

**SOUTHEAST MISSOURI STATE UNIVERSITY
COURSE SYLLABUS**

Department of **Human Environmental Studies**
Course Title: **Interior Systems II**

Course #: **DS208**
New Course: **Spring 2012**

I. Catalogue Description and Credit Hours

The study of distribution systems including the mechanical, electrical and plumbing systems required in the construction of healthy indoor spaces. (3)

II. Prerequisite(s)

None

III. Purposes or Objectives of Course

- A. Demonstrate an understanding of the mechanical, electrical and plumbing systems of the built environment.
- B. Examine the relationships among the various systems.
- C. Identify components of the mechanical, electrical and plumbing systems used in the construction industry.
- D. Demonstrate knowledge of all applicable local, state and federal building codes.
- E. Apply knowledge of thermal comfort and indoor air quality to enhance the health, safety, welfare, and performance of building occupants.

IV. Student Learning Outcomes

- A. Students will produce accurately scaled drawings that identify the various components of the mechanical, electrical and plumbing systems used in residential construction drawings.
- B. Students will define and explain local, state, and federal building codes.
- C. Students will define and explain thermal comfort and indoor air quality and the importance of each in the interior environment.

V. Expectations of Students

- A. Satisfactorily complete all class assignments and quizzes and four written exams.
- B. Complete a mechanical system design.
- C. Actively participate in class discussion.
- D. Attend three required off campus field trips.

VI. Course Outline or Content

Hours

A. The Big Picture

8

1. The Building Team

- a. Generalist Designers
- b. Installers

2. Codes and Permits

- a. Building Codes
- b. Permits and Inspections

c. Working with Building Officials

B. HVAC Systems

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1. Heating Systems

- a. The Human Comfort Zone
- b. Energy Conservation
- c. Heating Fuels
- d. Forced Air Heating Systems
- e. Hydronic Heating Systems
- f. Electric Heating Systems

2. Cooling Systems

- a. Cooling Naturally
- b. Evaporative Cooling
- c. Refrigeration Cooling
- d. Heat Pumps

3. Maintaining Healthy Indoor Air

- a. Air pollution
- b. Moisture
- c. Ventilating Room by Room
- d. Whole-House Ventilation Systems

C. Plumbing Systems

15

1. Hot and Cold Water Supply

- a. Sources of Water
- b. Distribution Systems
- c. Piping for Water Supply
- d. Water Heating

2. Drain, Waste and Vent System

- a. Parts of the System
- b. Pipe Sizes
- c. Venting
- d. Pipe materials

3. Plumbing Fixtures, Appliances and Accessories

- a. Plumbing Fixtures for the Bath
- b. Plumbing Fixtures for the Kitchen

D. Electrical Systems

10

1. Electrical Power Systems

- a. The Service Entrance
- b. Wire and Conduits
- c. Low-Voltage Wiring Systems
- d. Home Automation Systems
- e. Electricity from the Sun

2. Lighting

- a. Lighting Basics
- b. Lighting by Function

- c. Lighting Sources
- d. Lighting Kitchens
- e. Lighting Baths

* Total class hours = 45

VII. Textbook(s) and/or Other Required Materials or Equipment

Germer. (2006). Kitchen and Bath Systems. Hackettstown, New Jersey: National Kitchen and Bath Association.

VIII. Basis for Student Evaluation

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|--------------------------------------|-----|
| A. Class assignments and quizzes | 40% |
| B. Four written examinations | 40% |
| C. Field trips to construction sites | 20% |

Note: The weight of the evaluation criteria may vary according to each instructor and will be communicated at the beginning of the course.

IX. Academic Policy Statement

Students will be expected to abide by the **University Policy for Academic Honesty** regarding plagiarism and academic honesty. Refer to:

<http://www6.semo.edu/judaffairs/code.html>

X. Student with Disabilities Statement

If a student has a special need addressed by the **Americans with Disabilities Act (ADA)** and requires materials in an alternative format, please notify the instructor at the beginning of the course. Reasonable efforts will be made to accommodate special needs.