

SYLLABUS

CIVE 568 Design of Masonry and Wood Structures

Spring 2015

Instructor:

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Textbooks: TMS 402/ACI 530/ASCE 5 "Building Code Requirements and Specification for Masonry Structures.

D.E. Bryer, K.J. Fridley, K.E. Cobeen, and D.G. Pollock. "Design of Wood Structures - ASD/LRFD", 6th Ed., McGraw-Hill.

National Design Specification (NDS) for Wood Construction with NDS Commentary and Supplement - Design Values for Wood Construction", American Forest and Paper Association (2015). Optional – "Masonry Structural Design" by R.E. Klingner.

Class: TTh 9:30-10:45 p.m., Shepardson 102

Course Objectives:

1. Understand and describe the important structural characteristics of masonry and wood buildings and their components.
2. Apply design provisions of U.S. code to wood and masonry.
3. Design connections details for timber structures.
4. Understand how components within a wood building form a comprehensive structural system to resist lateral and gravity loading.
5. Develop the basic design knowledge in wood and masonry that can serve as the foundation for future self-study.

Office Hours:

11:45-1:00 TTh – Drop in times. For an appointment - please e-mail me and suggest a time (or several times) to meet. I will let you know if I will be in my office then or give you several alternate times to choose from.

Attendance: Attendance is expected. If you have to miss class please get the notes from a classmate.

Grading: There is no +/- grading in effect for this course.

	Percentage
Homework	25%
Exam 1 (Masonry)	25%
Individual Design Project	25%
Exam 2 (Wood)	25%
Total	100%

Homework will be assigned in class approximately every one to two weeks, on average.

The Exams will be announced at least one week in advance. Only university excuses will be considered acceptable. Please submit a signed doctors excuse if you become ill.

Approximate Schedule

Week #	Subject(s)
1	Components of masonry buildings and hardware used in buildings.
2-3	Overview of structural design codes for masonry and other related provisions. Behavior and design of several different wall types, including unreinforced.
4	Design of beams, columns, reinforcement detailing for masonry
5-6	Design of masonry shear walls. Design of roof and floor diaphragms and distribution to masonry walls. Anchor bolt design for masonry.
7	Introduction to the National Design Specification (NDS) for wood structures. Properties of wood.
8	Basic beam and column equations and applications for wood structures.
9	Flexural and compressive members for wood structures.
10-11	Fasteners and connections in wood.
12-13	Shear walls, diaphragms for wood buildings, seismic design
14	Introduction to Cross laminated timber
15	Project presentations to class