

IVY TECH COMMUNITY COLLEGE

COURSE NUMBER: MAT 050 Basic Algebra **COURSE SECTION:** 01

COURSE TITLE: Basic Algebra

MEETING DAYS AND TIMES: M, W, F 10:00-10:50am

CLASSROOM/LOCATION: E128

SEMESTER: Spring **YEAR:** 2008

PREREQUISITE (S): Successful completion (C or better) of MAT 044, Mathematics or demonstrated competency through appropriate assessment. (SAT, ACT, COMPASS, or ASSET)

PROGRAM: General Education

CREDIT HOURS: 3

RESPONSIBLE DIVISION: General Education

CONTACT HOURS: 48

INSTRUCTOR NAME: Joe Henson

INSTRUCTOR PHONE NUMBER: 298-2312 In case of emergency, leave a message with the General Education office by calling (812) 298-2225 or toll free 1-800-377-4882 extension 2225.

INSTRUCTOR E-MAIL: jhenson@ivytech.edu **WEB:** http://fc.goivytech.net/~Joe_Henson/

INSTRUCTOR OFFICE LOCATION: E108D

INSTRUCTOR OFFICE HOURS: M, W, F: 9:00-10:00, 12:30-1:30 (H104);
T, R: 9:30-10:00, 2:00-3:00 (MLK)

CATALOG DESCRIPTION: Reviews signed numbers and basic linear equations, concentrates on integer exponents, scientific notation, linear equations and inequalities, literal equations, polynomial operations, polynomial factoring, graphing linear equations, and applications. A developmental algebra course.

MAJOR COURSE OBJECTIVES:

Upon successful completion of this course the student will be expected to:

1. Use order of operations with signed numbers
2. Use properties of integer exponents and scientific notation.
3. Simplify and evaluate algebraic expressions.
4. Solve linear and literal equations.
5. Graph linear equations.
6. Understand and use the concept of slope.
7. Solve and graph linear inequalities in one variable.
8. Perform basic operations with polynomials.
9. Factor polynomial expressions and use factoring to solve simple quadratic equations.
10. Use relevant mathematical terminology, laws, and notation.
11. Solve a variety of application problems in the above areas.
12. Use a scientific and/or graphing calculator proficiently as related to coursework.
13. Use computer technology, which may include the Internet, the Web, e-mail, or computer tutorials to enhance the course objective.

COURSE CONTENT:

1. Signed numbers
2. Linear equations
3. Integer exponents and scientific notation
4. Linear inequalities
5. Literal equalities
6. Polynomial operations
7. Polynomial factoring

TEXT/CURRICULUM MATERIALS:

REQUIRED: **Aufmann, Barker & Lockwood, Beginning Algebra with Applications**, 7th edition, Houghton Mifflin. NOTE: This is a NEW edition of previously used textbook.

RECOMMENDED: **EDUSPACE access code** (often called a passkey)

When purchased through the Terre Haute Ivy Tech bookstore the book includes the EDUSPACE code. Additionally, the student will receive a student's solution manual.

SUGGESTED: Scientific Calculator

There are many good calculators such as Texas Instruments TI-30X II S and TI-30X II B. If you would like help in selecting a calculator, please contact your instructor.

OPTIONAL: Algebra to Go: A Mathematics Handbook, by Great Source

ACADEMIC HONESTY STATEMENT:

The College is committed to academic integrity in all its practices. The faculty value intellectual integrity and a high standard of academic conduct. Activities that violate academic integrity undermine the quality and diminish the value of educational achievement.

Cheating on papers, tests or other academic works is a violation of College rules. No student shall engage in behavior that, in the judgment of the instructor of the class, may be construed as cheating. This may include, but is not limited to, plagiarism or other forms of academic dishonesty such as the acquisition without permission of tests or other academic materials and/or distribution of these materials and other academic work. This includes students who aid and abet as well as those who attempt such behavior.

The Ivy Tech Community College Student Handbook defines the "Scholastic Dishonesty" policy in this way: "Any student found guilty of scholastic dishonesty, which includes plagiarism, collusion, or cheating on any examination or test is subject to suspension from the college.

ADA STATEMENT:

Ivy Tech Community College seeks to provide effective services and accommodations for qualified individuals with documented disabilities. The goal of Disability Support Services (DSS) is to provide opportunities for equal access in college programs, services, and activities. DSS assists students with disabilities in achieving their educational goals through such services as academic and career counseling, adaptive testing, tutoring, note taking, interpreting, and test proctoring.

If you need a course accommodation because of a documented disability, you are required to register with Disability Support Services at the beginning of the semester. You may contact this department at 800-377-4882 ext. 2282 or 812-298-2282. If you require assistance during an emergency evacuation, notify your instructor, immediately. Look for evacuation procedures posted in your classrooms.

COPYRIGHT STATEMENT:

Students shall adhere to the laws governing the use of copyrighted materials. They must insure that their activities comply with fair use and in no way infringe on the copyright or other proprietary rights of others and that the materials used and developed at Ivy Tech Community College of Indiana contain nothing unlawful, unethical, or libelous, and do not constitute any violation of any right of privacy.

METHOD (S) OF DELIVERY: Lecture

METHOD (S) OF EVALUATION: Homework/Quizzes, 5 Unit Tests and 1 Final Exam

MAKE-UP POLICY:

If you are absent from class when homework is due or on a day of a quiz or test, you will earn 0 points from the activity unless other arrangements are agreed upon by the instructor **in advance**. Exceptions may be granted for unforeseen, documented emergency. Please contact your instructor as soon as possible in such a situation.

CALCULATOR USE:

Calculators may be used in this course, for homework and for all tests.

The math department policy declares that the following types of calculators are **NOT allowed**:

- Graphing Calculators
- Those that make noise or beep
- Calculators that factor polynomials or perform measurement conversions
- The calculator function on a cell phone
- The calculator within any hand-held device such as a Palm or other PDA

Some topics in the course may be more challenging without the use of a scientific calculator. You should use a calculator such as the TI-30X IIS or TI-30X IIB, but there are many other good options. Please ask if you have questions about using a particular calculator.

ONLINE RESOURCES (EDUSPACE):

When you purchased your textbook from the bookstore, you received an Eduspace passkey. This string of letters and numbers will unlock an enormous wealth of information online. You will use this passkey code the very first time that you visit the site in order to create your account. During that visit you will create your own username and password that will be used for all future visits. Students who did not purchase their textbook through the campus bookstore can visit the Eduspace site online to buy a passkey.

In order to begin using the great resources provided through Eduspace, you must connect your account to this specific section of the course. The code needed for this course is: **JHENS-0640A7C20D575A**. You will only need to enter this course code one time.

You can login to Eduspace from any computer with internet access. Just use any browser to visit www.eduspace.com.

LIBRARY STATEMENT:

The Ivy Tech Virtual Library is available to students on and off campus. It offers full-text journals and books and other resources essential for course assignments. It can be accessed by going to <http://www.ivytech.edu/library/terrehaute>

MATH TUTORING:

Students may receive extra help on all course concepts from the math tutors in the Library (LRC) on the South 41 campus (C-hallway) in Terre Haute. Trained Ivy Tech student tutors are available Monday-Thursday 8am-9pm and Friday 8am-4pm. Additional resources including supplemental textbooks and videotapes are also available. For more information, stop by the LRC or call (812) 298-2307. Tutoring is sometimes available at other Ivy Tech sites as well. Inquire at your local site.

MATH TECHNOLOGY CENTER

At the South 41 campus in Terre Haute, we have an **open computer classroom staffed by math instructors** – all dedicated to math students. Students can use the computers to access Eduspace and other online math resources while instructors are nearby to help as needed. The Math Technology Center is located in room H104. More information can be found on the lab website: www.goivytech.net/mtc

Students from other sites are invited to use the Math Technology Center but should also inquire at your local site to see what resources are available for student use.

ATTENDANCE POLICY:

In order to provide you with a quality education, it is important for you to attend class regularly. Any student who has decided to not complete the course should withdraw him/herself from the course. Students must complete this process by contacting an advisor or the Office of Admissions.

Any student who remains enrolled will receive zero scores for any work not completed and will also receive a final course grade based on the total points possible for the course.

LAST DATE TO WITHDRAW: Friday, 11 April, 2008.

GRADING PROCESS AND SCALE:

Final course grades will be assigned by the following percentage scale:

<u>Grading Scale</u>	
93% -100%	A
84% - 92%	B
75% - 83%	C
70% - 74%	D**
Below 70%	F

***NOTE: A grade of C or better is required in order to move on to the next math course.**

Points will be earned through Homework/Quizzes (100 points) 5 Unit Tests (100 points each) and 1 final exam (100 points). Therefore, you will have 700 points possible for the course:

<u>Grades Assigned by Points</u>	
648 – 700 points	A
585 – 647 points	B
522 – 584 points	C
487 – 521 points	D
486 points or less	F

HOMEWORK/QUIZZES: There will be 5 unit assignments, (1 per unit) worth a total of 75 points. The unit assignments (homework) will be distributed at the end of class periods, to be worked outside of class. There will also be 5 quizzes worth 5 points each, during the semester. Homework due dates are noted on the schedule. Quizzes will be announced in class prior to the Unit Exams. **Quizzes cannot be made up.**

Quizzes cannot be made up!
ALL EXAMS MUST BE COMPLETED BY MAY 2, 2008.
NO HOMEWORK WILL BE ACCEPTED AFTER THIS DATE

ASSIGNMENTS:

Even if not assigned for a grade, you are required to do the suggested problems from each section to keep up with the course work. Check your performance using the answers provided at the back of the book.

EXTRA CREDIT:

No extra credit will be given. Additional assignments or corrections to homework exercises will be calculated into the total possible Homework/Quiz points and will not exceed the 100 points total for the semester.

TESTS:

Each unit test has 20 questions and is worth 100 points toward your final course grade. In some cases, partial credit points can be earned if the problem is not completely correct but the right procedure was followed. In order to earn this credit you must show all of your work.

No personal notes will be allowed during the exam. Selected formulas, charts, and conversion tables will be supplied for you on the exam itself. Your instructor will notify you of the information that you can expect to see on the exam.

FINAL EXAM:

All students will take a multiple-choice final exam covering all concepts studied over the semester. This test will be worth 100 points toward your overall grade. Just like other exams, students may use a calculator during the final.

If it would improve your overall course grade, the final exam can be counted twice (replacing your lowest test score). Therefore, doing well on the final can enhance your semester grade.

NOTE: The schedule and procedures in this course are subject to change. The instructor and/or the College reserve the right to change any statements, policies or scheduling as necessary. Students will be informed promptly of any and all changes.

Table of Equations and Formulas

This formula list will be found on all exams. You will be expected to learn Area and Perimeter of squares and rectangles and any other information required to do the problems in the unit guides that is not included in this sheet of information.

Slope of a Straight Line

$$\text{Slope} = \frac{y_2 - y_1}{x_2 - x_1}, x_1 \neq x_2$$

Slope-intercept Form of a Straight Line

$$y = mx + b$$

Sum of the Measures of the Angles of a Triangle is 180°

$$\text{Area of a Triangle: } A = \frac{1}{2}bh$$

$$\text{Circumference of a Circle: } C = 2\pi r = \pi d$$

$$\text{Area of a Circle: } A = \pi r^2$$

WEEK	DATE	SECTION	TOPIC
WEEK 1	14-Jan		Orientation/Syllabus
	16-Jan	1.1, 1.2	Introduction to Integers, Operations with Integers
		1.3	Rational Numbers
	18-Jan	1.4	Exponents and the Order of Operations
WEEK 2	21-Jan		MARTIN LUTHER KING DAY--NO CLASS
	23-Jan	1.5	Geometry Concepts
	25-Jan	2.1	Evaluating Variable Expressions
WEEK 3	28-Jan	2.2	Simplifying variable Expressions
	30-Jan	2.3	Translating Verbal Expressions into Variable Expressions
	1-Feb	3.1	Introduction to Equations
WEEK 4	4-Feb		Review--QUIZ 1
	6-Feb		TEST 1 Homework 1 Due
	8-Feb	3.2	General Equations
WEEK 5	11-Feb	3.2	General Equations
	13-Feb	3.3	Inequalities
	15-Feb	4.1	Translating Sentences into Equations
WEEK 6	18-Feb	4.2.1	Consecutive Integer Problems
	20-Feb	4.2.2	Coin and Stamp Problems
	22-Feb		Review--QUIZ 2
WEEK 7	25-Feb		TEST 2 Homework 2 Due
	27-Feb	5.1	Rectangular Coordinate System
	29-Feb	5.2	Graphs of Straight Lines $y = mx + b$
WEEK 8	3-Mar	5.2	Graphs of Straight Lines $Ax + By = C$
	5-Mar	5.3	Slopes of Straight Lines
	7-Mar	5.3	Graphing using Slope & Intercept
	10-Mar		SPRING BREAK--NO CLASS
	12-Mar		SPRING BREAK--NO CLASS
	14-Mar		SPRING BREAK--NO CLASS
WEEK 9	17-Mar	5.6	Graphing Linear Inequalities
	19-Mar	6.1	Solving Systems of Equations by Graphing
	21-Mar		Review--QUIZ 3

