

**NOVA COLLEGE-WIDE COURSE CONTENT SUMMARY
DSL 160 - AIR BRAKE SYSTEMS (3 CR.)**

Course Description

Studies the basic operational theory of pneumatic and air brake systems as used in heavy-duty and public transportation vehicles. Covers various air control valves, test system components, and advanced air system schematics. Teaches proper service and preventative maintenance of systems. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

Course Purpose

The student who successfully completes this course should be able to efficiently and intelligently analyze medium/heavy-duty truck braking system problems and repair any defects. The student should be able to discuss their findings with the car owner and describe the problems and corrective actions required.

Course Prerequisites/Co-requisites

Ability to read, write, and speak the English language.

Course Objectives

Upon completion of this course, the student will be able to:

- Identify the components of a truck air brake system
- Explain the operation of a dual-circuit air brake system
- Identify the major components of an air compressor
- Outline the operating principles of the valves and controls used in an air brake system
- Describe the operation of S-cam and wedge-actuated drum brakes
- Describe the major components and operation of parking and emergency braking systems

Major Topics to be included

- The basic operation of brake foundation systems
- The basic operation of brake air systems
- Read and troubleshoot air brake systems using diagrams and schematics
- The basic operation of hydraulic brake systems