

**Virginia Western Community College**  
**BLD 159**  
**Mechanical Code and Certification Process**

**Prerequisites**

None

**Course Description**

Discusses local, state, and national building codes as they relate to the installation, maintenance and repair of mechanical systems in residential and commercial buildings. Includes gas and oil burners, venting, flues and sizing of systems.

**Semester Credits: 3 Lecture Hours: 3 Lab/Clinical/Internship Hours: 0**

**Required Materials****Textbook:**

2012 International Mechanical Code Commentary. ISBN #: 9781609830717.

**Other Required Materials:**

None

**Course Outcomes**

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

- understand the concept of applying the code
- interpreting code requirements
- sizing exhaust systems
- calculating ventilation air requirements
- understanding air distribution systems
- identify common code violations
- understand life safety issues

**Topical Description**

- 1) Scope and Applications
- 2) Administration and Enforcement
- 3) Definitions
- 4) General Regulations
- 5) Ventilation
- 6) Exhaust Systems

- 7) Duct Systems
- 8) Combustion Air/ Gas Pipe Sizing
- 9) Chimneys and Vents
- 10) Specific Appliances, Fireplaces and Solid Fuel-Burning Equipment
- 11) Boilers, Water Heaters and Pressure Vessels
- 12) Refrigeration
- 13) Hydronic Piping
- 14) Fuel Oil Piping and Storage
- 15) Solar Systems
- 16) Referenced standards

### **Notes to Instructors**

- Students will be expected to take an active part in all class activities and discussions.
- You expected to complete all homework assignments.
- The course includes 3 two hour in-class exams and one final exam.
- Students are expected to abide by the Honor Code.