**Stair Building CARP 230**

**Syllabus and Guidelines**

**Semester: Spring 2012**

**Class: Carpentry 230**

**Section#: 21096**

**Units: 2**

**Instructor: Marie Kline**

Campus Office: 464-3447

Email address: mariekline@earthlink.net

Office Hours: Mondays 10:00am-10:30am; Wednesday 2:50pm- 3:20pm

Office location: G160

**Class Meeting Time:** 10:00 am to 2:50 am; Wednesdays (1 hr lunch)

**Class Location:** G160

**Tools, Notebooks, Safety Gear, & Text**

Students Provided Materials (text and binder) Safety Equipment and Tools are ***required by the second class!*** If you do not have these items I will assume you are ***not*** prepared for instruction.

**Tools**

**Notebook**

**Pencil**

**Hard Hat**

**Safety goggles or glasses**

**Dust mask/respirator**

**Hearing protection**

**Tape measure**

**Speed square or**

**Combination square**

**Architect’s square**

**Tool belt**

**Framing hammer**

**Handsaw**

**4 in 1 screwdriver**

**Utility knife**

**I” chisel**

**Nail set**

**Stair gauges**

**Framing square (not just any framing square)**

**Calculator with square root & tangent function (not a cell phone)**

**Text:**

**Stair Design and Layout** 2nd Edition; By: Stanley Badzinski Jr.; ATP Publisher.

About $35.00 on-line or at the builder’s book source. Do not get the earlier edition.

Suggested text: **Basic Stairbuilding , by Steve Schuttner, Taunton Press, 1998**

**Handouts:**

Handouts will be handed out periodically throughout the semester. These should be kept in your notebook.. Do not disrupt class to get a handout. I try to keep handouts that I have distributed in the flier rack on the wall behind the new office.

**Homework and Reading Assignments:**

Instructor will assign reading assignments and homework at her discretion. It is the student’s responsibility to e-mail me for homework (or get it during my office hours) if you are absent, and to turn in all homework on time even if you are absent. All homework, except for special projects, is due the next class **only**. Late homework is not accepted. No homework will be given credit unless **all math work** is shown. Staple your work on additional pages to the back of the assignment. Homework that is identical from one student to another will be stapled together and the credit will be divided amongst those students. All homework is due first thing in the morning on the day it is due.

Some assignments will be web based. As a Laney student you have access to library and computer lab computers to do your course work. You will need to have a valid student ID card to access school computers. Computer labs allow a number of pages to be printed per student each day.

**Math:** If you have not taken the math courses for the carpentry degree, (MATH 220A\* MATH 220B\* MATH 220C\* MATH 220D\* MATH 220E\* MATH 220F\*, these classes include technical algebra and geometry) or have the equivalent math background you will probably fail this class. Go drop this class now and come back when you have the math.

**Grading:** Your grade is based on 2 things; Academic work (homework, quizzes and tests), and Participation

 Academic 55%

 Participation 45%

If you are working to get a certificate in Carpentry you will need to get a C or better to pass the class.

**Attendance Policy:** It is important to be on time and attend all classes. This is a difficult class to succeed in if you get behind on homework or miss a lecture or part of a lecture. Attendance affects your grade because your participation grade is partly based on your attendance.

**Drops:** Students are responsible for dropping from classes if you decide to discontinue a class.

**Cell Phones:** No cell phone use during lectures. At other times short calls taken outside are acceptable.

**Tests:** No cell phones or transmitting electronic devises are allowed during tests. You will need to get a separate hand held calculator for test taking or you will be taking tests without the aid of a calculator. Any cheating on tests will result in a failing grade on that test.

**Health and Safety:** Students are expected to observe all safety instruction at all times in the classroom, out in the yard and on the school job site. If you do not heed these instructions you will either be restricted to hand tools only or dismissed from class. If you wear prescription glasses you will need to wear goggles over them or obtain prescription glasses with ANSI Z87.1 approved lenses. Laney is a Smoke Free campus. To smoke you must go out to the perimeter city sidewalk. It is strongly recommended that students review their tetanus shot record and receive a booster shot if necessary.

**Clean-up:** No janitors come and clean-up after us in the carpentry department. Classes make the messes, so classes clean them up. Considering a huge part of what goes on in the construction trades is cleaning up, you’d best get use to it. If you take off at the end of class without helping with the clean up, your participation grade will be affected.

**Recycling:** Recycling is now part of construction industry practices. All recyclable materials will go in the recycling bins. All aluminum cans, plastic drink containers, cardboard, metal, and clean paper will go in the blue recycling bins! All short pieces of 2 x 4 fir go in the firewood bin beneath the chop box. Materials that cannot be burned, such as: OSB, MDF, radiata pine, PT fir, plywood, etc… do NOT go in the firewood bin. Also, longer pieces than 14” do not go in the firewood bin.

**Student Learning outcomes:**

|  |
| --- |
| 1. Demonstrate ability to calculate and build a set of stairs from blueprints. |
| 2. Display a knowledge of the Uniform Building Code as it applies to handrails and stair building. |
| 3. Demonstrate an understanding of the various stair configurations. |
| 4. Demonstrate basic construction site safety and safe attitudes in all class activities. |

**Syllabus: Spring 2012, Stair Building**

**January**

 **25** Introduction. Required tools. Grading. Syllabus, Stair terminology. Safety test. Text, Skilsaw lecture, safety

 Homework: Obtain and bring tools next class

 Study for safety test

 Read: Chapter 1- “Stairway Basics” to pg 4

 Study for stair terminology quiz

**February**

 **1** Framing square overview; Types of stairs; Types of treads; Skilsaw; Stair project #1 (ladder stair)

 Test: Safety

 Quiz: Stair terminology

Homework: Go on-line, find and print the IRC stair building code-16

 Pages

 Read: Chapter 1- “Stairway basics” pg 4 -8

 Study review questions – pg 9-11; Next quiz is based on these

 **8** Stair code

 Quiz on Reading

 Finish up Stair project #1 (ladder stair)

 Homework: Code worksheet:

 Reading: Chapter 2- “Stairway Safety and Codes” Math worksheet; Converting decimal feet to feet, inches and

 fractions of an inch

 **15** New terms; Blueprint reading

 Print project; 2 of 4 pages

 Homework:

 Reading: Chapter 3- “Stairway Materials and Tools”

 Study review questions for qui

 Math homework- converting fractions to decimal ft.

 **22** Stair design; Layout Stringer; Adjustments

 Quiz on reading

 Homework:

 Reading: Chapter 4 “Stairway Design”

 Do the stair calculations(Calculations 4-1) starting on pg 69

 9 questions.

 Go to online web site and test stair calculation [www.blocklayer.com/Stairs/StairsEng.aspx](http://www.blocklayer.com/Stairs/StairsEng.aspx)

 **29** Headroom; layout on plywood continued

 Homework: Reading; Chapter 5-“Headroom”

 Do the stair calculations (Calculations 5-1)starting on pg 81

 5 problems

**March 7** Landings; stringer cutout, stair construction

 Homework: Reading- Chapter 6- “Landings”

 Do the calculations 6-1, on pg 103 ( four problems ); and the first of the problems under “Calculations 6-2”

 **14** Winders; Mitered stringer; Google Sketch-up; computer lab 10am – 12pm

 Homework: Reading- Chapter 8 “winders”

 Do the winder Review questions #1 and #2 on pgs 137 and 138

 Google sketch up stairway project

 **21** Mid-term review; Project intro

 Homework: Review the “Final Exam” questions starting on pg 141

 **28** Mid-term; Projects, Lecture -Using a router

 Homework: Reading-Chapter 7- “Stringers”

 Do the review questions-“Calculations” starting on pg 125, 6 problems

**April**

 **4 Holiday- SPRING BREAK**

 **11** Projects- Lecture- Using a Plate Jointer

 Homework: Do Review questions on pgs 84-86, 5 problems

 **18** Projects- Lecture - Fasteners

 Homework: Do Review questions on pg 104, #17-24; and “stairway B” #9-16 on pg 105

 **25**  Projects

 Homework: Do Review question on pg 106, “Stairway C”, # 17-24

**May**

 **2** Projects

 Homework: Do Review questions on pg 139-140

 **9** Projects

 Homework: Google sketch-up stair project #2

 **16** Clean up; Final Review

 **23 Final exam**