

Date approved \_\_\_\_\_

Date revised \_\_\_\_\_

**Angelina College  
Technology and Workforce Division  
MCHN 1452 INTERMEDIATE MACHINE TOOLS I  
Instructional Syllabus**

**I. COURSE DESCRIPTION:** *(as stated in the bulletin, including necessary pre-requisite courses, credit hours)*

Four hours credit. This course covers the advanced operations of latches, milling machines, and O.D. grinder. This course also uses accessories of latches and milling machines and advanced uses of precision measuring tools. Prerequisites: MCHN 1438 and MCHN 1441 or work experience. Two lecture and six laboratory hours each week.

**INTENDED AUDIENCE:**

Entry Level Freshmen.

**INSTRUCTOR**

**Name:**

**Office Location:**

**Office Hours:**

**Phone:**

**E-mail Address:** b

**II. INTENDED STUDENT OUTCOMES:**

**A. Core Competencies – (Basic Intellectual Competencies)**

**1. Reading:** Reading at the college level means the ability to analyze and interpret a variety of printed materials – books, articles, and documents. A core curriculum should offer students the opportunity to master both general methods of analyzing printed materials and specific methods for analyzing the subject matter of individual disciplines.

**2. Writing:** Competency in writing is the ability to produce clear, correct, and coherent prose adapted to purpose, occasion, and audience. Although correct grammar, spelling, and punctuation are each a sine qua non in any composition, they do not automatically ensure that the composition itself makes sense or that the writer has much of anything to say. Students need to be familiar with the writing process including how to discover a topic and how to develop and organize it, how to phrase it effectively for their audience. These abilities can be acquired only through practice and reflection.

**3. Speaking:** Competence in speaking is the ability to communicate orally in clear, coherent, and persuasive language appropriate to purpose, occasion, and audience. Developing this competency includes acquiring poise and developing control of the language through experience in making presentations to small groups, to large groups, and through the media.

**4. Listening:** Listening at the college level means the ability to analyze and interpret various forms of spoken communication.

**5. Critical Thinking:** Critical thinking embraces methods for applying both qualitative and quantitative skills analytically and creatively to subject matter in order to evaluate arguments and to construct alternative strategies. Problem solving is one of the applications of critical thinking, used to address an identified task.

**6. Computer Literacy:** Computer literacy at the college level means the ability to use computer-based technology in communicating, solving problems, and acquiring information. Core-educated students should have an understanding of the limits, problems, and possibilities associated with the use of technology, and should have the tools necessary to evaluate and learn new technologies as they become available. (*The Texas Higher Education Coordinating Board. ("Report of Subcommittee on Core Curriculum", March 1, 1989).*)

**B. Exemplary Objectives –** *(Found in the Texas Higher Education Coordinating Board Document. Titled: CORE CURRICULUM: ASSUMPTIONS AND DEFINING CHARACTERISTICS Dated: April 1998)*  
Not applicable for courses in the Technology & Workforce Division.

**C. Course Objectives –** *(common to all sections)*

1. Use shop machine tools and measuring tools.
2. Use machinery and tools in a safe manner.
3. Use precision measuring instruments to define tolerances.

**D. Course Objectives -** Not applicable for courses in the Technology & Workforce Division.

**III. ASSESSMENT MEASURES OF STUDENT LEARNING OUTCOMES:**

**A. Assessments for the Core Intellectual Competencies –**

1. Reading – Reading material will be measured by the student's demonstration of understanding and interpreting assigned reading material and written instructions.
2. Writing – Writing will be measured by the student's ability to complete writing assignments.
3. Speaking – Speaking will be measured by the student's completion of writing assignments.
4. Listening – Listening will be measured by the student's ability to respond appropriately.
5. Critical Thinking – Critical thinking will be measured by lab completions and test grades.
6. Computer Literacy – Computer literacy will be measured by the student's successful completion of computer assignments and computer aided instructions.

**B. Assessments for the Exemplary Objectives Specific to the Course –**

Not applicable for courses in the Technology & Workforce Division.

**C. Assessments for Objectives Specific to the Course –**

1. Use shop machine tools and measuring tools.
2. Use machinery and tools in a safe manner.
3. Use precision measuring instruments to define tolerances.

**D. Assessments for the Objectives of the Course as determined by the Instructor –**

Not applicable for courses in the Technology & Workforce Division.

**IV. INSTRUCTIONAL PROCEDURES:**

**A. Methodologies common to all sections**

- A. 25% of instruction will be lecture, videos and discussion.
- B. 10% of instruction will be in class planning and writing project operation plan.
- C. 5% of instruction will be student presentation of their project operation plan.
- D. 60% of instruction will be hand on in lab.

**B. Methodologies determined by the instructor**

Not applicable for courses in the Technology & Workforce Division.

**V. COURSE REQUIREMENTS AND POLICIES:**

**A. Required Textbooks, Materials and Equipment –**

Text: Technology of Machine Tools

**B. Assignments –** (*Appropriate due dates, schedules, deadlines*)

By the conclusion of this course, the student will be able to demonstrate knowledge of; (by written exams, workbook test and hands-on lab)

- A. Machine Shop Safety
- B. Finding missing measurements on prints, by using math.
- C. Precision measuring tools (scales, dial calipers, micrometers, height gauges, dial bore gages, hardness gages and precision height gages.
- D. Advanced Machine Tools, such as band saws, mills, lathes, grinders, drill presses, and hand-tools.
- E. Semi-precision and precision layout, shop terminology

The weekly lesson plans on pages 4, 5 and 6 of the syllabus outlines.

See attachment.

**C. Course Policies – (This course conforms to the policies of Angelina College as stated in the Angelina College Handbook.)**

**Academic Assistance** – If you have a disability (as cited in Section 504 of the Rehabilitation Act of 1973 or Title II of the Americans with Disabilities Act of 1990) that may affect your participation in this class, you should see Karen Bowser, Room 208 of the Student Center. At a post-secondary institution, you must self-identify as a person with a disability; Ms. Bowser will assist you with the necessary information to do so.

To report any complaints of discrimination related to disability, you should contact Dr. Patricia McKenzie, Administration Building, Room 105 or 936-633-5201.

**Attendance** – See college bulletin.

**Additional Specific Requirements for this Course –**

- A. The project operation plan shall be counted as written test and will be graded.
- B. The oral project operation plan presentation by the student will be considered as classroom participation.
- C. Students are encouraged to be in class before the starting time out of courtesy to others, but also to ensure that they will not miss any part of the lecture, announcements or be late for a test or a quiz.
- D. Attendance: Students are required to attend all class meetings. Responsibility for work missed because of absent/tardy or other reasons is placed upon the student. Excessive absences are cause for the student to be dropped from the course. (Excessive absences are defined as three or more consecutive absences or four or more cumulative absences from regularly scheduled class meetings.)
- E. Instructor conferences: all students are encouraged to take time to meet individually with the instructor with any problem that the student may have. (Office hours are posted on the office door.) When a problem arises concerning the course, meet with the instructor as soon as possible.

**VI. COURSE CONTENT:**

**A. Content/ Topics -** *(as required by the individual Instructor)*

Operation of drills, milling machines, lathes, and power saws. Introduction to precision measuring techniques.

**B. Additional Content**

- A. Each student will be required to develop a written operation plan for each project.
- B. Each student will present his/her operation plan orally in class.

**VII. EVALUATION AND GRADING:**

**A. Grading Criteria**

The following evaluation activities will be averaged to produce the course final grade.

- 1. Test/Exams
- 2. Unit Test-(workbook)
- 3. Project Grade
- 4. Class Participation
- 5. Final Test

**B. Determination of Grade**

Partial credit for problems may be awarded.

The final grade will be awarded on the basis of;

- 1. 90-100=A
- 2. 80-90=B
- 3. 70-79=C
- 4. 60-69=D
- 5. Below 60=F

**VIII. SYLLABUS MODIFICATION:**

The instructor may modify the provisions of the syllabus to meet individual class needs by informing the class in advance as to the changes being made.

- IX.** As a student enrolled in a Technology & Workforce program, you will encounter certain risks while you are in a classroom, laboratory experience, or in a clinical or practicum setting. In the event that you sustain an injury and/or require any medical testing or care, all resulting medical expenses (hospital, ambulance, or physician fees), are your financial responsibility and not the responsibility of Angelina College or the clinical/practicum site.

- IX.** As a student enrolled in a Technology & Workforce program, you will encounter certain risks while you are in a classroom, laboratory experience, or in a clinical or practicum setting. In the event that you sustain an injury and/or require any medical testing or care, all resulting medical expenses (hospital, ambulance, or physician fees), are your financial responsibility and not the responsibility of Angelina College or the clinical/practicum site.