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

_____ Transfer course __X___ A.A. degree applicable course
(check all that apply)

**COURSE NUMBER AND TITLE:** CFT-142 The Art and Craft of Planemaking

**UNIT VALUE:** .5,1, 2,3

**MINIMUM NUMBER OF SEMESTER HOURS:** 16,32,64,96 hours lecture/laboratory

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

**ENTRANCE REQUIREMENTS**

**PREREQUISITE:** CFT-100

**COREQUISITE:** None

**RECOMMENDED PREPARATION:** None

**SCOPE OF COURSE:**
This course will teach students to make wooden hand planes. Through the use of lecture, handouts, demonstrations and videos, the following topics will be covered: the history of plane making, tuning and using wooden and metal planes, designing a plane, making and tuning laminated planes; cutting, tempering and sharpening a plane iron; design, layout, make and use a wooden plane.

**SPECIFIC COURSE OBJECTIVES:**
1. Describe, recognize, demonstrate, practice, and apply appropriate safety standards and practices.
2. Describe and discuss the various types and functions of handplanes.
3. Demonstrate appropriate strategies in tuning, using and maintaining metal and wooden handplanes.
4. Sketch, explain and discuss correct layout, geometry and design for a traditional wooden handplane.
5. List, describe, and demonstrate effective usage of traditional and modern planemaking tools.
6. Describe and demonstrate all steps in the cutting, shaping, tempering and sharpening of a blade for a handplane.
7. Describe and demonstrate all steps necessary in the making of a laminated handplane.
8. Describe and demonstrate all steps necessary in the making of a traditional handplane.

**CONTENT IN TERMS OF SPECIFIC BODY OF KNOWLEDGE:**
I. Introduction
   A. History of plane making
   B. Plane design
   C. Older/used planes
II. Bench plane construction
   A Classical
   B. Modern
III. Restoration of older planes
   A. Dealing with rust

B. Loosening screws
C. Cleaning the wood

IV. Hand plane tune-up
A. Metal planes
B. Wood planes
1. Disassembly
2. Truing the sole
3. Adjusting the mouth
4. Adjusting the chip breaker
5. Flattening the bed
6. Lateral adjustment of the iron
7. Sharpening the iron
8. Sharpening the chip breaker

V. Modern Lamination Plane
A. Design
B. Sequence of construction
C. Tuning and using the plane

VI. Metallurgy
A. Types of steel
B. Hardening and tempering a plane iron

VII. Sharpening a plane iron

VIII. Jigs, Fixtures and Tools used in Plane Making

IX. Floats and Float Making

X. Traditional Plane Types
A. Coffin smoother
B. Jack Plane
C. Jointer Plane

XI. Handles, Body types and Lever Caps

XII. Layout and Sequence of Construction

XIII. Finishing, tuning and using the plane

**REQUIRED READING:** Articles from Fine Woodworking and other magazines handed out in class.

**SUGGESTED READING:**

1. Making Traditional Wooden Planes John M. Wheelan
2. Making and modifying Woodworking Tools Jim Kingshott
3. Fifty Years a Planemaker and User Cecil E. Pierce
4. The Wooden Plane: Its History, Form and Function John M. Wheelan
5. Restoring, Tuning & Using Classic Woodworking Tools Michael Dunbar
6. Wooden Planes in 19th Century America Kenneth D. Roberts
7. The Handplane Book Garret Hack

**REQUIRED WRITING:**

1. Students will generate a notebook consisting of appropriate title page, dividers, index, class notes, handouts that have been read and highlighted, extra material, pictures and project descriptions
2. Students will write an overview of their primary class project. Overview should include:
   - Drawings, construction principles, plan of construction, problems encountered and how solved, drawings of special jigs or fixtures created, costs, and a discussion/summary of the experience.

**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.**

**INSTRUCTIONAL METHODOLOGY:**

**Check all that apply:**

____ lecture

____ laboratory
__X__lecture-laboratory combination
____ directed study

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

**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):

Grading standards **(100 points possible)**:

1. Class Exercises (forty total points)
   - Tune a plane **(10 points)**
   - Cut, shape, harden, temper, and sharpen a plane iron from tool steel stock **(10 points)**
   - Make a Scary Sharp sharpening station **(10 points)**
   - Make a prototype of a plane w/ layout all layout lines **(10 points)**

2. Class Projects
   - Laminated or Krenov Style Plane **(15 points)**
   - Classical or traditional mortise style plane w/ drawings, a written project overview, prototypes if required, and any jigs or fixtures created for the project drawn out **(35 points)**

3. Notebook **(10 points)**
   - Appropriate title page, dividers, index, class notes, handouts that have been read and highlighted, extra material, pictures and project descriptions are expected and will determine grade.

4. Participation and class attendance is expected. The first week will not be counted since we might still be adding students. That leaves 15 classes.
   - missing three classes(20% of the course) will result in an overall drop of one grade
   - missing four classes (26.67% of the whole course) will result in a drop of two grades
   - missing five classes (30% of the whole course) will result in a "Failing" grade

**IS COURSE REPEATABLE FOR REASON(S) OTHER THAN DEFICIENT GRADE?**
Yes __X_ No ___ Number of times course may be taken for credit: _3__

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

**CONTACT PERSON:** Russ Filbeck ext-2812

**SIGNATURES ON FILE**