

**Milwaukee Area Technical College**  
**Liberal Arts and Sciences Division - Mathematics Department**  
**Course Syllabus**  
**College Math**  
**Math 107 –xxx (section number)**

**I. INSTRUCTOR**

Name: Dr. Akram Dakwar

Office: A227 (South Campus)

Office Phone: (414)571-4524

E-mail: dakwara@matc.edu

Office Hours: xxx

**Prerequisites:**

One of the following must be met:

1. Accuplacer Scores of Arithmetic 64-120
2. Accuplacer Score of Elementary Algebra 41-52
3. ACT Math score of 17 or higher
4. Completion of MATGEN 109 with a grade of C or better

**Credits and Class Hours:** MATH 107-xxx (section number) meets xxx (Days), xxx (Time) in Room xxx

Credits: 3

Class Hours: 4

**Text:** Roads to Mathematics, by Dakwar, ISBN: 1111724628, Cengage Learning Inc. Publisher

**Supplies:**

1. A scientific calculator is required. Recommended calculators are Texas Instruments' TI30XIIS or TI30XIIB, Sharp's EL531V, and Casio's FX250HC or FX300MS. No calculator with a symbolic (algebraic) manipulator such as the TI-89, TI-92, or the Casio FX2 is allowed. No calculators built into cell phones or palm pilots are allowed. The use of a scientific calculator is permitted on all the course assignments and tests.
2. A notebook and pencils or pens.

**Content (Course Description):** This course is designed to review and develop fundamental concepts of mathematics pertinent to the areas of: 1) Arithmetic and Algebra; 2) Geometry and Trigonometry; and 3) Probability and Statistics. Special emphasis is placed on problem solving, critical thinking and logical reasoning, making connections, and utilizing calculators. Topics include performing arithmetic operations and simplifying algebraic expressions, solving linear equations and inequalities in one variable, solving proportions and incorporating percent applications, manipulating formulas, solving and graphing systems of linear equations and inequalities in two variables, finding areas and volumes of geometric figures, applying similar and congruent triangles, converting measurements within and between U.S. and metric systems, applying Pythagorean Theorem, solving right and oblique triangles, calculating probabilities, organizing data and interpreting charts, calculating central and spread measures, and summarizing and analyzing data.

**Math Help:** Students are encouraged to contact the instructor before class, after class, or during office/prep hours, if they have questions or problems related to the class. It is suggested that students contact the instructor immediately in order to avoid falling behind in class. Please do not wait until the end of the semester to discuss issues that should have been resolved much earlier. In addition to your instructor, extra help is available from the following centers:

1. Milwaukee Campus: Math Center, Room C271, Phone 414-297-6702; Tutoring Services, Room C201, Phone 414-297-6791
2. North Campus: Academic Support Center and Tutoring Services, Room A108, Phone 262-238-2220
3. South Campus: Academic Support Center and Tutoring Services, Room A208, Phone 414-571-4647
4. West Campus: Academic Support Center and Tutoring Services, Room 249, Phone 414-456-5334

**Course Schedule:** A Course Schedule is included with this syllabus (Page 7, 8, 9). The Course Schedule includes the class periods (each period is 2 hrs), instructional topics, assignments, and tests for the entire semester.

**Homework:** You are expected to study and work through lessons in the text, as shown on the Course Schedule. Whatever is listed for a particular day is due the next day. Generally only the odd numbered problems are expected to be completed as part of the assignment. Read your text thoroughly and pay special attention to the examples given. Read with a pencil in your hand and work out the problems yourself. Write out the homework problems neatly and with steps shown. Round decimal answers as instructed and always check your answers in the back of the text. Generally, for math courses, you should expect to put in two extra hours of work for each hour (or credit) of class.

**Progress Grades:** At approximately the sixth week of class, students are assessed as to their progress. All students will be given letter grades using INFOnline via a link from the college's website.

**Final Grades:** For this class, there are six tests, six to ten unannounced pop quizzes (some quizzes will be open notes, some open book, some both, some neither), and daily homework. Your final grade will be weighted: 15% for homework, 15% for in class quizzes, and 70% for an average of your six tests. All tests must be taken or the student will receive a grade of U for the course. **DO THE OUTSIDE WORK. IT WILL MAKE A DIFFERENCE.** Course grades are assigned on a percentage basis according to the following scale.

A	93-100%	B-	80-82%	D+	67-69%
A-	90-92%	C+	77-79%	D	63-66%
B+	87-89%	C	73-76%	D-	60-62%
B	83-86%	C-	70-72%	U	under 60%

**Tests:** The dates of your tests are on the course schedule. Be sure to be in class on the day of a test. On all tests, if work is required for a problem, credit will not be given unless the work is shown. Tests must be completed within a specified time period. If more space is needed for a problem, ask your instructor for scratch paper and return it with your test. No breaks are allowed. Show all work to receive full credit. Write exact answers unless the problem has rounding directions. Write your answers in correct form as instructed. You may not ask for help with problem solving or use of the calculator. Turn off all sound-producing communication devices (eg, beepers, cell phones, iPods, walkmans, etc). You may not use your book or your notes.

**Review of tests:** After reviewing the graded tests, they must be returned to the instructor in order to be inventoried and filed. Students may not keep tests.

**Late Tests:** It is imperative that you contact your instructor if you are unable to attend class the day of a test. Depending upon the circumstances, a student may be permitted to make up one late test if arrangements are made with the instructor. Multiple late tests will be recorded as zero and used to determine the final grade.

**Instructional Environment and Academic Expectations Related to Student Conduct:** Any interference in the instructional process, or academic dishonesty on assignments or tests will not be tolerated, and will be treated with appropriate disciplinary action. According to school policy no food or drink can be permitted within the classroom. Any sound-producing communication devices must be turned off during class.

**Attendance:** Instructors are required to keep attendance records. Students will be marked present for the day if they attend for the entire period. If you are absent, it is your responsibility to communicate with your instructor about what you missed. If MATC is closed because of a snowstorm or other emergency, continue working on the assignments as shown in the Course Schedule so you will not get behind in your work. Official announcements regarding cancellation of classes will be made on television Channel 10. Emergency closing information will also be provided in a pre-recorded telephone message at 414-297-6561.

**Withdrawals:** If you have documented health or unusual personal problems affecting your attendance and your instructor agrees that you can make up the work, you may be allowed to continue and may be advised to use MATC support services (e.g., child care, financial aid, counseling, academic support, etc.). However, if your instructor determines you cannot complete the work or you will hinder instruction of other students, you will be withdrawn. You do have the right to appeal a withdrawal after first discussing it with your instructor. If your appeal is denied, a final withdrawal appeal may be made with the academic dean's office. If you are appealing, you may stay in the class until the drop is official, unless your presence may cause a safety hazard to yourself or others.

**Instructor-Initiated Withdrawals:** You may be dropped for absenteeism when the following occurs.

1. Your consecutive absences exceed the number of class meetings per week (three in a row for you), or on the third consecutive absence in the case of classes that meet once each week.
2. Your attendance is sporadic (e.g., you miss five class periods for a class meeting three periods a week).
3. You have not attended class during the first two weeks of the term.
4. You hinder instruction of other students in any way.

After the last allowable drop date, it is not appropriate and you will not be dropped for any of the following:

1. It is the end of the semester and you do not like your grade.
2. You did not communicate with your instructor about extended absences that resulted in a failing grade.
3. Your grade is negatively impacting your GPA.
4. You do not feel like taking the final or last exam and don't want a bad or failing grade.

**Student-Initiated Withdrawals:** Withdrawal before the last two weeks of class: Complete the Course Change Form (available in the Registration and Records Office or the Academic Dean's Office).

**Incompletes:** An incomplete will be considered only under extreme circumstances, and at the discretion of the instructor. The student must have only one assessment missing, and have exemplary attendance, and a minimum course grade of C. The student must request the incomplete and sign the incomplete contract before the end of the current semester. Within the first two weeks of the following semester, you must make arrangements with your instructor to complete the course. Failure to complete the requirements within the following semester results in a grade of U.

**ADA Statement:** If you have a disability that impacts your academic performance and wish to request an accommodation, contact Student Accommodation Services (SAS), Room C219, Phone 414-297-6750. They may require documentation regarding your disability to enable them to comply with your request. Admission of a disability is voluntary and will be handled in a confidential manner. MATC does not discriminate against individuals with disabilities and fully complies with the Americans with Disabilities Act.

**Advanced Placement by Challenge Exam:** Students desiring advanced placement in this course should contact Dr. Kimberly Farley, Associate Dean, Room M214, Phone 414-297-8187. If the request for advanced placement is approved, a Challenge Exam will be administered. Payment of one-half the course fee is required and must be paid before the test can be taken. A student must receive a score of 80% or more to receive credit for the course. The applicable number of course credits of math will be placed on the student's school transcript; however, no letter grade is applied. A Challenge Exam can be taken only once during a semester, and, if the student is enrolled in the course, the student must attend class until the Challenge Exam has been taken.

**Credit Transfer:** If you are concurrently enrolled at MATC and a four-year institution, or if you wish to continue your education at a four-year institution after leaving MATC, it is highly recommended that you contact the Admissions department of the college or university to which you plan to transfer for more detailed credit transfer information. Be aware that, in some cases, approval is needed by the four-year institution before you register for a course at MATC and that it is the option of the four-year institution to not accept credits transferred from MATC if prior approval is not obtained.

**Student Concerns:** MATC has established a formal system to assist students in resolving academic problems and course-related issues. In order for a complaint to be valid, the following steps must be followed in order.

1. Meet with the instructor to discuss any questions related to the course (e.g., requirements or assignments) or if you are experiencing academic problems. If the issue is unresolved after meeting with the instructor,

2. Meet with the associate dean of the department. If the issue is unresolved after meeting with the associate dean,
3. Meet with the dean of the department. If the issue is unresolved after meeting with the dean,
4. Go to the Office of Student Life for assistance.

**Milwaukee Campus:**

Dr. Evonne Carter, Dean, Room M214,  
Phone 414-297-7396;  
Dr. Kim Farley, Associate Dean, Room  
M214, Phone 414-297-8187;  
Mr. Thomas Geil, Instructional Chair, Room  
C471, Phone 414-297-7427

**North Campus:**

Dr. Courtney Marlaire, Associate Dean,  
Room 200, Phone 262-238-2386;  
Ms. Betsy Stern, Instructional Chair, Room  
A211, Phone 262-238-2255

**South Campus:**

Mr. Carl Morency, Associate Dean, Room  
A200D, Phone 414-546-4673;  
Mr. George Wawrzyniak, Instructional  
Chair, Room A205E, Phone 414-571-4535

**West Campus:**

Dr. Wilma Bonaparte, Associate Dean,  
Room 104, Phone 414-456-5323;  
Ms. Nancy Amidzich, Instructional Chair,  
Room 259, Phone 414-456-5509

**Changes in Course Syllabus and Course Schedule:** The Course Syllabus and Course Schedule are subject to change in the event of extenuating circumstances or at the discretion of your instructor.

**Core Abilities:** The Core Abilities are skills that allow students to continually adapt and learn. They have been called “employability skills,” soft skills, and professional attributes. You may not be tested for all of the Core Abilities directly, but you will demonstrate or apply them to complete lessons or to improve skills. The Core Abilities and indicators are listed below, and the ones you will be focusing on in this course are checked.

**Core Ability**

**Applies to Course**

Communicate Effectively

- a. Use effective oral communication skills .....X
- b. Use effective written communication skills.....X
- c. Apply standard rules of language structure, including grammar and spelling     x
- d. Listen actively to others .....X
- e. Derive meaning from text .....X
- f. Communicate in a bias-free manner.....X
- g. Support viewpoints with evidence.....X

Collaborate with Others

- a. Demonstrate respect in relating to people.....X
- b. Cooperate and resolve conflicts effectively
- c. Participate in shared problem solving.....X

Respect Diversity

- a. Acknowledge personal prejudices and biases
- b. Appreciate perspectives of people outside own background/culture..x
- c. Work collaboratively with persons from other backgrounds/cultures x
- d. Demonstrate sensitivity to global issues

Demonstrate Responsibility

- a. Attend classes as scheduled .....X
- b. Turn in quality work .....X
- c. Adhere to safety rules and regulations
- d. Act professionally to fulfill job duties within chosen field
- e. Demonstrate flexibility and self-directedness in learning.....X
- g. Practice environmental sensitivity in profession

Think Critically

- a. Differentiate between fact and fiction
- b. Consider other viewpoints and perspectives.....X
- c. Present logical arguments .....X
- d. Evaluate sources of information to solve problems .....X

Utilize Technology

- a. Use technology to communicate .....X
- b. Solve problems using technology .....X
- c. Use appropriate technology to manage information .....X
- d. Recognize the impacts of technology .....X

Apply Math and Science

- a. Apply math concepts and principles appropriately .....X
- b. Apply scientific concepts and principles appropriately .....X
- c. Interpret meaning from quantitative data.....X
- d. Interpret meaning from scientific data.....X

## Tentative Course Schedule

<b>*Period #</b>	<b>Instructional Topic</b>	<b>Homework (Odd Numbers)</b>
1	Orientation, Ch 1 – 1.1 1.1 Performing Operations on Rational Numbers	Exercises 1.1
2	Ch 1 – 1.2, 1.3 1.2 Simplifying Expressions Using the Order of Operations 1.3 Solving Applied Problems	Exercises 1.2, 1.3
3	Ch 2 – 2.1 2.1 Solving Equations in One Variable	Exercises 2.1
4	Ch 2 – 2.2, 2.3, 2.4 2.2 Manipulating Formulas and Solving Literal Equations 2.3 Solving Applied Problems 2.4 Solving Linear Inequalities in One Variable	Exercises 2.2, 2.3, 2.4
5	Ch 2 – 2.5 2.5 Solving a System of Equations by Algebraic Methods	Exercises 2.5, Practice Test
6	Help session Test # 1 (Ch 1 & 2)	
7	Ch 3 – 3.1, 3.2 3.1 Solving Ratios and Proportions 3.2 Solving for Missing Quantities in Percent Problems	Exercises 3.1, 3.2
8	Ch 3 – 3.3 4.3 Solving Financial Problems Involving Percent	Exercises 3.3
9	Ch 4 – 4.1 4.1 Graphing Linear Equations in Two Variables by Making a Table of Values	Exercises 4.1
10	Ch 4 – 4.2, 4.3 4.2 Graphing Linear Equations in Two Variables Using the Slope-Intercept Method 4.3 Graphing Linear Equations in Two Variables Using Intercepts	Exercises 4.2, 4.3

11	Ch 4 – 4.4, 4.5 4.4 Solving a System of Two Linear Equations by Graphing 4.5 Graphing Linear Inequalities in Two Variables	Exercises 4.4, 4.5, Practice Test
12	<b>Help session</b> <b>Test # 2 (Ch 3 &amp; 4)</b>	
13	Ch 5 – 5.1, 5.2 5.1 Perimeter of Plane Figures Including Composites 5.2 Area of Plane Figures Including Composites	Exercises 5.1, 5.2
14	Ch 5 – 5.3 5.3 Surface Area and Volume of Solid Figures Including Composites	Exercises 5.3
15	Ch 5 – 5.4 5.4 Similar and Congruent Triangles	Exercises 5.4
16	Ch 6 – 6.1, 6.2, 6.3 6.1 Conversion of Measurements within the Metric System 6.2 Conversion of Measurements within the U.S Customary System 6.3 Conversions between U.S. and Metric System	Exercises 6.1, 6.2, 6.3
17	Ch 6 – 6.4 6.4 Conversion of Area and Volume Measurements	Exercises 6.4, Practice Test
18	<b>Help session</b> <b>Test # 3 (Ch 5 &amp; 6)</b>	
19	Ch 7 – 7.1, 7.2 (through how to use the sine ratio to solve...) 7.1 Right Triangles and Pythagorean Theorem 7.2 Right Triangle Trigonometry	Exercises 7.1, 7.2(only the problems that relate to the sine ratio)
20	Ch 7 – 7.2 ( starting with the cosine ratio) 7.2 Right Triangle Trigonometry	Exercises 7.2(the problems that relate to the cosine and tangent ratios)



21	Ch 7 – 7.3 7.3 Oblique Triangle Trigonometry	Exercises 7.3, Practice Test
22	Help session Test # 4 (Ch 7)	
23	Ch 8 – 8.1, 8.2 ( through histograms) 8.1 Organizing Data Using Grouped and Ungrouped Frequency Distributions 8.2 Constructing, Reading, and Interpreting Graphs of Data	Exercises 8.1, 8.2 ( only the problems that relate to histograms)
24	Ch 8 – 8.2 (starting with frequency polygons) 8.3 Constructing, Reading, and Interpreting Graphs of Data	Exercises 8.2 (the problems that relate to all other graphs than histograms)
25	Ch 8 – 8.3 8.3 Finding Measures of Central Tendency for Data Sets	Exercises 8.3
26	Ch 8 – 8.4 8.4 Finding Measures of Dispersion for Data Sets	Exercises 8.4
27	Ch 8 – 8.5 8.5 Finding Measures of Relative Position for Data Sets	Exercises 8.5, Practice Test
28	Help session Test # 5 (Ch 8)	
29	Ch 9 – 9.1, 9.2, 9.3 9.1 Defining Probability of an Event in an Experiment 9.2 Recognizing Invalid Probabilities 9.3 Calculating Probabilities Using a Fair Experiment Model	Exercises 9.1, 9.2, 9.3
30	Ch 9 – 9.4, 9.5 9.4 Applying the Counting Principle 9.5 Comparing Theoretical and Empirical Probabilities	Exercises 9.4, 9.5
31	Ch 9 – 9.6 9.6 Distinguishing between Probabilities and Odds of Events	Exercises 9.6, Practice Test
32	Help session Test # 6 (Ch 9)	

**\* 1 Period = 2 hours**