Fundamentals of Mathematics I (MATH 121)
Fall Quarter, 2003

Time/Place: MWRF 10:00-10:50 a.m. RGH 220
Instructor: Jonathan Duncan (duncjo@wwc.edu)
Office: Kretchmar Hall 330, phone: 527-2097
Office Hours: 10:00 T, 11:00 R, 1:00 MWF, or by appointment

Text: College Algebra with Trigonometry, 7th Edition,
Webpage: http://math.wwc.edu/courses/121a/

This course examines college algebra including integers; rational, real, and complex numbers; equations and inequalities; polynomials; algebraic, exponential, and logarithmic functions; and graphs. The course will cover chapters 1 through 5 in your text, in order, omitting section 4.5. The deadline for withdrawing from the course is Tuesday, 18 November and the final will be given on Wednesday, 17 December.

Topics

1. Basic Algebraic Operations:
   Sets, real numbers, polynomials, factoring, rational expressions, integers, rational exponents, radicals.
2. Equations and Inequalities:
   Linear equations, systems, applications, linear inequalities, and absolute value, complex numbers, quadratic equations, polynomial and rational inequalities.
3. Graphs and Functions:
   Basics, lines and circles, functions and their graphs, combinations of functions, inverse functions.
4. Polynomial and Rational Functions:
   Graphics, finding zeros, asymptotes.
5. Exponential and Logarithmic Functions:
   Exponential functions, base e, logarithmic functions, common and natural logarithms, equations.

Objectives

Upon completion of this course, students will have

1. developed demonstrable understanding of the topics outlined above.
2. successfully engaged in mathematical thinking, reasoning, and problem solving.
3. become proficient in expressing clear and accurate solutions to mathematical problems in written form.

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

Quizzes (O1,O2)

Short 10 point quizzes based on previous homework will be given promptly at the beginning of class on Wednesdays and Fridays, excluding those days which fall directly before, on, or after a schedule exam. Make-up and early quizzes will not be given for any reason. Your lowest quiz score will be dropped at the end of the quarter. In the event that you miss more than one quiz due to appropriate and verifiable reasons, additional quiz scores may, at the discretion of the instructor, be dropped.
Homework (O2,O3)

**Mathematics is not a spectator sport.** Daily 10 point assignments will be give, each due at the beginning of the next class period. These assignments should be considered the minimal amount of homework required to pass the course. Assignments which are more than one class period late will not be accepted for any reason. Your lowest two homework scores will be dropped at the end of the quarter. If you miss more than two assignments due to **appropriate and verifiable** reasons, additional homework scores may, at the discretion of your instructor, be dropped.

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. Multi-page assignments must be stapled or paper-clipped together.
3. Fold the assignment lengthwise like a book and write your name, the course number, and assignment number(s) on the front cover.
4. Use a pencil, write legibly, and organize your problems and solutions in a logical manner.
5. Show all essential steps in solving the problem, include figures, and notes when appropriate. A reader must be able to easily verify that you not only have the correct answer, but have also expressed a correct solution to the problem.

Exams (O1,O2)

There will be four exams during the course of the quarter, including the two-hour comprehensive final. The first three 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 and only for **appropriate and verifiable** reasons. The final exam may only be taken out of schedule after consultation with the Associate Academic Dean.

<table>
<thead>
<tr>
<th>Exam</th>
<th>Chapters</th>
<th>Date</th>
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<tbody>
<tr>
<td>Exam I</td>
<td>Chapters 1 and 2</td>
<td>17 October</td>
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<tr>
<td>Exam II</td>
<td>Chapters 2 and 3</td>
<td>5 November</td>
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<tr>
<td>Exam III</td>
<td>Chapters 3 and 4</td>
<td>21 November</td>
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<tr>
<td>Final</td>
<td>Chapters 1-5, emphasis on 5</td>
<td>Wed, 17 Dec 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 six scores: your homework average, quiz average, and four 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>A+ 98%  B+ 87%  C+ 76%  D+ 65%</td>
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<tr>
<td>Exams I-III</td>
<td>A 91%  B 80%  C 69%  D 58%  F 0%</td>
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<tr>
<td>Homework</td>
<td>A- 89%  B- 78%  C- 67%  D- 56%</td>
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<tr>
<td>Quizzes</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.