

**Math 1650.002 (Precalculus)
Fall 2011**

Lecture: TR 6-8:20 pm, PHYS 115

Instructor: Briana Foster-Greenwood
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Office Hours: TR 3-5 pm, or by appointment
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Course Description: 5 hours. A preparatory course for calculus: trigonometric functions, their graphs and applications; sequences and series; exponential and logarithmic functions and their graphs; graphs of polynomial and rational functions; general discussion of functions and their properties. MATH 1650 covers approximately the same material as MATH 1600 and 1610 together. Students who already have credit for both MATH 1600 and MATH 1610 may not receive credit for MATH 1650. Satisfies the Mathematics requirement of the University Core Curriculum.

Prerequisites: Math 1100 with a grade of C or better or appropriate placement. Enrollment in the class does not guarantee that the student has met the prerequisite. If a student is enrolled in the class without having met the prerequisite, the student could be dropped from the course with a grade of F or WF. If you are not sure if you meet the prerequisite, talk to someone in the math advising office GAB 443.

Text/eBook: *Precalculus*, 6th edition, by J. Stewart, L. Redlin and S. Watson (hardcopy is optional; eBook comes with purchase of required WebAssign access)

WebAssign (REQUIRED): This class will use WebAssign for online homework. You will need to purchase a WebAssign access code (available directly online, as stand-alone, or packaged with a hardcopy of the textbook). To get started using WebAssign, go to www.webassign.net and click on "I Have a Class Key". Enter our Class Key (below) and set up your account login information. You must enter your purchased Access Code to gain full access for the entire semester.

WebAssign Class Key: unt 8591 4179

WebAssign Enrollment Deadline: You must enroll in WebAssign by our second class day. There is a 14-day grace period for purchasing an Access Code. If you have not entered an Access Code by September 8th, you will lose access to WebAssign until you enter an Access Code. Late work is not accepted in this course, and a zero will be recorded for missed assignments, even if the assignments are missed due to not having WebAssign access.

Calculators: A graphing calculator (TI-83, TI-84, or equivalent) is recommended. A calculator will be especially helpful in sections focusing on applications. Generally, calculators will NOT be permitted on exams or quizzes. However, there will likely be a few exceptions to this, depending on the topic being covered.

Learning Objectives: After completing Math 1650, students will have learned:

1. to apply arithmetic, algebraic, geometric, higher-order thinking, and statistical methods to modeling and solving real-world situations;
2. to represent and evaluate basic mathematical information verbally, numerically, graphically, and symbolically;

3. to use appropriate technology to enhance mathematical thinking and understanding and to solve mathematical problems and judge the reasonableness of the results; and
4. to interpret mathematical models such as formulas, graphs, tables and schematics, and draw inferences from them.

While taking Math 1650, students will participate in the following over-arching objectives of UNT's core curriculum. Math 1650 students will:

- explore math
- make connections between different areas of knowledge and different ways of knowing
- be able to locate, evaluate and organize information including the use of information technologies
- think critically and creatively, learning to apply different systems of analysis
- develop problem solving skills
- cultivate self-responsibility, building a foundation for life-long learning

Grades: There will be five components to your grade, weighted as follows:

10%	Homework (two lowest homework scores dropped)
10%	Quizzes (lowest quiz score dropped)
5%	Project
55%	Average of 4 midterms (final exam may replace lowest midterm)
20%	Final exam

Grades will be assigned according to the following intervals:

A	[90%, 100%]
B	[80%, 90%)
C	[70%, 80%)
D	[60%, 70%)
F	[0%, 60%)

During the semester, you can use WebAssign to see your assignment grades. At the end of the semester, you can access your course grade through the EIS system at my.unt.edu/grades.

Exams: There will be four midterms and a final exam. I expect to give the midterms in class on the following dates:

Exam 1	Thursday, September 29
Exam 2	Thursday, October 20
Exam 3	Thursday, November 10
Exam 4	Thursday, December 1

The **comprehensive final exam** will be **Tuesday, December 13, 6:00-8:00pm**. You must take the final exam at the time specified in the Schedule of Classes. You must take the final exam to pass the class.

There will be **no make-up exams**; instead, if your final exam score is higher than one of the midterm exam scores, then your **final exam score may replace your lowest midterm score**. This policy is designed to cover times when you are sick, have an emergency, etc. In the event of a schedule conflict, **you may schedule to take an exam early**. If you take an exam early, the problems may differ from the problems on the exam given in class. If you miss an exam, a zero will be recorded for that exam.

Online Homework: WebAssign homework will be assigned daily and due online by the date/time posted in WebAssign. There is **zero credit for late homework**. Regardless of reason (e.g. internet crashes), assignments not submitted in WebAssign by the posted due date will earn zero

credit. Instead, at the end of the semester your **two lowest homework grades will be dropped**. In addition to submitting your answers online, keep a notebook with your written work, including enough detail so that another precalculus student could read your notes and understand how to solve the problems. Although you will not be required to turn in your notebook, you can refer to it when discussing/presenting problems in class and studying for quizzes and exams.

Quizzes: About once a week, there will be a short in-class quiz. There are **no make-up quizzes**; instead, at the end of the semester, your **lowest quiz grade will be dropped**. This policy is designed to cover times when you are sick, have an emergency, have transportation trouble, etc. In the event of a schedule conflict, **you may schedule to take a quiz early**. If you take a quiz early, the problems may differ from the problems on the quiz given in class.

Project: Choose one of the Discovery Projects from www.stewartmath.com. Your work to turn in should include

- a summary of any background information needed to understand the project (for example, some of the projects introduce new definitions or concepts)
- your solutions to the problems in the Discovery Project

The **project is due Tuesday, November 22**. More detailed instructions/expectations will be provided once the semester is underway.

Attendance: Attendance for the full class period is expected and will be recorded. You should be prepared to ask questions, take notes, and look alive in class. Turn off all electronic devices such as cell phones, iPhones, MP3 players, laptops, etc. Do not wear headphones during class. It is your responsibility to obtain all assignments/handouts/announcements/info, even if you are absent.

Recommended Keys to Success/Expectations: Success in math classes requires a great deal of time and honest effort outside of class along with punctual attendance. You are expected to come to each class on time and stay the entire class. You are responsible for everything that happens in class. You are expected to read ahead: get out a pencil and paper and try to work through the examples in the text. Make note of the steps that are confusing and come to each lecture prepared with questions about what you have read. Spend time after each lecture reviewing the lesson with a classmate and working on homework problems. Even just 15 minutes after each class helps enormously. Meet with a study group several times per week. Use the Math Lab. Work on the assignments consistently every day.

Math is not a spectator sport. You will not learn mathematics from watching the instructor or friends display ideas and solve problems. You must try problems, finish problems, ask questions, correct your mistakes, put concepts in your own words, and practice, practice, practice! The good news: an increase in effort usually results in an increase in success!

Resources: In addition to asking questions during class and office hours, here are some resources. Go ahead and use them right away! It is a lot easier to start out strong than to try to make up ground later in the semester.

Work Together: On homework assignments, you may find it helpful to study with other students—ask questions, share ideas and memory aids, discuss concepts, etc. Beware, though! You'll be on your own come test time, so be sure to go back and make sure you can do the problems on your own.

Math Lab: The UNT Math Lab (<http://www.math.unt.edu/mathlab>) is in GAB 440. You can work on your homework there and ask questions one-on-one. Hours: Mon-Thurs 7am-8pm, Fri 7am-4pm, Sat 12pm-5pm (closed Sundays and holidays).

UNT Learning Center: Offers tutoring and info about learning styles, study strategies, etc. Visit learningcenter.unt.edu for more information. Attend the workshops on learning styles and test-taking tips. These workshops (and others) are offered on a rotating schedule all throughout the semester.

Student Evaluation of Teaching Effectiveness: The Student Evaluation of Teaching Effectiveness (SETE) is a requirement for all organized classes at UNT. This short online survey will be available at my.unt.edu towards the end of the semester and provides you a chance to comment on how this class is taught. Completion of the SETE is mandatory, as I need your perspective on what worked well and what can be improved for future courses.

University Deadlines: You are responsible for meeting all university deadlines such as registration, fee payment, drop deadlines, etc. Refer to the online Schedule of Classes and/or University Catalog for policies and dates.

Drop Policy: If a student is unable to complete this course, it is their responsibility to formally withdraw from the course. Withdrawal is done through the Registrar's Office after obtaining the necessary signatures. Consents for withdrawal and all necessary signatures may be obtained in the Math Department Office, GAB 435. The last day to drop a class with an automatic W is Tuesday, October 4. The last day to drop a class with W or WF is Friday, October 28.

Incompletes: Beginning Thursday, November 10, a student that qualifies may request a grade of "I", incomplete. An "I" is a non-punitive grade given only if ALL three of the following criteria are satisfied. They are: (1) The student is passing the course; (2) The student has a justifiable (and verifiable) reason why the work cannot be completed as scheduled; and (3) The student arranges with the instructor to complete the work within one academic year.

Student Behavior: Student behavior that interferes with an instructor's ability to conduct a class or other students' opportunity to learn is unacceptable and disruptive and will not be tolerated in any instructional forum at UNT. Students engaging in unacceptable behavior will be directed to leave the classroom and the instructor may refer the student to the Center for Student Rights and Responsibilities to consider whether the student's conduct violated the Code of Student Conduct. The university's expectations for student conduct apply to all instructional forums, including university and electronic classroom, labs, discussion groups, field trips, etc. The Code of Student Conduct can be found at <http://conduct.unt.edu>.

Academic Dishonesty: Cheating on final exams, in-class tests, or quizzes is a serious breach of academic standards and will be punished severely and generally result in a student failing the course. All work done on in-class exams and quizzes must represent only the student's own work, unless otherwise stated in the directions. See <http://vpaa.unt.edu/academic-integrity.htm> for details on academic integrity at UNT.

Disability Accommodations: It is the responsibility of students with certified disabilities to provide the instructor with appropriate documentation from the Dean of Students Office.

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(TENTATIVE) Lecture Schedule**

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
8/22	8/23	8/24	8/25 1.10 Lines 1.11 Making Models Using Variation FIRST DAY OF CLASS	8/26
8/29	8/30 1.7 Inequalities 2.1 What is a Function? 2.2 Graphs of Functions	8/31	9/1 2.3 Getting Information from the Graph of a Function MATH LAB OPENS for the semester	9/2 Last day to add or swap a class.
9/5 LABOR DAY No classes	9/6 2.4 Average Rate of Change of a Function 2.5 Transformations of Functions	9/7	9/8 2.5 continued 2.6 Combining Functions CENSUS DATE - Last day to drop course for refund	9/9
9/12	9/13 2.7 One-to-one Functions and Their Inverses -Modeling with Functions	9/14	9/15 3.1 Quadratic Functions and Models 3.2 Polynomial Functions and Their Graphs	9/16
9/19	9/20 3.3 Dividing Polynomials 3.4 Real Zeros of Polynomials	9/21	9/22 3.5 Complex Numbers 3.6 Complex Zeros and the Fundamental Theorem of Algebra	9/23
9/26	9/27 3.7 Rational Functions	9/28	9/29 3.7 continued Exam 1	9/30
10/3	10/4 -Fitting Curves to Data 4.1 Exponential Functions Last day to drop with an automatic "W"	10/5 Beginning this date instructor may drop students with grade of "WF" for nonattendance	10/6 4.2 The Natural Exponential Functions 4.3 Logarithmic Functions	10/7
10/10	10/11 4.4 Laws of Logarithms 4.5 Exponential and Logarithmic Equations	10/12	10/13 4.6 Modeling with Exponential and Logarithmic Functions	10/14 MIDSEMESTER

10/17	10/18 5.1 The Unit Circle	10/19	10/20 5.2 Trig Functions of Real Numbers Exam 2	10/21
10/24	10/25 5.3 Trig Graphs 5.4 More Trig Graphs	10/26	10/27 5.5 Inverse Trig Functions and Their Graphs -Fitting Sinusoidal Curves to Data	10/28 Last day to drop a course with consent of instructor
10/31	11/1 6.1 Angle Measure 6.2 Trigonometry of Right Triangles	11/2	11/3 6.3 Trig Functions of Angles 6.4 Inverse Trig Functions and Triangles	11/4
11/7	11/8 6.5 The Law of Sines 6.6 The Law of Cosines	11/9	11/10 6.6 continued Exam 3	11/11
11/14	11/15 7.1 Trig Identities 7.2 Addition and Subtraction Formulas	11/16	11/17 7.2 continued 7.3 Double-Angle, Half-Angle, and Product-Sum Formulas	11/18
11/21	11/22 7.4 Basic Trig Equations 7.5 More Trig Equations Discovery Project Due	11/23	11/24 THANKSGIVING University closed	11/25 THANKSGIVING University closed
11/28	11/29 12.1 Sequences and Summation Notation 12.2 Arithmetic Sequences	11/30	12/1 12.3 Geometric Sequences Exam 4	12/2
12/5	12/6 8.1 Polar Coordinates 8.2 Graphs of Polar Equations	12/7	12/8 Review	12/9 4:00 pm – MATH LAB CLOSES for the semester
PRE-FINAL WEEK	PRE-FINAL WEEK	PRE-FINAL WEEK	PRE-FINAL WEEK	PRE-FINAL WEEK
12/12	12/13 FINALS WEEK Final Exam, 6-8pm	12/14 FINALS WEEK	12/15 FINALS WEEK	12/16 FINALS WEEK TERM ENDS