

DELAWARE COUNTY COMMUNITY COLLEGE

TERM: FALL, 2015

COURSE NAME: Introductory Algebra

CRN: 144 Course Abbreviation - Section # MAT 060 - 83

1. INSTRUCTOR CONTACT INFORMATION

Instructor

Name: Jack Siderer

Class

Time: 6:35 p.m. to 9:35 p.m.,

Classroom: Southeast 114

Phone:

Office:

Office

Hours: e-mail me for an appointment

E-mail: jsiderer@dccc.edu

2. **Course Description:** This course is designed to prepare students for mathematics courses in the college transfer curriculum and/or for Technical Mathematics I. It involves the study of elementary algebra through quadratic equations.
3. **Prerequisite:** MAT 040 Basic Mathematics or its equivalent; or the appropriate score on the mathematics placement test.
4. **Course Materials:**

Required textbook and software: MyMathLabPlus – Stand-Alone Access Card, 2/E – Pearson Publishing OR Introductory Algebra Package for Delaware County Community College (Textbook and MyMathLabPlus Code).

- Purchase from Delaware County Community College bookstore or Pearson only.
- Delaware County Community College and the Instructor are not responsible for MyMathLabPlus – Stand-Alone Access Cards from any other sources.

Other necessary materials: Notebook to be used for MAT 060 only, pencils, and eraser.

5. **Competencies and Objectives:**

Competency 1: Add, subtract, multiply, and divide real numbers (Chapter 1).

Objectives:

- 1.1 Evaluate algebraic expressions by substitution.
- 1.2 Translate word phrases to algebraic expressions.
- 1.3 Indicate which of two real numbers is greater using $>$ or $<$ symbol.
- 1.4 Determine whether an inequality is true or false.
- 1.5 Find the absolute value of a real number.
- 1.6 Add real numbers without using a number line.
- 1.7 Find the opposite, or additive inverse, of a real number.
- 1.8 Subtract real numbers.
- 1.9 Perform combinations of addition and subtraction of real numbers.
- 1.10 Multiply real numbers.
- 1.11 Divide integers.
- 1.12 Find the reciprocal of a real number.
- 1.13 Divide real numbers.
- 1.14 Use the distributive law to multiply algebraic expressions.
- 1.15 Use the distributive law to factor algebraic expressions.
- 1.16 Collect like terms.
- 1.17 Simplify algebraic expressions by removing parentheses and combining like terms.
- 1.18 Simplify algebraic expressions using the correct “order of operations.”

Competency 2: Solve linear equations and inequalities in one variable (Chapter 2).

Objectives:

- 2.1 Determine whether a given number is a solution of an equation.
- 2.2 Solve linear equations using the addition/subtraction principle.
- 2.3 Solve linear equations using the multiplication/division principle.
- 2.4 Solve linear equations using both the addition and multiplication principles.
- 2.5 Solve linear equations by removing parentheses and collecting like terms.
- 2.6 Solve applied problems by translating to linear equations.
- 2.7 Determine whether a given number is a solution of an inequality.
- 2.8 Graph an inequality on a number line.
- 2.9 Solve linear inequalities using both the addition and multiplication principles.

Competency 3: Solve literal equations for the indicated variable (Ch. 2, section 4).

Objectives:

- 3.1 Solve literal equations and formulas for a specified letter, by applying the same principles that are used to solve linear equations.

Competency 4: Graph linear equations in two variables (Chapter 3).

Objectives:

- 4.1 Plot points associated with ordered pairs of numbers.
- 4.2 Determine the quadrant in which a point (x, y) lies.
- 4.3 Find the x - coordinate and the y - coordinate of a point on a graph.
- 4.4 Determine whether an ordered pair of numbers, (x,y) , is a solution of a linear equation in two variables.
- 4.5 Graph equations of the type $y = mx$ and $y = mx + b$.
- 4.6 Find the x – intercept and the y – intercept of a linear equation.
- 4.7 Graph equations of the type $ax + by = c$ using the intercepts.
- 4.8 Graph equations of the type $x = a$ and $y = b$.
- 4.9 Understand slope as it relates to the linear equation $y = mx + b$.
- 4.10 Solve applied problems using slope.

Competency 5: Add, subtract, multiply, and divide polynomials (Chapter 4).

Objectives:

- 5.1 Understand the meaning of exponential notation.
- 5.2 Evaluate exponential expressions containing exponents.
- 5.3 Use the product rule, the quotient rule, and the negative exponent rule.
- 5.4 Use the power rule to raise powers to powers.
- 5.5 Raise a product to a power and raise a quotient to a power.
- 5.6 Evaluate a polynomial for a given value of the variable.
- 5.7 Identify the terms of a polynomial.
- 5.8 Identify and collect the like terms of a polynomial.
- 5.9 Add polynomials.
- 5.10 Find the opposite of a polynomial.
- 5.11 Subtract polynomials.
- 5.12 Multiply a monomial by another polynomial.
- 5.13 Multiply two binomials.
- 5.14 Multiply any two polynomials.
- 5.15 Use the FOIL method to multiply any two binomials.
- 5.16 Divide a polynomial by a monomial.

Competency 6: Factor polynomials (Chapter 5).

Objectives:

- 5.1 Factor monomials.
- 5.2 Factor polynomials by factoring out the greatest common factor (g.c.f.).
- 5.3 Factor trinomials of the type $ax^2 + bx + c$ where $a=1$.
- 5.4 Factor trinomials of the type $ax^2 + bx + c$ where a is a prime number.
- 5.5 Recognize and factor differences of squares.
- 5.6 Solve equations using the “principle of zero products.”
- 5.7 Solve equations by factoring and then using the “principle of zero products.”

Competency 7: Simplify, multiply, and divide rational expressions (Chapter 6).

Objectives:

- 7.1 Simplify rational expressions by factoring the numerator and denominator and by cancelling identical factors.
- 7.2 Multiply rational expressions and simplify.
- 7.3 Find the reciprocal of a rational expression.
- 7.4 Divide rational expressions and simplify.

Competency 8: Solve a system of linear equations in two variables (Chapter 7).

Objectives:

- 8.1 Understand a system of two linear equations including the types of possible solutions.
- 8.2 Use graphing to solve a system of two linear equations.
- 8.3 Use the elimination method to solve a system of two linear equations.

Competency 9: Perform operations on square roots (Chapter 8).

Objectives:

- 9.1 Find principal square roots and their opposites.
- 9.2 Simplify square roots.
- 9.3 Multiply square roots and simplify.
- 9.4 Divide square roots.
- 9.5 Simplify square roots of quotients.

Competency 10: Solve quadratic equations (Chapter 9).

Objectives:

- 10.1 Write a quadratic equation in standard form $ax^2 + bx + c = 0$.
- 10.2 Solve quadratic equations by factoring and using the principle of zero products.
- 10.3 Solve quadratic equations of the type $ax^2 = p$.
- 10.4 Solve quadratic equations using the quadratic formula.

6. **Methods of Instruction:**

Lecture/discussion, question/answer, assigned reading, exercises and problems and online resources.

7. **Student Learning Activities:**

Student participation through classwork, question/answer, taking notes, reading, studying, and completing practice exercises and homework problems.

8. **Instructional Resources:**

MyLabsPlus MAT 060 Course. Tutoring is available in the Math Academic Lab (STEM 2408) on the Marple Campus, in the Learning Commons at Southeast, Exton and Upper Darby Centers, or in the Tutoring Center on the Downingtown Campus.

9. **Methods of Evaluation:**

Grades are based on but not limited to combinations of the following: homework, quizzes, class participation, oral and written presentations, unit tests, chapter tests and a departmental comprehensive final examination.

10. **Course Grade:**

This course is a developmental course and is graded on a High Pass (HP), Pass (P), or No Pass (NP) scale.

11. **Calculator Policy:**

The use of calculators is **not** permitted.

12. **Attendance and Withdrawal Policy:**

Attendance is expected at all class meetings. Students who do not attend class during the first three weeks of class or who only attend the first day of class WILL BE ASSIGNED THE REGISTRATION CODE OF 'NS' (NO SHOW) as of the 4th week of classes. Instructors will NOT withdraw students for non-attendance. Students will be responsible for withdrawing themselves from their courses and may do so until the semester Student Withdrawal date (see your Student Handbook for information). Students who wish to be withdrawn from a class after the Student Withdrawal date will need to meet with the appropriate administrator. Please refer to the Student Handbook for more details on this policy.

13. **Academic Honesty:**

Delaware County Community College regards dishonesty on the part of students as unacceptable behavior that could result in dismissal. You can find the Academic Honesty Policy in the Student Handbook

14. **Students With Disabilities:**

Delaware County Community College policy complies with Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990. Students requesting academic accommodations **must** register with the Office of Disability

Services and are responsible for picking up their accommodation letters at the beginning of **each** semester and presenting them to their instructors. I am available to discuss the approved accommodations that you may require in this course. If you have any questions, contact Ann Binder, Director of Disability Services, at 610-325-2748 or by email at abinder@dccc.edu. Students on all Branch Campuses can contact Shammah Bermudez, Coordinator of Disability Services for Branch Campus Operations at 484-237-6251 or by email at sbermudez@dccc.edu.

15. Summary of Course Topics:	Hours (including testing)
Real Numbers and Algebraic Expressions	5
Solving Equations and Formulas	4
Applications and Inequalities	4
Polynomials: Operations	6
Polynomials: Factoring	8
Rational Expressions	3
Graphs of Linear Equations	6
Systems of Equations	3
Radical Expressions	3
Quadratic Equations	3
Comprehensive Final Examination	See Final Exam Schedule

Note: This is only a guideline and may be adjusted to meet the needs of individual classes.

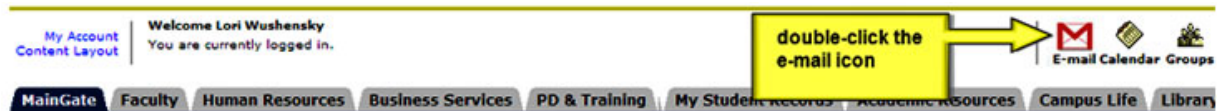
16. Logging into DCCC Network:

1. Enter your DCCCiD (P00xxxxxx) and password.
 - *If your DCCCiD starts with P00 please make sure you are using the number zero not the letter "o".*
 - Password is the one of the following
 - i. Your delaGATE password.
 - ii. Your birth day (MMDDYY)
 - iii. first letter of your first name plus the first letter of your last name plus the last four digits of your SSN. Example, Jane Doe, SSN-123-456-7890 would have a password of jd7890. If you do not have a SSN use the last four of your DCCC ID.

NOTE: if one of these three passwords does not work, please see your instructor to reset your delaGATE password.
2. Next, a second login screen, the "Windows Workstation" box will appear. There is no password needed. Just click the "OK" button.

17. Accessing DCCC e-mail account:

1. Go to <http://delagate.dccc.edu/> and login.
 - User Name: DCCCiD (P00xxxxxx)
 - Password:
 - First Time Users: Your birth date (MMDDYY)
 - Existing Student: Your delaGATE password.
2. Once you have logged into the portal, click the e-mail icon at the top right of the portal window.



3. First-time users will be prompted to set up their DCCC e-mail account.
4. Agree to the terms of service by clicking on the "I accept. Create my account." button.
5. You will see your DCCC e-mail inbox. Your DCCC e-mail address will appear at the top right of the inbox window.

18. Accessing MyLabsPlus:

First Time:

1. Go to dccc.mylabsplus.com.
2. Under Sign In, click **Forgot your password?**
3. Under User ID, enter your **DCCCiD (P00xxxxxx)** and click **Request Password Reset**.
4. Click **Return**.
5. Access your DCCC email (directions on previous page) and click on email with subject Password Reset Information.
6. Click on the link provided in the email to reset your password and follow directions to reset your password and click **Reset**.
7. Click, **Home Page**.
8. Under Sign In, Enter your DCCCiD (P00xxxxxx) and password created in step 6.

9. At the Welcome Screen, Click on your mathematics course under the appropriate semester.
10. The first time you click on your course, you will need to read the End User License and Privacy Policy. Click **Accept** once you have read and agree with the terms of use.
11. Pay for access to your MyLabsPlus mathematics course.
 - To enter your MyLabsPlus code, click **Access Code**. Enter your access code in the boxes provided and click **Next**.
 - If you prefer to purchase online, using a credit card or Pay Pal, click **Buy Now**. Click the product link and follow the steps outlined to complete your purchase.
 - To get a temporary access code that is valid for **twenty-one** days from the start of the term, click **Course Home Tab** and click **Temporary Access Tab**. Copy this access code by highlighting the code, then right click and select copy. Click on **Course Home Tab**. To enter your temporary MyLabsPlus code, click **Access Code**. Click **Switch to a single box for pasting your access code**. Right click and select paste and click **Next**.
 - Once you have entered your access code or purchased online, you will receive a Confirmation & Summary Page. To return to your MyLabsPlus course, click **Return to Course**.
12. Click, **Assignments Tab** to start your work.

To sign in later:

1. Go to **dccc.mylabsplus.com**.
2. Under Sign In, Enter your DCCCiD (P00xxxxxx) and MyLabsPlus password.
3. Click **Sign In**.
4. At the Welcome Screen, Click on your mathematics course under the appropriate semester.
5. Click, **Assignments Tab** to start your work.