

# Northwestern Michigan College

## MTH 23 - BEGINNING ALGEBRA

Instructor Debbie Pharo - Section 1019 : T/R 8:05-10:05 - Section 1763 : T/R 8:05-10:05 - Fall 2003

### WHY Am I Taking This Course?

Probably because you placed into this course when you took the COMPASS test.

**This course is a study of basic algebra.**

We will cover Order of Operations, Problem Solving, Factoring, Rational Expressions, Properties of Exponents, Solve Equations Symbolically, Function Notation, the Coordinate System, and learn how to use the calculator.

*Practice  
Makes  
Permanent!*

### WHAT Do I Need For This Course?

#### REQUIRED MATERIALS

#### Text:

*Elementary Algebra, 2 ed.*

by Tussy and Gustafson



**Graphing  
Calculator  
TI - 83**

**Notebook and Pencils**



### HOW Do I Earn My Grade?

#### GRADING SCALE:

Percent .....	Grade
94-100 .....	4.0
87-93 .....	3.5
81-86 .....	3.0
75-80 .....	2.5
70-74 .....	2.0
65-69 .....	1.5
61-64 .....	1.0
below 61 .....	0.0

#### GRADE FACTORS

Homework .....	20%
Labs .....	10%
Tests .....	45%
Final Exam .....	25%

**HOMEWORK IS NOT ACCEPTED LATE AND MAY NOT BE MADE UP! THEREFORE, THE TWO LOWEST HOMEWORK GRADES WILL BE DROPPED.**

### OTHER VITAL, INDISPENSABLE INFORMATION...

**Office Location:** LB 33 C

**Office Phone:** 995-1261

**Fax:** 995-2120

**E-Mail Address:** [dpharo@nmc.edu](mailto:dpharo@nmc.edu)

**Web Page:** [www.nmc.edu/~dpharo](http://www.nmc.edu/~dpharo)

**Office Hours:** Monday 10:15-11:00 & 2:00-3:00

Tuesday 10:15-11:00

Wednesday 10:15-11:00 & 2:00-3:00

Thursday 10:15-11:00

Friday 10:15-11:00

**Course Transferability:** The transfer of NMC courses is determined by the transfer institutions in cooperation with NMC. To check the transferability of this course, visit the web site <http://www.nmc.edu/nmcexp/transfer.shtml>

**WARNING:** If you miss more than three consecutive classes without contacting me, I will no longer consider you part of this class. This **DOES NOT** mean you have withdrawn. You **CANNOT** withdraw simply by not attending. You will get a 0.0 on your transcript unless you formally withdraw at the Registrar's Office.

# KEYS TO SUCCESS

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**ATTEND EVERY CLASS** - You **cannot** pass this course if you do not learn the material. You **cannot** learn the material if you are not here!

**BE ON TIME** - Each class begins with questions and answers about the previous day's material. If you are late **you will miss it!**

**BE PREPARED FOR CLASS** - Do all assignments so you will know exactly where your weaknesses are. Keep an organized notebook for your class notes and homework.

**EXCUSES WON'T WORK** - "**But I wasn't here!**" is not a valid excuse in this class. If you miss class, you are responsible for learning what was covered. Your best bet is to not miss class.

**USE THE BUDDY SYSTEM** - Before you leave class TODAY, make a friend. Get that person's phone number so you can talk to someone when you get stuck on a problem. In addition, you will have someone you can get notes from should you ever miss a class.

My study buddy is: \_\_\_\_\_ Phone: \_\_\_\_\_

**USE MY OFFICE HOURS** - I am available to work one-on-one with you many different times during the week and by appointment. Refer to your syllabus for specific hours.

**GET A TUTOR** - If you start having trouble with the material in this class, sign up for a tutor immediately. You can sign up for a tutor in the Learning Center which is located in the Library.

**GET A CALCULATOR** - You **will** need a calculator. A TI - 83 graphing calculator is required for this course.

**ASK QUESTIONS** - This is probably the best advice you'll get. Do not be shy - I love to answer questions! Chances are two or three other students have the same questions, so speak up as soon as you get confused!

**KEEP A POSITIVE ATTITUDE** - Your attitude is every bit as important as your aptitude in this class - make the most of your experience in Beginning Algebra. It's the *experience of a lifetime!*

# ???WHAT IS MY GRADE???

**Labs - 10% of your grade**

**Remember: If you miss a LAB, you must enter 0 as your score.**

9/2	9/4	9/9	9/11	9/16	9/18	9/23	9/25	9/30	10/2	10/7
					<b>Test 1</b>					
10/9	10/14	10/16	10/21	10/23	10/28	10/30	11/4	11/6	11/11	11/13
<b>Test 2</b>			<b>No Class</b>			<b>Test 3</b>				
11/18	11/20	11/25	11/27	12/2	12/4	12/9	12/11	12/16	12/18	
	<b>Test 4</b>		<b>No Class</b>				<b>Test 5</b>		<b>Final Exam</b>	

**Points Earned**

Quiz Average \_\_\_\_\_  $\times 1 =$  \_\_\_\_\_

**Homework - 20% of your grade**

**Ten Pointers**

TP1	TP2	TP3	TP4	TP5	TP6	TP7	TP8	TP9	TP10	TP11	TP12	TP13	TP14	TP15

Quiz Average \_\_\_\_\_  $\times 2 =$  \_\_\_\_\_

**Tests - 45% of your grade**

<b>Test 1</b>

<b>Test 2</b>

<b>Test 3</b>

<b>Test 4</b>

<b>Test 5</b>

Test Average \_\_\_\_\_  $\times .45 =$  \_\_\_\_\_

**Total Points Earned =** \_\_\_\_\_  
Sum of above 3 Numbers

**Class Average =**  $\frac{\text{Total Points Earned}}{.75} =$  \_\_\_\_\_

# General Information

## Assessment and makeup policy:

- **Labs:** During most class sessions we will take time out to do a lab. A lab will consist of a learning activity that you do in a group setting. Labs will be graded on participation and attitude.
- **Ten-Pointers:** You will have a ten-pointer every week. A ten-pointer is a 10 problem problem set. It will be handed out on Monday and due back the following Monday. Ten-Pointers will make up 20% of your final grade. Late Ten-Pointers will not be accepted. Your two lowest ten-pointer grades will be dropped.
- **Tests:** There will be five tests throughout the semester, every third week. Each test will have a take-home component, which may be worked on in groups, and an in-class component, which will be done individually. The in-class portion of any test may be retaken within two weeks of the original test date, a new test will be given. **Take-home tests will not be accepted late.** You may bring a 3" x 5" note card to each test.
- **Final:** The final exam will be comprehensive and will be a two hour in class, individual test. It will make up 25% of your grade. The final is scheduled for the last day of class during regular class hours. Everybody takes the final. If you think you want an opportunity to retake your final exam, the first attempt must be done by Wednesday of finals week after attending a review session. Thursday of finals week will be the last day I administer final exams. Check with me for final exam times.

## Class Schedule:

Date	Chapter	Test
September 2 - 11	Chapter 1	
September 16 - 30	Chapter 2	September 18
October 2 - 16	Chapter 3	October 9
October 23 - November 6	Chapter 4	October 30
November 6	Chapter 5	
November 11 - 18	Chapter 6	November 20
November 25 - December 9	Chapter 7	December 11
December 16	Review Day	
December 18		Final Exam

## General Education Outcomes

MTH 23 meets level 1 of the critical thinking general education outcomes which means that students will

- identify issues or problems and articulate a process for resolving them.

# ???WHAT IS MY GRADE???

**Labs - 10% of your grade**

**Remember: If you miss a LAB, you must enter 0 as your score.**

9/3	9/8	9/10	9/15	9/17	9/22	9/24	9/29	10/1	10/6	10/8
				<b>Test 1</b>						<b>Test 2</b>
10/13	10/15	10/20	10/22	10/27	10/29	11/3	11/5	11/10	11/12	11/17
					<b>Test 3</b>					
11/19	11/24	11/26	12/1	12/3	12/8	12/10	12/15	12/17	12/18	
<b>Test 4</b>						<b>Test 5</b>		<b>Final Exam</b>		

**Points Earned**

Quiz Average \_\_\_\_\_  $\times 1 =$  \_\_\_\_\_

**Homework - 20% of your grade**

Ten Pointers

TP1	TP2	TP3	TP4	TP5	TP6	TP7	TP8	TP9	TP10	TP11	TP12	TP13	TP14	TP15

Quiz Average \_\_\_\_\_  $\times 2 =$  \_\_\_\_\_

**Tests - 45% of your grade**

<b>Test 1</b>

<b>Test 2</b>

<b>Test 3</b>

<b>Test 4</b>

<b>Test 5</b>

Test Average \_\_\_\_\_  $\times .45 =$  \_\_\_\_\_

**Total Points Earned =** \_\_\_\_\_  
Sum of above 3 Numbers

**Class Average =**  $\frac{\text{Total Points Earned}}{.75} =$  \_\_\_\_\_

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## Class Schedule:

Date	Chapter	Test
September 3 - 15	Chapter 1	
September 22 - Oct. 1	Chapter 2	September 17
October 6 - 20	Chapter 3	October 8
October 22 - November 5	Chapter 4	October 29
November 5	Chapter 5	
November 10 - 17	Chapter 6	November 19
November 24 - December 8	Chapter 7	December 10
December 15	Review Day	
December 17		Final Exam

## General Education Outcomes

MTH 23 meets level 1 of the critical thinking general education outcomes which means that students will

- identify issues or problems and articulate a process for resolving them.

## Course Objectives

- I. Students will develop an understanding of the arithmetic and problem solving of algebra.
  - A. Order of Operations
    1. Arithmetic problems involving whole numbers, integers, and rational numbers.
    2. Add, subtract and multiply polynomials.
    3. Square binomials.
    4. Order of operations with polynomials and multiple operations.
  - B. Problem Solving
    1. Work with a variety of word problems.
    2. Determine if a number is prime.
    3. Recognize and compute triangular numbers.
    4. Convert from one unit to another.
    5. Use Pythagorean Theorem to solve word problems.
  - C. Factoring
    1. Factor out common monomial factors.
    2. Factor quadratic expressions of the form  $x^2 + bx + c$ .
    3. Factor quadratic expressions of the form  $ax^2 + bx + c$ .
  - D. Rational Expressions
    1. Identify excluded values
    2. Reduce rational expressions.
    3. Build equivalent rational expressions with desired denominators.
    4. Add and subtract rational expressions.
    5. Multiply and divide rational expressions.
  - E. Properties of Exponents
    1. Simplify expressions with whole number exponents.
    2. Simplify expressions with integer exponents.
  - F. Solve Equations Symbolically
    1. Solve linear equations.
    2. Solve rational equations.
    3. Solve quadratic equations by factoring.
    4. Solve absolute value equations.
  
- II. Students will develop an understanding of the function concept using symbolic, graphical, and numerical representations.
  - A. Functions Notation
    1. Symbolic representation.
    2. Table representation.
    3. Graphical representation.
  - B. Coordinate System
    1. Identify quadrants and plot points.
    2. Slopes of lines.
    3. x-intercepts and y-intercepts
    4. Equations of linear functions and their graphs.
    5. Distance between points.
    6. Quadratic functions and their graphs.