

El Paso Community College

Syllabus

Part II

Official Course Description

SUBJECT AREA	<u>Machining Technology</u>
COURSE RUBRIC AND NUMBER	<u>MCHN 1313</u>
COURSE TITLE	<u>Basic Milling Operations</u>
COURSE CREDIT HOURS	<u>3 2 : 4</u> Credits Lec Lab

I. Catalog Description

Introduces the common types of milling machines, basic parts, nomenclature, basic machine operations and procedures, safety, machine mathematics, blueprint reading, and theory. **(2:4). Lab Fee.**

II. Course Objectives

Upon satisfactory completion of this course, the student will be able to:

- A. Select proper machine (vertical or horizontal) for the job.
- B. Perform preventive maintenance.
- C. Identify parts and functions of vertical mill.
- D. Indicate table (X and Y) axis.
- E. Utilize manual dials (X, Y, and Z) axis.
- F. Identify cutting tools.
- G. Perform setup operations.
- H. Calculate rpm's and feeds and speeds.
- I. Square work piece.
- J. Perform various milling operations (drill, tap, ream, bore, countersink, and fly cutting).
- K. Utilize digital readout (DRO).
- L. Utilize power feeds.
- M. Perform angular cuts.
- N. Utilize rotary table/index unit.
- O. Organize work area.
- P. Locate center of part with edge finder.
- Q. Locate center of part with indicators.
- R. Perform regular housekeeping.
- S. Use personal safety attire.
- T. Utilize terminology of trade.
- U. Select appropriate materials.
- V. Verify part specifications.
- W. Utilize computer measuring machine.

III. THECB Learning Outcomes (WECM)

- 1. Describe milling machine parts and functions.
- 2. Identify types of milling machines.
- 3. Describe the difference between climb and conventional milling.
- 4. Calculate speeds and feeds for milling machines.

5. Set up milling machines.
6. Operate milling machines.

IV. Evaluation

A. Pre-Assessment

Students may request pre-assessment for the purpose of challenging this course. Any exam given for this purpose will contain a written exam as well as a practical laboratory exam.

B. Challenge Exam

Students who wish to challenge the course should contact the Testing Center and Division Deans. Challenges must be accomplished before the census cut-off date. Students who previously have received a “W” or a letter grade for the course are not eligible to challenge the course. Student must score a minimum of 85% in order to successfully challenge this course.

C. Post-Assessment

1. The instructor will maintain a continuous record of each student’s progress on an institutionally approved grade sheet or computerized substitute. All instructors must keep records in such a way that information would be clear to a second party having to check grade computation in special cases. An explanatory legend should be provided on the grade sheet.
2. The final project will count at least 20% (percent) of the course grade. This part of the grade should reflect evaluation of the various milling projects. It is up to the individual instructor to decide how much he/she will weigh these measuring steps, but under no circumstances should the instructor base the entire grade solely on the completed final product.
3. Assignment, exams, and milling projects will count for 80% (percent) of the course grade.
4. The instructor is required to schedule an appropriate activity for the final exam period. The completed exams and projects should be sufficient to demonstrate mastery of course content. The following are some suggested uses of the final exam period:
 - a. Students can take a previous exam and review major sections.
 - b. Students can view an appropriate audio-visual presentation.
 - c. Students can meet with the instructor to review their course work.

D. Remediation

1. Students needing assistance with assignments should contact the instructor.
2. Make-up work and retakes of quizzes may be provided at the instructor’s discretion.

E. Grading Criteria: The following grading criteria will be utilized.

Course Activities	20%
Exam #1	10%
Exam #2	10%
Course Projects	40%
Final Project	20%

F. Grading Scale

90 – 100	=	A
80 – 89	=	B
70 – 79	=	C
60 – 69	=	D
0– 59	=	F
Incomplete	=	I
Withdrew or Withdrawn	=	W

V. Disability Statement (Americans with/Disabilities Act [ADA])

EPCC offers a variety of services to persons with documented sensory, mental, physical, or temporary disabling conditions to promote success in classes. If you have a disability and believe you may need services, you are encouraged to contact the Center for Students with Disabilities to discuss your needs with a counselor. All discussions and documentation are kept confidential. Offices located: VV Rm C-112 (831-2426); TM Rm 1400 (831-5808); RG Rm B-201 (831-4198); NWC Rm M-54 (831-8815); and MDP Rm A-125 (831-7024).

VI. 6 Drop Rule

Students who began attending Texas public institutions of higher education for the first time during the Fall 2007 semester or later are subject to a 6-Drop limit for all undergraduate classes. Developmental, ESL, Dual Credit and Early College High School classes are exempt from this rule. All students should consult with their instructor before dropping a class. Academic assistance is available. Students are encouraged to see Counseling Services if dropping because exemptions may apply. Refer to the EPCC catalog and website for additional information.