



**TTEN 172 Automatic Trans/Transaxles section name section credit hours**  
**Credits**  
**Syllabus**

## Course Information

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

**Catalog description:** The operating principles of Toyota and Lexus automatic transmissions, transaxles, and their diagnosis, electrical and electronic controls, and repair will be covered. Instruction on noise, vibration and harshness diagnosis and correction will also be covered along with mechanical and hydraulic components. Safety is emphasized.

**Prerequisites:** Take TTEN-175 TTEN-120

**Terms offered:** Fall Only

**Section-specific Course Description:**

## Course Level Objectives

- Service, diagnosis and repair of automatic transmission sub systems
- Inspect, diagnose and repair U-Series Tandem based shift control system
- Inspect, diagnose and repair U-Series Ravigneaux/LePelletier based shift control system
- Service diagnose and overhaul transmissions with compound based gear trains

## Required Texts and/or Materials

**Today's Technician: Automatic transmissions and Transaxles**  
9780357380321  
Pickerill  
Cengage

## 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. Using generic text and labsheet, identify and describe planetary gear set components, simple planetary gear set power flow, gear ratio characteristics
2. Using generic text and assigned labsheet, identify and describe transmission identification and designations, and transmission units on car and bench
3. Using TIS, basic hand tools and assigned labsheet, R&R Toyota Automatic Transmission/Transaxle
4. Using generic text and assigned labsheet describe the electronic transmission control system and system operation
5. Using generic text and assigned labsheet describe the function and operation of major oil pump components

6. Using generic text and assigned labsheet, describe oil pump pressure regulation and control system operation, and demonstrate diagnosis of mainline pressure fault using Techstream and pressure gauge
7. Using generic text and assigned labsheet, describe torque converter w/lock up clutch operation, and demonstrate diagnosis of component/system fault using various diagnostic tools
8. Using generic text and assigned labsheet, describe apply device operation, and diagnose apply device fault using clutch application chart
9. Using generic text and assigned labsheet, describe Simpson A-series gear train nomenclature, function and operation including power flow in all gear ranges
10. Using generic text and assigned labsheet, identify and describe Simpson A-series apply device orientation, nomenclature function, and operation
11. Using generic text and assigned labsheet, identify and describe Simpson A-series shift control function, operation, diagnosis and testing
12. Using generic text and assigned labsheet, describe Tandem based U-series gear train nomenclature, function and operation including power flow in all gear ranges
13. Using generic text and assigned labsheet, identify and describe Tandem based U-series apply device orientation, nomenclature function, and operation
14. Using generic text and assigned labsheet, identify and describe Tandem based U-series shift control function, operation, diagnosis and testing
15. Using generic text and assigned labsheet, describe Ravigneaux\LePelletier based U-series gear train nomenclature, function and operation including power flow in all gear ranges
16. Using generic text and assigned labsheet, identify and describe Ravigneaux\LePelletier based U- -series apply device orientation, nomenclature function, and operation
17. Using generic text and assigned labsheet, identify and describe Ravigneaux\LePelletier based U--series shift control function, operation, diagnosis and testing
18. Using generic text, labsheet, diagnostic tools and procedures, describe AB60E shift control system function and operation
19. Using generic text, labsheet demonstrate DTC and Symptom based diagnostic procedures of the shift control system
20. Using generic text, labsheet and procedures listed in TIS, perform, inspection disassembly procedures of the AB60E transmission
21. Using generic text and labsheet, perform diagnosis, inspection and overhaul of the AB60E transmission components determine necessary action

## 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](mailto: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 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.

## 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

This will be completed 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](mailto: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](mailto: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

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