

**SOUTHEAST MISSOURI STATE UNIVERSITY
COURSE SYLLABUS**

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

Course #: **DS331**
Revision of HI470: **Fall 2008**

I. Catalogue Description and Credit Hours

The study of building systems including the construction components, classifications, standards, physical properties of materials, typical building and interior construction systems, and mechanical systems. **(3)**

II. Prerequisite(s)

CM100

III. Purposes or Objectives of Course

- A. Examine the physical behavior of structures and materials.
- B. Explain the interactive nature of building systems and their impact on the interior environment.
- C. Identify current issues and concerns related to specific building components.
- D. Examine the effectiveness of ecologically responsible building systems and components.
- E. Illustrate basic concepts involved in acoustics, building codes, and fire safety and suppression.

IV. Expectations of Students

- A. Successfully complete a residential building systems illustration.
- B. Successfully complete a commercial building systems illustration.
- C. Successfully complete a detail illustration.
- D. Prepare and lead a presentation and discussion about a selected case study pertaining to building systems.
- E. Satisfactorily complete final examination.

V. Course Outline or Content

Hours

A. Physical Behavior of Structures and Materials

6

1. Natural Resources and Materials

- a. Material Sources, Physical Properties of Materials
- b. Fabrication, Durability

2. Structural Behavior

- a. Loading, Bending, Shear, Material Strength
- b. Structural and Non-Structural Building Components

B. Building Systems

16

1. Overview of Building Systems

- a. Interactive Nature of Foundations, Structure, Enclosure
- b. Partitions, Fenestration, and Mechanical Systems

2. Types of Specific Building Systems

- a. Historical Precedents
- b. Evolution of Construction Typologies

- c. Foundation and Wall Systems, Floor Systems
- d. Roof and Enclosure Systems
- e. Thermal and Moisture Protection, Doors and Windows
- f. HVAC, Plumbing Systems

C. Building Components **12**

1. Materials

- a. Wood – Solid, Veneers, GlueLams, Composites, Particle board
- b. Metals - Steel, Copper, Aluminum, Others
- c. Masonry – Brick, CMU's, Glass Block
- d. Concrete – Cement, Reinforcement, Applications
- e. Finishes – Drywall, Stucco, Flashing

2. Construction

- a. Installation Methods and Framing Systems
- b. Finishes and Details
- c. Construction Documents

3. Mechanical Systems

- a. Water and Waste, Plumbing
- b. Heating, Ventilation, Air-conditioning, Air Quality

4. Specialty Construction

- a. Elevators, Stairs
- b. Fireplaces
- c. Architectural Details

D. Ecological Responsibility **6**

1. LEED Certification

- a. Leadership in Energy and Environmental Design (LEED)
- b. Benefits and Disadvantages

2. Solar Design

- a. Passive and Active Solar Design Strategies

E. Related Concerns **5**

1. Acoustics

- a. Terminology, Material Properties, Noise Reduction
- b. Coefficients, Sound Transmission, Controlling Techniques

2. Building Codes and Safety

- a. OSHA, BOCA, Fire Safety, Escape Routes
- b. Limiting Fuels, Fire Suppression

3. Current Issues

- a. Trends and Contemporary Advances in Building Systems
- b. New Products for Building Systems

* Total class hours = **45**

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

Ching. (2008). Building Construction Illustrated. Somerset, NJ: John Wiley & Sons, Pub.

VII. Basis for Student Evaluation

A. Residential Building System Illustration	20%
B. Commercial Building System Illustration	20%
C. Interior Architectural Detail Illustration	20%
D. Building System Case Study Presentation	30%
E. Final Exam	10%

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

VIII. 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>

IX. 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.