

CATALOG INFORMATION

Dept and Nbr: MACH 80B Title: MACHINE TOOL 80B
Full Title: Machine Tool Technology
Last Reviewed: 2/28/2022

Units		Course Hours per Week		Nbr of Weeks	Course Hours Total	
Maximum	5.00	Lecture Scheduled	4.00	17.5	Lecture Scheduled	70.00
Minimum	5.00	Lab Scheduled	4.00	17.5	Lab Scheduled	70.00
		Contact DHR	0		Contact DHR	0
		Contact Total	8.00		Contact Total	140.00
		Non-contact DHR	0		Non-contact DHR	0

Total Out of Class Hours: 140.00

Total Student Learning Hours: 280.00

Title 5 Category: AA Degree Applicable
Grading: Grade Only
Repeatability: 13 - 10 Units Within 2 Semesters
Also Listed As:
Formerly:

Catalog Description:
Mach 80B is a course in all aspects of CNC mill operation. Emphasis is on programming, CNC mill operation, Computer Aided Drawing (CAD), and Computer Aided Machining (CAM) applicable to entry-level CNC mill operators.

Prerequisites/Corequisites:
MACH 80A.

Recommended Preparation:

Limits on Enrollment:

Schedule of Classes Information:
Description: Machine Tool 80B is a course in all aspects of mill operation. Emphasis is on programming, CNC mill operation, Computer Aided Drawing (CAD), and Computer Aided Machining (CAM) applicable to entry-level CNC mill operators. (Grade Only)
Prerequisites/Corequisites: MACH 80A.
Recommended:
Limits on Enrollment:

Transfer Credit: CSU;
Repeatability: 10 Units Within 2 Semesters

ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:

AS Degree:	Area			Effective:	Inactive:
CSU GE:	Transfer Area			Effective:	Inactive:
IGETC:	Transfer Area			Effective:	Inactive:
CSU Transfer:	Transferable	Effective:	Spring 1995	Inactive:	
UC Transfer:		Effective:		Inactive:	

CID:

Certificate/Major Applicable:
Certificate Applicable Course

COURSE CONTENT

Outcomes and Objectives:

Students will:

1. Practice the safe use of tools and machines.
2. Determine what manufacturing operations are done on the CNC mill.
3. Calculate cutter speeds and feed speeds for various mill operations.
4. Be able to describe the proper procedures for sharpening mill cutters.
5. Diagnose basic problems faced in the operation of the CNC mill.
6. Be able to program the C.N.C. mill.
7. Select proper tooling for C.N.C. mill operations.
8. From shop drawings produce projects on the C.N.C. mill.

Topics and Scope:

1. Introduction
 - A. Shop Safety
 - B. Print Reading ö Work Drawing
 - C. Shop Orientation ö Machine Identification ö Facility Layout
2. Basic CNC Milling Operations
3. CNC Mill Accessories
4. Materials
5. Layout Mill Applications
6. C.N.C. Mill Programming and Operation
7. Other C.N.C. Programs

Assignment:

Assignments consist of: Proper set-up, process, and procedure for the C.N.C. mill. Students will be required to produce CAD drawing and produce projects on the C.N.C. mill.

Methods of Evaluation/Basis of Grade:

Writing: Assessment tools that demonstrate writing skills and/or require students to select, organize and explain ideas in writing.

None, This is a degree applicable course but assessment tools based on writing are not included because problem solving assessments and skill demonstrations are more appropriate for this course.

Writing
0 - 0%

Problem Solving: Assessment tools, other than exams, that demonstrate competence in computational or non-computational problem solving skills.

Homework problems

Problem solving
20 - 30%

Skill Demonstrations: All skill-based and physical demonstrations used for assessment purposes including skill performance exams.

Class performances, LAB PROJECTS

Skill Demonstrations
30 - 45%

Exams: All forms of formal testing, other than skill performance exams.

Multiple choice, True/false, Matching items, Completion

Exams
30 - 40%

Other: Includes any assessment tools that do not logically fit into the above categories.

None

Other Category
0 - 0%

Representative Textbooks and Materials:

Machine Tool Practices, Kibbe, Prentice Hall, 6th Ed., 1999