

SYLLABUS

PFPB 2341  
PIPE FABRICATION & INSTALLATION II  
INDUSTRIAL COMMERCIAL PIPEFITTING  
BRAZOSPORT COLLEGE  
LAKE JACKSON TEXAS

PREPARED BY: \_\_\_\_\_ DATE: August 3, 2011  
INSTRUCTOR

RECOMMENDED BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
DIVISION CHAIRMAN

APPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_  
DEAN

The Brazosport College District shall not discriminate against, or exclude from participation in any benefits or activities either on the staff or in the student body, any person on the grounds of sex, race, color, religion, national origin, age or handicap.

BRAZOSPORT COLLEGE  
500 COLLEGE DRIVE  
LAKE JACKSON, TEXAS 77515

PFPB 2341

## PIPE FABRICATION & INSTALLATION II

### COURSE DESCRIPTION

Advanced pipe fabrication of various materials with emphasis on vertical, horizontal, and rolling off-sets using 45-degree fittings and odd-angle fittings. (3 C/ 2 lect, 2 lab,)

### COURSE ;EARNING OUTCOMES

Fabricate piping offsets; and develop and lay out templates of various pipe intersections and miters.

### TEXT AND REFERENCES

THE PIPEFITTER'S BLUE BOOK, by, W. V. Graves, published by  
Groves Publishers, LaPorte, Texas

PIPE TEMPLATE LAYOUT,

WHEELS OF LEARNING FOR PIPEFITTERS, module 08402-07,  
08403-07, 08406-07, by Associated Builders and Contractors, Inc.  
National

### COURSE GOALS

The following list of course goals will be addressed in the course. These goals are directly related to the performance objectives (Addendum A). (\* designates a CRUCIAL goal)

1. divide straight lines using a ruler, divider, and a framing square
2. bisect an angle
3. calculate pipe circumference

4. divide equal circle
5. develop 45 degree angle template
6. fabricate a 45 degree angle
7. develop a 90 degree one weld template
8. fabricate a 90 degree one weld angle
9. calculate a right hand triangle
10. develop a 90 degree two weld template
11. fabricate 90 degree two weld angle
12. use a contour marker
13. develop a 90 degree three weld template
14. fabricate 90 degree three weld angle
15. layout an equal sized, header to branch saddle template
16. fabricate equal size header to branch saddle template
17. layout a header to a reduced branch saddle template
18. fabricate a four inch branch to a six inch header, 90 degree
19. lay out a lateral connection 45 degree saddle with same size header and branch template
20. fabricate a lateral connection , 45 degrees saddle with same size header and branch
21. make a freehand isometric drawing from blueprints
22. make a bill of materials from isometric drawing

## STUDENT CONTRIBUTIONS

Each student will spend at least 2 hours per week preparing for class. Attendance is critical in this class. The student will be given an opportunity to evaluate the instructor/course.

## COURSE EVALUATION

Your performance objectives and exams will be translated to points and the points to grades. There are 100 points possible and grades will be earned as follows: A- 90 to 100, B- 80 to 89, C-70 to 79, D-60 to 69, F- 0 to 59.

## COURSE SCHEDULE

The class meets for 2 lecture hours and 2 lab hours per week.

## ADDENDUM A

### PERFORMANCE OBJECTIVES

1. The student will solve for lengths of pipe and degree of angle for simple piping offsets.
2. The student will layout equal and unequal spread offset for three parallel pipelines.
3. The student will lay out and fabricate a tank coil.
4. The student will lay out and fabricate a three-piece and four-piece 90-degree, mitered turn.
5. The student will lay out and fabricate a 45-degree lateral using reference charts and performing geometric layout.
6. The student will lay out and fabricate a type 1 pipe support.
7. Identify three methods used to stress relieve pipe and perform alignment of a pipe flange to an equipment nozzle.
8. The student will install tubing using flared, compression, solder and braze tubing joints.
9. The student will bend piping to a specified radius.