

Instructor: Dr. S. Wu
Phone: (617) 373-5640
Office Hours: M, W & Th 10:30 --- 11:30am, and other time by appointment.

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Text: *Precalculus 5th Edition*, Stewart, Redlin and Watson, Thomson Brooks/Cole 2006.

Goal: To prepare the student for Calculus and improve algebraic skills. This course DOES NOT SATISFY the A&S core. **Please check** with your Advisor if you should take this course.

Brief description: Algebra skills are emphasized! Topics include linear, quadratic, polynomial, exponential, logarithmic and trigonometric functions. Emphasis is on understanding, manipulating and graphing these basic functions, their inverses and compositions and using them to model real-world situations (e.g. exponential growth/decay, periodic phenomena). Equations involving these functions will be solved using appropriate techniques.

Policy on Calculators: You will need a scientific GRAPHING calculator which has trigonometric, exponential and logarithmic functions. A calculator is NOT A SUBSTITUTE for algebraic skills. On your exams you will be expected to show your work for full credit.

Grading: Weekly quizzes --- 30% ; Midterm --- 30%; Final Exam --- 40%
There will be no make-up quizzes, but your lowest quiz grade will be dropped. There will be no make-up for the midterm except extreme circumstances with an official verification.

Final Exam : The time for the final exam has been set by the registrar and not by the instructor. your instructor CANNOT change it. If you have a conflict, or three exams in a day, please contact the Registrar (120 Hayden - fill out a Final Exam Conflict Form). **Sept. 19** is the last day to file a Conflict Form. You are expected to take into account your final exam schedule, in making your travel and other plans for the end of the semester. Calculators are permitted and recommended. It is a 2 hour exam.

Homeworks: Homeworks will be assigned at each class. You are expected to keep up with the homework in order to perform well on the quizzes and exams.

Withdrawal: Instructors in the course do not have the authority to give a W. If you want to withdraw from the course you must do it through the registrar. LAST DAY TO DROP with a W grade is **Nov. 16, 2007**.

Incomplete: Incompletes are given under very limited circumstances. The student must have completed a significant portion of the course material and must have a C or better on that material. The Instructor CANNOT give an incomplete simply because a student is failing. It is University policy that no grade, including an incomplete, may be changed after one year. Exceptions must be authorized by the Academic Standing Committee.

Free Tutoring is available in 540B Nightingale Hall starting in two weeks. **DO NOT WAIT!!!!**
Hours: Mon-Wed 10:00 AM - 9:00 PM, Thurs 10:00 AM - 6:00 PM and Fri 10:00 AM - 1:00 PM

Peer Tutoring is available in Snell Library. Go to the Peer Tutoring Center on the 2nd floor or phone (617) 373-2150 to schedule a private tutor.

NOTE: If you have any concern/problems about the course that cannot be resolved by discussing with me, then you may see the course coordinator Prof. S. Eigen, 527 LA, eigen@neu.edu.

MTH U121

Schedule of Topics (Tentative):

Week 1 (9/5 -- 9/7)

- §1.1 Fraction/Number Review
- §1.2 Exponents/Radicals

Week 2 (9/10 -- 9/14)

- §1.3 Algebraic Expressions and Factoring
- §1.4 Rational Expressions
- §1.5 Solving Equations
- §1.10 Lines --- Linear Functions

Week 3 (9/17 -- 9/21)

- §1.11 Modeling Variation --- Applications of Linear Functions
- §2.1 Functions Including Piecewise Defined Functions
- §2.2 Graphs of Functions

Week 4 (9/24 -- 9/28)

- §2.3 Increasing and Decreasing; Average Rate of Change
- §2.4 Transformations of Functions
- §2.5 Quadratic Functions; Maxima and Minima

Week 5 (10/1 -- 10/5)

- §2.6 Modeling with Quadratic Functions
- §3.1 Polynomial Functions and Their Graphs
- §3.4 Complex Numbers

Week 6 (10/9 -- 10/12) (10/8: Columbus Day)

- §3.4 Complex Numbers
- §3.5 Complex Zeros of Polynomials

Week 7 (10/15 -- 10/19)

- §4.1 Exponential Functions
- Midterm Exam Review

***** Midterm *****

Week 8 (10/22 -- 10/26)

- §4.1 Exponential Functions
- §4.2 Logarithmic Functions
- §4.3 Laws of Logarithms

Week 9 (10/29 -- 11/2)

- §4.4 Exponential and Logarithmic Equations
- §4.5 Modeling with Exponential Functions
- §6.1 Angle Measure

Week 10 (11/5 -- 11/9)

- §6.2 Trigonometry of Right Triangles
- §7.4 Inverse Trigonometric Functions
- §5.1 The Unit Circle

Week 11 (11/13 -- 11/16) (11/12: Veterans' Day)

- §5.3 Graphs of Trigonometric Functions
- §9.1 Two Equations --- Both Linear and Nonlinear Examples

Week 12 (11/19 -- 11/21) (11/22: Thanksgiving Day)

- §9.2 System of Two Linear Equations in Two Variables

Week 13 (11/26 -- 11/30)

- §9.3 System of Three Linear Equations in Three Variables
- Final Exam Review

Week 14 (12/3 -- 12/5)

- Final Exam Review