

## IVY TECH COMMUNITY COLLEGE

**COURSE NUMBER:** MAT 111 Intermediate Algebra      **COURSE SECTION:** W0  
**COURSE TITLE:** Intermediate Algebra      **MEETING DAYS AND TIMES:** T, R 12:30-1:45pm  
**CLASSROOM/LOCATION:** MLK Room K116  
**SEMESTER:** Spring      **YEAR:** 2008

**PREREQUISITE (S):** Demonstrated competency through appropriate assessment or a grade of "C" or better in  
MAT 050 Basic Algebra

**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](mailto:jhenson@ivytech.edu)      **WEB:** [http://fc.goivytech.net/~Joe\\_Henson/](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 basic operations of polynomials, scientific notation, linear equations and inequalities, graphing linear equations, and factoring algebraic expressions. Concentrates on properties of integer and rational exponents, rational expressions and equations, systems of linear equations, radicals, radical equations, quadratic equations, functions and their graphs, and applications. A standard college level intermediate course.

### MAJOR COURSE OBJECTIVES:

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

1. Perform basic operations on polynomials and factor polynomials.
2. Use the properties of integer and rational exponents and scientific notation.
3. Solve linear equations and inequalities.
4. Graph linear equations and inequalities in two variables.
5. Determine linear equations from geometric data.
6. Solve systems of equations using graphing, substitution, and elimination.
7. Solve quadratic equations by factoring and by the quadratic formula.
8. Graph quadratic functions.
9. Simplify rational expressions and solve rational equations.
10. Solve literal equations.
11. Simplify radicals and solve radical equations.
12. Interpret functions algebraically, graphically, and numerically and use function notation.
13. Use relevant mathematical terminology, laws, and notation.
14. Solve a variety of application problems in the above areas.
15. Use a scientific and/or graphing calculator proficiently as related to coursework.
16. Use computer technology, which may include the Internet, the Web, email, or computer tutorials to enhance the course objectives.

### COURSE CONTENT:

Polynomial operations	Scientific notation	Linear equations and inequalities
Factoring	Applications	Rational expressions and equations
Integer and rational exponents	Radicals and radical equations	Systems of linear equations
Functions and their graphs	Quadratic equations	Graphs of linear equations and inequalities

## **TEXT/CURRICULUM MATERIALS:**

**REQUIRED:** Sullivan & Struve, Intermediate Algebra., Prentice Hall.

**REQUIRED:** MyMathLab access code

When purchased through the Terre Haute Ivy Tech bookstore the book includes this code. Students purchasing materials used or through another site may buy the access code online by visiting the publisher site at [www.coursecompass.com](http://www.coursecompass.com).

**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.

## ONLINE RESOURCES (MyMathLab):

When you purchased your textbook from the bookstore, you received a MyMathLab access code. This string of letters and numbers will unlock an enormous wealth of information online. You will use this access 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 MyMathLab site online to buy a passkey.

In order to begin using the great resources provided through MyMathLab, you must connect your account to this specific section of the course. The code needed for this course is: **henson25407**. You will only need to enter this course code one time.

You can login to MyMathLab from any computer with internet access. Just use any browser to visit [www.coursecompass.com](http://www.coursecompass.com).

## TECHNOLOGY NEEDS FOR USING MYMATHLAB:

MyMathLab, CourseCompass and MathXL are all products that work together with each other within the same online environment provided by our textbook publisher. These three names mean something different, but students will not usually notice when you move from one to the next. Therefore, most often the package is referred to just as MyMathLab.

In order to access MyMathLab, you need an internet connection and web browser. Bookmark the site: <http://www.coursecompass.com/>.

In order to run applications with MyMathLab, your computer must meet certain requirements and have certain components downloaded onto it. **For this reason, you may NOT be able to access MyMathLab from every computer.** For example, public computer labs often have a block on downloading software to the machine. Many Ivy Tech sites use MyMathLab and some have already made the downloads available on computers in campus libraries and/or open labs.

**When you log into MyMathLab for the first time, run the Installation Wizard to prepare your computer.** Repeat the process on all computers that you might be using during the semester.

**If you need technical assistance with MyMathLab, contact the publisher's Technical Support:**

### ONLINE

Log into <http://www.coursecompass.com>. Click Getting Help in the Need Help? area, then click CourseCompass Product Support.

### BY PHONE

Call 1-800-677-6337. Staff is available Monday through Friday, from 8 a.m. to 8 p.m. Eastern time and Sunday from 5 p.m. to midnight Eastern time.

## 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 MyMathLab 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](http://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.

**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.

**METHOD (S) OF DELIVERY:** Lecture

**METHOD (S) OF EVALUATION:** Homework/Quizzes, 4 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.

**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>	
90% - 100%	A
80% - 89%	B
70% - 79%	C
60% - 69%	D**
Below 60%	F

**\*NOTE: A grade of C or better is required in order to transfer credits to another institution. Also, some programs will require a grade of C or better in this course. Please contact your advisor or the admissions office with questions about this.**

Points will be earned through Homework/Quizzes (100 points) 4 Unit Tests (400 points each) and 1 final exam (100 points). Therefore, you will have 600 points possible for the course:

<u>Grades Assigned by Points</u>	
537 – 600 points	A
477 – 536 points	B
417 – 476 points	C
357 – 416 points	D
356 points or less	F

**HOMEWORK/QUIZZES:** There will be 4 unit assignments, (1 per unit) worth a total of 80 points. The unit assignments (homework) will be completed on the MyMathLab website. There will also be 4 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 1, 2008.**  
**NO HOMEWORK WILL BE ACCEPTED AFTER THIS DATE.**

## 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.

**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 homework exercises will be calculated into the total possible Homework/Quiz points and will not exceed the 100 points total for the semester.**

**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

WEEK	DATE	SECTION	TOPIC
<b>WEEK 1</b>	15-Jan		Orientation
		R.2	Sets and Classification of Numbers
		R.3	Real Numbers and Operations
	17-Jan	R.4	Order of Operations
		R.5	Algebraic Expressions
<b>WEEK 2</b>	22-Jan	1.1	Linear Equations
		1.2	Problem Solving
		1.3	Formulas in Problem Solving
	24-Jan	1.4	Linear Inequalities
		1.5	Compound Inequalities
<b>WEEK 3</b>	29-Jan	2.1	Rectangular Coordinates and Graphs
		2.2	Relations
	31-Jan	2.3	Intro to Functions
		2.4	Functions and Graphs
<b>WEEK 4</b>	5-Feb		Review-- <b>QUIZ 1</b>
	7-Feb		<b>TEST 1 Homework 1 Due</b>
<b>WEEK 5</b>	12-Feb		Lab Day
	14-Feb	3.1	Linear Equations and Functions
		3.2	Slope and Equations of Lines
<b>WEEK 6</b>	19-Feb	3.3	Parallel and Perpendicular Lines
		3.4	Linear Inequalities in Two Variables
	21-Feb	4.1	Systems of Linear Equations
		4.2	Problem Solving with Two Unknowns
<b>WEEK 7</b>	26-Feb		Review-- <b>QUIZ 2</b>
	28-Feb		<b>TEST 2 Homework 2 Due</b>
<b>WEEK 8</b>	4-Mar	GR5	Intro to Polynomials and Polynomial Functions
		5.1	Add/Subtract Polynomials
	6-Mar	5.2	Multiply Polynomials
		5.3	Divide Polynomials
			<b>10 MARCH--14 MARCH</b>
			<b>SPRING BREAK--NO CLASSES</b>
<b>WEEK 9</b>	18-Mar	5.4	Factoring--GCF and Grouping
		5.5	Factor Trinomials
	20-Mar	5.6	Factor Special Products
		5.7	Complete Factoring

