MA 104 – College Algebra with Applications in the Sciences and Technologies
Fall 2013 Course Syllabus

Days: M,T,W,Th

Class ID: MA 104 Section 02: call # 80487 Time 2:00-2:50pm

Room/Testing Room: WS 3602 Credits: 4

Instructor: JoAnn Buhl
Office: NSF 1125 e-mail: jbuhl@nmu.edu

Office Hours: 12-2, M W Th. Other times are available by appointment. It is usually a good idea to drop me an e-mail or set up the appointment before or after class, just to confirm that I will be available.

Prerequisites: MA 100 or satisfactory score on the math placement exam.

Course Access: All course material and course instructions can be accessed through the EduCat website at NMU. https://educat.nmu.edu/

Text: Algebra and Trigonometry, 9th Edition, by Ron Larson. We will also be using the online homework package through the company WebAssign. www.webassign.net

Course Description: Select portions of Chapters 1-9. This includes a review of basic algebra, solving equations and inequalities, functions and graphing, linear, quadratic, polynomial, and rational functions, exponential and logarithmic functions. Right triangle trigonometry will be briefly covered, along with the Laws of Sines and Cosines. The semester will end with solving systems of equations.

Attendance: You are expected to attend class each day and are responsible for the material covered on that day. Mathematics is like a sport. In order to improve, you must practice!

Homework: Will be assigned on a daily basis. The best way to learn mathematics is by doing it yourself, and that requires steady, consistent effort. For each hour of lecture or video, you should expect an equal amount of time spent on the homework problems. Your hard work will pay off on the tests! Homework is online. HOWEVER, I expect you to work out the problems with paper and pencil in a notebook. The notebooks will be
collected before each test, and a certain number of points on the test will be allotted for the notebook work. The paper notebooks also help if for some reason the computer is giving you problems on a particular assignment. In a pinch, you can turn in your notebook to prove you did the work!

**Homework Notebook:** For homework ONLY! Do NOT put notes in this notebook. This notebook will be turned in before each test. Take notes in a different notebook.

**Tests and the Final:** There will be four tests. The Final will be considered the fourth test, and will cover material only since the last test.

**Final Date:** MA 104 Section 02 Wed, Dec 11, 2:00 – 3:50 pm WS 3602

**Calculator:** This course will use a graphing calculator (most students purchase a TI-84 plus/silver). The Instructor will be using a Texas Instruments graphing calculator, but any good graphing calculator with trigonometric functions will work (Casio also makes a nice one). **You are EXPECTED to use the calculator on all homework and tests.**

**Computers:** Obviously, you will need a computer to access the on-line e-book, videos, and homework. Tests may be online as well, if I can figure out the lockdown browser feature! Otherwise, tests will be in a paper format. I find that computers can be a distraction in class however, and will NOT BE ALLOWED DURING CLASS TIME unless specifically requested. Same goes for cell phones!

**Grades:** Your grade will be based on the percentage you achieve of the following scores:

<table>
<thead>
<tr>
<th>Component</th>
<th>Points</th>
<th>Grading Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test 1</td>
<td>100</td>
<td>90% and up A’s</td>
</tr>
<tr>
<td>Test 2</td>
<td>100</td>
<td>80% - 89% B’s</td>
</tr>
<tr>
<td>Test 3</td>
<td>100</td>
<td>70% - 79% C’s</td>
</tr>
<tr>
<td>Final</td>
<td>100</td>
<td>60% - 69% D’s</td>
</tr>
<tr>
<td>Homework</td>
<td>100</td>
<td>Below 60 % F</td>
</tr>
<tr>
<td>TOTAL POINTS:</td>
<td>500</td>
<td></td>
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Tests may only be made up with a documented, validated excuse.
**Extra Help:** Be sure to take advantage of the following FREE Tutoring Centers!

- **Math Tutor Lab.** West Science 3810. M – TH 9 - 4 and F 9 – 3
- **All Campus Tutoring.** Learning Resource Center 111H. S – W 2 – 10:00 p.m.

[www.calcchat.com/](http://www.calcchat.com/) is an online source connected with our book that works through all the ODD problems in our textbook (the homework consists mainly of EVEN problems, but usually problems occur in pairs and you may get some valuable insight viewing the solution to a similar problem). Also, a new website [www.LarsonPrecalculus.com](http://www.LarsonPrecalculus.com) has videos and worked out problems.

**Foundation of Natural Sciences/Mathematics Requirement:** This course satisfies the Foundation of Natural Sciences/Mathematics requirement. Students who complete this course should be able to demonstrate a basic understanding of mathematical logic; use mathematics to solve scientific or mathematical problems in college classes; express relationships in the symbolic language of mathematics; and appreciate the role of mathematics in analyzing natural phenomena.

**ADA Statement:** If you have need for disability-related accommodations or services, please inform the Coordinator of Disability Services in the Disability Service Office in the Dean of Students Office at 2001 C.B. Hedgcock Building (227-1700). Reasonable and effective accommodations and services will be provided to students if requests are made in a timely manner, with appropriate documentation, in accordance with federal, state, and university guidelines.
Student Learning Outcomes

Upon successful completion of this course the student will be able to:

Understand and apply the rules of linear, quadratic, polynomial, exponential, and logarithmic relations to solve equations.

Understand and apply the concepts and properties of a function to model real-world situations, and use both algebraic and graphical methods to solve scenarios involving these functions.

Apply trigonometry to solve scenarios involving triangle relationships.

Solve problems involving systems of equations.

Student achievement of these learning outcomes will be measured through:

Performance on homework and exams.