



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

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 tickets and password reset: [San Juan College Help Desk](#)

For Canvas support information: [Canvas Support](#)

Accessibility/Privacy Policies for all Technology Tools Used

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

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

COVID Safe Practices for Being on Campus

Masks / cloth face coverings must be worn while on campus in accordance with the New Mexico public health order. If you feel that you cannot wear a mask due to health complications, please contact Disabilities Services: disabilityservices@sanjuancollege.edu or call (505) 566-3271. Hand sanitizer stations are at all building entrances, please "wash in, wash out"--clean your hands when you enter and before you leave. Classrooms and labs have been arranged to allow for social

distancing; please respect your classmates and instructors by staying 6 feet away from everyone. You will be expected to disinfect your table or area prior to class and after class, cleaning products will be provided for this purpose. Check with your instructor for specific policies for their course. Please do not congregate in hallways or common areas, instead utilize our beautiful outside spaces and weather to visit with your friends and colleagues from a safe distance.

If you have been in contact with anyone who has tested positive for COVID-19, has symptoms, or is waiting on test results, contact your instructor and DO NOT come to class. If you have tested positive, have symptoms or are waiting on test results, contact your instructor and DO NOT come to class. Your health care provider or the assigned contact tracer will let you know when it is safe for you to be around others.

Student Support

Student Services and Support

The Student Support webpage provides information on counseling, tutoring, technical support, and many other support services available to San Juan College students.

[Student Support](#)

Academic Support

Academic Support webpage provides information on academic advising, the library, Testing Center, and the honors program.

[Academic Support](#)

Participation and Attendance Policy

Because of the class emphasizes 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.

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.

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.

Instructor Response Time

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

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.

Grading

Final grades are calculated based on the following...

Lab work is 40%

Tests and Quizzes are 30%

Final is 30%

Key Dates to Remember

[Full Academic Calendar](#)

Course Schedule

Schedule will be filled in at a later date

College Policies

The following information also applies to your work in this class. If you have special needs for campus emergency situations, please inform me immediately.

1. **Academic Accommodations - American with Disabilities Act (ADA)**

If you believe you need academic accommodations due to physical or learning disabilities, you are encouraged to inform them as soon as possible. The coordinator can work with you in verifying your disabilities and developing

accommodation strategies. Please go to [Disability Services Office](#), click the button for “Request for Services” and complete all the steps.

You can also contact the college’s disability coordinator in the Advising/Counseling Center at 566-3271 or disabilityservices@sanjuancollege.edu. More information is available on the website listed above.

2. The Family Educational Rights and Privacy Act (FERPA)

Your personal information and grade are confidential. Aside from routine reporting to the college required for this course, I will not share such information with anyone unless I have your permission.

3. Academic Honesty Rules

San Juan College expects all students to adhere to the [Academic Honesty Rules](#) as posted online. These are the official guidelines for all classes at San Juan College (July 2006).

4. Student Conduct Statement

College is preparation for professional opportunities, and professional conduct is expected in courses, including online classes, as well as any written communications, and interactions with members of the college community. As part of our learning community, students are expected to interact and communicate in a mature, respectful, thoughtful, and supportive manner. Students who demonstrate disrespectful, hostile, belittling, bullying or other disruptive behavior will be subject to potential consequences and possible dismissal from the college. The college will take appropriate action when students demonstrate threatening behavior (to others or self). Students should refer to the Code of Conduct in the Student Handbook for additional information.

5. Student Safety

Keeping students safe is a priority, and part of that is ensuring that we have the ability to communicate emergency messages – whether for school closures due to weather or for more or urgent situations. Rave is San Juan College’s emergency messaging system. Through your SJC student email, you will automatically receive email messages, however, it is also vital that you receive text messages. In order to receive the messages, you must register in a simple process with [Rave](#). When registering, please make sure that your mobile status is “confirmed.”

The Department of Public Safety is available 24 hours per day. In an emergency, they can be accessed by calling 215-3091 or 566-3333.

In the event of an emergency, a Rave message will be sent, and depending on the situation, you will be instructed to do one of the following:

- Evacuate the building
- Shelter in place (Campus doors are locked, and operations continue as normal. During this situation, no one other than law enforcement is allowed in or out of the campus.)

- Lockdown (Campus doors are locked. All operations cease, and you should take cover in your immediate area. No one other than law enforcement is allowed in or out of the campus.

6. **Non-Discrimination, Sexual Harassment, and Retaliation.**

San Juan College does not discriminate on the basis of race, color, religion, sex, sexual orientation, gender identity, national origin, disability, age, genetic, veteran's status, or on the basis of any other category protected under federal, state and local laws. If you have experienced sexual harassment, sexual assault, or any other form of protected class discrimination, we encourage you to make a report. If you report to a faculty member, she/he/they are obligated by policy to share knowledge, notice, and/or reports of harassment, discrimination, and/or retaliation with the Title IX Coordinator. These disclosures include but are not limited to reports of sexual assault, dating/domestic violence, and stalking. You may also make a confidential report to a SJC Counselor. Please refer to San Juan College's [Title IX](#) site for further details.

San Juan College's Title IX Coordinator is Stacey Allen, Assistant Director of Human Resources/Equity, Diversity, and Inclusion Officer. The office is located at the Educational Services Center Building, 2nd Floor, Human Resources, Room 4243 at (505) 566-3515 or allens@sanjuancollege.edu.

7. **Drop for Non-Attendance and/or Non-Participation**

Class Attendance and Participation Expectation:

Face-to-Face -- Students are expected to attend and participate in class regularly. Any student missing more than 10% of consecutive class time, (For example, in a regular 15-week class that meets twice a week, this equates to the student missing 3 consecutive classes) without consultation with the instructor may be considered as having abandoned the course.

On-line -- Students are expected to participate regularly and submit all course assignments, based on the course guide definition. A student who does not submit any assignments during a consecutive 10% of the course (1.5 weeks of a 15-week semester) without consulting the instructor, may be considered as having abandoned the course. Logging in does not meet the attendance standard.

Competency-Based Education Classes -- Students are expected to have regular and substantive interactions with their instructor and to actively work on course content. A student who has not submitted coursework, nor had substantive

interactions with the instructor over a consecutive 10% of the term, without the instructor's prior approval, will be considered to have abandoned the competency progression. Last date of attendance will be recorded as the last date that coursework was submitted or that the student met with the instructor. For on-line learners, logging in does not meet the attendance standard.

8. Failure to Meet Class Participation Expectation:

Students who fail to meet participation expectations will have their last date of attendance recorded. This date will be used to recalculate any financial aid received/veteran's benefits received, and the student may be required to repay the institution/government. If the student does not drop the course, an 'X' grade will be recorded. An 'X' grade impacts the grade point average the same as an 'F'.

9. Grading Policies

Incomplete: Incomplete Grade Assignment ([Incomplete Grades Information](#))

The grade of I (Incomplete) is given for passing work that could not be completed during the semester because of circumstances beyond the student's control. Ordinarily, the assignment of an I is given by the course instructor at the time final grades are due

In no case is an I grade to be used to avoid assignment of D or F grades for marginal or failing work or to require a student to enroll in the class the next semester because work was not completed on time. Circumstances warranting the issuance of an I grade must be beyond the student's control and must be documented on the appropriate form prior to approval.

I grades can be removed only during the subsequent 16 weeks from the end of term, or within the time limit set by the instructor. Removal of an I is accomplished by completing the work in a manner acceptable to the instructor. Re-enrollment in the course under the repeat option does not remove the prior grade of I. Students should not re-enroll for the course. An I not made up within 16 weeks or within the time limit set by the instructor will change to an F grade thereafter and cannot be changed by work completion.

10. Grade Appeals

The policy for grade appeals is in the Academic Catalog. ([Grade Appeal Policy](#))

Student Handbook

The Student Handbook provides information on Student support, student organizations, and San Juan College policies.

[Student Handbook](#)

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.