MA 150 – Mathematics for the Elementary School Teacher I
Winter 2014 Course Syllabus

Days: M,T,W,Th
Class ID: MA 150  Section 01: call # 10410  Time: 1:00pm - 1:50 pm
MA 150  Section 02: call # 10411  Time: 11:00am – 11:50 pm
Classroom: WS 3806
Instructor: JoAnn Buhl  e-mail: jbuhl@nmu.edu
Office: NSF 1125
Office Hours: 12-1pm, M T W Th. Other times are available by appointment.

Prerequisites: A “C” or better in MA 100 or satisfactory score on the math placement exam.

Course Access and correspondence: Much of the course material and course instructions can be accessed through the NMU EduCat website:
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.


Calculator: This course will occasionally require the use of a scientific graphing calculator. A TI-84 or Casio FX-9750 are both good choices.

Computers: We will occasionally use our NMU computers in class. However, computers will NOT BE ALLOWED DURING CLASS TIME unless specifically requested. Same goes for cell phones!

Attendance: You are expected to attend class each day and are responsible for the material covered on that day.

Homework: Will be assigned and collected 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 instruction, you should expect an equal amount of time spent on the homework problems. Your hard work will pay off on the tests! Homework includes assigned problems from the book, in-class work, and any assigned projects or presentations.
Tests and Final Exam: There will be three tests and a comprehensive final.

Final Dates: 11 am class Final is Tuesday, April 29 from 10am-12pm.
1 pm class Final is Monday, April 28 from 12pm-2pm

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>100pts</td>
<td>90-92 A- 93-100 A</td>
</tr>
<tr>
<td>Test 2</td>
<td>100pts</td>
<td>80-82 B- 83-86 B 87-89 B+</td>
</tr>
<tr>
<td>Test 3</td>
<td>100pts</td>
<td>70-72 C- 73-76 C 77-79 C+</td>
</tr>
<tr>
<td>Final</td>
<td>200pts</td>
<td>60-62 D- 63-66 D 67-69 D+</td>
</tr>
<tr>
<td>Homework</td>
<td>120pts</td>
<td>59-Below F</td>
</tr>
<tr>
<td>TOTAL POINTS:</td>
<td>620 pts</td>
<td></td>
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</tbody>
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A “C” or better is needed to go on to MA151.

Tests/homework may only be made up with a documented, validated excuse – examples are a doctor’s note or a university validated excuse (athletic note, note from the Dean of Students, etc.). Otherwise, the absence is unexcused and a zero is assigned for the grade.

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

Math Tutor Lab. West Science 3810.
M – TH 9am – 4pm and F 9am – 3pm

All Campus Tutoring. Learning Resource Center 111H.
S – W 2pm – 10pm

Your classmates! Form a study group. You will have many future classes together...
Course Description for MA 150 Mathematics for the Elementary Teacher I:

This course is designed to examine elementary school mathematics from an advanced standpoint. The emphasis is on the development of the system of real numbers and the language, models, concepts, and operations associated with it. Quantitative thinking skills are developed through applications and problem solving situations. In this course, the students will:

A. compare the characteristics of different numeration systems from a historical perspective;
B. Examine the structure and properties of whole numbers, integers, rational numbers, and real numbers;
C. Develop concrete and conceptual models for each of the operations and their algorithms;
D. Focus on problem solving and a variety of strategies for problem solving;
E. Develop skills for applying number theory to elementary school mathematics;
F. Use mental computation and estimation in appropriate situations;
G. Use technology as a tool in problem solving;
H. Extend the process of mathematical proof through logical intuitive reasoning.

Student Learning Outcomes

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

- Compare the characteristics of different numeration systems;
- Describe the structure and properties of whole numbers, integers, rational numbers, and real numbers;
- Show fluency in concrete and conceptual models for each of the operations and their algorithms;
- Use different problem-solving strategies to solve problems;
- Apply number theory skills to elementary school mathematics;
- Use mental computation and estimation in appropriate mathematical situations;
- Apply the process of mathematical proof through logical, intuitive reasoning.

Student achievement of these learning outcomes will be measured through:

- Performance on homework, exams, in-class work, and assigned projects.
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.

NMU’s Non-Discrimination Statement: Northern Michigan University does not unlawfully discriminate on the basis of race, color, religion, sex, national origin, age, height, weight, marital status, familial status, handicap/disability, sexual orientation, or veteran status in employment or the provision of services, and provides, upon request, reasonable accommodation including auxiliary aids and services necessary to afford individuals with disabilities an equal opportunity to participate in all programs and activities.

Anyone having civil rights inquiries may contact the Equal Opportunity Office, 502 Cohodas Hall, telephone number 906-227-2420.