



# Atlantic Technical College

## Advanced Automotive Service Technology

### Toyota T-TEN

### Program Syllabus

### 2018-2019



<p><b>Instructor Names:</b> Ken Bergmann, Ken Williams (KW) and Tom Keller (TK)</p> <p><b>Department Name:</b> Automotive</p> <p><b>Office/Classroom Location:</b> 17-295 &amp; 15-259</p> <p><b>Phone Number:</b> 754 321 5148 (KW) 754-321-5262 (TK)</p> <p><b>Email Address:</b> kenneth.bergmann@browardschools.com kenneth.williams@browardschools.com thomas.keller@browardschools.com</p>	<p><b>Instructor Office Hours:</b> <b>M - F:</b> 2:35 PM – 3:45 PM (by appointment only)</p>																																	
<p><b>Student Hours:</b> Monday – Thursday 7:05 AM - 2:20 PM</p> <p><b>Lunch</b> 11:00am- 11:30am</p> <p><b>Internship:</b> Paid work internship hours are arranged by the sponsoring dealership</p> <p><i>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.</i></p>	<p><b>Program Name:</b> Advanced Automotive Service Technology, Toyota Technician Training and Education Network (T-TEN) Program</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th style="width: 10%;">OCPs</th> <th style="width: 70%;">Course Names (sequenced)</th> <th style="width: 20%;">Hours</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">A</td> <td>Automotive Maintenance Technician</td> <td style="text-align: right;">400 hours</td> </tr> <tr> <td style="text-align: center;">G</td> <td>Advanced Electrical/Electronics</td> <td style="text-align: right;">400 hours</td> </tr> <tr> <td style="text-align: center;">F</td> <td>Advanced Brake Systems</td> <td style="text-align: right;">200 hours</td> </tr> <tr> <td style="text-align: center;">E</td> <td>Advanced Suspension and Steering</td> <td style="text-align: right;">200 hours</td> </tr> <tr> <td style="text-align: center;">H</td> <td>Advanced Heating &amp; Air Conditioning</td> <td style="text-align: right;">200 hours</td> </tr> <tr> <td style="text-align: center;">B</td> <td>Advanced Engine Repair</td> <td style="text-align: right;">200 hours</td> </tr> <tr> <td style="text-align: center;">I</td> <td>Advanced Engine Performance</td> <td style="text-align: right;">400 hours</td> </tr> <tr> <td style="text-align: center;">D</td> <td>Advanced Manual Drivetrain and Axle</td> <td style="text-align: right;">200 hours</td> </tr> <tr> <td style="text-align: center;">C</td> <td>Advanced Automatic Transmission and Transaxles</td> <td style="text-align: right;"><u>200</u> hours</td> </tr> <tr> <td colspan="2"></td> <td style="text-align: right;"><b>2400</b> total hours</td> </tr> </tbody> </table>	OCPs	Course Names (sequenced)	Hours	A	Automotive Maintenance Technician	400 hours	G	Advanced Electrical/Electronics	400 hours	F	Advanced Brake Systems	200 hours	E	Advanced Suspension and Steering	200 hours	H	Advanced Heating & Air Conditioning	200 hours	B	Advanced Engine Repair	200 hours	I	Advanced Engine Performance	400 hours	D	Advanced Manual Drivetrain and Axle	200 hours	C	Advanced Automatic Transmission and Transaxles	<u>200</u> hours			<b>2400</b> total hours
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<p><b>Technical College Policy/Adult Student Attendance:</b></p> <ul style="list-style-type: none"> <li>A student must be withdrawn after being absent for six (6) consecutive days.</li> <li>Two (2) additional absences may be allowed under certain circumstance with appropriate documentation.</li> <li>Please refer to the Broward Technical College Student Handbook for postsecondary students: <a href="http://www.atlanticttechnicalcollege.edu/atc-student-handbook/">http://www.atlanticttechnicalcollege.edu/atc-student-handbook/</a></li> </ul>																																		

<p><b>Required Book(s) and/or Online Access</b> Available for purchase at the ATC Bookstore:</p> <ul style="list-style-type: none"> <li>• Halderman, James, <i>Automotive Technology 5<sup>th</sup> edition</i>, Pearson, 2015</li> <li>• Toyota Technician Handbooks, 901, 623, 652, 553, 452, 752, 151, 852, 874, 302 and 274</li> </ul>	<p><b>Required Materials/Supplies</b> Purchased from ATC Bookstore:</p> <ul style="list-style-type: none"> <li>• Safety Glasses</li> <li>• Notebooks</li> <li>• USB Drive</li> <li>• Pen</li> </ul>
<p><i>All required books &amp; most materials/supplies can be purchased from the school bookstore. Stop by during operational hours for pricing &amp; purchasing information.</i></p>	
<p><b>Test of Basic Education scores/state mandated basic skills requirements for program: Reading <u>10</u> Language <u>10</u> Math <u>10</u></b></p>	
<p><b>Grading System:</b></p> <p>A 90 - 100% B 80 - 89% C 70 - 79% D 60 - 69% F 0 - 59% I Incomplete</p>	<p><b>Additional Program Specific Grading Information:</b> Toyota courses require specific attendance requirements and a minimum of 80% on course exams. A “C” or higher is required for Toyota &amp; Broward College credit. Internships requirements are stated in the program application and are required during the entire program.</p>
<p><b>Lab Work:</b> NATEF requires the completion of 95% of P-1, 80% of P2 and 50% of P3 tasks.</p>	
<p><b>View Your Grades:</b> <b>Grades can be viewed online by following the directions below:</b></p> <ol style="list-style-type: none"> <li>1. Go to <a href="https://browardfocus.com">https://browardfocus.com</a> (access FOCUS using Chrome, Firefox or Safari)</li> <li>2. Student ID which is on your student schedule.</li> <li>3. Passcode: Student’s date of birth formatted as YYYYMMDD. <i>Four digits for the year, two digits for the month and two digits for the day.</i></li> </ol>	
<p><b>Class Room/ Lab Rules:</b></p> <ol style="list-style-type: none"> <li>1. <i>Must complete safety online course and pass the safety test before working in shop.</i></li> <li>2. <i>Must wear safety glasses at all times when in shop.</i></li> <li>3. <i>Do not use equipment if you have not been trained to use it correctly.</i></li> <li>4. <i>Must have proper shop clothing and PPE to work (no flip flops, loose fitting clothing, etc.)</i></li> <li>5. <i>Clean any oil spills immediately.</i></li> <li>6. <i>Do not distract anyone who is working on a project.</i></li> <li>7. <i>No running, throwing things or unprofessional behavior</i></li> <li>8. <i>All vehicles in the shop must have instructor approval and a repair order before work can begin.</i></li> <li>9. <i>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.</i></li> <li>10. <i>Be aware of what is going on around you at all times.</i></li> </ol> <p><b><u>Please Note:</u></b> <i>Working in the shop is a privilege that can be revoked if these rules are not followed.</i></p>	

<p><b>ASE Industry Credentials</b>  <b>Two are required for graduation:</b>  A1 Engine Repair  A2 Automatic Transmission/Transaxle  A3 Manual Transmission &amp; Drivetrain  A4 Brakes  A5 Suspension &amp; Steering  A6 Electrical/Electronic Systems  A7 Heating &amp; Air Conditioning  A8 Engine Performance  ASE Certification: Students are eligible to take all eight (8) ASE tests (A1 - A8).  Exam Fee is \$37 per Computer-based test.  Registration Fee is \$36 per registration.  Students may take more than one exam at a time.  ASE tests are given off-site.  Maximum cost per Computer-based test is \$73.  Refrigerant Recovery and Recycling Certification is \$15  Toyota Certified Technician (after passing 2 ASE exams and completion of the program) at No Cost  <i>You may qualify for certification reimbursement of your exam cost(s) upon passing. Credential fees are subject to change.</i></p>	<p><b>Outstanding Student Recognition Information:</b>  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.</p>
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**Program Name: Advanced Automotive Service Technology - Toyota Technician Training and Education Network (T-TEN) Program**  
Courses taught in the following sequence:

**Course Number:** AER0011  
**Course Name:** Automotive Maintenance Technician  
**Occupational Completion Point:** A  
**Intended Outcomes:** (From FL DOE Curriculum Framework)  
01.0 Proficiently explain and apply required shop and personal safety tasks relating to the automotive industry  
02.0 Explain and apply required tasks associated with the proper use and handling of tools and equipment relating to the automotive industry  
03.0 Demonstrate proficiency in preparing vehicle for routine pre/post maintenance and customer services  
**Course Number:** AER0319  
**Course Name:** Advanced Automotive Electrical/Electronic System Technician  
**Occupational Completion Point:** G  
**Intended Outcomes:** (From FL DOE Curriculum Framework)  
09.0 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:** AER0419  
**Course Name:** Advanced Automotive Brake System Technician  
**Occupational Completion Point:** F  
**Intended Outcomes:** (From FL DOE Curriculum Framework)  
08.0 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:** AER0459

**Course Name:** Advanced Automotive Suspension and Steering Technician

**Occupational Completion Point:** E

**Intended Outcomes:** (From FL DOE Curriculum Framework)

07.0 Explain and apply proficiently the diagnosis, service and repair of front and rear suspensions systems, wheel alignment, and wheels and tires

**Course Number:** AER0173

**Course Name:** Advanced Automotive Heating and Air Conditioning Technician

**Occupational Completion Point:** H

**Intended Outcomes:** (From FL DOE Curriculum Framework)

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:** AER0118

**Course Name:** Advanced Engine Repair Technician

**Occupational Completion Point:** B

**Intended Outcomes:** (From FL DOE Curriculum Framework)

04.0 Explain and apply proficiently engine theory, diagnosis, service and repair of engines, cylinder heads, valve train, engine block, lubrication and cooling systems

**Course Number:** AER0506

**Course Name:** Advanced Automotive Engine Performance Technician

**Occupational Completion Point:** I

**Intended Outcomes:** (From FL DOE Curriculum Framework)

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

**Course Number:** AER0275

**Course Name:** Advanced Manual Drivetrain and Axle Technician

**Occupational Completion Point:** D

**Intended Outcomes:** (From FL DOE Curriculum Framework)

06.0 Explain and apply proficiently the operation, assembly, 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:** AER0258

**Course Name:** Advanced Automatic Transmission and Transaxle Technician

**Occupational Completion Point:** C

**Intended Outcomes:** (From FL DOE Curriculum Framework)

05.0 Explain and apply proficiently the diagnosis, service, repair and overhaul of automatic transmissions/transaxles

The School Board of Broward County, Florida, prohibits any policy or procedure which results in discrimination on the basis of age, color, disability, gender identity, gender expression, national origin, marital status, race, religion, sex or sexual orientation. Individuals who wish to file a discrimination and/or harassment complaint may call the Director, Equal Education Opportunities/ADA Compliance Department at 754-321-2150 or Teletype Machine (TTY) 754-321-2158. Individuals with disabilities requesting accommodations under the Americans with Disabilities Act Amendments Act of 2008, (ADAAA) may call Equal Educational Opportunities/ADA Compliance Department at 754-321-2150 or Teletype Machine (TTY) 754-321-2158.