

AUT265

Automotive Braking Systems

COURSE OUTLINE

Prerequisites:

NONE

Course Description:

Automotive Braking systems 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/Recitation Hours: 3

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PO Box 14007
Roanoke, VA 24038
(540)-857-7273



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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.

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Required Materials:

Safety glasses sturdy closed shoes CDX Automotive Interactive CD

Textbook:

Automotive Technology principles, diagnosis and service -
Pearson Publishers - Halderman 4th edition
ISBN 978-0-13-254261-6

The following supplementary materials are available:

1. Publisher's online material
2. Automotive Excellence Volume 1 – online quiz

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Topical Description: (Outline chapters and sections to be covered in the book – may include timeline)

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

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Notes to Instructors

(List information about optional topics, departmental exams, etc)

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

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