

Metropolitan Community College

PRMA 1400 North High

CLASS IDENTIFICATION

TITLE: Precision Machine Safety/Principles
PREFIX/SECTION: PRMA 1400
CREDIT HOURS: 4
CLASS BEGINS/ENDS: 08/18/23 - 10/07/23
MEETING M-F 1:35 – 3:05
NO CLASS DAYS: SEE OPS CALENDAR
LAST DATE TO WITHDRAW FROM CLASS WITH NO GRADE: 9/22/22
LAST DATE TO WITHDRAW WITH NO CHARGE: 09/02/22

CLASS LOCATION: NORTH HIGH MACHINE SHOP / CLASSROOM

CONTACT INFORMATION

INSTRUCTOR NAME: Jeff Banker
OFFICE LOCATION: MCC - SOC - CAM 114
OFFICE TELEPHONE:
OFFICE HOURS: Monday-Friday 1:35 PM – 3:05
PM @ NORTH HIGH
EMAIL ADDRESS: Jeffrey.Banker@op.org
ACADEMIC AREA: Center for Advanced
Manufacturing

ACADEMIC DEAN'S OFFICE TELEPHONE: Kassie Nelson (531) 622-5424

Note: Any questions or concerns regarding this course should first be directed to the instructor.

COURSE INFORMATION

COURSE DESCRIPTION:
Students learn machine safety, metrology and metallurgy along with basic machine principles related to hole making bench work and layout.

COURSE PREREQUISITES: NONE

MINIMUM TECHNICAL SKILLS: NONE

COURSE OBJECTIVES:

1. Determine correct heat treating methods using different types of material.
2. Calibrate and measure parts accurately using the correct tools.
3. Use all shop equipment safely.
4. Machine holes accurately using all shop equipment including drill press, mill and lathe.
5. Calculate correct cutting speeds, feeds, depth of cuts and RPM's for various tools.

Students learn the following:

- Shop Safety
- Semi-Precision Measurement
- Precision Measurement
- Bench layout
- Metallurgy
- Band saws vertical and horizontal
- Offhand grinding techniques
- Drilling, tapping, threading and reaming
- Drill Press operations
- Bench grinders
- Machine maintenance
- Students will also take the NIMS Measurement Materials and Safety certification

REQUIRED TEXT BOOK

TITLE: Precision Machine Technology & Precision Machine Technology Workbook

EDITION: Third Edition supplied by Blair High School

Author: Hoffman, Hopewell and Janes

Publisher: Cengage Learning

COMPUTER REQUIREMENTS:

The computer and/or mobile device you use for MCC courses must be able to run one of the Canvas-compatible web browsers listed on the supported browsers page (<https://community.canvaslms.com/t5/Canvas-Basics-Guide/What-are-the-browser-andcomputer-requirements-for-Canvas/ta-p/66>). For blended and remote delivery classes, a

web camera and microphone are strongly recommended for participation in video conferencing and may be required for some demonstrations of learning.

SOFTWARE/FILE SUBMISSION REQUIREMENTS:

Metropolitan Community College uses Microsoft products as part of its standard software and encourages students to use their free access to Microsoft Office 365 applications (<https://outlook.com/mccneb.edu>). You may save word-processed documents for file attachments in Microsoft Word .doc or .docx format. If your software does not allow either of these, then save files in Rich Text Format (.rtf). Your instructor may also provide other specific requirements for file submissions.

STUDENT EMAIL REQUIREMENTS:

Students enrolled in credit classes are required to check and use CANVAS Inbox (<https://canvas.mccneb.edu>) and MCC (<https://outlook.com/mccneb.edu>) for all official course and College correspondence.

RESPONSE TIME:

Faculty will respond within 48 hours to student emails concerning course content, learning activities, and private matters appropriate for discussion within the teacher-student relationship. Posting of feedback and grades for major assignments is addressed under Assessment of Student Work.

ASSESSMENT OF STUDENT WORK

TYPES OF ASSESSMENTS/ASSIGNMENTS.

Students will be assessed on Test scores, homework assignments, Participation, and Shop Projects.

LATE AND MAKE-UP ASSIGNMENT POLICIES:

Late assignments will have a reduction of 50% up to one week late.

INSTRUCTOR FEEDBACK TO STUDENTS:

Throughout the quarter, instructors will provide students timely feedback on assignments and performance, including a midterm report or other communication that addresses progress in the class and gives suggestions for improvement. Students in this class will receive midterm progress information through Emails.

GRADING POLICY:

Assignments 30%

Quizzes 30%

Projects 30%

Class Participation 10%

INSTRUCTOR'S EXPECTATIONS OF STUDENTS
ATTENDANCE / PARTICIPATION POLICY:

Absent three class no deduction in final grade

Absent four classes drop one letter grade

Absent five classes drop two letter grades

Absent six classes you will be given an F on final grade

LATE REGISTRATION RESPONSIBILITIES:

If you register late, keep in mind that you are responsible for attendance and missed class assignments.

ATTENDANCE / PARTICIPATION REPORTING:

To confirm each student's eligibility to remain registered for the class, the instructor will officially report attendance/participation on or before the Census Date on 9/20/2021.

STUDENT RESPONSIBILITIES:

Please communicate with your instructor, preferably through Canvas Inbox or MCC email, about any absences, attendance and participation status, and academic progress in this course. The instructor's contact information is listed at the beginning of this document.

See also the additional responsibilities and expectations under COLLEGE SYLLABUS POLICIES AND INFORMATION FOR STUDENTS below.

Student Conduct:

- Safety is our first concern. Students will adhere to all safety requirements
- Safety glasses will be worn at all times in the lab, if any equipment is being used.
- Student's conduct in the classroom and lab must be appropriate; horseplay, practical jokes, tampering with safety devices, inappropriate behavior and language will not be tolerated.
- One warning will be issued about misconduct with further incidences resulting in the instructor withdrawing the student from class.
- Cell phone interruptions will not be tolerated.

COLLEGE SYLLABUS POLICIES AND INFORMATION FOR STUDENTS

Please visit the College syllabus policies and Information for Students page (<https://myway.mccneb.edu/depts/Syllabus>) to learn about the policies and resources below. Students are responsible for understanding and following the policies.

CLASS AND INSTRUCTIONAL POLICIES

- COMMUNICATION EXPECTATIONS
- ACADEMIC HONESTY STATEMENT
- TURNITIN
- OUTCOMES ASSESSMENT OF STUDENT LEARNING
- USE OF STUDENT WORK
- RECORDING CLASS SESSIONS FOR INSTRUCTIONAL PURPOSES
- STUDENT WITHDRAWAL

LEARNING SUPPORT AND STUDENT SERVICES

- MCC STUDENT ORIENTATION
- ACADEMIC SUPPORT CENTERS
- ACCOMMODATIONS FOR STUDENTS WITH DISABILITIES AND STUDENTS WHO ARE PREGNANT
- STUDENT WELL-BEING
- NONDISCRIMINATION AND EQUAL OPPORTUNITY STATEMENT

TECHNOLOGY SUPPORT

- MCC CANVAS SUPPORT at canvas@mccneb.edu or (531)622-2834
- IT SUPPORT SERVICES
- TECHNOLOGY RESOURCES

SCHEDULE OF ASSIGNMENTS

WEEK 1	<ul style="list-style-type: none"> ● INTRODUCTION INTO MACHINING ● CAREERS IN MACHINING ● WORKPLACE SKILLS 	SECT. 1 UNIT 1 SECT. 1 UNIT 2 SECT. 1 UNIT 3
WEEK 2	<ul style="list-style-type: none"> ● INTRODUCTION INTO SAFETY ● QUALITY ASSURANCE 	SECT. 2 UNIT 1 SECT. 2 UNIT 5
WEEK 3	<ul style="list-style-type: none"> ● METAL COMPOSITION ● HEAT TREATMENT OF METALS 	SECT. 2 UNIT 6 SECT. 2 UNIT 7
WEEK 4	<ul style="list-style-type: none"> ● MAINTENANCE, LUBRICATION, AND CUTTING FLUIDS ● SEMI-PRECISION MEASUREMENT 	SECT. 2 UNIT 8 SECT. 2 UNIT 3
WEEK 5	<ul style="list-style-type: none"> ● LAYOUT 	SECT. 3 UNIT 2

WEEK 6	<ul style="list-style-type: none"> ● SAWS AND CUTOFF MACHINES ● OFF HAND GRINDING 	SECT. 3 UNIT 4 SECT. 3 UNIT 5
WEEK 7	<ul style="list-style-type: none"> ● DRILLING, THREADING, AND TAPPING 	SECT. 3 UNIT 6
WEEK 8	<ul style="list-style-type: none"> ● INTRO TO DRILL PRESS ● TOOLS, TOOL HOLDING FOR THE DRILL PRESS ● DRILL PRESS OPERATIONS ● NIMS PRACTICE TEST 	SECT. 4 UNIT 1 SECT. 4 UNIT 2 SECT. 4 UNIT 3
WEEK 9	<ul style="list-style-type: none"> ● SHOP CLEANUP ● NIMS CERTIFICATION 	

NOTICE: This syllabus sets forth a tentative schedule of class topics, learning activities, and expected learning outcomes. However, the instructor may adjust this schedule because of weather or other unplanned events. Any modifications will not substantially change the objectives or grading in this course and will conform to the policies and guidelines of Metropolitan Community College.