



**Course Title: Brake Systems**  
**Course #: Aut 102-1**

**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  
**E-mail:** skollas@navajotech.edu  
**Office Phone:** 505.387.7403(1045)  
**Cell Phone:** 505.220.1600

**Modality:** **Face-to-Face**  
**Class Location and Meeting Times:** MW 8:30-12:00  
**Meeting Hours and Online Hours**

**Required Materials:** **All Students are required to have laptop/Tablet and internet access!**  
**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), Íína (implementing), and Siihasin (reflection), students acquire quality education in diverse fields, while preserving cultural values and gaining economic opportunities.

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

**Course Description:** The theory, diagnosis, repair of disc and drum brakes will be covered in this course. Mechanical and hydraulic theory and principals will be addressed, as well as brake rotor and drum resurfacing, precision measuring, overhauling components, bleeding hydraulic lines, and adjustment of drum brakes. Anti-lock brake system theory, diagnosis, repair, and scanning of ABS systems will also be explored.

Course Outcomes	Course Assessments
A strong understanding of all brake system types	Complete reading assignments, homework assignments, exams, and quizzes.
A strong understanding of hydraulics	
An ability to understand customer complaints.	
A strong ability to correctly brake system problems	
A strong ability to correctly repair, or replace damaged or worn parts.	
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
	<b>Jan 17</b>	<b>Martin Luther King Day</b>	<b>Holiday</b>	
1	Jan 18	Chapter 43		
	<b>Jan 21</b>	<b>Last day to add/drop</b>		
2	Jan 24	Chapter 43 Continued		Chapter 43 Quiz
3	Jan 31	Chapter 44		
4	Feb 7	Chapter 44 continued		Chapter 44 Quiz
5	Feb 14	Chapter 45		
	<b>Feb 21</b>	<b>President's Day</b>	<b>Holiday</b>	
6	Feb 22	Chapter 45 Continued		Chapter 45 Quiz
	<b>Feb 25</b>	<b>Spring Graduation Petition due</b>		
7	Feb 28	Chapter 46		
8	<b>Mar 7</b>	<b>Midterms</b>		
9	<b>Mar 14-18</b>	<b>SPRING BREAK</b>		
10	Mar 21	Chapter 46 Continued		Chapter 46 Quiz
11	Mar 28	Chapter 47		
	<b>Mar 31</b>	<b>Last day to withdraw with "W"</b>		
12	Apr 4	Chapter 47 Continued		Chapter 47 Quiz
13	Apr 11	Chapter 48		
14	Apr 18	Chapter 48 Continued		Chapter 48 Quiz
15	Apr 25	Chapter 49		
16	May 2	Chapter 49 Continued		Chapter 49 Quiz
17	<b>May 9</b>	<b>Finals</b>		
	<b>May 12</b>	<b>Grades due to the Registrar</b>		
	<b>May 13</b>	<b>Graduation</b>		

### 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. **Students are expected to attend and participate in all class activities- as listed above, as it is 25% of the grade.** 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. A percentage 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: akkya hon detsemak a:wannikwa da: hon de:tsemak a:ts'umme. *Our language and ceremonies allow our people to maintain strength and knowledge.* A:shiwí core values of hon i:yyułashik'yanna:wa (respect), hon delank'oha:willa:wa (kindness and empathy), hon i:yyayumola:wa (honesty and trustworthiness), and hon kohol lewuna:wediyahnan, 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](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: May 9<sup>th</sup> 2022**