



## **TTEN 130 Toyota Fuel & Emission Systems Section Name Section Credit Hours Credits**

### **Syllabus**

## Course Information

**Meeting times and location:** section meeting\_times section location

**Catalog description:** A study of the fuel and emission control systems used on current model Toyota and Lexus vehicles. Troubleshooting method for Toyota and Lexus fuel, electrical, and electronic systems. Instruction will include diagnostic procedures on fuel injected engines, including direct injections. Engine conditions, and diagnosis and repair of engine sensors and system monitors. Students will learn to use an exhaust gas analyzer, oscilloscopes, and other special test equipment.

**Prerequisites:** TTEN-120

**Terms offered:** Spring Only

**Section-specific Course Description:**

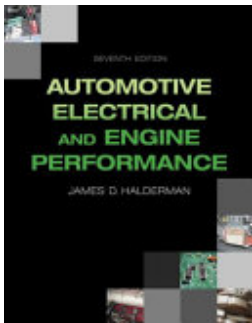
## Course Level Objectives

Overall Learning Outcomes with Final Skill Performances

1. Instructional Unit 1: Engine Controls Fundamentals
  1. Learning outcome: system fundamentals, service, repair and diagnosis
    1. FSP (written): describe system operation determining injector duration
2. Instructional Unit 2: Input Sensors
  1. Learning outcome: system fundamentals, function, operation, service, repair and diagnosis
    1. FSP (skills): input sensor system fault diagnosis
3. Instructional Unit 3: Electronic Ignition Systems

1. Learning outcome: electronic ignition systems construction, function, operation, service, repair and diagnosis
  1. FSP (skills): ignition system fault diagnosis
4. Instructional Unit 4: Fuel Systems
  1. Learning outcome: fuel delivery system construction, function, operation, service, repair and diagnosis
    1. FSP (skills): fuel delivery system fault diagnosis
5. Learning outcome: fuel injection system construction, function, operation, service, repair and diagnosis
  1. FSP (skills): fuel injection system fault diagnosis
6. Instructional Unit 5: ECU Outputs
  1. Learning outcome: air induction system construction, function, operation, service, repair and diagnosis
    1. FSP (skills): air induction system fault diagnosis

## Required Texts and/or Materials



### **Automotive Electrical and Engine Performance**

9780133866278

James D. Halderman

Prentice Hall

2015-02-13

## Required Technology and Software

- Canvas
- Chrome, Safari, or Firefox

## Course Requirements

Students will do the following activities:

1. Demonstrate safe techniques for servicing fuel systems.
2. Test the fuel delivery system. (Mechanical and electrical)
3. Diagnose & replace fuel regulation components.
4. Diagnose and repair an exhaust gas recirculation system.
5. Diagnose and repair an evaporative emission system.
6. Diagnose and repair an inlet air management system.
7. Diagnose and repair an early fuel evaporation system.
8. Diagnose and repair an air injector system.
9. Test for water and alcohol in gasoline and perform a Reid Vapor pressure test.
10. Use exhaust gas analyzers to check emissions on a vehicle.

## Other Classroom Policies and Expectations

Clean employee dealership uniforms should be worn to class daily. Personal Protective Equipment must be worn in the shop at all times.

## Grading

Final grades are calculated based on the following...

Lab work is 40%

Tests and Quizzes are 30%

Final is 30%

## Course Time Commitment

The Toyota Web Based E-Learning modules will require students to dedicate time after class to complete them. As students are required to Pass a minimum of 4 ASE tests to graduate, students should plan 2-4 hours of study time for each of those ASE exams per week.

## Canvas Participation and Expectations

Announcements, student lab sheets, grades and supplemental reading/study material will be posted on Canvas. Students are expected to log into Canvas frequently to check for new announcements and grade updates.

## Participation and Attendance Policy

Because of the class emphases on hands-on lab activities, consistent attendance is required. Students that are not in class when attendance is taken will be counted absent. Personal errands should be scheduled for times that will not conflict with class schedule. Students will not be given make-up work.

Federal and State education guidelines has stated that students missing 10% or more of their classes should not be eligible for class credit. The SJC Automotive Department uses the attendance rubric below when calculating your attendance.

If you miss 10% of your classes you will receive an "X" grade. Refer to the following chart:

% Classes Missed	Attendance Score
0% thru 9%	OK
10%	X
20%	X
30%	X
40%	X
50%	X
60%	X
70%	X
80%	X
90%	X
100%	X

Understand that this is based on percentage of the total number of days available in the course based on the official SJC course calendar. For example:

If your course schedule shows that a course runs 20 days (4 weeks), 2 missed days would count as missing 10% of the available days and would result in an incomplete X grade.

So each day in a 20 day course counts as 5%. Each day in a 40 day course counts as 2.5% (and rounds to 3%). Each day in an 80 day course counts as 1.25% (and rounds to 1%) etc.

Also remember that late arrivals are counted absent.

## Instructor Response Times & Regular Interaction Expectations

Normally Instructors will respond to phone calls/texts the same day. Please allow two business days to respond to emails.

## Key Dates to Remember

[Full Academic Calendar](#)

## Course Schedule

See the course calendar in Canvas

## Technical Support

Technical support is available through the San Juan College Help Desk 24/7/365. The help desk can be reached at 505-566-3266 or by creating a ticket at [San Juan College Help Desk](#).

For password reset and Canvas support, visit the [Student Technology Guide](#) website.

## Accessibility/Privacy Policies for all Technology Tools Used

[Accessibility/Privacy Policies for all Technology Tools Used](#)

## Student Support

At San Juan College, we are committed to supporting your academic success and overall well-being. We recognize that college life can be challenging and stressful, impacting both learning and personal health. We are here to help you succeed.

### **Academic Support and Resources**

We provide a range of academic support services to help you stay on track on your educational journey. Free resources include tutoring, computer loans, life skills workshops, and so much more. Visit the [Academic Support and Resources](#) webpage to learn more about support and resources available through Academic Advising, the Tutoring Center, the Student Resource Center (formerly Student Achievement Center) and the Testing Center.

### **Student Support and Resources**

If you or someone you know could benefit from counseling, accessibility services, career exploration, veteran transitional assistance, or any of our other support services, visit the [Student Support and Resources](#) webpage where you'll find detailed information about various resources available to you as an SJC student.

We encourage you to take advantage of these free resources to enhance your college experience and ensure your success.

## College Policies and Resources for Current Students

The [Student Handbook](#) provides information on student support, student organizations, and student conduct policies at San Juan College.

The San Juan College catalog outlines the [Academic Policies](#) students need to know.

## Healthy and Safe Practices for Being on Campus

We want a healthy and safe campus for students, faculty, staff, and guests.

### **Contagious diseases and your responsibility:**

If you have COVID-19 symptoms, fever, flu or even the common cold, you should stay home. Do not come to campus if you are feeling sick. Contact your instructor about missing class (and review your instructor's policies on missed or late work). Being sick does not necessarily excuse you from completing your work on time.

### **Safety on campus and your responsibility:**

If you are on campus and experience or witness an emergency, call 9-1-1 first and then the Department of Public Safety at 505-566-3333 (or just 3333 if calling from a campus phone).

When you are on campus, be aware of your surroundings. If you need an escort to your vehicle, call 505-566-4444 (DPS non-emergency line) or 505-215-3091 (officer on duty line).

The College will send information for campus emergencies through SJC AlertAware, email and the webpage. Stay informed and stay safe.

## Inclement Weather Information

Students will receive notification of class delays and cancellations due to inclement weather via the SJC AlertAware and SJC student email. Face-to-face classes will not meet in person; however, students are advised to check with instructors about alternative meeting options, as some may choose to meet via zoom. Hybrid classes will meet as scheduled via zoom. For questions regarding your class delay or cancelation, please contact your instructor.

## Online Course Fee

Online Courses - San Juan College requires all online courses to include some form of assessment to demonstrate the mastery of course objectives. This could include exams, capstone projects, e-portfolios, presentations, final papers or other appropriate assessments. The use of a proctoring platform, plagiarism detection software or other method to ensure that assessments are completed by the enrolled student is required.

A course fee of \$5.00 is assessed for all online courses at San Juan College to cover the cost of the above services. Students who are required to take a proctored exam and choose to use a physical testing center outside the SJC Testing Center or SJC Disability Services will be responsible for the cost of using that center.