervisor  
Specialized Auto Repairperson

## Advanced Standing Available\*

Lincoln Technical Institute  
Morrisville State College  
New England Institute of Technology  
New York Automotive & Diesel Institute  
Ohio Technical College  
Pennsylvania College of Technology  
Suffolk County Community College  
SUNY Alfred  
SUNY Canton  
SUNY Delhi

Universal Technical Institute  
\*Advanced Standing may be available to those who successfully complete this Tech course. See Articulation Agreements in Handbook.

## Student Supplies

1. Dark blue work shirt/work pants
2. Safety work shoes (hard-soled)
3. Safety goggles

## Academic credits integrated:

Tech Math, Tech Phys Sci, Eng 12, CFM, Comp App

## CTE Endorsement

Students must successfully meet the academic and attendance criteria for a two-year Wilson Tech Certificate of Completion, be High School diploma eligible, and pass the following national certification exam: Automobile Service Excellence Certification.

## Course Outline

ASE/NATEF Certified Modules  
Lubrication  
Exhaust System Repair  
Front-End  
Engine Overhaul  
Alternator Service  
Electronic Test Equipment  
Tire Repair  
Brakes  
Alignment and Repairs  
Engine Tune-up  
Clutch Repairs  
Transmission Service/Repair  
Air-Conditioning Service  
Fuel Injection  
Computerized Controls

## Average Annual Wage

National entry-level to experienced:  
\$27,150 - \$48,230  
NY entry-level to experienced:  
\$23,150 - \$48,340  
For more information:  
[www.careerzone.ny.gov](http://www.careerzone.ny.gov)



# Aviation Science/Flight

Approved by New York State Education Department (NYSED)



AVIATION SCIENCE/FLIGHT develops the skills, attitudes and related flight background required by the aviation industry. Students will receive ground school and flight instruction in a single engine training aircraft. All flight time earned will be recorded in student logbooks, and can be credited toward pilot certification. A Federal Aviation Administration (FAA) approved curriculum is used including practical test standards. A nationally recognized college level aviation fundamentals textbook is the core of the ground/academic instruction. Students will also use computers with flight training simulator programs and graphics as well as academic software to cover aviation science areas and FAA exam material.

## Work Environment

The professional pilot may work in several environments: commercial airlines utilizing large jets, regional airlines with smaller jets or turboprop airplanes, the military, or private businesses. Other positions may be in air traffic control, airport management, air carrier operations, or related governmental positions.

## Career Opportunities

Air Traffic Controller  
Airport Management  
Aviation Sales  
Aviation Law  
Dispatcher  
Flight Instructor  
FAA Flight Service Specialist  
Ground Instructor  
Passenger Agent  
Pilot (Airlines, Corporate, General)  
Tower Operations

## Advanced Standing Available\*

Colorado Northwestern Community College  
Dowling College  
Embry Riddle Aeronautical University

SUNY Farmingdale  
Vaughn College of Aeronautics

\*Advanced Standing may be available to those who successfully complete this Tech course. See Articulation Agreements in Handbook.

## Student Supplies

1. TSA background check
2. 3rd Class FAA Medical Exam (from an FAA medical examiner)\*
3. FAA Private Pilot Exam
4. Uniform: White pilot shirt, Black tie, Black pants

\*Please note that certain medications may disqualify a student from passing the FAA medical review.

## Academic credits integrated:

Tech Math, Tech Phys Sci, Eng 12, CFM, Comp App

## CTE Endorsement

Students must successfully meet the academic and attendance criteria for a two-year Wilson Tech Certificate of Completion, be High School diploma eligible, and pass the following national certification exam: Federal Aviation Administration (FAA) Private Pilot

Written Knowledge Exam (PPWKE).

## Average Annual Wage

National entry-level to experienced:  
\$53,050 - \$96,810

NY entry-level to experienced:  
\$43,200 - \$100,720

For more information:  
[www.careerzone.ny.gov](http://www.careerzone.ny.gov)

## Course Outline

FAA Regulations  
Aircraft Safety  
Aerodynamics  
Flight Operations  
Controlled Airspace  
Radio Procedures  
Aircraft Instruments  
Aircraft Systems  
Meteorology  
Preparation for FAA Exams  
Aviation Weather Reports/Charts  
Aeromedical Factors  
Weight & Balance  
Powerplant/Engine  
Basic Navigation  
Radio Navigation  
Flight Planning  
Aviation History



# Marine & Motor Sports Technology

Equipment & Engine Training Council (EETC) Accredited School



MARINE TECHNICIANS who can service boat engines and operate marinas are in demand due to a growth in recreational boating on Long Island and nationally. This demand, along with the advances of marine propulsion, has created the need for competent and highly trained employees. While Marine Technology will be emphasized, this course will also teach students to make repairs and install engines, drivetrains, and control parts on landscape and industrial powered equipment.

## Work Environment

Marine Technicians are generally employed in outside boatyards, marinas, engine repair facilities, as well as on fleet boats. Those seeking employment working with small engines are generally employed in small shops and work both indoors and outdoors.

## Career Opportunities

Boat Transport  
Boat Yard Maintenance  
Business Owner  
Marine Service Person  
Salesperson  
Shop Foreperson  
Technician  
Technical Representative

## Advanced Standing Available\*

Kingsborough Community College  
New England Institute of Technology  
SUNY Cobleskill  
University Technical Institute

\*Advanced Standing may be available to those who successfully complete this Tech course. See Articulation Agreements in Handbook.

## Student Supplies

1. Long or short-sleeved navy coverall
2. Hard-soled, safety work shoes
3. Safety glasses or goggles will be supplied for use in class

## Academic credits integrated:

Tech Math, Tech Phys Sci, Eng 12, CFM, Comp App

## CTE Endorsement

Students must successfully meet the academic and attendance criteria for a two-year Wilson Tech Certificate of Completion, be High School diploma eligible, and pass the following national certification exam: National Occupational Competency Testing Institute (NOCTI) - Small Engine Technology Exam.

## Average Annual Wage

National entry-level to experienced:  
\$27,800 - \$45,390  
NY entry-level to experienced:  
\$25,010 - \$43,900  
For more information:  
[www.careerzone.ny.gov](http://www.careerzone.ny.gov)

## Course Outline

- Boat Yard Skills
- Transport and Handling
- Fuel Ignition and Drive Systems
- Inboard Technology
- Outboard Technology
- Marine Engine and Service Fundamentals
- Outboard and Inboard Engines
- Safety and Navigation
- Fiberglass Boat Repair
- Boat Trailer Service
- Electric and Auxiliary Systems
- Servicing, Rebuilding, and Maintenance of Small Engines
- Landscape Equipment Maintenance