



Instructor

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Instructor
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Office Hours: by appointment

Time and Location

Class times: Mon. Wed. 1:00pm – 2:50pm
Lab Times: Mon. Wed. 1:00pm – 2:50pm
Industrial Technology Bldg. Room 103

Course Description

The course is an advanced course in the use of precision measuring instruments and metal working machines. This course is intended to be a refinement of the machine shop practices of industry. Shop and machine safety, hand tool and machine operation, materials characteristics, are a few of the topics covered in this course.

Course Objectives

Course Overview / Shop Safety

This course is defined by machining projects. Introduction to hand sketches and computer driven drawings will apply to describing project shapes and sizes. Projects will evolve from copying an original example. Verbal overviews will occur in the class setting for describing all machining operations. All students will execute copies of the original design in a teamwork setting. All students will execute their own piece parts for exact replication of the example project. All available machine tools will be used in the preparation of projects.

Machines will include:

Tool and cutter grinder
Surface grinder
Milling machines
Tool room lathes
Additionally, grinding vices and sine plates will also be used.
Measuring devices both inspection and lay-out will be used.

Reading

Text required for this course is: Technology of Machine Tools / Steve F. Krar - 7th ed.
Publisher – McGraw-Hill Copyright 2011
ISBN 978-0-07-351083-5

Additional reading material will be provided.

Accessibility

Sul Ross State University is committed to equal access in compliance with the Americans with Disabilities Act of 1973. It is the student's responsibility to initiate a request for accessibility services. Students seeking accessibility services must contact the Counseling and Accessibility Services, Ferguson Hall, Room 112. The mailing address is P.O. Box C-171, Sul Ross State University, Alpine, Texas 79832. Telephone: 432-837-8203.

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. It will be run in a lecture\discussion\lab format. Lectures will utilize demonstrations. The lectures will be given primarily to enhance and answer questions about the material that should have been studied prior to the class period. The student will be responsible for asking questions when they run across something they do not understand. The student will be expected to use their problem solving skills in coming up with solutions to the lab problems. There may be some step-by-step guided practice, one-on-one assistance, and demonstration during the scheduled class time in areas where there seems to be a need. It is essential that you are in attendance for the scheduled meetings so you get your questions answered and do not miss the shared information and demonstrations. Several of the scheduled class times may be scheduled as lab time as well. It is also important that you plan on working in the lab outside scheduled class time.

Time Commitment

Students should be prepared to spend 4-6 hours per week outside of class on assignments that will include: Homework, Reading Assignments, Lab work and 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: To be determined.

And Lab proficiency tests and setup.

30% Attendance

25% Instructors discretion grade to include attitude, lab care, 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".

Lab Time

As with all the Industrial Technology classes, there will be a substantial amount of lab work to be done. Normally 6 hours outside of scheduled class time each week for researching, reading, and general homework is expected for college level work. All of the required research, lab work, and practice will not be able to be completed within the scheduled class time. There may be some release time from class to complete some of the work. There will also be some group work students will have to schedule on their own. The lab will be open for use during open building hours (usually 8 - 5 daily). The lab may occasionally be open other evenings and those working during the evenings will be required to leave when the lab assistant leaves. No one will be left in the building without a lab assistant. Be advised that there may not be a knowledgeable lab assistant available at all times. No regular weekend hours are planned at this time.

Equipment and Supplies

Most of the major equipment you will need for completing your assignments will be supplied in the lab. . Please be careful with the equipment. These you will be required to purchase:

- ✎ Safety glasses or goggles

- ✦ Gloves (things can be hot and sharp)
- ✦ Lab coat or apron if you want one
- ✦ Any other special tools you wish to use that we do not have in the lab

NOTE: Safety glasses **are required** any time you are working in the lab.

Supplies - Students will be responsible for purchasing the supplies they will use in this course. There will be materials fee that will cover the materials you use for your assigned projects. If the issued materials are damaged, the student will be responsible for purchasing the additional material. If anyone wishes to do more than the assigned work they will be responsible for paying for the additional material. Some supplies may be purchased from the department and others must be found elsewhere.

Materials Fee - The materials fee will cover the metals used for assigned projects in this course. However, it only covers the material for one of each project. It is set at **\$25.00** for the Spring 2015 semester based on the average usage and cost of materials. The fee may be paid in the departmental office if paid with cash or check. If a credit card or debit card is used it must be paid in the cashiers' office. You will be required to obtain the account number before you pay your fee at the cashier's office. You will be required to show the receipt to the instructor prior to beginning any lab work.

Storage

The lockers in the hallway may be checked out and used for storing your equipment and supplies. These lockers must be signed out with the secretary in the IT main office. You must supply your own lock. Do not leave any of your work or equipment lying around in the lab!

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

All projects will serve as the final.

IT 3316 Advanced Machine Metalwork Tech

Spring 2025

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	