Math 1315: College Algebra

Syllabus

## Basic Information

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| **Course Information** | | **Instructor Information** | |
| *Course* | Math 1315 | *Name* | Andrew Cousino |
| *Semester* | 2015 Fall | *Office* | Derrick Hall 213 |
| *Section* | 041 | *Telephone* | (512) 245-4742 |
| *Class Time* | MWF 10:00–10:50 | *Email* | acousino@txstate.edu |
| *Class Room* | Derrick Hall 122 | *Office Hours* | M-Th 13:00-14:00 |

## Textbook

*College Algebra* (Texas State Package), Miller, 2014 [with [ConnectMath](http://www.connectmath.com/)] (ISBN 9781259376047)

## Other Materials

* [ConnectMath](http://www.connectmath.com/)
* Graphing calculator

## Important Dates

**Exams –** September 16th, October 14th, and November 13th

**Final Exam** – December 7th-11th

**Drop Dates –**

Drop with no record – September 9th

Drop with an automatic W – October 25th

Last day to drop a class or withdraw from the University – November 19th

## Grading

The grade for this class will be split between attendance, homework, three mid-term exams, and one final exam. The weights of these categories as well as the letter grade cutoffs are listed in the following tables. Homework and all exams will be graded upon correctness.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Grade** | **Cutoffs** |  | **Category** | **Weight** |
| A | 90-100% |  | Attendance | 5% |
| B | 80-89% |  | Homework | 15% |
| C | 70-79% |  | Exam 1 | 20% |
| D | 60-69% |  | Exam 2 | 20% |
| F | 0-50% |  | Exam 3 | 20% |
|  |  |  | Final Exam | 20% |

### Attendance

Expect that attendance will be taken at the beginning of every class. If you are going to be absent from class, please let me know ahead of time. It is important that you attend class regularly in order to do well as you can in the class.

### Homework

Homework should be turned on or before the due date. Late homework will not be accepted. On each homework, put your name, my name (“Cousino”), and the course (“Math 1315”), which helps to ensure your homework ends up in my hands at the end of the day. Finally, show all your work in order to receive full credit (if I cannot get the answer in one line, then you probably cannot either).

### Exams

There will be three mid-term exams as well as a cumulative final exam. All of the exams will consist of short answer questions, in which you are expected to show your work along with your answer. Exams will be graded for correctness and partial credit will be given. If you have to miss any mid-term exam (not the final) for a justifiable reason, let me know by the preceding class date so we can schedule a make-up exam. I get to determine what justifiable is. Examples of good reasons are serious illness/injury, extracurricular activities, and family emergencies; examples of bad reasons are sleeping through an exam, forgetting about an exam, and not being prepared for an exam.

## Technology

Grades will be posted on [TRACS](https://tracs.txstate.edu/). The syllabus will be posted there as well.

## Resources

[SLAC](http://www.txstate.edu/slac/) in Alkek 411, Monday-Friday 8:00-17:00

[CLC](http://hlsamp.cose.txstate.edu/clc/clc-home.html) in Roy F Mitte (RFM) 4203, Monday-Thursday 9:00-18:00

[Math Lab](http://www.math.txstate.edu/resources/lab.html) in Derrick Hall 233, Monday-Thursday 8:00-19:00 and Friday 8:00-17:00

## Electronic Devices

Cellular Telephones**,** Pagers, Palm Pilots or any device that may distract from the class should be turned off before class begins and may not be on the desk during class or tests.

## Special Needs

Students with special needs, as documented by the [Office of Disability Services (ODS)](http://www.ods.txstate.edu/), should identify themselves at the beginning of the semester. If you are one of these students, and you wish to take your exams in the [Testing, Research Support, and Evaluation Center (TREC)](http://www.txstate.edu/trec/), you must make an appointment with them 48 hours in advance.

## Brief Course Outline

College Algebra is a course required by almost every major. So it is a course designed to cover lots of disparate topics, none of which help to show how useful or interesting mathematics is on its own.

## Course Description

A course covering linear and quadratic equations, inequalities, word problems, functions, logarithms, systems of equations and other college algebra topics as time permits.

## Prerequisite

College Readiness in Mathematics according to the TSI regulations or Math 1311 with a grade of CR.

## Objectives

The goal of College Algebra to provide students an opportunity to learn algebra concepts and to develop algebraic problem solving skills. The goal will be achieved by meeting the following objectives. The student will be able to:

* Solve equations and inequalities (linear, quadratic, other polynomial equations, exponential, logarithmic).
* Develop the concept of function (inverse, rational, polynomial functions).
* Understand related functions through symmetry, transformation and operations with functions.
* Solve systems of linear and nonlinear equations.
* Operate with matrices and complex numbers.
* Translate real world situations into mathematical models.
* Use a graphing calculator as a tool for thinking about algebraic concepts.

## [**Academic Honor Code**](http://txstate.edu/effective/upps/upps-07-10-01.html)

As members of a community dedicated to learning, inquiry and creation, the students, faculty and administration of our university live by the principles in this Honor Code. These principles require all members of this community to be conscientious, respectful and honest.

#### We are conscientious.

We complete our work on time and make every effort to do it right. We come to class and meetings prepared and are willing to demonstrate it. We hold ourselves to doing what is required, embrace rigor, and shun mediocrity, special requests, and excuses.

#### We are respectful.

We act civilly toward one another and we cooperate with each other. We will strive to create an environment in which people respect and listen to one another, speaking when appropriate, and permitting other people to participate and express their views.

#### We are honest.

We do our own work and are honest with one another in all matters. We understand how various acts of dishonesty, like plagiarizing, falsifying data, and giving or receiving assistance to which one is not entitled, conflict as much with academic achievement as with the values of honesty and integrity.

#### The Pledge for Students

Students at our university recognize that, to ensure honest conduct, more is needed than an expectation of academic honesty, and we therefore adopt the practice of affixing the following pledge of honesty to the work we submit for evaluation: ***I pledge to uphold the principles of honesty and responsibility at our university.***

Math 1315 Tentative Schedule

|  |  |  |
| --- | --- | --- |
| **Day** | **Text** | **Lesson** |
| **8/24** | 1.1 | Linear Equations in Two Variables |
| **8/26** | 2.3 | Introduction to Functions |
| **8/28** | 2.3 | Graphs of Functions |
| **8/31** | 2.6 | Transformations |
| **9/2** | 2.6 | Transformations |
| **9/4** | 2.8 | Operations with Functions |
| **9/9** | 2.8 | Operations with Functions |
| **9/11** | 1.3 | Complex Numbers |
| **9/14** |  | Review |
| **9/16** |  | Exam 1 |
| **9/18** | 1.4 | Quadratic Equations |
| **9/21** | 3.1 | Quadratic Functions |
| **9/23** | 3.2 | Polynomial Functions |
| **9/25** | 3.3 | Division of Polynomials |
| **9/28** | 3.3 | Division of Polynomials |
| **9/30** | 3.4 | Zeros of Polynomials Functions |
| **10/2** | 3.5 | Rational Functions |
| **10/5** | 3.5 | Rational Functions |
| **10/7** | 3.6 | Polynomial and Rational Inequalities |
| **10/9** | 3.6 | Polynomial and Rational Inequalities |
| **10/12** |  | Review |
| **10/14** |  | Exam 2 |
| **10/16** | 4.1 | Inverse Functions |
| **10/19** | 4.1 | Inverse Functions |
| **10/21** | 4.2 | Exponential Functions |
| **10/23** | 4.3 | Logarithmic Functions |
| **10/26** | 4.3 | Logarithmic Functions |
| **10/28** | 4.4 | Properties of Logarithms |
| **10/30** | 4.4 | Properties of Logarithms |
| **11/2** | 5.1 | Systems of Linear Equations |
| **11/4** | 5.1 | Systems of Linear Equations |
| **11/6** | 5.2 | Systems of Linear Equations |
| **11/9** | 5.2 | Systems of Linear Equations |
| **11/11** |  | Review |
| **11/13** |  | Exam 3 |
| **11/16** | 6.1 | Introduction to Matrices |
| **11/18** | 6.2 | Inconsistent and Dependent Systems |
| **11/20** | 6.3 | Operations on Matrices |
| **11/23** | 6.4 | Inverse Matrices and Matrix Equations |
| **11/30** |  | Review |
| **12/2** |  | Review |