Course Description

MATD 0370 ELEMENTARY ALGEBRA (3-4-0). A course designed to develop the skills and understanding contained in the first year of secondary school algebra. Topics include review of operations on real numbers, graphing linear equations, solving linear and quadratic equations, solving systems of linear equations, polynomials, factoring, and applications.

Required Materials


You can access the chapters from the textbook covered in the first few days online at http://www.austincc.edu/mthdept2/text/ password acc0370 before you buy your text.

MyMathLab access: In all of Janet Bickham's developmental math sections, MyMathLab is required. All new textbooks purchased at an ACC bookstore include MyMathLab access. It is not included with the purchase of a used book, and may not be included with a new book purchased at a different bookstore. Refer to the handout Information about MyMathLab.

Notebook paper, pencils, erasers, and a scientific (non-graphing) calculator are also required.

Prerequisites

Please make sure you have the necessary prerequisites for this course. That means you need a C or better in Basic Math Skills (MATD 0330) or its equivalent knowledge, or appropriate score on the ACC Mathematics Assessment Test taken before enrolling in ACC mathematics courses. If I feel you are not prepared for this course, I may choose to withdraw you. If you have any questions about your preparation for the course, please talk to me about it.

Grading Policy

The grading policy can now be found at the end of the Weekly Schedule.
In-Progress Grade

If a student is regularly attending and doing all assigned work but is still not earning a grade of C or higher, he or she may be eligible for the IP (In Progress) grade. Students who receive an IP grade are expected to register and pay for the course again the next time they enroll at ACC. A maximum of 2 IP grades can be awarded in any single developmental course.

How to Progress through the Course

Homework problems consist of two types: online homework problems in MyMathLab and written homework problems from the textbook. Both are required and contribute to your grade. Below is the order in which you should work through the assignments, for maximum benefit.

Instructional Aides in MyMathLab

Each section contains online video lectures and example problems. This is where you should start. View the lectures and/or animations, and pause as needed to work through the You Try It examples, before attempting any homework problems. Read through the pages in the textbook for a more thorough explanation.

Online Homework

As soon as possible after completing the video lectures, start on the online homework problems from the corresponding sections in MyMathLab, as outlined in the Weekly Schedule. These problems often have instructional aides, and give immediate feedback.

You must complete each assignment with a score of 80% or better before continuing to the next section. You may attempt each problem as many times as necessary. If you are stuck, get help.

Written Homework

After completing the online homework, do the assigned written problems from the textbook. Read all details about completing and submitting written homework in the Weekly Schedule posted at http://www.austincc.edu/jbickham/handouts.

Online Quizzes

Quizzes are given online, a few quizzes for each chapter, in MyMathLab. Take the online quiz shortly after completing the homework for all of the sections that are covered on the quiz. You must complete all of the online homework in the corresponding sections with a score of 80% or higher before attempting the quiz. Quiz deadlines are stated in the Weekly Schedule.

Students should score at least 80% on each quiz. Each quiz may be taken up to three times, so contact your instructor for help if you have not scored at least 80% in three attempts. The highest score out of the three attempts is the only score that will count.

Tests and Missed Test Policy

All tests, including the final exam, will be given in an ACC testing center. For on-campus students, this will be Pinnacle Testing Center. If taken on our last day of class, the Final Exam will be taken in class. Students who submit an appropriate accommodations letter may take their tests in an Office for Students with Disabilities. These tests must be taken by the stated deadlines. Tests may be taken early, but please ask permission to take a test early or wait until you hear from me that it is available. As soon as it is available in the testing center, you are welcome to take it. Please refer to the Weekly Schedule for more information about testing.
Attendance, Withdrawal, and Reinstatement

Students are expected to attend and participate in class. "Attendance/participation" is determined by continuing to progress in the class - keeping up with the (1) Weekly Schedule of assignments and quizzes to complete on the computer, (2) tests to take in the Testing Center, and (3) written homework due dates. A record of all work completed while logged into the computer program is sent to the instructor. Students may be dropped for excessive absences or for missing tests or assignments. If you start to fall behind, be sure to contact me. I may drop students who do not show signs of progress. While I may drop a student for various reasons, bear in mind that it is always the student's responsibility to make sure you have dropped the course. Never assume any ACC instructor has dropped you from a course until you have checked with ACC's administration. Students who withdrew or were withdrawn generally will not be reinstated unless they have completed all quizzes, homework, and tests necessary for them to be caught up with the rest of the class and be passing the course with at least a C (70%) average. The deadline for withdrawal (and reinstatement) is Monday, July 25, 2011.

TSI Warning for Students Who Are Not TSI Complete*

Students who are not TSI complete in math are not allowed to enroll in any course with a math skill requirement.

All students are required to be "continually in attendance" in order to remain enrolled in this course. If this is the only developmental class you are enrolled in, and you withdraw yourself from this course or are withdrawn by your instructor, then:

a) You may be withdrawn from courses that you should not be enrolled in, such as any class with a math skill requirement.

b) You will have a hold placed on your registration for the following semester. The Hold will require that you register for the next semester in person with an advisor or counselor and that you work with the Developmental Math Advisor during that semester.

c) You will continue to face more serious consequences, up to being restricted to only registering for developmental courses, until you complete the required developmental math course or satisfy the TSI requirement in another way.

More information can be found at http://www.austincc.edu/math/tsiwarning.htm.

* If you are unsure whether or not this warning applies to you, see an ACC advisor immediately.

Importance of Completing Developmental Course Requirements

The first steps to achieving any college academic goal are completing developmental course requirements and TSI requirements. The first priority for students who are required to take developmental courses must be the developmental courses. TSI rules state that students are allowed to take college credit courses, if they are fulfilling their developmental requirements. Because successful completion of dev courses is so important, ACC will intervene with any student who is not successfully completing developmental requirements. This intervention can mean a hold on records, requiring developmental lab classes, working with the Developmental Math Advisor, and monitoring during the semester.

Course Rationale

As with all developmental math courses, Elementary Algebra is designed to provide you with the mathematical foundation and personal confidence to enable you to use mathematics in your future life. This course is designed to prepare you for MATD 0390 Intermediate Algebra and the algebra-based courses which follow it. It also may provide you with sufficient preparation to pass the math portion of the THEA or Compass test. It also offers you one way to prepare for MATH 1332 and 1342, after you have passed the math portion of the THEA or Compass test.
Additional Services and Policies at ACC

Student Services:

The web address for student services is: [http://www3.austincc.edu/evpcss/rss/Default.htm](http://www3.austincc.edu/evpcss/rss/Default.htm).

The ACC student handbook can be found at: [http://www3.austincc.edu/evpcss/handbk/toc.htm](http://www3.austincc.edu/evpcss/handbk/toc.htm).

Instructional Services: The web address is: [http://www3.austincc.edu/evpcss/memos/reference.htm](http://www3.austincc.edu/evpcss/memos/reference.htm); then click on “Campus Based Student Support Overview”.

Incomplete Grade Policy: Incomplete grades (I) will be given only in very rare circumstances. Generally, to receive a grade of “I”, a student must have taken all examinations, be passing, and after the last date to withdraw, have a personal tragedy occur which prevents course completion.

Statement on Scholastic Dishonesty: Acts prohibited by the college for which discipline may be administered include scholastic dishonesty, including but not limited to, cheating on an exam or quiz, plagiarizing, and unauthorized collaboration with another in preparing outside work. Academic work submitted by students shall be the result of their thought, work, research or self-expression. Academic work is defined as, but not limited to, tests, quizzes, whether taken electronically or on paper; projects, either individual or group; classroom presentations; and homework.

Statement on Scholastic Dishonesty Penalty: Students who violate the rules concerning scholastic dishonesty will be assessed an academic penalty which the instructor determines is in keeping with the seriousness of the offense. This academic penalty may range from a grade penalty on the particular assignment to an overall grade penalty in the course, including possibly an F in the course. ACC’s policy can be found in the Student Handbook page 33 or on the web at: [http://www.austincc.edu/marketng/handbook/student_handbook_02-03.pdf](http://www.austincc.edu/marketng/handbook/student_handbook_02-03.pdf).

Statement on Student Discipline: Classroom behavior should support and enhance learning. Behavior that disrupts the learning process will be dealt with appropriately, which may include having the student leave class for the rest of that day. In serious cases, disruptive behavior may lead to a student being withdrawn from the class. ACC’s policy on student discipline can be found in the Student Handbook page 32 or on the web at: [http://www.austincc.edu/marketng/handbook/student_handbook_02-03.pdf](http://www.austincc.edu/marketng/handbook/student_handbook_02-03.pdf).

Statement on Students with Disabilities: Each ACC campus offers support services for students with documented physical or psychological disabilities. Students with disabilities must request reasonable accommodations through the Office of Students with Disabilities on the campus where they expect to take the majority of their classes. Students are encouraged to do this three weeks before the start of the semester.

Statement on Academic Freedom: Institutions of higher education are conducted for the common good. The common good depends upon a search for truth and upon free expression. In this course the professor and students shall strive to protect free inquiry and the open exchange of facts, ideas, and opinions. Students are free to take exception to views offered in this course and to reserve judgment about debatable issues. Grades will not be affected by personal views. With this freedom comes the responsibility of civility and a respect for a diversity of ideas and opinions. This means that students must take turns speaking, listen to others speak without interruption, and refrain from name-calling or other personal attacks.
COMMON COURSE OBJECTIVES FOR MATD 0370 ELEMENTARY ALGEBRA (Revised Oct 2009):
The following objectives are listed in a sequence ranging from the simple to the more complex. As such, this document should not be viewed as a chronological guide to the course, although some elements naturally will precede others. These elements should be viewed as mastery goals which will be reinforced whenever possible throughout the course.

Overall objectives:

A. Students will feel a sense of accomplishment in their increasing ability to use mathematics to solve problems of interest to them or useful in their chosen fields. Students will attain more positive attitudes based on increasing confidence in their abilities to learn mathematics.

B. Students will learn to understand material using standard mathematical terminology and notation when presented either verbally or in writing.

C. Students will improve their skills in describing what they are doing as they solve problems using standard mathematical terminology and notation.

1. Description and classification of whole numbers, integers, and rational numbers using sets and the operations among them
   a. identify and use properties of real numbers
   b. simplify expressions involving real numbers
   c. evaluate numerical expressions with integral exponents

2. Polynomials
   a. distinguish between expressions that are polynomials and expressions that are not
   b. classify polynomials in one variable by degree and number of terms
   c. simplify polynomials
   d. add, subtract, multiply (including the distributive law), and divide polynomials (including division by monomials, but excluding long division)
   e. factor polynomials in one or more variables (including factoring out the greatest common factor, factoring by grouping, factoring trinomials in which the leading coefficient is one, factoring trinomials in which the leading coefficient is not one, and factoring the difference of two squares)
   f. understand and use the exponent laws involving integer exponents
   g. convert numbers into and out of scientific notation and perform multiplication and division with numbers written in scientific notation

3. Solve linear equations in one variable involving integral, decimal, and fractional coefficients and solutions

4. Solve and graph linear inequalities

5. Application problems
   a. write and evaluate linear expressions from verbal descriptions
   b. solve application problems which lead to one of the following types of equations: linear equations in one variable, systems of two linear equations in two variables, quadratic equations, and rational equations with monomial numerators and denominators)
   c. solve literal equations for a specified variable using addition and multiplication principles
   d. use given data to estimate values and to evaluate geometric and other formulas
   e. solve problems involving the Pythagorean theorem, similar triangles, and proportions

6. Linear equations in two variables
   a. identify the relationship between the solution of a linear equation in two variables and its graph on the Cartesian plane
   b. understand and use the concepts of slope and intercept
   c. determine slope when two data points are given
   d. graph a line given either two points on the line or one point on the line and the slope of the line
   e. write an equation of a line given one point on the line and the slope of the line, or two points on the line
   f. identify lines given in standard, point-slope, or slope-intercept forms and sketch their graphs
   g. solve systems of linear equations
7. Quadratic equations
   a. find solutions to quadratic equations using the technique of factoring and using the principle of square roots
   b. recognize a need to use the quadratic formula to solve quadratic equations and solve quadratic equations by using the quadratic formula when some simplification of square roots is needed

8. Description and classification of irrational numbers
   a. simplify radical expressions
   b. use decimal approximations for radical expressions

9. Rational expressions
   a. determine for which value(s) of the variable a rational expression is undefined
   b. simplify rational expressions containing monomials, binomials, and trinomials
   c. multiply and divide rational expressions containing monomials, binomials, and trinomials
   d. add and subtract rational expressions with like denominators and rational expressions with unlike denominators (only monomials and binomials that do not require factoring)

10. Geometry
    a. understand the difference between perimeter and area and be able to use formulas for these appropriately
    b. solve application problems involving angles and polygons