IVY TECH
COMMUNITY COLLEGE

Math 043 Essentials of Algebra II
Course Syllabus – Spring2013

Instructor: HEIDI TRUMBULL
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Office Hours:MW 8-9PM, T 3:30-5, R 12:30-2
Course #-Section: Math 043-XX
Days**: Tuesday & Thursday**
MyMathLab (MML) Website**: www.pearsonmylabandmastering.com**

Phone Number: 260-481-2284
Office: Harshman 2306
CRN: 36894
Room #:
Times: 9:30-12:20
MML Course ID:**TRUMBULL49695 (no capitals)**

COURSE OUTLINE OF RECORD

PREREQUISITES: Demonstrated competency through appropriate assessment (COMPASS ALG 52-65 or ACCUPLACER ELEM ALG 53-73), or a grade of "C" or better in MATH 023 Essentials of Algebra I or MATH 050 Basic Algebra

SCHOOL: Academic Skills Advancement   PROGRAM: Mathematics
CREDIT HOURS: 3   CONTACT HOURS: Lecture: 3
EFFECTIVE DATE OF THIS REVISION: Summer, 2011

CATALOG DESCRIPTION: Reviews operations with polynomials, linear equations, inequalities, graphing, and factoring algebraic expressions. Concentrates on properties of integer and rational exponents and equations, systems of linear equations, radicals, radical equations, quadratic equations, functions including their graphs, and applications

MAJOR COURSE LEARNING OBJECTIVES: Upon successful completion of this course thestudent will be expected to:
1.	Solve compound inequalities and absolute value equations and inequalities and express inequality solutions in interval notation.
2.	Graph linear equations and inequalities.
3.	Determine linear equations from geometric data.
4.	Interpret functions algebraically, graphically, and numerically.
5.	Solve 2 x 2 systems of equations graphically and by substitution and elimination.
6.	Divide a polynomial by a binomial.
7.	Solve quadratic equations by the square root property, factoring and the quadratic formula.
8.	Graph quadratic functions and find the vertex and intercepts of quadratic functions.
9.	Perform basic operations with complex numbers.
10.	Simplify rational expressions, including complex fractions, and solve rational equations.
11.	Use the properties of rational exponents.
12.	Simplify radicals and solve radical equations.
13.	Use relevant mathematical language, laws, and notations appropriately.
14.	Solve a variety of application problems.

15. Use a scientific calculator proficiently as related to coursework.
16. Use computer technology which may include the Internet, email, or computer software to enhance the course objectives

COURSE CONTENT: Topical areas of study include:

A brief review of graphing, writing, and solving linear equations	Radicals and radical equations
Review polynomial operations and factoring	Quadratic equations
Solving absolute value equations, inequalities and compound inequalities	Complex numbers
Integer and rational exponents	Functions and their graphs
Rational expressions and equations	Applications
Systems of linear equations	

REQUIRED TEXT &MATERIALS

1. Text: <u>Beginning and Intermediate Algebra 5e</u>, by Martin-Gay &MyMathLab Student Access Kit (ISBN: 978032174082)
2. Notebook or binder
3. Scientific Calculator: We recommend Casio fx-115or 300 or Texas Instruments TI-30XS. **Graphing and cell phone calculators are not permitted.** You must be able to show all work.

Course Communication
Ivy Tech Community College instructors are committed to responding to students within two business days. Use only ivytech.edu email through Campus Connect.

ASSIGNMENTS & GRADING

Due Dates & Deadlines
The Syllabus and Course Calendar are tools to help students understand the course, expectations, and deadlines. Deadlines are also indicated in the Homework tab of MyMathLab. Students should check the calendar frequently for deadlines and to be aware of what to expect next. Deadlines are subject to change.

Exams
Students will need to complete the exam within the allotted time. The exams will be graded within 2-3 days and posted to the grade book in MyMathLab. All work should be shown neatly on the exam or scrap paper that must be attached to the exam.

Evaluation Procedures:

	% of Grade	Grading Scale:	
Test # 1	11%	90-100%	SA
Test # 2	11%	80-89%	SB
Test # 3	11%	70-79%	SC
Test # 4	11%	60-69%	SD
Test # 5	11%	0-59%	SF
Comprehensive Final	20%	Stopped Attending	SFW
Quizzes, Homework & Multimedia	25%		
Total	**100%**		

General Information

1. **<u>Attendance is required</u>.** Students are expected to attend class session in full.Students are responsible for all class notes, materials and assignments, whether absent or present.

2. **One-on-one tutoring is available in the Center for Academic Excellence**. Call 480-4262 to make an appointment in Harshman 1610.

3. Students may access MyMathLab from anywhere that has an Internet connection by logging onto http://pearsonmylabandmastering.com/. You may work on homework, quizzes and practice tests outside of class.

4. Grades are maintained online in MMLin the grade book tab. Students are responsible to track their progress.

5. Tests are the confidential property of Ivy Tech Community College and may not be kept by students.

6. A course grade of C or higher is required to progress to the next course after MATH 043. Students who do not meet this standard are encouraged to retake the COMPASS or ASSET placement exam. If the score is sufficient, students may progress to program-level courses, regardless of the grade earned in Math 043.

7. Class Rules
    a. No children are permitted in classrooms, hallways, or study areas
    b. No personal electronic devices other than calculators may be used in class
        i. Cell phones must be set to silent
        ii. Cell phones may not be used as calculators
        iii. Music players may not be used in class
    c. You may not receive assistance on tests
    d. No food or beverages allowed in the classroom

8. <u>Make–up tests require the instructor's approval in writing in advance</u>and will be granted in documentable, emergency situations. A maximum of one makeup test will be allowed. (This does not state that everyone gets one make up test. It states that no one may make up more than one test). Make-up testsmust be completed within 2 class sessions after the original test date.

9. Tests, once taken and graded, are the property of Ivy Tech Community College and are confidential. Tests must be returned to the instructor before leaving the room.

COLLEGE POLICIES

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.

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 contain nothing unlawful, unethical, or libelous and do not constitute any violation of any right of privacy.

ADA Statement
Ivy Tech Community College seeks to provide reasonable accommodations for qualified individuals with documented disabilities. If students need an accommodation because of a documented disability, please contact the Office of Disability Support Services at least 30 days before the start of the semester (If possible).

Breathe easy
Ivy Tech–Northeast is committed to providing a healthy, comfortable and productive environment for the students, faculty and staff of this campus. The use or sale of any tobacco product is prohibited on college-owned, operated, or leased property or vehicles at any time. The policy applied to all Ivy Tech–Northeast facilities and grounds, regardless of location. Smoking, including the use of an e-cigarette, shall not be permitted in any enclosed space and is also prohibited outdoors on all college campus property, including parking lots. This policy applies to all students, faculty, staff and visitors. **Tickets and fines will be issued to violators.**

IVY Tech Growing Greener
Ivy Tech Community College is committed to a comprehensive sustainability plan. We ask everyone to participate in energy conservation and recycling. The recycling bins in classrooms and offices are for single-stream recycling (clean dry paper/cardboard, plastic containers, aluminum & tin/steel cans and glass). Empty the liquid from all containers before depositing. Materials that cannot be recycled should be placed in garbage cans. Turn off lights when leaving a room.

Library
The Ivy Tech Library is available to students on and off campus, offering full text journals, books, and other resources essential for course assignments. The Library can be accessed from the Library tab in Blackboard or from the Library tab in Campus Connect.

Withdrawal
To withdraw from this course, students are responsible for completing an official withdrawal form with the registrar or withdraw online. **Note:**Withdrawing from class may affect or cancel financial assistance. Students receiving financial assistance should check with the financial aid office before withdrawing.
The last day to withdraw from this course isFriday, April 26, 2013.

Right of Revision
The college reserves the right to change any statements, policies or scheduling as necessary. Students will be informed promptly of any and all changes.

Course Calendar – 16 SESSIONS

College Holidays (No Classes): Monday, January 21; Monday, March 10 – Sunday, March 17.

Week	Session	Date	Chapter & Section Numbers	Pages
1	1	T3/19	Review Graphs and Introduction to Functions (Chapters 3)	168-237
			Cover Chapter 3 Highlights, Definitions, Concepts & Examples	238-245
			Work Chapter 3 Test All	245-247
1	2	R3/21	Solving Systems of Linear Equations (Chapter 4)	
			4.1 Solving Systems of Linear Equations by Graphing	249-258
			4.2 Solving Systems of Linear Equations by Substitution	258-265
			4.3 Solving Systems of Linear Equations by Addition	265-272
			4.5 Systems of Linear Equation and Problem Solving	280-305
2	3	T 3/26	Review Exponents and Polynomials (Chapter 5 sect. 5.1-5.5)	306-353
			Cover Chapter 5 Highlights, Definitions, Concepts & Examples	364-370
			Work Chapter 5 Test (Problems 1-28)	370-371
			5.6 Dividing Polynomials	353-359
			Review Chapters 3, 4 & 5 for Test #1	371-372
2	4	R3/28	**Test #1 - Chapters 3, 4 & 5**	
			6.1 The Greatest Common Factor and Factor by Grouping	373-382
			6.2 Factoring Trinomials of the Form x²+bx+c	382-389
3	5	T 4/2	6.3 Factoring ax²+bx+c and Perfect Square Trinomials	389-397
			6.4 Factoring ax²+bx+c and Perfect Square Trinomials	397-402
			6.5 Factoring Binomials	402-409
			6.6 Solving Quadratic Equations by Factoring	412-421
3	6	R4/4	6.7 Quadratic Equations and Problem Solving	421-430
			7.1 Rational Functions and Simplifying	439-450
			7.2 Multiplying and Dividing Rational Expressions	451-460
			7.3 Adding/Subtracting with Common Denominators	460-467
4	7	T 4/9	7.4 Adding and Subtracting Rational Expressions	468-474
			7.5 Solving Equations Containing Rational Expressions	474-481
			7.6 Proportion and Problem Solving with Rational Equations	482-495
			7.7 Simplifying Complex Fractions	495-501
			Review Chapters 6 & 7 for Test #2	
4	8	R4/11	**Test #2 – Chapters 6 & 7**	
			8.1 Graphing and Writing Linear Functions	510-519
			8.2 Reviewing Function Notation & Graphing Nonlinear Functions	519-527
5	9	T 4/16	9.1 Compound Inequalities	551-559
			9.2 Absolute Value Equations	559-564
			9.3 Absolute Value Inequalities	564-570
			9.4a Graphing Linear Inequalities in Two Variables (Objective 1)	570-574
			Review Chapters 8 & 9 for Test #3	
5	10	R4/18	**Test #3 - Chapters 8 & 9**	
			10.1 Radicals and Radical Functions	586-595
			10.2 Rational Exponents	596-603
6	11	T 4/23	10.3 Simplifying Radical Expressions	603-611
			10.4 Adding, Subtracting and Multiplying Radical Expressions	611-617
			10.5 Rationalizing Denominators and Numerators	617-623

Week	Session	Date	Chapter & Section Numbers	Pages
6	12	R4/25	10.6 Radical Equations and Problem Solving	624-633
			10.7 Complex Numbers	634-641
			Review Chapter 10 for Test #4	641-648
7	13	T 4/30	**Test #4 - Chapter 10**	
			11.1 Solving Quadratic Equation by Completing the Square	652-661
			11.2 Solving Quadratic Equations by The Quadratic Formula	662-672
7	14	R5/2	11.3 Solving Quadratic Equations using Quadratic Methods	672-681
			11.5 Quadratic Functions and Their Graphs	689-697
			11.6 Further Graphing of Quadratic Functions	697-705
			Review Chapter 11 for Test #5	705-710
8	15	T5/7	**Test #5 - Chapter 11**	
			Final Review	
8	16	R5/9	**Final Exam**	

Note: At the discretion of the Instructor the schedule may vary.