

Bossier Parish Community College
Master Syllabus

Course Prefix and Number: CONS 205

Credits: 3-3-0

Course Title: Mechanical, Electrical and Plumbing Systems

Course Prerequisite: CONS 101 and CONS 102

Textbook(s): Richard R. Janis, William Tao & Associates, Inc. William K. Y. Tao, Tao & Lee Associates, Mechanical & Electrical Systems in Buildings, 4th edition. Prentice Hall, 2014.
ISBN: 9780138015626

Course Description: An overview of the mechanical, electrical, and plumbing systems commonly used in multi-story commercial buildings. The course presents the fundamentals of air conditioning, heating, plumbing, and lighting, along with electrical/communications wiring and equipment. Specialty equipment for energy-efficient construction is introduced.

Learning Outcomes:

At the end of this course, the student will:

- A. develop an understanding of the properties, functions, and construction implications of the mechanical systems of a building; including heating, ventilations and air conditioning systems and plumbing systems;
- B. develop an understanding of the properties, functions, and construction implications of the electrical systems of a building; including illumination, electrical systems, and electrical energy conservation;
- C. learn to read the construction documents and specifications for the mechanical and electrical systems;
- D. learn the basic building code references for mechanical and electrical systems;
- E. learn the steps and processes for installation and start-up operations for the mechanical and electrical systems;
- F. learn the firefighting, lifesaving, and security installations basics in the construction systems; and
- G. learn the heating and cooling processes used within the construction process.

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

1. define terminology and measurement principles used in the Mechanical Systems in the construction process (A);
2. define the terminology and measurement principles used in the Electrical Systems in the construction process (B);
3. define the terminology and measurement principles used in the Plumbing Systems in the construction process (A);
4. list different types of mechanical, electrical, and plumbing materials (A, B, C);
5. describe the basic procedure for the installation of the mechanical, electrical and plumbing systems (E);

6. identify any associated support equipment used in the mechanical, electrical and plumbing systems (D, E);
7. identify and described the basic firefighting, lifesaving and security systems used in building construction (F);
8. identify and described the basic communications and access options (D, E);
9. identify various standards used in the illumination systems and processes and be able to determine which system will be best utilized (B); and
10. identify and described the heating and cooling process used in building systems and be able to determine the capacity of each system needed (G).

Course Requirements: Complete all homework assignments, in-class equipment exercises, lecture tests, and final exams.

Course Grading Scale:

90% to 100%	=	A
80% to < 90%	=	B
70% to < 80%	=	C
60% to < 70%	=	D
< 60%	=	F

*30% of grade from Lab exercises

*40% grade from class Quizzes and Test

*30% grade from Final Exam

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

Course Fees: N/A

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