

**Spokane Community College  
Course Learning Outcomes and Outline**

---

---

**Course Title: Theory of Brake System**

**Prefix and Course Number: 111**

---

**Course Learning Outcomes:**

**By the end of this course, a student should be able to:**

- Identify and describe the purpose, application and operation methods of brakes systems including drum, disc, and parking brakes
- Identify and describe the purpose, application and operation methods of master cylinders and brake hydraulics
- Identify and describe the purpose, application and operation methods of power brakes
- Identify and describe the purpose, application and operation methods of power brakes
- Identify and describe the purpose, application and operation methods ABS, stability control and traction control systems
- Identify and describe the purpose, application and operation methods hybrid brake systems

**Course Outline:**

Brake systems:

- Drum brakes components and operation
- Disc brakes components and operation
- Antilock brake components and operation
- Parking brake system operation
  - Mechanical parking brake components and operation
  - Electrical parking brake components and operation

Master cylinder and hydraulic system:

- Hydraulic fluid, lines, valves and switches
- Brake bleeding methods

Machining:

- Understanding how to setup and turn drum and rotors
- On the car rotor lathe

Power Brake:

- Vacuum and hydraulic brake booster operation

ABS, Traction Control & Stability Control:

- A building block of these three systems and their operation

Hybrids