



**Pre-calculus 1**  
 Course Outline    Winter, 2008  
 Math 110, Section 2    5 credits  
 CC 081  
 8:00 - 10:05 pm MW

**Prerequisite:** Placement in Math 110 or grade of 2.0 or higher in Math 095, and placement in English 101.

**Course Description:** This 5-credit college-level math course is for students intending to pursue coursework in mathematics, natural sciences, or engineering. This course builds upon the base of MATH 095 (Intermediate Algebra) and assumes that the student plans on taking MATH 120 (Pre-calculus 2). Relations and functions are investigated in graphic, numeric, symbolic, logarithmic, polynomial, power and rational functions. Special topics may include systems of linear and non-linear equations. Applications are investigated primarily from a science and engineering perspective. Students communicate results in oral and written form. Technology is integrated throughout the course.

**Text:** Algebra & Trigonometry, 4<sup>th</sup> ed., by Sullivan & Sullivan, Prentice Hall, 2006.

**Calculator:** A graphing calculator is required. A TI-83+ or TI-84+ is strongly recommended.

**Instructor:** James Whitehead (Jim)

**Office:** CC 361

**E-mail – PREFERRED:** [jimwhitehead.cascadia@gmail.com](mailto:jimwhitehead.cascadia@gmail.com)

**Phone/Voice Mail:** 425-352-8553

**Office hours:** MW 6:45-7:45 PM. Other times by appointment.

**Web-site:** <http://www.cascadia.edu/faculty/jfwhitehead>

**Grading:** The course grade is based on the following:

2 Best tests (of 3) @ 100 points each	= 200 points
6 Quizzes @ 15 points each	= 90
4 Projects @ 25 points each	= 100
Comprehensive Final Exam	= <u>140</u>
Total	= 530 points

Homework will be assigned daily and discussed the following class. Quizzes based on the homework will be given every 2 or 3 classes. Some quizzes will not be announced. The best 6 of 9 quizzes will determine your homework grade. Three (3) tests will be given, and the 2 best test scores will be included. **There will be no make-up tests or quizzes.** Students will work on individual and group projects and present examples, concepts, and applications in written reports. Classroom participation and improvement will be considered in borderline cases.

**Tentative Grading Scale**

	490-530	470-489	450-469	420-449	405-419	390-404	355-389	340-354	325-339	300-324	285-299	0-284
Letter Grade	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	F
Numerical Grade	4.0	3.7	3.3	3.0	2.7	2.3	2.0	1.7	1.3	1.0	0.7	0.0

**Accommodation:** If you require an accommodation for a disability, please contact Enrollment Services at 425-352-8860, and ask for the Disability Support Facilitator.

**Learning Agreements:** Cascadia Community College has developed statements on many educational issues, including Academic Honesty, Acceptable Use Policy on Information Technology, Diversity, Emergency Procedures, Family Education Rights and Privacy Act (FERPA), and Student Rights and Responsibilities. These statements and policies apply to all classes. A copy of these agreements can be found at the course/instructor web site: <http://www.cascadia.edu/faculty/jfwhitehead>

**Weather Advisories:** Link to [www.schoolreport.org](http://www.schoolreport.org) and click on Cascadia Community College, or call 425-352-8000.

**Important Dates:**

Last Day to add a class (with signature):	January 18
Last Day to Drop Classes (with signature)	January 18
No classes (holiday):	January 21, Feb. 18
Last Day to Change To/From Audit (with signature)	February 15
Last Day of Class:	March 19 (college classes end March 21)

**Course Outcomes:**

1. *Learn actively by*
  - a) Experimenting with projects that integrate the use of mathematics as one aspect of generalized problem solving.
  - b) Taking responsibility for accessing and using a variety of sources for assistance in learning about mathematics, such as on-line tutorials, visiting the math center, meeting with the instructor during office hours, etc.
  - c) Applying problem solving and mathematical modeling to real situations.
  - d) Integrating technology into problem solving as a tool to support and complement the theoretic approach.
  - e) Participating in groups to solve real problems.
  - f) Distinguishing between efficient and inefficient operations and methods to solve problems.
  - g) Experimenting with projects that integrate the use of mathematics as one aspect of generalized problem solving
2. *Think critically and creatively by*
  - a) Demonstrating mastery of exponential, logarithmic, polynomial, power, and rational functions.
  - b) Using sequential logic and subroutines to solve problems.
  - c) Analyzing, comparing and contrasting processes, procedures, and paths of approach.
  - d) Creatively using mathematical and other problem solving strategies to formulate models, to solve problems using multiple approaches, and to interpret results.
  - e) Following, evaluating and reproducing mathematical arguments and proofs.
3. *Communicate clearly and originally by*
  - a) Listening, speaking, and writing using mathematical vocabulary, notation, and graph expressions.
  - b) Explaining problem solving approaches and computation of answers.
  - c) Translating and illustrating the use of graphs, words, tables, mathematical symbols and formulas.
  - d) Developing the habit of reviewing all results for correctness and readability.
4. *Interact in the diverse and complex environment by*
  - a) Demonstrating effective use of group process.
  - b) Respecting individual ways of arriving at correct answers, expressing results and processes, while critically analyzing procedures for logical validity and completeness.
  - c) Refining processes around estimation and solution in large, complex, problem solving.
  - d) Recognizing notational differences between cultures.
  - e) Recognizing the biases/limitations of mathematical thinking and models.