

Virginia Western Community College
AUT 265
AUTOMOTIVE BRAKING SYSTEMS

Prerequisites

None

Course Description

Presents operation, design, construction, repair, and servicing of braking system, including anti-lock brake systems (ABS). Explains uses of tools and test equipment, evaluation of test results, estimation of repair cost for power, standard and disc brakes.

Semester Credits: 4 Lecture Hours: 3 Lab/Clinical/Internship Hours: 3

Required Materials**Textbook:**

Fundamentals of Automotive Technology, Principles, and Practice, 2nd Edition, ISBN: 978-1-284-10995-5

Other Required Materials:

- Safety Glasses
- Closed-toe shoes
- CDX Automotive Interactive CD
- Publisher's online material
- ASE Online Prep Tests

Course Outcomes

At the completion of this course, the student should be able to:

- List the parts of the braking system
- Discuss mechanical & hydraulic Advantage
- Describe, diagnose, and replace or repair valves
- Replace and/or repair brake lines
- Identify various brake fluids and applications
- Demonstrate bleeding procedures of hydraulic lines
- Perform repair and/or maintenance to drum and disc style braking systems
- Adjust brakes, to include drum, disc, and emergency/parking brakes
- Diagnosis and Service Antilock Braking Systems (ABS)

- 70% of students completing AUT 266 will demonstrate how to diagnose, repair/replace all aspects of the braking system by receiving a score of 70% or higher on the ASE student certification test on brakes or the final exam

Topical Description

	Chapter	Title
week 1	93	Braking System Principles
week 2	94	Brake Hydraulic Systems
week 3	95	Hydraulic Valves and Switches
week 4	96	Brake Fluids and Lines
week 5	97	Brake Bleeding and Adjustments
week 6 & 7	100	Drum Brakes Diagnosis and Repair
week 8 & 9	102	Disc Brakes Diagnosis and Repair
week 10	103	Parking Brake Operation and Repair
week 11	105	Power Brake Unit Operation, Diagnosis, & Service
week 12 & 13	107	ABS diagnosis and Repair
week 14	108	Electronic Stability Control Systems
week 15		ASE test Preparation and Study Guide Review
week 16		Final Exam

Notes to Instructors

- CDX testing should be administered in sections every 2 weeks.
- ABS interaction with onboard computer systems discussions during Chapters 106, 107, & 108.
- The use of an ASE online test preparation quiz, if time permits could help students with later ASE certification options.
- Practical Exam given on week 16.