

PELLISSIPPI STATE TECHNICAL COMMUNITY COLLEGE
MASTER SYLLABUS

**CONSTRUCTION METHODS
CET 1010**

Class Hours: 4.0

Credit Hours: 4.0

Laboratory Hours: 0.0

**Date Revised: Spring
02**

Catalog Course Description:

The basic techniques and fundamentals essential in erecting light frame, steel and reinforced concrete frame building. The study involves the various phases from site investigation through finished work.

Entry Level Standards:

Students entering this course should have some note-taking and study skills. They need some reading comprehension and written communication skills. Students may enroll in this course concurrently with DSPS, DSPW and DSPM courses.

Prerequisites:

None

Textbook(s) and Other Reference Materials Basic to the Course:

Text:

Principles and Practices of Heavy Construction, 2nd edition, Ronald C. Smith. Prentice Hall Publishing Company

Reference:

Building Construction Illustrated, Francis D. K. Ching. Van Nostrand Reinhold Publishing Company

Architectural Drawing and Light Construction, Edward J. Miller. Prentice Hall Publishing Company

Other:

- Floppy Disk
- Paper
- Pencil

I. Week/Unit/Topic Basis:

Week	Topic
1	Introduction & Building Siting Factors
2	Site Investigation
3	Structural Systems & Building Load

4	Plans and Specifications
5	Site Layout EXAM 1
6	Excavation
7	Foundations (light)
8	Foundations (heavy) EXAM 2
9	Wood Frame Systems
10	Wood Frame Systems EXAM 3
11	Concrete Formwork, Transportation & Placement of Concrete
12	Concrete & Masonry Systems
13	Steel Frame Systems
14	Roofing Systems
15	Miscellaneous
16	FINAL EXAM

II. Course Objectives*:

- A. Understand and use appropriate technical terminology in communications. I & II
- B. Understand basic theoretical and practical concepts involved in light construction. II
- C. Understand basic theoretical and practical concepts involved in heavy construction. II
- D. Recognize the basic construction components and methods involved in light construction. I, II
- E. Recognize the basic construction components and methods involved in heavy construction. I, II

*Roman numerals after course objectives reference goals of the CET program.

III. Instructional Processes*:

Students will:

1. Actively listen to class lectures and participate in class activities that develop and reinforce comprehension of the theories, concepts, principles and applications in the use of materials and methods of constructing a project. *Communication Outcome, Problem Solving & Decision Making Outcome, Information Literacy Outcome, Active Learning Strategies*
2. Work individually and in teams to complete class assignments. *Communication Outcome, Problem Solving & Decision Making Outcome, Active Learning Strategies, Transitional*

Strategy

3. Use WordPerfect/Word or other appropriate software to generate written home work assignments. *Communication Outcome, Problem Solving & Decision Making Outcome, Technological Literacy Outcome, Active Learning Strategies*

*Strategies and outcomes listed after instructional processes reference Pellissippi State' s goals for strengthening general education knowledge and skills, connecting coursework to experiences beyond the classroom, and encouraging students to take active and responsible roles in the educational process.

IV. Expectations for Student Performance*:

Upon successful completion of this course, the student should be able to:

1. List building site design factors. A, B, & C
2. List different types of architectural drawing. A, B, & C
3. Describe the basic building elements and types of loading. A, B & C
4. Identify the stresses which occur in simple beams and columns. A, B & C
5. List the methods of subsurface exploration along with their limitations. A, B, & C
6. Identify foundation design factors. A, B, & C
7. List the components of basic foundation systems. A, D & E
8. List the characteristics of basic foundation systems. A, B, & C
9. List the primary wood frame floor system design factors. A & B
10. Identify basic wood frame floor system components. A & D
11. List the characteristics of basic wood frame floor system types. A & B
12. Identify the primary wood frame wall system design factors. A & B
13. List the basic wood frame wall system components. A & D
14. List the characteristics of basic wood frame wall system types. A & B
15. Identify the primary wood frame roof system design factors. A & B
16. List the basic wood frame roof system components. A & D
17. List the characteristics of basic wood frame roof system types. A & B
18. Identify the primary commercial floor system design factors. A & C
19. List the basic commercial floor system components. A & E
20. List the characteristics of basic commercial floor system types. A & C
21. Identify the primary steel frame system design factors. A & C

22. List the basic steel frame system components. A & E
23. List the characteristics of basic steel frame system types. A & C
24. Identify the primary formwork system design factors. A & B
25. List the basic formwork system components. A & D
26. Identify the primary reinforced concrete frame system design factors. A & C
27. List the basic reinforced concrete frame system components. A & E
28. List the characteristics of basic reinforced concrete frame system types. A & C
29. Identify the primary commercial roof system design factors. A & C
30. List the basic commercial roof system components. A & E
31. List the characteristics of basic commercial roof system types. A & C
32. List the characteristics of basic types of roofing systems. A, D, & E

*Letters after performance expectations reference the course objectives listed above.

V. Evaluation:

A. Testing Procedures:

Four examinations are scheduled. They will be True/False, Multiple Choice, Matching, and Short Answer Essay. The exams are given over the internet. Students normally have 1 week to complete the exam.

Examinations will normally be given as scheduled. Should a student have a planned vacation, operation, etc. occur during a scheduled exam, every effort should be made to take the exam prior to the scheduled absence. When a student misses an exam due to illness, he must contact the instructor immediately upon return and make-up the exam within one week.

B. Laboratory Expectations:

Quizzes:

Quizzes may be given by the instructor. Most quizzes will be unscheduled and randomly given. They cover the previous sessions material or the reading assignment for that day. There is no make-up or extra credit given for quizzes missed.

Written Assignments:

A minimum of three written reports will be required. They will consist of a synopsis of a magazine article. Topics will be provided by the instructor. Students may also be required to hand in answers to select questions at the end of each chapter or other appropriate homework at the instructor's discretion. All written assignments must be handed in on 8 x 11 engineering notepad, typing paper, lined paper with smooth edges or forms provided by your instructor. Students are encouraged to use word processing to generate their assignments.

All written assignments will be assessed a 10% penalty for each school day it is late.

All student work submitted for evaluation may be retained by the instructor.

C. Field Work:

N/A

D. Other Evaluation Methods:

A subjective evaluation based on attendance, classroom participation and attitude may be included (10%).

E. Grading Scale:

Final grades will be computed from the grades obtained on homework, quizzes, and examinations as follows:

Quizzes and homework = 10 - 30%

Examinations = 60 - 80%

Attendance/Participation = 0 - 10%

Grades are based on the following:

91 - 100 A

86 - 90 B+

81 - 85 B

76 - 80 C+

71 - 75 C

66 - 70 D+

60 - 65 D

Below 60 F

VI. Policies:

A. Attendance Policy:

Pellissippi State Technical Community College expects students to attend all scheduled instructional activities. As a minimum, students in all courses must be present for at least 75 percent of their scheduled class and laboratory meetings in order to receive credit for the course (Pellissippi State Catalog). Individual departments/programs/disciplines, with the approval of the vice president of Academic and Student Affairs, may have requirements that are more stringent.

It is the student's responsibility to attend every scheduled class activity on time.

Students are responsible to get assignments missed and to make-up any work missed during an absence.

B. Academic Dishonesty:

To use any form of unauthorized aid (notes, text, etc.) during a quiz or obtain any form of help from another student during testing is considered a form of cheating. Any time any form of cheating is observed the student will receive a 0 on that quiz or test.