



BCCM 2696

Division: Career and Technical Education

Department: Building Construction and Construction Management

Course: BCCM 2696

Title: Traditional Timber Framing

Catalog Description:

This is a hands on course for the traditional building skills of timber framing. The course covers the history, philosophy and traditional practices for the design, manufacture and construction of timber frame projects. Actual timber frame project will be constructed in the TBSI shop.

General Education Requirements: N/A

Semesters Offered: Fall

Credit/Time Requirement: Credit: 1; Lecture: 1; Lab: 1

Clock/Hour Requirements: 0

Offered for Non-Credit: No

Prerequisites: N/A

Corequisites: N/A

Justification:

The course is being provided in response to the construction industry trends for timber framed buildings, as well as increased interest in historic timber framing. Timber framing has survived through the centuries on the sound principle that it provides excellent shelter, and can still provide a durable shelter today. It shows the beauty of wood and joinery. The Traditional Building Skills Institute (TBSI) Board of Trustees has recommended this course.

Student Learning Outcomes:

Upon successful completion of this course, students will:

- know the construction of traditional timber framing
- be able to design and lay out timbers from plans
- be able to fabricate timbers using the standard joinery and pegs
- value the history, and the art and craft of timber framing

Content:

This course will include:

- introduction
 - history
- understanding timber framing
 - from trees to timbers
 - types of styles and species of timbers
- tools and equipment
 - tools of the past
 - layout
 - technology and manufacturing today
- timber framed design process
 - structured design
 - characteristics of wood and effects on strength
 - structural design of wood
 - loads and forces
- frame design
 - wall design
 - floor design
 - roof design
 - bracing
- timber framed construction
 - layout and cutting timbers
 - layout tools
 - cutting tools
- joinery
 - mortise and tenon
 - lap dovetail, joints and rafter pockets, scarf joints
 - pegs
- assembly and raising
 - moving timbers
 - assembly of a bent
 - assembly of roof rafters

General Education Outcomes:

5) Apply a cultural and historical awareness to a variety of phenomena.

The participant will become aware of the historical aspect of timber framing, a procedure which dates as far back as 500 BC. Shaping and joinery of timbers proved to be a building system so primal and basic that it found its way into forested cultures all around the world. This will be shown by slides.

6) Apply computational skills to a variety of contexts.

Timber framing requires the participant to estimate materials, to calculate sizes, to figure angles, and to measure lengths.

9) Respond with informed sensitivity to an artistic work or experience.

The participants will appreciate timber framing as an art and craft. It has a romance of its own, like a piece of furniture, it is intended to be structural and visible. This will be done by lecture and slides.

Key Performance Indicators:

- a rating of scores from the instructor's quizz: 30%
- assessment of acquired skills in timber frame fabrication and restoration by instructor: 50%
- attendance and attitude:
 - 10 points per day will be given for attendance and showing up on time
 - 10 points per day will be given on attitude which includes willingness to participate and follow instructions: 20%

Representative Text and/or Supplies:

- Jack A. Sobon, *"Build a Classic Timber-Framed House"*, 1994, Storey Books.

Optimum Class Size: 10

Maximum Class Size: 15

Signatures:

I hereby submit this course syllabus:

Officer Robert Wright, ,

I hereby find this course consistent with the goals and resources of the Building Construction and Construction Management Department:

Marlin Christensen, M. Ed., Instructor, Chair

I hereby find this course consistent with the goals and resources of the Career and Technical Education Division:

Michael P. Medley, MBA, Assistant Professor, Dean

I have discussed the need for library resources related to this class with the person submitting the syllabus:

Lynn Anderson, MLIS, Technical Services Librarian (Main Campus)

Michelle Olsen, MLS, Campus Librarian (Richfield Campus)