

**PALOMAR COLLEGE**  
**COURSE OUTLINE OF RECORD FOR**  
**DEGREE CREDIT COURSE**

X Transfer Course X A.A. Degree applicable course  
(check all that apply)

**COURSE NUMBER AND TITLE:** AP C 221 Roof Framing I

**UNIT VALUE:** 1.5

**MINIMUM NUMBER OF SEMESTER HOURS:** 40

**BASIC SKILLS REQUIREMENTS:** Appropriate language and computational skills.

**ENTRANCE REQUIREMENTS**

**PREREQUISITE:** None.

**COREQUISITE:** None.

**RECOMMENDED PREPARATION:** None.

**SCOPE OF COURSE:**

Roof construction is one of the most challenging and satisfying facets of carpentry. This basic course will introduce rafter theory and layout. Students will construct a gable roof using conventional and truss methods. Mathematical calculations for various rafter lengths and safety will also be covered.

**SPECIFIC COURSE OBJECTIVES:**

Students will be able to:

1. Analyze and apply information from roof framing plans
2. Calculate the span, run and unit of rise for various roof designs
3. Identify various types of roofs and their application
4. Demonstrate the ability to layout and assemble a gable roof

**CONTENT IN TERMS OF SPECIFIC BODY OF KNOWLEDGE:**

- I. Identification of various types of roof structures
  - A. Shed
  - B. Gable
  - C. Hip

- II. Location and use of roof framing blueprints
  - A. Roof framing print
  - B. Structural connections to walls
  - C. Trust manufactures specifications
- III. Mathematical methods used in the calculation of various types of rafters.
  - A. Calculations to determine distance of span
  - B. Calculations to determine pitch
  - C. Calculations to determine unit of rise
- IV. Assembly of a gable roof.
  - A. Conventional roof framing
  - B. Trust system
- V. Building codes reviewed as applied to roof structures.

**REQUIRED READING:**

Koel, Leonard. Carpentry. Homewood: American Technical Publishers, 1997

Riechers, A.F. Full-Length Roof Framing. Palo Alto: A.F. Riechers, revised 1992

Carpenters 46 Northern California Counties JATC. Construction Mathematics. Oakland: Self-published 1991

Carpenters 46 Northern California Counties JATC. Introduction to Working Drawings. Oakland: Self published 1991

**SUGGESTED READING:**

None.

**REQUIRED WRITING:**

Completion of written assignments in student workbook consisting of ten to twelve pages in length.

**OUTSIDE ASSIGNMENTS:**

**Students are expected to spend a minimum of three hours per unit per week in class and on outside assignments, prorated for short-term classes.**

Students will read assigned text and workbook assignments.

**INSTRUCTIONAL METHODOLOGY:**

**Check all that apply:**

- lecture
- laboratory
- lecture-laboratory combination
- directed study

**DISTANCE LEARNING:**

**This course may be offered as a distance learning course and meets Title 5 regulations 55370, 55372, 55374, 55376, 55378, and 55380.**

Yes  No

**If yes, check all that apply:**

- Television Course (Video one-way, e.g. ITV, video cassette, etc.)
- Online Course (Text one-way, e.g. newspaper, correspondence, electronic file, etc.)
- Two-Way Video Conferencing (Two-way interactive video and audio)
- One-Way Video Conferencing (One-way interactive video and two-way interactive audio)
- Computer Assisted Instruction (A specialized form of mediated instruction relying primarily on student access to information and prepared lessons or teaching materials through a computer terminal, but not under immediate supervision of a qualified instructor.)

**GRADING POLICY AND STANDARDS** (include methods of determining whether the stated objectives have been met by students):

Class Participation	10%	A = 100 – 90
Quizzes	20%	B = 89 – 80
Lab/Shop Projects	20%	C = 79 – 70
Workbook	20%	F = Below 70
Final Exam	<u>30%</u>	
	100%	

**IS COURSE REPEATABLE FOR REASON(S) OTHER THAN DEFICIENT GRADE?**

Yes  No  Number of times course may be taken for credit: 2

If yes, identify specific provision of Title 5 Division 2 section(s), 55761-55763 and 58161 which qualifies course as repeatable: 58161 Part C 2A

**CONTACT PERSON:** Director, Vocational Programs, Ext. 2286

**SIGNATURES ON FILE**