

**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 entry-level 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.