THE UNIVERSITY OF THE BIG BEND

IT 1306
Beginning Metalwork Technology
Fall 2022

Instructor
Mr. Terrence Ross
Instructor
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Office Hours: by appointment

Time and Location
Class times: MW 1:00pm – 2:50pm Aug. 22,2022 Thru Dec. 07,2022
Lab Times: None
Industrial Technology Bldg. Room 103

Course Description
The course is an introductory course in the use of precision measuring instruments and metal working machines. Materials characteristics, defined by metallurgical, and standard material testing methods will be introduced. Essentials of engineering graphics introduced. Special mathematical topics needed for shop practice will be introduced.

Course Objective
The objectives of this course of study are to provide the student with an opportunity to acquire basic knowledge and understanding of the fundamentals of general metalworking. Topics discussed will consist of sheet metal, steel and aluminum. Processes will include foundry casting, forging, die-casting, and injection molding.
Additional topics will include:
Heat treating, fasteners, thread systems, gearing calculations, geometric transformations and pattern developments.

Student Learning Outcomes
This course is designed to meet one or more of the following Student Learning Outcomes:
1.) Students will appreciate and understand common manufacturing processes.
2.) The importance of mathematics needed for two dimensional calculations will be understood.
3.) It will be understood - further work in mathematics and technical drawing will be needed for advancement in metalworking fields beyond this course.
4.) The need for technical drawing skills will be well understood above all!

Reading
Text required for this course is: Modern Metalworking / John R. Walker - Copyright 2000
Publisher – The Goodheart – Willcox Co.,Inc.
ISBN 1-56637-710-2

Additional reading material will be provided.

SRSU Disability Services
ADA (Americans with Disabilities Act) Sul Ross State University (SRSU) is committed to equal access in compliance with Americans with Disabilities Act of 1973. It is SRSU policy to provide reasonable accommodations to students with documented disabilities. It is the student's responsibility to initiate a request each semester for each class. Students seeking accessibility/accommodations services must contact Rebecca Greathouse Wren, LPC-S, SRSU's

Accessibility Services Coordinator at 432-837-8203 (please leave a message and we'll get back to you as soon as we can during working hours), or email rebecca.wren@sulross.edu. Our office is located on the first floor of Ferguson Hall (Suite 112), and our mailing address is P.O. Box C-122, Sul Ross State University, Alpine, Texas, 79832.

Attendance

Attendance is necessary! Missing six hours of class is considered excessive. Attendance will be taken each scheduled class period in accordance with University and Departmental Policy. Attendance will count as part of the daily work grade. Everyone starts with 400 points at the beginning of the semester for class attendance - each absence will cost 10 of those points. In accordance with the Student Handbook, after 9 hours of absences (9 days) the student will be dropped from the course with an 'F'. Attendance will be taken at the beginning of each class period and once taken, will not be changed. If a student is tardy and misses the roll call they will be charged with one absence. Because much of the learning in this course takes place in the form of laboratory activities, time spent, in the lab will also be considered in the final grade. Lab attendance will be taken and a lab sign-in sheet will be available every day. Lab attendance will worth up to 390 points (10 points per hour in the lab). Lab attendance will begin with the third week of class and will be monitored, as much as possible, throughout each day.

Class Structure

This course is designed to be a guided study and not just dissemination of information.

Time Commitment

Students should be prepared to spend 4-6 hours per week outside of class on assignments that will Include: Homework, Reading Assignments, studying for tests and quizzes.

Phones & Electronic Devices

NO PHONES will be allowed in class. This will be closely monitored. Remember 25% of your grade will be the instructor discretion category.

Assignments

Daily work will consist of reading, worksheet pages, written assignments, drawings, metalworking projects, project record sheets, and equipment proficiency demonstrations. There will be several laboratory assignments required for this course. Some of the laboratory exercises and projects will be completed together during the scheduled class time. Several of the lab assignments will require written reports, sketches, and drawings pertaining to the projects being made. Instructions regarding the format of the written material will be distributed at the time of assignment.

Due dates: All assignments and projects will be given due dates which must be met. All assignments will be due by 4:30 pm on the assigned day. Assignments and projects will be accepted if they are turned in late. Late assignments will lose ten points per calendar day. Students are responsible for meeting the deadlines even if classes are missed.

Grading: All work will be graded on specific criteria given at the time of the assignment during class. Daily work and laboratory projects will be graded on a point per answer basis, a percentage basis, or simply points for completion. All worksheets or workbook assignments will be graded on a points-per-answer basis with the use of an answer key. Rubrics will be given for all projects with a breakdown of graded criteria. Project grade sheets will be broken into these general categories: accuracy, neatness, content, adherence to standards, safety procedures followed, teamwork (if applicable), and workmanship. All grades are converted to a percentage in the grade book. Percentages will be tallied in the grade book resulting in a final percentage for each of the graded areas of the course. Any other papers and drawings assigned will be graded subjectively on a percentage basis which will include content, presentation, accuracy in style, grammar, format, and clarity.

Grades

Final grades will be determined by totals in these areas:

45% daily work and tests: To be determined

30% Attendance

25% Instructors discretion grade to include attitude, and work ethic.

Weekly student reviews will be recorded for consideration in the final grading

In the event one of the above categories is not completed during the course, that percentage will automatically be divided between the other categories at the same level.
All assignment points will be converted to percentages for individual assignment letter grades.

A=100-90 B=89-80 C=79-70 D=69-60 F= 59

Grades will be earned on the basis that "C" is average work, "B" is above average work, and "A" is well above average work. Barring unusual circumstances, there will be ***NO INCOMPLETES*** given at the end of this semester.

Grading

All work will be graded on specific criteria using the following guidelines. Any worksheets will be graded on a points-per-answer basis. Any sketches and drawings assigned will be graded on a 100 point (percentage) scale. Criteria for grading will include: accuracy of content, appropriateness of content for assignment, presentation, clarity. Projects in the lab will be graded on accuracy, neatness, content, adherence to standards, adherence to assignment, and workmanship. Graded items will be broken into specific categories and presented on grade sheets given at the time the assignments are given.

Academic Honesty

All students are expected to do their own work at all times. Any dishonest conduct will be promptly rewarded with an immediate "F"

Tests Take-home

Everything discussed and everything in the assigned reading, including laboratory material, is fair game for tests will be written in nature using various styles of questions covering terminology, equipment, processes, and other items discussed. There may also be some practical exercise portions on each exam. No makeup tests will be given.

Midterm Exam

There will be no midterm exam given.

Final Exam

There will be a final. Essay form.

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Tentative Reading Schedule

The following is a tentative reading schedule for the semester. The dates provided are the dates the reading is assigned and the reading is to be completed by the following class day.

Date	Reading
TBD	