PreCalculus I - Mathematics 153

Winter 2009

Instructor: Nancy Budner
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Text: PreCalculus: A Problem-Oriented Approach, Sixth Edition, Cohen, Lee, & Sklar, Thomson, Brooks/Cole Publishers, 2005.

Grading:

A	94 or above	**A-**	90 – 93		
B+	87 – 89	**B**	83 – 86	**B-**	80 – 82
C+	77 – 79	**C**	73 – 76	**C-**	70 – 72
D	60 – 69	**F**	Below 60		

1. Incompletes will **NOT** be given!
2. If you have any requests to allow for special needs, let the instructor know within the first three days of class.
3. In and out of class quizzes will total 100 points.
4. There will be four exams counting 100 points each.
5. A common cumulative final will be given counting 200 points.
6. Make-up exams will **NOT** be given unless the instructor is notified **BEFORE** the exam of the acceptable reason, in person or by message (email or phone). Not being ready for the exam or a minor cold is not an acceptable reason.

Pre-Requisite Skills
Students should be able to
- Apply the order of arithmetic operations (both with and without the use of technology);
- Solve linear equations (in a single variable);
- Solve quadratic equations (using the quadratic formula);
- Square and cube binomials;
- Apply the rules of exponents.

Course Information
1. This is the first section of a two-part PreCalculus course.
2. This course presents topics in Equations and Inequalities, Functions, Polynomials and Rational Functions, Exponents and Logarithmic Functions
3. This syllabus sets out the expectations for the coursework which will determine your grade. It is important that you read and understand it. You are encouraged to ask questions. Keep this document for reference.
4. Remember Mathematics is like a foreign language. The only way to gain the skills required for success is through practice. It requires TIME, not just a few minutes of watching someone else doing math. If you can not spend the time to practice this language, you will have problems successfully completing this course. Homework and projects are strictly **YOUR responsibility**. Lack of effort will result in a waste of **YOUR** time and money!
5. You may expect homework on a daily basis.
6. Homework must be done but will not be collected. Homework problems will be used on weekly quizzes**.**
7. The most accurate predictors of success are regular attendance and commitment to learning. Two-way communication will help you learn.

Course Objectives

When successfully finishing this course, students will be able to

Define and recognize functions given numerical, graphical, or algebraic relationships;

- Identify domains and ranges of given functions;
- Work with functional notation;
- Apply the functional concepts of functional arithmetic, composition, and inverses;
- Translate among numeric, symbolic, graphical, and verbal representations of functions;
- Work with a variety of "prototype functions, in particular,
    - Linear;
    - Quadratic;
    - Exponential;
    - Logarithmic;
    - Absolute value;
    - Piece-wise defined;
    - (possibly Polynomial);
    - (possibly Rational);
    - (possibly Radical);
- Analyze the effect of transformations on both the algebraic and graphical representations of functions (both with and without technology);
- Locate and determine certain graphical features of functions, in particular,
    - Intercepts;
    - Asymptotes;
    - Maxima and minima;
    - Intervals of increase and decrease.