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

Time/Place: MTWF 1:00-1:50 p.m. KRH 347
Instructor: Jonathan Duncan (duncjo@wwc.edu)
Office: Kretchmar Hall 330, phone: 527-2097
Office Hours: 10:00 MWTF, 4:00 MTT, or by appointment

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

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 February** and the final will be given on **Monday, 17 March**.

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 which are based on previous homework and assigned readings will be given promptly at the beginning of class on Tuesdays and Fridays, excluding days which fall directly before, on, or after a schedule exam date. No make-up quizzes will be given, and no quizzes will be given early. Your lowest quiz score will be dropped at the end of the quarter. In the event that you miss more than one quizzes due to illness or for other appropriate and verifiable reasons, additional quiz scores may, at the discretion of the instructor, be dropped.
Homework (O2, O3)

Daily 10 point assignments will be given, each due at the beginning of the next class period. Homework which is more than one class period overdue will be discounted at a rate of 2 points per day late. Please see your instructor about homework which is late due to illness or other appropriate and verifiable reasons. Your lowest two homework scores will be dropped at the end of the quarter.

Please observe the following guidelines when preparing your homework. You may be asked to redo assignments which do not meet these criteria. In such cases, normal late homework discounts will apply.

1. Use letter (8.5 \times 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 the 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. You must attend the final exam at the scheduled time. The first three exams will be taken at the normal class meeting time, and will be announced at least one week in advance. Make-ups will only be given for written, verifiable excuses, with notification given to your instructor in advance.

<table>
<thead>
<tr>
<th>Exam</th>
<th>Chapters</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exam I</td>
<td>1 and 2</td>
<td>24 January</td>
</tr>
<tr>
<td>Exam II</td>
<td>2 and 3</td>
<td>12 February</td>
</tr>
<tr>
<td>Exam III</td>
<td>3 and 4</td>
<td>5 March</td>
</tr>
<tr>
<td>Final</td>
<td>1-5, emphasis on 5</td>
<td>Mon, 17 Mar 12:00 p.m.</td>
</tr>
</tbody>
</table>

Grades

Your final letter grade will be assigned as shown below based on your quarter average. Your quarter average is made up of six scores: your homework average, quiz average, and four exam scores. Weights for each of these are shown 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>
</tr>
</thead>
<tbody>
<tr>
<td>Final 25%</td>
<td>A+ 98%  B+ 88%  C+ 76%  D+ 63%</td>
</tr>
<tr>
<td>Exams I-III, 3×17%</td>
<td>A 92%  B 82%  C 67%  D 57%  F 0%</td>
</tr>
<tr>
<td>Homework 12%</td>
<td>A- 90%  B- 80%  C- 65%  D- 55%</td>
</tr>
</tbody>
</table>

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 print formats upon request.