

**MATH 160  
PRE-CALCULUS  
WINTER 2014**

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General Description and Objectives

*Upon successful completion of the course, you should be able to:*

1. *Demonstrate the ability to perform fundamental operations on algebraic expressions including polynomials, rational expressions, and expressions containing radicals or non-integer exponents.*
2. *Solve inequality statements, including linear, absolute value and more general non-linear inequality statements and graph their solutions.*
3. *Solve and interpret systems of equations in two and three variables.*
4. *Solve and interpret quadratic, exponential, and logarithmic equations.*
5. *Analyze and locate zeros of polynomial functions.*
6. *Determine whether a function is one to one and construct its inverse function.*
7. *Analyzing trigonometric functions: Inverse Sine, Cosine, and Tangent Functions,*
8. *Solving trigonometric equations.*
9. *Analyze and manipulate symbolically expressions representing sequences and series.*
10. *Demonstrate familiarity with the elements of symbolic logic and be able to analyze and critique logical arguments.*

Materials Required

Text: *Precalculus Mathematics for Calculus, 6<sup>th</sup> Edition by Stewart, Redlin and Watson.*

Calculator: *A scientific or graphing calculator*

Quizzes

*There will be about 5 quizzes. All quizzes are consisting of problems similar to the homework and examples in lectures. There will be no makeup quizzes. At the end of the semester, the highest 4 quiz grades will be used.*

Exams

*There will be two exams. You will be allowed at most one makeup exam but only for extreme circumstance. **If you will be unable to take an exam at the scheduled time, you must contact me before the day of the exam to request a makeup exam.** The exams will test your understanding of the concepts covered in the course. Most of the questions on these exams will require showing a significant amount of work to justify your answer. A correct answer with no work shown will be given a zero. The exams will also require you to explain and interpret your results. **Do Not Miss the Exams.***

### Homework

The completion of daily homework is critical to your success in this course. There will be about 5 homework assignments, each counting 10 points that will be collected on Tuesday. **Late homework will not be accepted**, even if you are absent. If you do not turn in assignment on time, you will receive a zero. On each assignment, a small selection of problems will be graded for a few points; the remaining points will be given for the completeness of the assignment. In order to receive credit for “completeness,” an honest attempt must be made on each problem. At the end of the semester, the highest 4 scores will be used, for a homework total of 40 points.

Most of the homework problems will be related to topics discussed in class; some will ask you to try something we didn't talk about. You should be able to reconcile most difficulties with the homework before class. Please make good use of the tutoring services on campus, and each other. While you may discuss these homework problems (as well as all others) with other students in the class or with me, the solutions turned in should for the most part be your own work. You should not write up solutions as a group.

It is very important both for your understanding of the material and for preparing for exams that you work all the assigned problems as soon as the material is covered in class.

### Grading

Your semester course grade will be determined by your percentage of the total points possible. You should keep an accurate record of your grades. I will provide information on your grade standing after each exam.

<b>Percentage</b>	
Exams	45%
Final Exam	30%
Homework	10%
Quizzes	15%

The scale used to convert from total points earned to a letter grade will no more stiff than:

<b>Percentage</b>	<b>Grade</b>
90.0 - 100.0	A
80.0 - 89.9	B
70.0 - 79.9	C
60.0 - 69.9	D
Below 60.0	F

Academic Honesty

*I place a high premium on honesty. Therefore, I consider cheating a serious offense, not only to me, and to other students, but ultimately to the cheater. If a student cheats on an exam, either by copying another student's work or by using a cheating device (notes on paper, clothing, desk, etc...) and I catch him or her, I will address it by either giving them an F for the exam, an F for the entire course, or asking the school to dismiss the student.*

Week #	Date	Monday	Tuesday	Wednesday	Thursday	Friday
1	Jan. 6 - 10		2.1 – 2.5	2.6 – 2.7 Page: 213 - 222	3.1 – 3.3 <b>Quiz #1</b>	
2	Jan. 13 – 17		3.4 – 3.7	4.1 – 4.2 <b>Quiz #2</b>	4.3 – 4.4 <b>Exam #1</b>	
3	Jan. 20 – 24		4.5 – 4.6 5.1	5.2 – 5.5 6.1 – 6.2	6.3 – 6.4 <b>Quiz #3</b>	
4	Jan. 27 - 31		7.1 – 7.5	9.1 – 9.2 <b>Quiz #4</b>	10.7 – 10.8 <b>Exam #2</b>	
5	Feb. 3 – 7		11.1 – 11.4	12.1 – 12.3 12.5	12.6, 13.1 <b>Quiz #5</b>	
6	Feb. 10 - 14		13. 2 – 13.3	13.4 <b>Review</b>	<b>Final Exam</b>	