



TTEN 120 Toyota Electrical 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 electrical and electronic systems found on Toyota and Lexus vehicles. Emphasis is on basic circuitry, starting systems, charging systems, ignition systems, diagnosis and servicing the electrical components on current model Toyota and Lexus vehicles. On-board computer networks found on modern Toyota and Lexus vehicles, proper techniques for isolating, diagnosing and repairing complex automotive computer networks. Theory and operation of key hybrid vehicle systems and components. Instruction will include test equipment related to ignition, electrical, and electronic devices. Personal safety will be emphasized.

Prerequisites: TTEN-110

Terms offered: Fall Only

Section-specific Course Description:

Course Level Objectives

- Service and diagnosis of electrical systems and system circuits with an emphasis on battery, starting and charging
- Service diagnose and repair for lighting and motorized electrical system circuits for non-multiplexed systems
- Operation ,service and diagnosis of body electrical system circuits for multiplexed and networking systems and system circuits

Required Texts and/or Materials

*image
not
available*

Todays' Technician

9781337033633

2015-01-01

Required Technology and Software

- Canvas
- Chrome, Safari, or Firefox

Course Requirements

Students will do the following activities:

1. Basic Electrical Introduction
2. Simple Circuits and meter Usage
3. Series Circuits and meter usage
4. Parallel Circuits and meter usage
5. Parallel Circuits and meter usage Review
6. Series - Parallel Circuits
7. Introduction to EWD and electrical symbols
8. Inductors and Electromagnetism, EWD on TIS and current flow tracing
9. Wiring repair
10. Review and Exam
11. Batteries Theory and Operation
12. Batteries System Theory and Operation
13. Starting System Theory and Operation
14. Starting System Testing

15. Starting System Diagnosis
16. Charging system theory and operation
17. Review 623 and make up day
18. Electronic signals
19. EWD current tracing and Intro to electrical diagnosis
20. Diagnosis of simple automotive electrical circuits
21. Lighting circuits and diagnosis of shorts to ground
22. Wiper/washer operation and diagnosis
23. Power window operation and diagnosis
24. Introduction to ECUs
25. TIS
26. Multiplexing operation and diagnosis, Topology
27. Electrical diagnosis with ECU controlled circuits, CAN communication
28. CAN communication with accessories
29. BEAN communication with accessories
30. LIN communication and diagnosis
31. Supplemental restraints circuits
32. Immobilizer systems

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 labsheets, 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

Instructor will normally 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

The class is scheduled from 11:15 am to 5:45 pm Monday through Friday and runs from October 21, 2024 to December 17, 2024.

Program Handbook

SCHOOL OF TRADES AND TECHNOLOGY

POLICIES AND PROCEDURES

SHOP AND CLASSROOM CONDUCT

1. The shop contains many pieces of equipment that can seriously injure a student if all safety precautions are not observed.

*Therefore, it is imperative that NO physical contact between students be allowed in the lab or department spaces.

*Conversations that are distracting from the learning process in the classroom and the lab are not permitted.

1. The department office is for the use of the instructors. Students will NOT enter the department office except on official business or when directed to do so by an instructor. The department office does not provide change for the vending machines.

1. You are responsible for your own tools. Keep up with them--no one else will. Personal tools will be kept in toolboxes. Students will provide locks for their lockers.

1. You are responsible for wearing approved safety glasses/goggles at all times in the shop or at a job location. Safety glasses must have clear, non-tinted, non-mirrored or shaded lenses. Prescription glasses MUST have plastic lenses and side shields

1. You are responsible for wearing dealer uniform shirts and appropriate slacks while on campus! Shirt tails are to be tucked in at all times.

1. You are responsible for wearing leather shoes which are strong, sturdy, and appropriate to the trade at all times while in the shop or at a job location. Leather, canvas, nylon athletic shoes or sandals are not acceptable.

1. Always ask the instructor for permission to leave the class.

1. No food, drink, vaping, smoking, or tobacco products are allowed in the classroom or the lab. Food and drink are allowed in the appropriate areas only. Smoking is allowed in designated areas only and butts will be disposed of properly. All instructional areas are designated non-smoking.

1. Inappropriate language will not be tolerated at any time on the premises.

1. Cell phones and entertainment devices MAY NOT be used during class or shop time!

1. The use of personal or school provided computers for any activity other than those assigned by your instructor is not allowed during class or shop time.

SCHOOL OF TRADES AND TECHNOLOGY

POLICIES AND PROCEDURES

GENERAL CAMPUS CONDUCT

1. The citizens of San Juan County and the State of New Mexico have contributed huge sums of money and time to provide YOU with this clean and modern facility. It is your responsibility and that of the faculty to ensure that this facility remain as you see it TODAY. Many of us overlook small actions that over a long period of time have an eroding and costly effect on the facility. Some of these costly eroding actions that we must refrain from committing are:
 - A. Placing feet on chairs, tables, desks, and walls.
 - B. Sitting on tables.
 - C. Parking in undesignated areas.
 - D. Not using sidewalks.

E. Writing on walls and furniture.

G. Not using trash receptacles.

1. Alcoholic beverages, drugs or persons under the influence of either alcohol or drugs will not be allowed or tolerated on the campus.

1. While walking in the halls or lab, do so in a quiet and orderly manner.

PLEASE HELP US ENSURE THAT FUTURE STUDENTS WILL HAVE THE SAME OPPORTUNITY THAT YOU HAVE HAD TO FURTHER THEIR EDUCATION IN A CLEAN AND FUNCTIONAL FACILITY.

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.