



Atlantic Technical College

Master Automotive Service Technology

Program Syllabus

2026-2027



Instructor Names: Andy Smith (AS) & Kelvie Bucknor
Department Name: Transportation, Distribution & Logistics
Office/Classroom Location: Bldg. 17, Room 298 & Portable 15
Phone Number: 754 321-5196 (KB) 754 321-5100 (AS)
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 kelvie.bucknorjr@browardschools.com

Instructor Office Hours: M-
 F: 1:50 PM - 3:50 PM
 (By appointment only)

Student Hours:

Monday – Friday

7:05 AM – 1:50 PM

Lunch

10:10 AM – 10:40 AM

Break

10:40 AM – 10:50 AM

NOTE: All students are expected to be present during their entire scheduled class time(s). All classroom breaks will occur on an “as needed” basis. The wall clock in the classroom will serve as the official time.

Program Name: Master Automotive Service Technology
Career Cluster: Transportation, Distribution and Logistics

OCP	Course Name / Title	Hours/Days
A	AER0014/Automotive Service Assistor	300hr 50
B	AER0100 /Engine Repair Technician	150hr 25
C	AER0257/Automatic Transmission and Transaxle Technician	150hr 25
D	AER0274/Manual Drivetrain and Axle Technician	150hr 25
E	AER0453/Automotive Suspension and Steering Technician	150hr 25
F	AER0418/Automotive Brake System Technician	150hr 25
G	AER0360/Automotive Electrical/Electronic System Technician	300hr 50
H	AER0172/ Automotive Heating and Air Conditioning Technician	150hr 25
I	AER0503/Automotive Engine Performance Technician	<u>300hr 50</u>
		1800 hours/ 300 Days

Technical College Policy/Adult Student Attendance:

- A student must be withdrawn after being absent for six (6) consecutive days.
- Two (2) additional absences may be allowed under certain circumstance with appropriate documentation.
- Please refer to the Broward Technical College Student Handbook for postsecondary students: <http://www.atlantictechcollege.edu/atc-student-handbook/>

Required Book(s) and/or Online Access

Available for purchase at the ATC Bookstore:

- Halderman, James, Automotive Technology 7th Edition, Pearson 2023.
ISBN# **9780135257272**
- Motor Age A-1 to A-8 Training Books

Required Materials/Supplies

Purchased from ATC Bookstore:

- Unex Safety Glasses
- Notebooks
- Writing Utensils (pen and pencil)
- Pocket Flashlight

Grading System:

- A 90 - 100%
- B 80 - 89%
- C 70 - 79%
- D 60 - 69%
- F 0 - 59%
- I Incomplete

Additional Program Specific Grading Information:

Lab Work & Write Ups	40%
Weekly Tests	20%
Weekly Quizzes	15%
Electude Online Curriculum	10%
Key Terms & Review Questions	10%
Employability	5%

Lab Work:

Each course requires that the student must have the following percentage of lab work competed:

- P1- 95%
- P2- 80%
- P3- 50%

Online Curriculum Grading Policy:

- Electude courses must have a 70% or higher to complete the course.
- Quizzes and tests will be graded on first attempts only. (NO Resets)

View Your Grades:

Grades can be viewed online by following the directions below:

1. Go to <https://browardfocus.com> (access FOCUS using Chrome, Firefox or Safari)
2. Student ID which is on your student schedule.
3. Passcode: Student's date of birth formatted as PMM/DD/YYYY.

Two

digits for the month, two digits for the day and Four digits for the year.

Classroom/ Lab Rules:

1. Must complete safety online course and pass the safety test with a 90% or better before working in shop.
2. Must always wear safety glasses when in shop.
3. Do not use equipment if you have not been trained to use it correctly.
4. Must always have proper shop clothing (no flip flops, loose fitting clothing, etc.)

5. Clean any oil spills immediately.
6. Do not distract anyone who is working on a project.
7. No running or throwing things.
8. All vehicles in the shop must have a repair order before work can begin.
9. The keys of any vehicle in the shop will be given to the instructor and not returned until the vehicle has been cleared by the instructor.
10. Be aware of what is always going on around you.
11. All electronic devices must be silent and out of sight during instructional time. This includes cell phones, earbuds, smartwatches, headphones, mp3 players, etc. The school and/or teacher are not responsible for lost or stolen devices/personal belongings of any kind.

Please Note: Working in the shop is a privilege that can be revoked if these rules are not followed.

ASE Industry Credentials:

A1 Engine Repair
 A2 Automatic Transmission & Transaxles
 A3 Manual Transmission & Drivetrain
 A4 Brakes
 A5 Suspension & Steering A6
 Electrical
 A7 Heating & Air Conditioning
 A8 Engine Performance
 ASE Certification: Students are eligible to take all eight (8) ASE tests (A1 - A8).
 Exam Fee is \$62 per Computer - based test.
 Registration Fee is \$34 per registration.
 Students may take more than one exam at a time.
 ASE tests are given off-site.
 Maximum cost per Computer - based testing is \$96.

Outstanding Student Recognition Information:

A gold seal will be applied to a Program Completion Certificate or an Applied Technology Diploma if the student has earned a 3.5 GPA or higher in their Career and Technical Education (CTE) classes.

Program Name: Automotive Service Technology
Course Number: AER0014 Course Name: Automotive Services Assistor Occupational Completion Point: A <u>Intended Outcomes:</u> 1.0 - Proficiently explain and apply required shop and personal safety tasks relating to the automotive industry. 2.0 - Explain and apply required tasks associated with the proper use and handling of tools and equipment relating to the automotive industry. 3.0 - Demonstrate proficiency in preparing vehicle for routine pre/post maintenance and customer services.
Course Number: AER0110 Course Name: Engine Repair Technician Occupational Completion Point: B <u>Intended Outcome:</u> 4.0 - Explain and apply proficiently the diagnosis, service and repair of engines, cylinder heads, valve train, engine block, lubrication and cooling systems.
Course Number: AER0257 Course Name: Automatic Transmission and Transaxle Technician Occupational Completion Point: C <u>Intended Outcome:</u> 5.0 - Explain and apply proficiently the diagnosis, service, repair and overhaul of automatic transmissions.
Course Number: AER0274 Course Name: Manual Drivetrain and Axle Technician Occupational Completion Point: D <u>Intended Outcome:</u> 6.0 - Explain and apply proficiently the diagnosis, service and repair of manual drivetrains, clutches, transmissions/transaxles, drive and half-shaft universals, constant velocity joints, rear axle differential assembly, limited slip, four-wheel drive and all-wheel drive.
Course Number: AER0453 Course Name: Automotive Suspension and Steering Technician Occupational Completion Point: E <u>Intended Outcome:</u> 7.0 - Explain and apply proficiently the diagnosis, service and repair of front and rear suspensions systems, wheel alignment, and wheels and tires.

Course Number: AER0418

Course Name: Automotive Brake System Technician

Occupational Completion Point: F

Intended Outcome:

8.0 - Explain and apply proficiently the diagnosis, service and repair of drum\disc brake, hydraulics, power assist units, electronic brakes, traction control, stability control systems and miscellaneous (wheel bearings, parking brake, electrical, etc.) systems.

Course Number: AER0360

Course Name: Automotive Electrical/Electronic System Technician

Occupational Completion Point: G

Intended Outcome:

9.0- Explain and apply proficiently the diagnosis, service and repair of electrical/electronic system components, battery, starting, charging, lighting, gauges, warning devices, driver information, horn, wiper/washer and accessory systems.

Course Number: AER0172

Course Name: Automotive Heating and Air Conditioning Technician

Occupational Completion Point: H

Intended Outcome:

10.0- Explain and apply proficiently the diagnosis, service and repair of heating and air conditioning, refrigeration, compressors, compressor clutches, evaporators, receiver driers, accumulators, condensers, heating and engine cooling, related control systems, refrigerant recovery, and recycling and handling.

Course Number: AER0503

Course Name: Automotive Engine Performance Technician

Occupational Completion Point: I

Intended Outcome:

11.0- Explain and apply proficiently the diagnosis, service and repair of engines, ignition, fuel, air induction, exhaust, computer engine and emission control systems.

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