



Course Title: Chassis, Suspension, & Steering
Course #: AUT 104-1

Credit Hours: 4
Semester: Spring 2022
Cap: 15

Faculty: Steven Kollas
Office: Auto- Trades Building
Office Hours: Fridays 8:00-12:00
Preferred Communication: **Email** and/or text; will respond within 24 hours

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Office Phone: 505.387.7403(1045)
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Modality **Face-to-Face: Zoom if necessary**
Class Location and Meeting Times: TR 8:30-12:00
Meeting Hours and Online Hours

Required Materials:

Textbooks: CDX Fundamentals of Automotive Technology digital edition
Tools: Leather work shoes/boots, safety eyewear, NTU Automotive work shirt (Long or short sleeve), notebook, pen or pencil.
Lab Fee:

Mission, Vision, and Philosophy

Mission: Navajo Technical University honors Diné culture and language, while educating for the future.
Vision: Navajo Technical University provides an excellent educational experience in a supportive, culturally diverse environment, enabling all community members to grow intellectually, culturally, and economically.
Philosophy: Through the teachings of Nitsáhákees (thinking), Nahátá (planning), Ína (implementing), and Siihasin (reflection), students acquire quality education in diverse fields, while preserving cultural values and gaining economic opportunities.

Course Description

The theory, diagnosis, repair, and adjustment of front and rear suspension systems is covered in this course. The course also includes tire problem diagnosis and repair, and the new electric assisted power steering systems as well as hydraulic power steering systems. Various styles of suspensions will be discussed and worked on.

Course Outcomes	Course Assessments
A strong understanding of tire problems and repair techniques.	Complete reading assignments, homework assignments, exams, and quizzes, and NATEF Task Sheets.
A strong understanding of suspension geometry and angles	
A strong understanding of the different types of suspension systems, both front and rear.	
A strong understanding of power steering systems.	
An ability to understand customer complaints.	
A strong ability to correctly diagnose steering problems	
A strong ability to correctly replace damaged or worn parts.	
A strong ability to correctly adjust suspensions to correct customer complaints	
A strong ability to repair and balance tires	
A strong knowledge of tire construction and issues.	
An ability to communicate the causes and corrections of problems to a service manager or customer	

Connections to Program Assessment (Course-Embedded Measures)

Course Activities

Week	Date	Class Topics/Reading Due	Assignments Due	Assessments
	Jan 17	Martin Luther King Day	Holiday	
1	Jan 18	Chapter 36		
	Jan 21	Last day to add/drop		
2	Jan 24	Chapter 37		Chapter 36 Quiz
3	Jan 31	Chapter 38		Chapter 37 Quiz
4	Feb 7	Chapter 39		Chapter 38 Quiz
5	Feb 13	Chapter 40		Chapter 39 Quiz
6	Feb 21	Chapter 41		Chapter 40 Quiz
	Feb 21	President's Day	Holiday	
	Feb 25	Spring Graduation Petition due		
7	Feb 28	Chapter 42		Chapter 41 Quiz
8	Mar 7-11	Midterms		
9	Mar 14-18	Spring Break		
10	Mar 21	Chapter 42 Continued		Chapter 42 Quiz
11	Mar 28			Labs
	Mar 31	Last day to withdraw with "W"		
12	Apr 4			Labs
13	Apr 11			Labs
14	Apr 18			Labs
15	Apr 25			Labs
16	May 2	Finals Review		
17	May 9-12	Finals		
	May 12	Grades due to the Registrar		
	May 13	Graduation		

Grading Plan

Homework:	20%
Class Participation:	25%
Quizzes:	25%
Mid-term:	15%
Final Exam:	15%

A = 100-90%
 B = 89-80%
 C = 79-70%
 D = 69-60%
 F = 59% or less

Grading Policy

Students must do their own work. Cheating and plagiarism are strictly forbidden. Cheating includes (but is not limited to) plagiarism, submission of work that is not one's own, submission or use of falsified data, unauthorized access to exams or assignments, use of unauthorized material during an exam, or supplying or communicating unauthorized information for assignments or exams.

Participation

Students are expected to attend and participate in all class activities. Points will be given to students who actively participate in class activities including guest speakers, field trips, laboratories, and all other classroom events.

Cell phone and headphone use

Please turn cell phones off **before** coming to class. Cell phone courtesy is essential to quality classroom learning. Headphones must be removed before coming to class.

Attendance Policy

Students are expected to attend all class sessions. **25% of the student's grade will be based on class attendance and participation.** Absence from class, regardless of the reason, does not relieve the student of responsibility to complete all course work by required deadlines. Furthermore, it is the student's responsibility to obtain notes, handouts, and any other information

covered when absent from class and to arrange to make up any in-class assignments or tests if permitted by the instructor. Incomplete or missing assignments will necessarily affect the student's grades. Instructors will report excessive and/or unexplained absences to the Counseling Department for investigation and potential intervention. **Instructors may drop students from the class after three (3) absences unless prior arrangements are made with the instructor to make up work and the instructor deems any excuse acceptable.**

Study Time Outside of Class for Face-to-Face Courses

For every credit hour in class, a student is expected to spend two hours outside of class studying course materials.

Study Time for Hybrid or Blended Courses

For a hybrid or blended course of one credit hour, a student is expected to spend three hours per week studying course materials.

Study Time for Online Courses

For an online course of one credit hour, a student is expected to spend four hours per week studying course materials.

Academic Integrity

Integrity (honesty) is expected of every student in all academic work. The guiding principle of academic integrity is that a student's submitted work must be the student's own. Students who engage in academic dishonesty diminish their education and bring discredit to the University community. Avoid situations likely to compromise academic integrity such as: cheating, facilitating academic dishonesty, and plagiarism; modifying academic work to obtain additional credit in the same class unless approved in advance by the instructor, failure to observe rules of academic integrity established by the instructor. **The use of another person's ideas or work claimed as your own without acknowledging the original source is known as plagiarism and is prohibited.**

Diné Philosophy of Education

The Diné Philosophy of Education (DPE) is incorporated into every class for students to become aware of and to understand the significance of the four Diné philosophical elements, including its affiliation with the four directions, four sacred mountains, the four set of thought processes and so forth: Nitsáhákees, Nahát'á, Íina and Siih Hasin which are essential and relevant to self-identity, respect and wisdom to achieve career goals successfully.

At NTU's Zuni Campus, the A:shiwí Philosophy of Education offers essential elements for helping students develop Indigenous and Western understandings. Yam de bena: dap haydoshna: akya hon detsemak a:wannikwa da: hon de:tsemak a:t's'umme. *Our language and ceremonies allow our people to maintain strength and knowledge.* A:shiwí core values of hon i:yyulashik'yanna:wa (respect), hon delank'oha:willa:wa (kindness and empathy), hon i:yyayumola:wa (honesty and trustworthiness), and hon kohoł lewuna:wedyahnan, wan hon kela i:tsemanna (think critically) are central to attaining strength and knowledge. They help learners develop positive self-identity, respect, kindness, and critical thinking skills to achieve life goals successfully.

Students with Disabilities

Navajo Technical University is committed to serving all students in a non-discriminatory and accommodating manner. Any student who feels that she or he may need special accommodations should contact the Accommodations Office (<http://www.navajotech.edu/student-services#accomodations-services>) in accordance with the university's Disability Accommodations Policy (see http://www.navajotech.edu/images/about/policiesDocs/Disability_Exhibit-A_6-26-2018.pdf).

Email Address

Students are required to use NTU's email address for all communications with faculty and staff.

Final Exam Date: