

Bossier Parish Community College
Master Syllabus

Course Prefix and Number: TEED 150

Credit Hours: 3-3-0

Course Title: Pneumatics

Course Prerequisite or Corequisite: MATH 099

Textbook(s): None

Course Description: A course designed for the industrial skilled trades apprentices requiring knowledge of air circuitry. Major topics include pressure units, behavior of gases, production mechanics, distribution mechanics, and the preparation, control, and use of air circuits. Emphasis is especially placed on symbolism and design of air circuit systems.

Learning Outcomes:

At the end of the course, the student will:

- A. demonstrate familiarization with symbols and terminology used to design, develop and analyze pneumatic systems;
- B. determine and measure force transmitted through a fluid/pneumatic system; and
- C. describe the difference between 4-way, 3-way, and 2-way valves.

To achieve the learning outcomes, the student will or will be able to:

(The letter designations at the end of each statement refer to the learning outcome(s).)

1. describe the development of compressed air used in industrial applications; (A, B)
2. use Pascal's law and calculate the force transmitted through a fluid; (A, B)
3. match pneumatic symbols to their names; (A, B)
4. list different types of compressors and give advantages and disadvantages of each; (A, B)
5. name the three types of piping systems used in pneumatic controls; (A, B)
6. list the differences between percussive and rotary tools; (A, B)
7. identify directional valves and explain the difference between 4-way, 3-way, and 2-way; (A, C)
8. draw the symbol and explain the operation of "flow control" valves and "quick exhaust" valves; (A, C)
9. explain the uses of sequence valves, regulators, and boosters; (A, B) and
10. explain why compressed air needs to be filtered and lubricated. (A, B)

Course Requirements: Complete all homework assignments, lecture tests and final exam.

Course Grading Scale:

- 90 – 100 = A
80 – 89 = B
70 – 79 = C
60 – 69 = D

Attendance Policy: The college attendance policy is available at <http://www.bpcc.edu/catalog/current/academicpolicies.html>

Course Fees: This course is accompanied with an additional non-refundable fee for supplemental materials, laboratory supplies, software licenses, certification exams, and/or clinical fees.

Nondiscrimination Statement: Bossier Parish Community College does not discriminate on the basis of race, color, national origin, gender, age, religion, qualified disability, marital status, veteran's status, or sexual orientation in admission to its programs, services, or activities, in access to them, in treatment of individuals, or in any aspect of its operations. Bossier Parish Community College does not discriminate in its hiring or employment practices.

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