

**COURSE SYLLABUS  
SOUTHEAST MISSOURI STATE UNIVERSITY**

Department of Industrial Engineering Technology

Course No.: CM-325

Title of Course: Building Mechanical and Electrical Systems

Revision: \_\_\_\_\_

New:     X    

Instructor:

Email:

Office:

Office Phone:

Web URL:

**I. Catalog Description and Credit Hours of Course:**

An overview of the principles and applications of all basic mechanical and electrical systems, with basic design data examples, exploring emerging technology and environmental issues, and referencing essential engineering calculations and data to illustrate principles. 3 credit hours (2 hours lecture and 2 hours lab)

**II. Prerequisite(s):**

CM-243 or Consent of Instructor

**III. Purposes or Objectives of the Course:**

- A. Identify basic building mechanical systems, including heating, ventilating, and air conditioning, plumbing, and fire protection.
- B. Identify basic building electrical systems, including power and illumination
- C. Apply methodologies for calculating preliminary building loads and space planning requirements.

**IV. Expectations of Students:**

- A. Students are expected read assigned materials.
- B. Students are expected to complete all assignments. Assignments will ONLY be accepted on the due dates provided, unless previous arrangements are made or student provides a written medical doctor's excuse.
- C. Students are expected to participate in class and group discussions
- D. Student work will be completed in accordance with Code of Student Conduct (<http://www6.semo.edu/judaffairs/code.html>)

**V. Course Content or Outline:**

<u>Topic</u>	<u>Weeks</u>
A. The Scope and Impact of Mechanical and Electrical Systems	1
B. HVAC Fundamentals and Delivery Systems	2
C. Production Equipment and Systems	3
D. Piping and Plumbing Equipment and Systems	2
E. Fire Protection Equipment and Systems	1
F. Power Systems and Equipment	1

G. Communications, Life Safety, and Security Systems	1
H. Electrical Design and Wiring	1
I. Light and Lighting	2
J. Noise and Vibrations in Mechanical and Electrical Systems	1
K. Final Exam	

**VI. Textbook(s) and/or Other Required Materials or Equipment:**

Mechanical and Electrical Systems in Buildings, William K. Y. Tao and Richard R. Janis, 2004, Prentice Hall.

**VII. Basis for Student Evaluation:**

Grading will consist of the following criteria and percentages.

Class Participation	10%
Assignments	40%
Quizzes/Tests	30%
Final Exam	20%

Course grade will be based on the following:

**Grading Scale:**

A =	100 - 90%
B =	89 - 80%
C =	79 - 70%
D =	69 - 60%
F =	59 - 0%

**Disabilities Statement:**

Students having special needs addressed by the Americans with Disabilities Act (ADA) and needing course materials in an alternative format should notify Instructor immediately. Reasonable efforts will be made to accommodate special needs.

***Instructor reserves the right to change the content and/or sequencing of the materials presented and will notify students of any changes.***