MATH 1306 – Fall 2016

College Algebra for the Non-Scientist

1306.001 MWF 900-950
1306.002 MWF 1000-1050

Instructor: Dr. Julie Sutton
Office: FN 2.208
E-Mail: JMSutton@utdallas.edu
Office Hours: MWF 11-1150 and by appointment.

Course Pre-requisites, Co-requisites, and/or Other Restrictions:
A score of 20% on ALEKS Math Placement Test

Course Description:
This is a special section of College Algebra for students **not** continuing to Pre-Calculus or Calculus. It Is acceptable, however, for students continuing to STAT 1342.

Students will learn some concepts and applications of set theory and logic. They will learn to analyze real-life situations using graphs, algebraic equations or other appropriate methods.

Main topics to be covered (Chapter.Section):

1. The Art of Problem Solving (1.1, 1.2, 1.3)
2. Basic Concepts of Set Theory (2.1-2.4; Extension)
3. Introduction to Logic (3.1-3.5)
4. Number Theory (5.1, 5.4)
5. The Real Numbers and Their Representation (6.1-6.3, 6.5)
6. The Basic Concepts of Algebra (7.1-7.5)
7. Graphs and Functions (8.1-8.4)
8. Counting Methods (10.1, 10.2, 10.3)

Student Learning Outcomes/Objectives:

1. Students will apply set theory to solving practical problems such as analyzing results of a survey using Venn Diagrams.
2. Students will determine the truth value of a compound statement and use diagrams to analyze the validity of the argument.
3. Students will learn how to solve simple algebraic equations and inequalities and will know how to use them to problem-solve.
4. Given the algebraic equation of a straight line, or other appropriate data, students will graph the line on a Cartesian Coordinate Plane.

Academic Calendar:

First Day Of Class	Monday, August 22
Labor Day	Monday, September 5
Census Day	Wednesday, September 7
Exam I	**Friday, September 23**
Mid-Term Grades	Saturday, October 15
Exam II	**Friday, November 4**
Thanksgiving Break	November 21-26
Drop Date	Thursday, October 27
Exam III/Last Day of Class	**Wednesday, December 7**

Required Materials:
Pearson's MyMathLab; access to the e-Text, *Mathematical Ideas, 13th ed*.

You should bring the following to lecture:

- Non-programmable Calculator (TI-30X)
- Lecture Notes
- Scratch Paper

You will be working on problems during lecture, so please be on-time.

Textbook: *Mathematical Ideas*, 13th ed, Miller, Heeren & Hornsby.

Optional Materials:

- Graph Paper
- Ruler
- Colored Pencils
- Student Solution manual for the text (odd problems only)

Grading Scale:

$97 \leq x \leq 100$	A+
$93 \leq x < 97$	A
$90 \leq x < 93$	A-
$87 \leq x < 90$	B+
$83 \leq x < 87$	B
$80 \leq x < 83$	B-
$77 \leq x < 80$	C+
$73 \leq x < 77$	C
$70 \leq x < 73$	C-
$67 \leq x < 70$	D+
$63 \leq x < 67$	D
$60 \leq x < 63$	D-
$60 < x$	F

Grading Policy:

Type	Number	% of Final Grade
Exams	3	75%
Quizzes	5-9*	10%
Homework	TBD	15%
	Total:	100%

*One (1) quiz grade will be dropped.

If at any time you have questions, please do not hesitate to ask.

Assignment Descriptions:

Exams: There will be three (3) cumulative exams. All exams will be held during class time and all exams will be closed note. Non-programmable, scientific calculators will be allowed, but no other electronic devices (including cell phones) will be allowed during exams. Your lowest exam score will be weighted 20% of your grade and the highest will be weighted 30%. The remaining exam will be weighted 25% each. No exam grades will be dropped. The tentative dates for exams can be found in the table on page 1.
*Students may ask for a re-grade of a quiz or exam when they feel it is warranted. This should be done in writing, with your reason for requesting the re-grade written on a blank sheet of paper and stapled to the front of the original assignment to be re-graded. Re-grading requests must be submitted no later than one week from the day the assignment was returned in class. If you submit a quiz or exam for a re-grade be aware that your entire assignment may be re-graded.

You should refrain from writing on your exam (or quiz) after it is returned to you as this may invalidate any claims you have for a re-grade.

Quizzes: Occasionally there will be a 10-15 minute quiz administered in class (or, possibly in the testing center). This will be announced at least one class period prior to the quiz.
You will be allowed one (1) handwritten (by you) 8 ½ " x 11" sheet of notes for use during each quiz. You may not borrow notes from other students, and your notes may not be a photocopy of pages from your book or contain copied images. Non-programmable, scientific calculators may be allowed on some quizzes, but not for all of them and you may not use a cell phone (or other electronic device) as a calculator during quizzes. Your one (1) lowest quiz grade will be dropped.

Homework: Homework will be assigned through the online portal MyMathLab. You will be given at least one (1) week to complete any online homework assignments.

How to access MML:

1. From the eLearning resource page click on the words, "Pearson MyLab/Mastering."
2. Click on "MyMathLab Course Home."
3. Read the terms and agreements; click "I accept"
4.
    a. If you DO NOT already have a MML account associated with your UTDallas Email:
        i. Click on the "Create" button and follow the screen prompts to setup your account. NOTE: Make sure that you select your UTDallas Email as your username. For example: axc00815236@Utdallas.edu. You will be given 3 options:
            1. Enter an access code (if you bought a hard copy of the book, new, you may have one of these)
            2. Pay for new access
            3. Request temporary access (this ends 10-14 days after the first day of class)
    b. If you already have an MML account associated with your UTDallas Email, then enter your username and Password and click "sign in".
5. When your registration is complete, click on "Go To Your Course" to enter MML.

Course and Instructor Policies:

Make-up Quizzes: Since one quiz grade is dropped, make-up quizzes will, in general, not be given unless there is an accommodation approved at least one week in advance.

Calculators: Only non-programmable, scientific calculators (TI-30X is suggested) are permitted on exams or quizzes (when allowed). Your calculator should have the ability to calculate probabilities (permutations, combinations, factorials, etc.) You may not share a calculator with another student. Cell phones (or other electronic devices) may **not** be used on exams or quizzes.

If at any time you have questions, please do not hesitate to ask.

Attendance: You are allowed 3 absences in this course with no penalty; you do not need to email me, provide a doctor's note, or other such documentation. Upon missing the fourth class your grade will be lowered one "notch." For example, a student who misses four (4) class meetings and earns a C+ in the course will have her grade lowered to a C for the absences. There will be no "excused" absences unless they are for University travel or for religious reasons. In these cases, documentation must be submitted and approval given at least one week prior to the absence. Two tardies (>10 minutes) will equal one absence. If you have a medical diagnosis that requires you to routinely miss class please contact Dr. Sutton within the first two (2) weeks of class to discuss your situation. In the event of severe illness (requiring hospitalization) please contact Dr. Sutton within 2 business days of discharge to make arrangements.

E-Mail Correspondence: When emailing Dr. Sutton, you must use your official UTDallas email account; email originating from another account (such as gmail) will not be acknowledged in accordance to UTDallas policies. Please include the following in the subject of your email: Course number and section, a basic overview of your purpose for emailing. For example:

MATH 1306.001 MyMathLab Problem #24, Section 3.4

In the body of your email include all information necessary to address your concern. If you are emailing for help with a homework problem from MyMathLab, please attach screenshots as necessary.

Comet Creed:

This creed was voted on by the UT Dallas student body in 2014. It is a standard that Comets choose to live by and encourage others to do the same:

"As a Comet, I pledge honesty, integrity, and service in all that I do."

UT Dallas Syllabus Policies and Procedures:

The information contained in the following link constitutes the University's policies and procedures segment of the course syllabus.

Please go to http://go.utdallas.edu/syllabus-policies for these policies.

My pledge to you, my student:

The goals of this course can only be accomplished in a setting of mutual respect. Although the study of mathematics rarely lends itself to too much controversy, we must still provide a safe environment that is conducive to learning. All are welcomed and encouraged to actively participate in the learning of College Algebra, regardless of gender, race, nationality, native language, sexual orientation, gender identity, political ideology, and especially personal mathematics history. I look forward to getting to know each of you both as individuals and as a learning community.

If at any time you have questions, please do not hesitate to ask.
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Tentative Course Schedule			
Week #	Dates	Topics	Sections
1	Aug 24, 26, 29, 31	Inductive and Deductive Reasoning	1.1, 1.2
2	Sept 2, 7, 9	Strategies for Problem Solving	1.3
3	Sept 12, 14, 16	Introduction to Set Theory, Symbols and terminology; Venn Diagrams and Subset	2.1, 2.2
4	Sept 19, 20	Set Operations, Surveys and Cardinal numbers	2.3, 2.4
	Friday, Sept 23	**Exam I**	**Up to 2.4**
5	Sept 26, 28, 30	Introduction to Logic	3.1
6	October 3, 5, 7	Statements and Quantifiers (Con't), Truth Tables and Equivalent Statements,	3.2, 3.3
7	Oct 10, 12, 14	The Conditional and related statements, Analyzing Arguments with Truth Tables.	3.4, 3.6
8	Oct 17, 19, 21	Prime and Composite Numbers, GCF and LCM	5.1, 5.4
9	Oct 24, 26, 28	The Real numbers and their representations	6.1
10	Oct 31, Nov 2	Clock Arithmetic (supplemental)	N/A
	Friday, November 4	**Exam II**	**Up to 5.4**
11	Nov 7, 9, 11	Cyphers and Cryptography	N/A
12	Nov 14, 16	More than just a shift: Cyphers in WWII era.	N/A
	Friday, Nov 18	NO CLASS	
13	November 21-26	Thanksgiving Break	
14	Nov 28, 30, Dec 2	Combinations and Permutations	10.1, 10.2
15	December 5	Review	10.1, 10.2
	Wednesday, Dec 7	**Exam III**	

These descriptions and timelines are subject to change at the discretion of the Professor.

If at any time you have questions, please do not hesitate to ask.
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