

REEDLEY COLLEGE
REEDLEY, CALIFORNIA

INDUSTRIAL TECHNOLOGY DEPARTMENT
MANUFACTURING TECHNOLOGY CERTIFICATE PROGRAM

MFGT 39 Metals

INSTRUCTOR: Mr. McCain

DESCRIPTION: General Metals - 2 units, 5 hours weekly,
9 weeks

REQUIRED BACKGROUND: None

REQUIRED MATERIALS:

1. text book: MODERN METALWORKING
John R. Walker, Goodheart-Wilcox 1985
2. workbook: Workbook for Modern Metalworking
John R. Walker, Goodheart-Wilcox 1985
3. other materials: Quizstrips, scantrons, ring binder,
#2 pencil, eraser, shop apron and
safety glasses.

COURSE OBJECTIVES:

1. Upon completion of this course, the student will be able to:
 - a. select proper metals for specific manufacturing operations
 - b. know the proper use of hand tools, measuring instruments, spot welders, and soldering tools.
 - c. ram up and pour green sand castings
 - d. operate metal forming and bending equipment.

METHODOLOGY:

Students will be expected to read the material in the chapters, complete and turn assigned problems in to the instructor and be prepared to discuss the assigned chapters. Lectures will serve the purpose of clarifying and expanding the reading material. Students must also complete and turn in all of the lab projects.

ATTENDANCE:

1. You need to attend class regularly and participate in your class. Class participation will be 100 points of your total grade.
2. Dropping from this class is YOUR RESPONSIBILITY. Failure to drop could result in a grade being issued. Remember to turn in a drop slip if you stop attending class. The drop deadline is Wednesday, Nov. 17, 1999.
3. Two tardies are equal to one absence. Two (2) absences and you will be dropped from the class.

EXAMINATIONS:

1. There will be two (2) examinations: (Fall 1999)

| <u>EXAM</u> | <u>Date</u> | <u>Material covered</u> |
|-------------|-------------|------------------------------------|
| 1 | Nov. 19 | Units 1-8 (except 3) |
| 2 | Dec. 17 | Units 10,13,14,15,16, 19 and 20 |

POINTS:

| | | |
|--------------------------------|---|------------|
| 1. 2 EXAMS. at 200 points each | = | 400 points |
| 2. 4 QUIZES at 20 points each | = | 80 " |
| 3. Workbook Problems | = | 1045 " |
| 4. Lab projects | = | 425 " |
| 5. Class participation | = | 100 " |

TOTAL POSSIBLE = 2050 points

POINTS SCALE:

1845 - 2050 = A
1640 - 1844 = B
1435 - 1639 = C
1128 - 1434 = D
Below 1128 = F

To determine your level of progress at anytime, divide your accumulated points by the total points possible up to that week. Look at the assignment sheet on page 4 to find the homework points listing. If you have trouble in determining your grade level please ask the instructor to help you.

COURSE OUTLINE
MFGT 39

| WEEK | SECTION | AGENDA |
|------|---------------|---|
| 1 | Units 1,2 & 4 | Lecture: Technology and Careers Metals we use and Shop safety. |
| 2 | Units 5-6 | Lecture: Measurements and Layout Work |
| 3 | Unit 7 | Lecture: Hand Tools - The var- ious types and how they are used |
| 4 | Unit 8 | Lecture: Hand Tools That Cut - Their function and proper use |
| 5 | Units 13-14 | Lecture: Sand Casting and Other Casting Techniques |
| 6 | Unit 16 | Lecture: Forging - materials, equipment and techniques |
| 7 | Unit 19 & 20 | Lecture: Heat Treatment of Metals - methods and types of equipment used. Metal Finishes - types and processes |
| 8 | Units 15 & 10 | Lecture: Wrought Metals - equipment, tools and techniques Fasteners - Types and uses, and and methods of installation. |
| 9 | FINALS | Test #2, and Turn in ungraded lab projects, aprons, and safety glasses. |

ASSIGNMENT SHEET
MFGT 39 METALS

| WEEK | SECTION | READING | WORKBOOK | PTS |
|------|---------|-----------|---|-----|
| 1 | UNIT 1 | pg 7-24 | pg. 7-12 part 1 1-20 part 2 1 & 2 part 3 all part 4 all | 120 |
| | UNIT 2 | pg 25-42 | pg. 13-16 part 1 1-7 part 2 1-20 part 3 --- | 107 |
| | UNIT 4 | pg 53-56 | pg. 21-22 part 1 1-5 part 2 --- | 40 |
| 2 | UNIT 5 | pg 57-82 | pg. 27-34 part 1 1-15 part 2 1-25 A-W part 3 A-L part 4 1-10 part 5 1-13 part 6 1-18 | 159 |
| | UNIT 6 | pg 83-92 | pg. 35-37 part 1 1-10 part 2 1-12 | 60 |
| 3 | UNIT 7 | pg 93-104 | pg. 38-41 part 1 1-14f part 2 A-S part 3 1-3 | 98 |

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|---|------------|------------|--|----|
| 4 | UNIT 8 | pg 105-118 | pg. 42-45 part 1 1-19 part 2 1-4 part 3 --- | 91 |
| 5 | UNIT 13 | pg 173-188 | pg. 63-66 part 1 1-14 part 2 A-Q part 3 1-2 | 96 |
| | UNIT 14 | pg 189-204 | pg. 67-68 part 1 1-11 | 32 |
| 6 | UNIT 16 | pg 217-230 | pg. 71-72 part 1 1-15 part 2 --- | 30 |
| 7 | UNIT 19 | pg 269-278 | pg. 80-81 part 1 1-13 part 2 --- | 34 |
| | UNIT 20 | pg 279-288 | pg. 82-83 part 1 1-13 part 2 1-2 | 48 |
| 8 | UNIT 15 | pg 205-216 | pg. 69-70 part 1 1-6 part 2 1-2 | 34 |
| | UNIT 10 | pg 129-140 | pg. 48-51 part 1 1-13 part 2 1-20 | 96 |
| 9 | FINAL TEST | | | |

Total points= 1045