DMACC
DES MOINES AREA COMMUNITY COLLEGE
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http://www.dmacc.edu

CAMPUS NAME: Ankeny

COURSE TITLE: Machine Shop Measuring

COURSE NUMBER: MFG 105

SECTION NUMBER & CRN: Section 1 CRN 10038

INSTRUCTOR INFORMATION

NAME: Mark Rosenberry

EMAIL ADDRESS: merosenberry@dmacc.edu

PHONE NUMBER: 515-964-6452

FAX NUMBER: 515-964-6815

OFFICE LOCATION: Building 3E Room 103A

OFFICE HOURS/APPOINTMENTS: Posted outside my office

COURSE INFORMATION

SEMESTER/YEAR: Fall 2016

DATE SYLLABUS CREATED AND/OR REVISED: 2016

DAYS & TIME & LOCATION: BLDG 3E Room 121
Section 1 Aug. 25 - Dec.15 Mon. – Thurs. 11:10am – 12:10am
Midterm date: 10/19/16

COURSE DESCRIPTION & CREDITS: http://www.dmacc.edu/courses/crsrod.asp

PREREQUISITES: None

COURSE COMPETENCIES: https://go.dmacc.edu/competencies
During this course, the student will be expected to:
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1. Demonstrate an understanding of relative math.
    1. List value for each decimal place, inch and metric.
    2. State how each decimal place is pronounced.
    3. Covert between inch and metric dimensions.
    4. Use formulas to solve related metrology tasks.
2. Define terms associated with metrology.
3. Demonstrate the ability to interpret and use the following measuring tools.
    1. Fractional rules
    2. Decimal rules
    3. Metric rules
4. Interpret vernier scales.

1. Demonstrate appropriate techniques for the following comparison measuring tools: telescoping gages, small hole gages, spring calipers, adjustable parallels, radius gages, thickness gages, combination square, precision square, cylindrical square, indicator

5. Demonstrate the ability to use caliper type measuring tools to measure within accepted industry standards.
    1. Select reference material
    2. Use thread micrometer
    3. Use thread wires
6. Demonstrate the ability to use micrometer type measuring tools to measure within accepted industry standards.
    1. Calculate the elevation required for a given angle
    2. List sine bar angle for a given workpiece
7. Demonstrate the ability to measure feature orientation.
    1. Calculate the sine bar elevation required for a given angle.
    2. Calculate the angle for a given sine bar elevation.
    3. Demonstrate the ability to measure perpendicularity using several different methods.
    4. Use a vernier protractor
8. Demonstrate appropriate techniques to interpret and use common comparison type measuring tools.
9. Demonstrate the appropriate techniques to measure with visual measure tools such as toolmaker's microscope and an optical comparator.
10. Demonstrate the appropriate techniques to measure with gage blocks and gage pins.
    1. Describe the maintenance required to maintain gage blocks.
    2. demonstrate wringing gage blocks tothether.
    3. Select combination of gage blocks required for a given height.
11. Measure external screw threads.
    1. Select appropriate reference material.
    2. Use thread micrometer to measure within accepted industry standards.
    3. Use thread wires to measure within industry standards.
12. Identify and explain CMM operation and describe some advantages and disadvantages over more conventional measuring methods.

TEXTBOOKS & MATERIALS

REQUIRED TEXTBOOKS & ISBN: Machine Tool Practices 10th edition ISBN 0-13-291265-5 Students may use an earlier addition if they wish. Page numbers and Figure references will be different requiring extra effort to follow class discussions.

REQUIRED MATERIALS: Three ring binder and safety glasses

COURSE POLICIES

ATTENDANCE/PARTICIPATION:

A) Attendance will be taken at the start of each class and optionally during the class to determine one of two conditions.
    1) Present for class

2) Absent for class the student must attend all scheduled hours of a class session to avoid an absence.

B) Break times are scheduled and everyone must abide by the listed times. If someone must leave an area they must inform their instructor. Failure to do so may result in an absence being recorded.

C) Attendance records will be maintained by the instructor and will be made available to authorized individuals who request this information. Penalties for absenteeism will occur as follows: Five percent of the final grade for any Tool & Die class will be determined by attendance. The calculation will involve determining the number of clock hours of missed class and converting that into a percentage of the total hours of that semesters class. Credit for the five percent will be issued by the following:

4% of missed class time or less = 100% of the available attendance points (5% of final grade)
5% of missed class time or less = 90% of the available attendance points (5% of final grade)
6% of missed class time or less = 75% of the available attendance points (5% of final grade)
7% of missed class time or less = 55% of the available attendance points (5% of final grade)
8% of missed class time or less = 30% of the available attendance points (5% of final grade)
9% of missed class time or less = 10% of the available attendance points (5% of final grade)
over 9% of missed class time = 0% of the available attendance points (5% of final grade)

Exceptions: When all projects and objectives for a class are met the student, with the instructor's approval may be excused from remaining class sessions.

D) Students are provided with a maximum of two occasions to make-up test(s). On either occasion there will be a reduction of the make-up test grade by 10 percent. Any make-up test will be scheduled at the convenience of the instructor. If an unavoidable absents is known in advance, the student may take the scheduled exam prior to its regularly scheduled time, without incurring a grade penalty.
Unannounced quizzes issued during class cannot be made-up.

GRADING CRITERIA:

See Tool and Die policy handout: Safety and Organizational Rules
work sheets: Daily / as needed 5 – 20 points
Quizzes: Daily / as needed 5 – 20 points
Test:

Section C	Unit 1	100 pts
Section C	Unit 2	100 pts
Section C	Unit 3	100 pts
Section C	Unit 4a	100 pts
Section C	Unit 4b	50 pts
Section C	Unit 4r	100 pts
Section C	Unit 5	100 pts
Section C	Unit 6	100 pts
Section C	Unit 7	100 pts
Section E	Unit 1&2	100 pts
Final		100 pts

The following grading scale will be used for all MFG courses:
A = 96.00% - 100%
A- = 94.00% - 95.99%

B+ = 91.90% - 93.99%
B = 89.80% - 91.89%
B- = 87.80% - 89.79%
C+ = 85.70% - 87.79%
C = 81.80% - 85.69%
C- = 79.80% - 81.79%
D+ = 77.70% - 79.79%
D = 74.81% - 77.69%
D- = 72.80% - 74.80%

CLASSROOM CONDUCT: https://go.dmacc.edu/handbook

MISSED EXAMS: See item "D" in the attendance section

LATE ASSIGNMENTS: Late assignments must be turned in within 5 class days of the due date, or of a student's return to class.

EXTRA CREDIT: Determined by instructor

STUDY EXPECTATIONS: Some study time will be provided during class. Students are expected to spend additional study time as required to maintain the goals he or she has set.

WEATHER POLICY: Individual circumstances such as health, childcare, rural roads, distance from the College, etc. can vary greatly among students and staff. It is always DMACC's goal to provide safe learning conditions, as well as provide the opportunity for students to attend classes when the vast majority is able to safely attend. The final decision to come to College can only be made by the individual student based on their specific extenuating circumstances that may make it unsafe for them to travel. During adverse weather, DMACC faculty is considerate of students who are unable to attend classes due to unique extenuating circumstances. Notification of Campus/College closures will be sent out through the DMACC RAVE Alert System, posted to the DMACC webpage at www.dmacc.edu, and where possible sent to local media.
Click & delete row if addendum being used with weather information.

CLASS CANCELLATION PROCEDURE: Tool and Die classes are seldom cancelled unless the college is closed. If it becomes necessary to cancel a class students will be notified via their DMACC e-mail.

ACADEMIC DISHONESTY/PLAGIARISM: Cheating by copying or any electronic device will not be tolerated. See Tool & Die Syllabus Addendum and Program Policies

It is important for you to be familiar with and follow DMACC's Academic Misconduct policy. Students are encouraged to review DMACC's Academic Misconduct Policy on-line at https://go.dmacc.edu/handbook/polprocedures/pages/academicmisconduct.aspx or in the DMACC Student Handbook.

COURSE SPECIFIC (LAB) SAFETY PROCEDURES: See Tool & Die Syllabus Addendum and Program Policies

DMACC INFORMATION

INSTRUCTOR HOME PAGES: http://www.dmacc.edu/instructors

ADD/DROP DATES: https://go.dmacc.edu/registration/pages/add_drop.aspx

REFUND POLICY: https://go.dmacc.edu/registration/Pages/refund.aspx

SUPPORT SERVICES

SERVICES FOR STUDENTS WITH DISABILITIES:
https://go.dmacc.edu/student_services/disabilities

Any student with a documented disability who requires reasonable accommodation should contact the Disability Services Coordinator at **515-964-6850** or the counseling & advising office on any campus to apply for services.

COURSE SYLLABUS

DISCLAIMER: "This syllabus is representative of materials that will be covered in this class; it is not a contract between the student and the institution. It is subject to change without notice. Any potential exceptions to stated policies and requirements will be addressed on an individual basis, and only for reasons that meet specific requirements. If you have any problems related to this class, please feel free to discuss them with me."

NONDISCRIMINATION POLICY: Des Moines Area Community College shall not engage in or allow discrimination covered by law. This includes harassment based on race, color, national origin, creed, religion, sex (including pregnancy and marital status), sexual orientation, gender identity, age, disability and genetic information. Veteran status in educational programs, activities, employment practices, or admission procedures is also included to the extent covered by law. Individuals who believe they have been discriminated against may file a complaint through the College Discrimination Complaint Procedure (ES4645). Complaint forms may be obtained from the Campus Provost's office, the Academic Dean's office, the Judicial Officer, or the EEO/AA Officer, Human Resources. For Title IX questions and concerns contact 515-964-6850.

Students who wish additional information or assistance may refer to Student Services procedure ES 4645 located at https://go.dmacc.edu/student_services/int. Click Policies & Procedures.

Employees and applicants who wish additional information or assistance may contact the **EEO/AA Officer,** Human Resources, Bldg. 1 on the Ankeny Campus, or refer to HR Procedures 3000, 3005, 3010, 3015, and 3020 at http://www.dmacc.edu/hr/hrpp.asp

Accommodations: The Program Development/Academic Support Services Director is the official Student Accommodation Officer/Section 504/ADA Coordinator for DMACC. The ADA Coordinator's office is located in Bldg. 6-10E on the Ankeny Campus and may be contacted by voice (515-964-6857). The ADA Coordinator is responsible for ensuring that the college complies with federal regulations that guarantee qualified students with disabilities equal access to all programs and services. Any student, faculty, or staff member may contact the ADA Coordinator's office for clarification of federal regulations, appeal of a grievance, or resolution of a disability-related problem.

SYLLABUS ADDENDUM

To access additional information related to DMACC policies and procedures that impact the classroom (i.e. use of technology, weather-related cancellations, classroom conduct, etc.), the DMACC student handbook, registration information (including add/drop dates and refund dates), student service information (including counseling and advising), the DMACC academic calendar, and campus-specific resources (i.e. Academic Achievement Center, library, computer, labs, etc.), go to https://go.dmacc.edu/handbook and click “Syllabus Addendum” in the left navigation.

If you do not have access to a computer and need a printed version of any of the information described above, contact your instructor.

COURSE SCHEDULE		
Week or Date	**Assignment**	**Due Date**
Approximate		
Week 1	Section C unit 4a	TBA
Week 2	Section C unit 4a	TBA
Week 3	Section C unit 1	TBA
Week 4	Section C unit 2	TBA
Week 5	Section C unit 3	TBA
Week 6	Section C unit 4r	TBA
Week 7	Section C unit 4b	TBA
Week 8	Section C unit 5	TBA
Week 9	Section C unit 5	TBA
Week 10	Section C unit 5	TBA
Week 11	Section C unit 6	TBA
Week 12	Section C unit 6	TBA
Week 13	Section C unit 7	TBA
Week 14	Section C unit 7	TBA
Week 15	Section E unit 1&2	TBA
Week 16	Final test	TBA

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