

## MATH 1050 SUMMER 2009

Text: Pre-Calculus 7<sup>th</sup> Edition by Larson & Hostetler  
Calculator: TI 83 plus, TI 84, or something comparable  
Instructor: Paul Christensen email: [paulchristensen@rhsm.org](mailto:paulchristensen@rhsm.org)  
[papamisada@msn.com](mailto:papamisada@msn.com)  
Location: U. of U. Bountiful Campus, Corner of 200 South and 200 East  
Time: Tuesday and Thursday evenings, 7:35 – 9:30 p.m.  
Pre-requisite Math 1010 or high school equivalent (Intermediate Algebra)  
Credit Hours: 4.0

If you need to contact me, email is the best way to do it. Please send your message to both of the above addresses. I will respond to you as soon as possible. Be patient. In the event of some ***pressing need*** you may call me at home at 801-272-1584 between 9:00 a.m. and 9:00 p.m.

Tentative Schedule of discussion topics and tests.

Tues May 19 and Thursday May 21 Sections 1.3 – 1.6, Appendix 3 and 5  
Most of this material should be familiar to you. The rectangular coordinate system, plotting points, equations for straight lines, definition of a relation, and a function, function notation and terminology (domain & range, zeros, symmetry, vertical line test) and the graphs of common (parent) parent functions. Also, the distance formula, factoring polynomials and solving simple linear and quadratic equations.

Tuesday May 26 and Thursday May 28 Sections 1.7 – 1.10  
Transformations of the graphs of parent functions, compound functions, defining and finding inverse functions, one-to-one functions, even and odd functions, and solving problems with direct and inverse variation.

Tuesday June 02 and Thursday June 04 Class cancelled

Tuesday June 09 and Thursday June 11 Sections 2.1 – 2.4, Appendix 6  
Graphs of quadratic functions, completing the square, and the quadratic formula (The crown jewel of algebra!). Long and synthetic division of polynomials, graphs of polynomial functions with degree higher than 2, lead coefficient test (end behavior), repeated zeros (multiplicities), and complex numbers.

Tuesday June 16 and Thursday June 18 Sections 2.5 – 2.7, Appendix 4  
Review of operations with rational expressions. More with the graphs of polynomial functions, Rational Zeros Theorem, real and complex zeros. Graphs of rational functions, defining and identifying vertical, horizontal, and oblique asymptotes. Also linear inequalities

Tuesday June 23 and Thursday June 25 Sections 3.1 – 3.5 **Midterm #1 Handed Out**  
Graphs and logarithmic, and exponential functions. Applications of exponential functions such as compound interest, the number “e”, and properties of logarithms. Solving exponential and logarithmic equations. Exponential growth and decay.

Tuesday June 30 (No class Thurs. July 02) Sections 7.1 – 7.3 **Midterm # 1 Due**  
Solving systems of equations. Linear systems in 2 and three variables, and non-linear systems in 2 variables. Solving by graphing, substitution, elimination, and Gaussian elimination.

Tuesday July 7 and Thursday July 9                      Sections 8.1 – 8.3    **Midterm #1 Returned**  
Define and perform operations with matrices, augmented matrices, Gauss-Jordan elimination, inverting matrices, writing systems of equations as matrix equations, and solving systems by the inverse-matrix method.

Tuesday July 14 and Thursday July 16                      Sections 8.4 – 8.5, 7.4  
Evaluating determinants by “diagonals”, and co-factors. Applications of determinants ie finding the area of a triangle and solving systems by Cramer’s Rule. Decomposition of rational expressions into partial fractions.

Tuesday July 21 (No class Thurs. July 23)                      Sections 9.1 – 9.3    **Midterm #2 Handed Out**  
Introduction to recursive and explicit formulas. Formulas for arithmetic and geometric, sequence and series.

Tuesday July 28 and Thursday July 30                      Sections 9.4 – 9.5    **Midterm # 2 Due**  
Proof by Mathematic Induction, Pascal’s Triangle, Binomial Expansion, and the Binomial Theorem.

Tuesday August 04 Questions and Review for the Final                      **Midterm # 2 Returned**

Thursday August 06                      **Final Exam 6:30 – 9:30 p.m.** (Bring an envelope!)  
(This time and date are not negotiable!)

**Class Objective:**                      The purpose of this course is to prepare you to go on to higher level math Courses such as Calculus. I expect to see you grow in confidence, and proficiency in your ability to work with each of the concepts we study, and to apply them in specific contexts. As your skills improve, and increase, so will your satisfaction.

**Expectations:**                      Come to class as often as you possibly can; every time would be the ideal. Bring your graphing calculator, and materials to take notes. Stay alert, participate, and ask questions. As a minimum, work the Review Exercises and the Chapter Test in the textbook at the end of each chapter we study. If necessary, work even more problems at the end of each individual section. Stay caught up. No homework will be collected, but having done it will make all the difference in your success.

**Suggestions:**                      Study several times a week for short (1 hour) sessions, instead of infrequent, long, drawn-out sessions. Find a “study buddy” or two in class with whom you can work homework problems, midterms, and share and compare notes. This is especially helpful if you have to miss a class.

**Tests:**                      There will be two take-home midterms. These you can work on with your study buddy or with any other person or group. They will each be 15 – 20 questions long. On these tests it will be important that you show your work and carefully demonstrate your understanding of method and process. You will be given partial to full credit on these problems according to the measure in which you have been complete and accurate. The Final Exam will be a 24 question multiple choice test. No credit is given for work and

process. You must arrive at and identify the correct solution to get credit for each problem. On the final exam you may use your notes, including old exams, and you may use your calculator, but you may not share notes or calculators. Also, you may not use your cell phone as your calculator.

**Grading:**

Each of your midterms will constitute 25% of your final grade, and the final exam will constitute the other 50%. If your final exam score exceeds either of your midterm scores, I will drop that midterm and allow your final exam to count as 75% of your grade. If you fail the final exam (score below 60%) then the *best possible* grade you may receive for the class will be a C-. The grading will be ***precisely*** as follows:

A	92.5%	B-	79.5%	D+	66.5%
A-	89.5%	C+	76.5%	D	62.5%
B+	86.5%	C	72.5%	D-	59.5%
B	82.5%	C-	69.5%		

**Note:**

After you have taken the final exam, your grade is then final. There is no “make-up”, “extra credit”, or any other reparation/salvaging processes. I tend to resent (and generally ignore) any such solicitations. It is always hard for me when a student has worked dutifully, and not attained the level of success they were hoping for. However, my responsibility is just to keep track of your scores, and calculate your final grade. “I” do not “give” you a grade. Your grade must reflect your level of competence with the material, and not how much effort you may or may not have put into the course. I have to trust your exam scores to represent your level of comprehension. I do not feel that a grade is negotiable.

**Behavior:**

All students are expected to maintain courteous behavior and respect for other individual in the classroom. This includes no use of cell phones or electronic/head phone devices. Students who, in the discretion of the instructor, are unwilling to maintain appropriate behavior will be dismissed from class for the day and, ultimately, if the problem persists, will be at risk to receive a failing grade. Students are encouraged to read the Student Code in the Student Handbook as many details are spelled out pertaining to student classroom and conduct, and their rights and responsibilities.

**Test Return:**

If you would like your final exam to be returned to you after it has been graded, then you must bring with you on the day of the final, an envelope that is self-addressed and stamped. If you do not do this, your test will be thrown away very shortly after it has been graded.

**Policy Note:**

The University of Utah seeks to provide equal access to its programs, services, and activities for people with disabilities. If you need accommodations in this class, reasonable prior notice needs to be given to the instructor and to the Center for Disability Services, 162 Olpin Union Bldg., 581 – 5020 (V/TDD). CDS will work with you and the instructor to msake arrangements for accommodations.