Moberly Area Community College  
Common Syllabus

MTH 130 Technical Mathematics

Current Term

Instructor: 
Office number: 
Office hours: 
Contact information: 
Classroom number: 
Class days and time: 

Catalog Description: MTH130: Technical Mathematics  
(3-0-3)
Technical Mathematics includes topics in right triangle trigonometry; quadratic equations; trig. identities, functions and graphing; vectors; and analytic geometry necessary for students in technical programs.  
(FA, SP)

Prerequisite: 
Eligible placement score, grade of “C” or higher in MTH011 or MTH015 or successful completion of the appropriate module in the Computer Assisted Pre-Algebra sequence.

Text: 
Title: Technical Mathematics w/ CD (Columbia) 
Author: Ewen 
Edition: 2nd 
Publisher: Pearson 
ISBN: 0-13-048810-7

Other Materials Required: Calculator – general purpose.

Purpose of Course: 
This course is designed to present mathematics in applied situations appropriate to technical fields. It involves process and problem solving skills arising from the use of machine power, electrical power, current prices and practices in the work force.

Course Objectives: 
Upon successful completion of this course, students will be able to: 
Show competencies in general math functions with fractions, decimal fractions, percentages and solve word problems. 
Apply basic math functions to personal finances and lines and graphs as well as calculate and read units of measurements, perimeter, area, and volume. Understand a number line, addition, subtraction, multiplication and division of signed numbers. 
Show competencies in the fundamentals of algebra and solve problems using signed numbers and algebra. 
Show competencies in advanced applied math including plane trigonometry, scientific notation, and engineering notation.
Course Content:
Fundamentals of General Mathematics: whole numbers, common fractions, decimal fractions, percentage, graphs: Bar and line.
Measurement: precision, accuracy, tolerance, measurement units, steel rules and vernier calipers, micrometers.
Fundamentals of Algebra: introduction to algebra, signed numbers, basic algebra operations, simple equations, complex equations, ratio and proportion, rectangular coordinate system, graphs of linear equations, systems of equations.
Fundamentals of Plane Geometry: introduction to plane geometry, angular measure.
Commuted Measurements: areas of common polygons, areas of circles, sectors, segments, ellipses, volumes, surface areas, weights, prisms, cylinders, pyramids, cones, spheres, composite figures.

Assessment of Student Learning:
Grading: Grades will be based on the following scale:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Description</th>
<th>Percentage</th>
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</thead>
<tbody>
<tr>
<td>A</td>
<td>90 - 100%</td>
<td>Homework   35%</td>
</tr>
<tr>
<td>B</td>
<td>80 - 89%</td>
<td>Unit Tests 35%</td>
</tr>
<tr>
<td>C</td>
<td>70 - 79%</td>
<td>Midterm Exam 15%</td>
</tr>
<tr>
<td>D</td>
<td>60 - 69%</td>
<td>Final Exam 15%</td>
</tr>
<tr>
<td>F</td>
<td>59% and below</td>
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Description of Major Assignments:
Course work will be based on lecture and discussion. Work assignments will be made with each unit and discussed in class. Students will be expected to discuss completed homework during class sessions. Early course work will be completed without the use of calculators. Periodic spot quizzes will be given.

Statement to Connect Course with General Education Outcomes or Technical Program Outcome Statement:

II. Demonstrate an understanding of scientific principles and computational skills and how to use them to solve problems and make informed decisions.

Instructor Policies:

Attendance Policy: Any student who misses two consecutive weeks of class during a regular sixteen-week semester or the equivalent proportion of class time during a shorter session will be dropped from the class by the instructor unless acceptable justification is supplied. An instructor must complete and file the appropriate forms to drop the student within one week following the student’s violation of the attendance policy. Additionally, any student who misses more than one-fourth of the entire number of in-seat class meetings in a regular 16-week semester or the equivalent proportion of class time during a shorter session, may be dropped from that class by the instructor if, in the opinion of the instructor, the student does not have reasonable opportunity to succeed in the class. A student’s attendance rate will be calculated based upon the first day of the semester (not the student’s date of enrollment in the course.)

Student attendance must be defined in a different manner for online, hybrid, and virtual courses. Student attendance in these courses is defined as active participation in the course. Online, hybrid, and virtual courses will, at a minimum, have weekly mechanisms for student participation, such as any or all of the following methods:
a. Completion of quizzes or exams  
b. Submission of assignments  
c. Participation in threaded discussions  
d. Communication with the instructor

A student who does not participate in an online, hybrid, or virtual course for two consecutive weeks will be dropped by the instructor unless acceptable justification is supplied. An instructor must complete and file the appropriate forms to drop the student within one week following the student’s violation of the attendance policy. As with ground courses, a student’s attendance rate in online courses will also be calculated based upon the first day of the semester. If a student does not demonstrate active participation in the online course within the first two weeks (or the equivalent proportion of class time during a short session), the student will be dropped as “never attended.” Simply logging into an online class does not constitute active participation.

Students should be aware that their dropping a course and their last date of attendance in the course may impact their financial aid. (Policy Handbook I.090 and M.095)

Tardiness: per instructor’s policy

Make-up and late work: per instructor’s policy

Extra-credit work: per instructor’s policy

Student Email: MACC Mail is the official student email system at MACC. Official college communication is sent via this email system. Students are responsible for checking their MACC Mail account regularly. Students may also receive notifications and reminders from MACC through the online learning platform. However, students should remain aware that the online learning platform messaging system and MACC Mail (student email) system are two separate systems.

Schedule of Student Assignment/Activities: per instructor’s policy

ADA Statement: Students who have disabilities that qualify under the Americans with Disabilities Act may register for assistance through the Office of Access and ADA Services. Students are invited to contact the Access/ADA Office to confidentially discuss disability information, academic accommodations, appropriate documentation and procedures. The Office of Access and ADA Services is located in the Main Library and the phone number is (660) 263-4110 ext. 240.

Title IX Statement: MACC maintains a strict policy prohibiting sexual misconduct in any form, including sexual harassment, sexual discrimination, and sexual violence. All MACC employees, including faculty members, are considered mandated reporters of sexual misconduct and as such are expected to contact the Title IX Coordinator when they become aware, in conversation or in writing, of an incident of sexual misconduct. For more information on this policy or to learn about support resources, please see http://www.macc.edu/sexual-misconduct-policy or contact Dr. Jackie Fischer, MACC’s Title IX Coordinator, at 660-263-4110, ext. 11236 or jackief@macc.edu.