

# Providence Career & Technical Academy

Auto 1

## Syllabus

**Instructor Name:** John Dufresne/Douglas E. Nelson

**Time Frame:** 2021-2022

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### Course Description:

Automotive Technology is designed to develop basic cognitive and performance skills for the automotive repair Industry and to prepare students to enter an associate's degree program in automotive technology or gain entry-level employment. Students will study in all eight areas of ASE Certification; Brakes, Engines, Steering & Suspension, Electrical, Engine performance, HVAC, Automatic Transmission and Manual Transmission according to the 2012 NATEF standards.

### Common Core Standards Addressed:

- 1. Integration of Knowledge and Ideas:** Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., visually, quantitatively, as well as in words) in order to address a question or solve a problem.
- 2. Communication:** developing skills in listening, speaking, reading, and writing
- 3. Connection:** acquiring new information and knowledge in other subject areas.

### Required Textbooks, Reading and Supplementary Materials:

Online text book: Electude  
Safety training online: SP2  
OSHA General Industry 10Hours  
Teacher made activities  
Online service information: Alldata Pro  
Online parts ordering and inventory: NAPA Pro Link

### Common Core Standards Addressed:

- GMP 1.6: Connect mathematical ideas and representations to one another.
- GMP 2.2: Explain the meanings of the numbers, words, pictures, symbol, gestures, tables, graphs, and concrete objects you and others use.
- GMP 3.1: Explain both what to do and why it works.
- GMP 4.1: Apply mathematical ideas to real-world situations.
- GMP 5.3: Estimate and use what you know to check the answers you find using tools.
- GMP 6.1: Communicate your mathematical thinking clearly and precisely.
- GMP 8.3: Reflect on your thinking before, during, and after you solve a problem.
- W.11-12.2: Write informative/explanatory texts to examine and convey complex ideas, concepts, and information clearly and accurately through the effective selection, organization, and analysis of content.

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- W.11-12.3: Write narratives to develop real or imagined experiences or events using effective technique, well-chosen details, and well-structured event sequences.
- W.11-12.7: Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.

### Assignment and Examination Schedule

| Assignment                         | Date  |
|------------------------------------|-------|
| Shop safety and operations         | 9/24  |
| Identify, Drill and tap a fastener | 10/22 |
| Careers in Automotive              | 11/18 |
| Intro to Automotive                | 12/18 |
| Alldata                            | 1/19  |
| Vehicle Protection and Lift Safety | 2/19  |
| Vehicle Maintenance Inspection     | 3/19  |
| Vehicle Service                    | 4/19  |
| Hand Tools                         | 5/19  |

### Freshman: General Service Technician

#### Safety

- OSHA general
- SP2 Mechanical Safety

#### Fasteners and Torque

- Bolts, Studs and Nuts identification
- What is torque
- Drilling and tapping
- Thread repair
- Fastener removal

#### Careers in Automotive

- Automotive History
- Careers in Automotive
- Types Of shops
- Automotive Industry certifications

#### At PCTA we offer

- Student ASE certifications
- Snap-On
- Hunter
- Alldata
- MACS

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- SP2
- OSHA

### Intro to Automotive

- Body Designs
- Vehicle chassis
- Vehicle operation and overview
- Drivetrain layout
- Classifying Engines
- Transmission and Axle configurations

### Alldata

- Alldata certification program CAIS

### Chassis Parts ID

- Label and identify all major system components

### Vehicle Protection and Jack and Lift safety

- Preventing damage
- Using Protective Covers
- Lifting Equipment
- Using Lifting Equipment
- Preparation for Customer Pick up

### Hand Tools

- Basic Hand Tools
- Air Tools

### Vehicle Maintenance Inspection and Repair Orders

- Repair Orders
- Fluids, Lubes and Sealers
- Underhood Inspection
- Exterior Vehicle Inspection
- In-Vehicle Inspection
- Under-Vehicle Inspection

### Vehicle Service

- Cooling System
- Transmission; AT,MT
- Engine Oil (oil Certification)
- Brake Flush
- Power Steering Flush
- Tires
  - Tire Rotation
  - Dismount/Mount Tires
  - TPMS
- Windshield Wipers
- Light Bulb replacement
- Differential Service

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**Grading Policy:** We encourage all students to come to class prepared, do their homework and participate in all class activities. However in an effort to measure students true knowledge only assessments, tests and quizzes will be factored in the score of all students. Any student who obtains a score of less than 70% in any classroom assessment will be qualified to retake the assessment only after he/she completes all necessary preparatory assignments.

### EXPECTATIONS:

#### **Safety**

We expect all students to thoroughly understand and observe any and all possible safety issues inside and outside the classroom. Due to the inherent and associated risks, safety training will take place at the beginning of each school year. Horseplay and not adhering to proper safety will affect not only the "Shop Safety" portion of the grade, but will also limit the amount of "Class Work" this student is able to perform.

**We strongly caution students from performing any work observed and/or learned from this class without supervision of a professional until professionally certified.**

#### **Effort**

We expect all students to give 100% and always try their hardest. Our responsibility is to make sure this effort is rewarded with learning.

#### **Conduct**

We expect all students to adhere to the school's handbook regarding classroom conduct. We believe a student performs at their best in a comfortable, safe environment on the physical and emotional levels. Teasing, bullying, hurtful and disrespectful behavior will NOT be tolerated.

#### **Prior to RTI**

1. The automotive department shall identify on a monthly basis any student who has frequent absences, several missed assignments, and lack of productivity in the lab area.
2. Upon identifying student with needs a meeting shall be made with the student, guidance and the Cluster Administrator to evaluate the student's lack of performance when attending electrical class. This meeting will allow the student and instructor to produce a comprehensive plan with the help of a guidance counselor and the Cluster Administrator to get the student to the appropriate performance level. This gives the student the opportunity to

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be a part of his or her education and redirection of their Career and Technical Education Training.

3. If the student does not comply with the agreement within 2 weeks, a representative from the automotive department will contact the guidance department to make an appointment for a second conference including the parent to discuss any issues or concerns about their child.

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4. If student performance continues to decline the student will be referred to RTI (see below for RTI plan)

### **RTI Plan**

1. The automotive department will meet once a month to discuss any potential students who are in the “at risk” category. The “at risk” category is defined as any freshmen or sophomore student missing more than 22 days in one quarter, also any student who fails one full module from the curriculum. The above will apply to juniors and seniors with the exception of if the student misses 11 days or more per a quarter.

2. Once any “at risk” students have been identified a spreadsheet shall be forwarded to guidance and special education. The spread sheet will be filed permanently in the automotive department.

3. A meeting shall be scheduled with the RTI team to discuss further actions to create a comprehensive plan for the student’s to succeed.

4. Upon the student’s completion of RTI the Automotive department shall contact the RTI team to discuss whether the student shall be referred to special education or if they can be dismissed from the Intervention plan.