Mathematics For Elementary Teachers II (MATH 113)
Winter Quarter, 2004

Time/Place: MWF 11:00-11:50 a.m. SMH 302

Instructor: Jonathan Duncan (duncjo@wwc.edu)
Office: Kretchmar Hall 330, phone: 527-2097
Office Hours: 10:00 T, 11:00 R, 1:00 MTWRF, or by appointment

Text: Mathematics for Elementary Teachers via Problem Solving,
Student Resource Handbook and Student Activity Manual,

Webpage: http://math.wwc.edu/courses/113/

This course covers topics in mathematics, including number theory, geometry, numeration, number systems,
graphs, algebra, statistics, measurements, and computer programming. We will cover selected sections from
chapters 6-10 in your texts. The deadline for withdrawing from the course is Tuesday, 24 February
and the final will be given on Wednesday, 17 March.

Topics

1. Fraction Models and Operations:
   Region models, linear models, set models, performing fraction operations, modeling fraction operations.
2. Real Numbers: Rational and Irrational:
   Ratios and proportions, decimal representations, percents, irrational numbers.
3. Patterns and Functions:
   Variables, numerical patterns, iteration, functions, equations.
4. Geometry:
   Thinking Mathematically and geometrically, lines, angles, polygons, congruence, similarity, proofs.
5. Measurement:
   Area, perimeter, surface area, volume, transformations, tessellation.

Objectives

Upon completion of this course, students will have

1. developed an adult-level understanding of elementary mathematics.
2. successfully engaged in mathematical thinking, reasoning, and problem solving.
3. developed the ability to present elementary mathematics using different approaches and techniques.

The following requirements encourage and measure the successful completion of these objectives.

Attendance (O2)

This course places great emphasis on in-class group work. It is therefore impossible to substitute outside
class reading for attendance. Because of this, there will be no excused absences. You are allowed 2
absences without penalty. Each additional absence will lower your final grade by 1.5%.

Punctuality and participation are also important. Therefore, three tardys (defined as not being in the
class room at the official start of class) or non-participation warnings (the definition of which is left to the
instructor) make up one absence.
Evaluations (O2)
A sizable portion of your class time will be spent in small groups. To encourage productive group work, a small portion of your grade will be tied to evaluations. Group members will evaluate each other based on attitude, willingness to contribute, and other desirable characteristics. The instructor will evaluate you based on attitude, time on task, etc.

Homework (O1,O2,O3)
Mathematics is not a spectator sport. Assignments will be given during the course of each week. All assigned problems and activities for the previous week are to be turned in by 5:00 p.m. on Monday. If your first attempt at an assignment scores less than 80%, you will not receive credit until you redo the assignment. Assignments may only be redone once, and only if the first score was less than 80%. Late assignments will be treated as the second attempt after a zero on the first attempt.

Please observe the following guidelines when preparing your homework. Papers which do not meet these criteria may not be accepted.

1. Use letter (8.5 × 11) sized paper with clean edges (not torn out of a notebook).
2. Typed homework is preferable, but legible handwritten work will be accepted.
3. Multi-page assignments must be stapled or paper-clipped together.
4. Fold the assignment lengthwise like a book and write your name, the course number, and assignment number on the front cover.
5. Assignments must be well organized, coherent, and use proper syntax and grammar.

Exams (O1,O2)
There will be three exams during the course of the quarter, including the two-hour comprehensive final. Each exam will consist of two parts: a group exam which will be given as a take-home and is worth 10% of the total score, and an individual portion taken in class and worth the remaining 90% of the total score.

The first two exam dates are subject to in-class change, and will be announced at least one week in advance. You may request alternative exam dates in advance for appropriate and verifiable reasons. The final exam may only be taken out of schedule after consultation with the Associate Academic Dean.

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<thead>
<tr>
<th>Exam</th>
<th>Chapters</th>
<th>Date</th>
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<tbody>
<tr>
<td>Exam I</td>
<td>Chapters 6 and 7</td>
<td>30 January</td>
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<tr>
<td>Exam II</td>
<td>Chapters 8 and 9</td>
<td>27 February</td>
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<tr>
<td>Final</td>
<td>Chapters 5-10, emphasis on 10</td>
<td>Wed, 17 March 10:00 a.m.</td>
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Grades
Your final letter grade will be based on your quarter average as shown below. Your quarter average is made up of five scores: your homework average, peer evaluations, and three exam scores. Weights for each of these are given below. Appropriate (to your instructor) modifications of the final letter grades may be made in individual cases for progress, unusual circumstances, etc.

<table>
<thead>
<tr>
<th>Score Weights</th>
<th>Letter Grades (lowest percent)</th>
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<tbody>
<tr>
<td>Final</td>
<td>29%</td>
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<tr>
<td>Exams I,II</td>
<td>2×23%</td>
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<tr>
<td>Homework</td>
<td>20%</td>
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<td>Evaluations</td>
<td>5%</td>
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Disabilities
Students with a physical and/or learning disability who require accommodations should contact the instructor or Disability Support Services at 527-2366. This syllabus is available in alternative formats upon request.