

Course Syllabus Fall 2009

Course: CM 3180 Building Techniques Three 4-0-4

Prerequisite: CNST 2000

Classroom: VISTA

Text: Required

Mechanical and Electrical Systems in Buildings - fourth edition

By: William K. Y. Tao & Richard R. Janis

Recommended

ASHRAE Fundamentals (in Library)

ASHRAE HVAC Systems (in Library)

\*Additional reading material for selected topics may be assigned.

Grading:

Homework 40%

Paper 10%

exams 10%

final examination 40%

Total: 100 %

Instructor: Dr. John W. Mench

Office: Room #331

Office Hours: Wednesday, Thursday & Friday

Telephone: 678-915-7289

E-mail: use VISTA mail

Class	Date	Topics	Assignments Due	Chapters in Text
1		Introduction to course and topics	Posted on VISTA	C-1
2		Human Comfort		C-2
3		Cooling & Heating Loads		C-2
4		HVAC Delivery Systems		C-3
5		Cooling Systems		C-4
6		Heating Systems		C-5
7		Air Handling Equipment		C-6
8		Piping Equipment and Systems		C-7
9		HVAC Plan Review		Plans
10		HVAC Systems Calculations		C1 to 7
11		Examination One		
12		Plumbing Systems		C-8
13		Plumbing Systems		C-8
14		Plumbing Plan Review		Plans
15		Plumbing System Calculations		C-8
16		Fire Protection Systems		C-9
17		Examination Two		
18		Introduction to Electricity		C-10
19		Power Equipment and Systems		C-11
20		Communications-Life Safety-Security		C-12
21		Electrical Wiring		C-13
22		Electrical Power Plan Review		Plans
23		Electrical Systems Calculations		C 10 to 13
24		Examination Three		
25		Light & Lighting		C-14
26		Lighting Equipment & Systems		C-15
27		Calculations of Illumination		C-16 & 17
28		Noise & Vibrations in MEP Systems		C-18
29		Lighting Plan Review		C-19
30		Lighting Plan Review		
31	Final Days			

NOTE: This outline is intended to represent the general format of the class. The instructor may make changes if it is determined that such changes will better suit the needs of the students.

Individual Assignments are expected to be individually completed--no sharing of results is permitted. Each student is to certify that he/she conducted the assignment personally and sign after the certification statement. This certification is in accordance with the SPSU honor code.

**Catalog Description:**

A study of mechanical and electrical system types, how they are built, and how they affect the construction project. Topics will include air conditioning, heating, plumbing, fire protection, electrical power, electrical lighting and building control materials and systems. The analysis of current construction drawing will be integrated into each topic.

**Course Outcomes:**

By the end of the course the student should:

1. read MEP plans and understand plan terminology
2. access websites to obtain information about building MEP systems
3. relate how building MEP systems function
4. understand the impact of MEP building systems on construction costs

**Final Examination:**

Students must take the final examination at Southern Polytechnic State University

**Lectures and Assigned Readings**

The list of lecture topics and assigned readings is contained in the syllabus and e-mail 2. The VISTA material provides the conceptual framework for the course and supplements (i.e., not replace) the readings assignments. It will be to the students' advantage to complete the reading assignments in a timely manner so the assigned questions may be submitted via VISTA mail each week. Students are expected to have a good understanding of the VISTA and reading materials.

**Individual Assignments**

The purpose of these assignments is to evaluate the students' understanding of concepts presented in the test. Also, the assignments provide an opportunity for students to strengthen their general thinking, and both written and e-mail communication skills, and their ability to work individually. This will enhance the student's performance in any type of construction professional job.

The instructor reserves the right to make any modifications or changes to the number and type of assignments, depending on the class progress, or on any special circumstance that may arise during the semester.

**Paper:**

Minimum of 5 pages of core text, work processed (specifications: 12 point Times New Roman font, single spaced, margins L=1.5", R = 1.0", top and bottom 1.0"). At least 2 additional pages of drawings, tables, or graphs are required. Title page with course number and name, your name and date submitted. Include research references and any attachments at the end. Include transmittal memo to course professor. Students are

responsible for turning in assignments that are grammatically correct. Misspellings and grammar mistakes will be taken into consideration when assigning a grade. Students will proof read their work before submitting it for grading. Points will be deducted from any assignment that does not adhere to these requirements.

Transmittal memo on top

Title page

report w/core test and tables/graphs/drawing

references

attachments

**Additional Notes:**

*NOTE 1*

*The course description and course schedule handouts provide the general framework for the course. However, the instructor reserves the right to make any modifications or changes to the course, depending on the class progress, or on any special circumstance that may arise during the semester.*

*NOTE 2*

*There will be no curve for the final grade, only straight averages. The minimum cutoff for an A is 89.5% and above; for a B is 79.5% and above; for a C is 69.5% and above; and for a D is 59.5% and above. Anything below 59.5% is considered an F. The instructor reserves the right to lower these cutoff values depending on specific circumstances surrounding the overall performance of the class.*

*NOTE 3*

*Students with disabilities who believe that they may need accommodations in this class are encouraged to contact the counselor working with disabilities at (678) 915-7226 as soon as possible to better ensure that such accommodations are implemented in a timely fashion.*

*NOTE 4*

*It is assumed that by this time in the student's matriculation, he/she is well-versed with what constitutes plagiarism. Proper citation of references is required for this and all your coursework in the CNST program. Failure to comply with this requirement may result in disciplinary action.*