

CEE 148, Lecture 1
Wood & Timber Design

Offered **2020 Summer Session A**

Fully Online Course, Available to Non-UCLA Students!

Course ID#: 147-590-110 *(Course counts as design elective towards UCLA CEE degree requirements)*

Recommended Prerequisites: CEE 108, 135A (or equivalent)

Class Organization: 16 2-hour lectures, 2 lectures released per week; weekly quizzes and homework; one mid-term and one final exam (all quizzes and exams taken online)

Instructor: Eric R. Ahlberg, Ph.D., P.E.

Course Description:

Properties and behavior of wood and wood products, analysis and design of wood and timber structural members subjected to flexural, shear, and axial stresses; connections, fasteners, and detailing; and light-framed wood shear walls and diaphragms. Students will understand the basic properties and behavior of wood. Students will also understand wood material design methods based on the National Design Specification for Wood and ASCE-7, and connection and lateral resistance design.

Sample Lecture Topics:

- Properties and behavior of trees and wood products
- Orthotropic mechanics of wood materials
- Flexural and shear design of beams
- Axial capacity of columns
- Design of combined axial and flexural members
- Design of fasteners and wood connections
- Engineered wood products and wood panels
- Design of vertical and horizontal wood diaphragms

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