MA 103 – Finite Mathematics
Fall 2015 Course Syllabus

Days: M, W, Th, F  Credits: 4

Class ID: MA 103  Section 01: CRN 80433  Time 11:00am – 11:50 am  West Science 2905
Section 05: CRN 80745  Time 9:00am – 9:50 am  New Science 1209

Instructor: JoAnn Buhl
Office: Jamrich 2232  e-mail: jbuhl@nmu.edu

Office Hours: 10-11 am, M, W, Th, F. 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 (Passed with C- or better) 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/ We will also be using an online homework program that goes with the book, which can be accessed at pearsonmylabandmastering.com

Text: Finite Mathematics with Applications in the Management, Natural, and Social Sciences, 11th Edition, by Lial, Hungerford, Holcomb and Mullins. Be sure that you are also purchasing the online homework packet as well.

Course Description: This course is designed primarily for students in business, economics, management, and the social sciences and life sciences. MA 103 builds on the algebraic skills of MA 100 while emphasizing applications, modeling, and decision-making from business, social and natural sciences, medicine, and other areas. It is a prerequisite for MA 171 and can be used as a Liberal Studies elective under Division III Natural Sciences/Mathematics.

Course Content: This course is broken down into four distinct areas:

- algebraic equations and functions,
- formulas and the mathematics of finance,
- systems of equations and linear programming,
- probability and statistics

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 show up and practice!
**Homework:** Will be assigned on a daily basis and graded online. Usually, an assignment is due at midnight the following day, so that you can have one class period after it is assigned to ask questions. The homework problems are a guide for you to increase your skill in the material. You are done with the homework when you know the material. The homework problems simply give you practice to see if you have learned the material (and also gives different views of the same topic). There will be time at the beginning of each class period to ask any questions you may have.

**Please do not bring computers to class!**
- If you have a computer issue, please see me during my office hours and I will attempt to help you get it straightened out.
- If you have a specific homework question, please write it down/print it up and bring it to class.

The best way to learn mathematics is by doing it yourself, and that requires steady, consistent effort. **For each hour of class time, you should expect an equal amount of time spent on the homework problems.** Your hard work will pay off on the tests!

**Tests and the Final:** There will be four tests, one for each category of mathematics that we cover. The Final will be considered the fourth test. Tests will still be old-fashioned paper, in-class tests for this semester.

**Final Dates:**
- **MA 103 Section 05** (9 am class) Thursday, December 10, 8:00-9:50 am NS 1209
- **MA 103 Section 01** (11 am class) Monday, December 7, 10:00-11:50am WS 2905

**Calculator:** This course will use a graphing calculator. I will be using a TI-84 plus graphing calculator for my examples in class, so students may want to purchase a TI-84 plus/silver graphing calculator: However, the Casio FX-9750 GII – WE graphing calculator is a good one too, and does everything the TI one does for about $50 less. Just be aware that if you get the Casio calculator, you may have to figure things out by yourself (but Google or I can usually help!) The TI-89 graphing calculator is overkill unless you are planning to go on into upper level calculus classes, but it works too (again, you will have to figure it out by yourself!). There are some really cool calculator apps out for your cell phones (wabbit emu ??), but when you take professional exams cell phones are not allowed yet, **so NO cell phone calculators on tests.** Which basically means you still need to purchase one. Think of it as an investment for the future. **You are EXPECTED to use the calculator on all homework and tests.**

**Computers:** I find that computers can be a distraction in class, and will NOT BE ALLOWED DURING CLASS TIME unless specifically requested. Taking notes has been proven to help you remember the material – something to do with hand-to-brain nerve connections - So bring a notebook and take notes!!

**Course Access and correspondence:** You will want to check your computers regularly OUTSIDE OF CLASS 😊, since course instructions can be accessed through the NMU EduCat website: [https://educat.nmu.edu/](https://educat.nmu.edu/). Also, any e-mail correspondence for the course will be via your NMU e-mail, so be sure to check it regularly.
Grades: Your grade will be based on the percentage you achieve of the following scores:

<table>
<thead>
<tr>
<th>Test</th>
<th>Points</th>
<th>Grading Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test 1</td>
<td>100 pts</td>
<td>90% and up</td>
</tr>
<tr>
<td>Test 2</td>
<td>100 pts</td>
<td>80% - 89%</td>
</tr>
<tr>
<td>Test 3</td>
<td>100 pts</td>
<td>70% - 79%</td>
</tr>
<tr>
<td>Test 4 (Final)</td>
<td>100 pts</td>
<td>60% - 69%</td>
</tr>
<tr>
<td>Homework</td>
<td>200 pts</td>
<td>Below 60 %</td>
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TOTAL POINTS: 600 pts

Tests may only be made up with a documented, validated excuse. If you know AHEAD of time that you have a conflict, let me know and I will be happy to make alternate arrangements.

Extra Help: Be sure to take advantage of the following FREE Tutoring Centers!

- All Campus Tutoring. Learning Resource Center 111H. S–W 2 – 10:00 p.m.

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 a need for disability-related accommodations or services, please inform the Coordinator of Disability Services 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 basic rules of algebra to solve algebraic equations.
- Understand and apply problem-solving methods to analyze a problem and obtain an answer.
- 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. In particular, the student will understand how to use linear, polynomial, exponential, and logarithmic functions.
- Understand the financial mathematics behind interest, amortization, annuities, and sinking funds.
- Solve systems of equations using matrices.
- Understand the mathematics used to work with matrices.
- Model and solve linear programming applications.
- Understand basic probability and statistics concepts.

Student achievement of these learning outcomes will be measured through:

Performance on homework and exams.