

## **Moberly Area Community College Syllabus**

### **MTH 015 Fundamentals of Technical Mathematics Current Term**

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

**Catalog Description: MTH 015: Fundamentals of Technical Mathematics (3-0-3)**

This course is designed to provide an introduction and/or review of mathematics concepts and skills for students entering technical programs. The emphasis will be on direct technical applications rather than theoretical mathematics. Topics include integers, decimals, fractions, measurement (US and metric), angles area, perimeter, volume, linear equations, polynomials, and graphs. Degree and certificate seeking students required to complete developmental coursework must enroll in the required developmental course(s) prior to or immediately following their first six credit hours of enrollment at MACC.

**Prerequisite:**

ASSET or ACT required.

**Text:**

Carman, Robert A., Saunders, Hal M. Mathematics for the Trades, Books a la Carte Plus  
MyMathLab -- Access Card Package, 10/E

ISBN-10: 013393439X

ISBN-13: 9780133934397

**Other Materials Required:**

**Purpose of Course:**

This course is designed to present basic mathematics skills in applied problems to prepare students for college level technical math courses and applied technical fields.

**Course Objectives:**

On completion of this course, the student should 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.

**Connection with Career and Technical Education (CTE) Outcome Statement:**

In compliance with MACC's CTE outcomes, the student who successfully completes this course will be able to:

- Students will demonstrate an understanding of discipline-related math and scientific principles.
- Students will think critically while systematically assessing problems, identifying issues and implementing solutions.

**ASSESSMENT OF STUDENT LEARNING****Grade Scale:**

A = 90-100%

B = 80-89%

C = 70-79%

D = 60-69%

F = 59% and below

**Assessment:**

(State the way learning outcomes will be measured. They may be measured through, but not limited to, the following: objective and essay questions, papers, quizzes, oral presentations, class participation, small group work, and/or projects.)

**Description of Assignment(s)/Project(s):****INSTRUCTOR POLICIES****Tardiness:**

per instructor's policy

**Make-up and late work:**

per instructor's policy

**Extra-credit work:**

per instructor's policy

**Schedule of Student Assignments/Activities:**

(Instructors will identify a Student Assignment/Activities schedule. Instructors have the prerogative to construct the schedule by class periods, weeks, or an overview of topics to be covered.)

**Other:**

List any other instructor policies

**COLLEGE POLICIES:****Attendance:**

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. 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. **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.**

#### **Academic Dishonesty:**

MACC board policy is as follows: "Academic dishonesty by students damages institutional credibility and unfairly jeopardizes honest students; therefore, it will not be tolerated in any form." Forms of academic dishonesty include but are not limited to the following: violations of copyright law, plagiarism, fabrication, cheating, collusion, and other academic misconduct. Incidents of dishonesty regarding assignments, examinations, classroom/laboratory activities, and/or the submission of misleading or false information to the College will be treated seriously. The procedure for handling academic dishonesty is outlined in the Student Handbook (*Policy Handbook M.010*). In cases of alleged academic dishonesty, the burden of proof is on the student, not on the instructor.

#### **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.

#### **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 Office to confidentially discuss disability information, academic accommodations, appropriate documentation and procedures. For more information, please call either the Moberly office at (660) 263-4100 Ext. 11240 or the Columbia office at (573) 234-1067 Ext. 12120, or visit our web page at <http://www.macc.edu/index.php/services/access-office>.

#### **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](mailto:jackief@macc.edu).