

## Region One ISDs in partnership with RGV – IHEs

# TRANSITION TO COLLEGE MATH COURSE A (1 semester)

based on

## College Preparatory 1 at RGV - IHEs

**Target Students:** Juniors or seniors who have not demonstrated college readiness as defined by HB5. This course is recommended for students who either did not take Algebra II or those who made an overall grade of less than 75 in Algebra II.

**Pre-requisites:** Student has credit for Algebra I and Geometry, and has met the passing standard on the Algebra I EOC.

### **Course Description as defined by the RGV – IHEs:**

College Preparatory 1: Topics include real numbers, rules of exponents, polynomials, factoring, linear equations, linear inequalities, graphing linear equations and inequalities, and rational expressions. An overall grade for the semester of 70 or higher indicates that the student has completed the course and may be considered complete in College Preparatory 1, Elementary Algebra, or equivalent at the RGV-IHEs.

### **Course Student Learning Outcomes & Learning Objectives as defined by the RGV - IHEs:**

STUDENT LEARNING OUTCOMES	LEARNING OBJECTIVES
<b>THE STUDENT WILL:</b>	
1. Identify and apply properties of real numbers, and perform accurate arithmetic operations with numbers in various formats and number systems.	1.1 Add, subtract, multiply and divide real numbers and manipulate certain expressions, including understanding the order of operations.
	1.2 Evaluate and simplify exponents of real numbers.
	1.3 Find square roots of perfect square numbers.
2. Demonstrate an understanding of linear equations, inequalities, and graphs.	2.1 Solve problems using linear equations and inequalities
	2.2 Plot ordered pairs and graph linear equations
	2.3 Find slopes and intercepts of lines
3. Demonstrate the ability to perform basic operations on polynomials, and an understanding of algebraic operations.	3.1 Add, subtract, multiply, and divide polynomials.
	3.2 Factor polynomials using the techniques of the greatest common factor, grouping, and differences of two squares.
	3.3 Multiply, divide and simplify rational expressions.
	3.4 Evaluate and simplify exponents of algebraic expressions.
4. Solve word problems and application problems.	4.1 Solve word problems and application problems utilizing linear equations and inequalities and concepts from geometry such as area and perimeter of geometric shapes.

### **Course Goal as defined by RGV-IHEs:**

- This course is intended to prepare students for the study of Intermediate Algebra and College Preparatory 2, a course that builds the foundation for the study of College Algebra and other entry level Mathematics courses.

### **Additional Public Ed Goals:**

- Students experience a combination of class and student-directed lab time to simulate the RGV - IHEs course structure, with a particular emphasis on mastery through student work in class and for homework.
- Students manage their own learning through effective self-scheduling, self-monitoring, and effective peer study groups.

### **Course Resources approved by RGV - IHEs:**

#### **Textbook:**

The course is aligned to the **Free** online textbook:

Tyler Wallace, Creative Commons Attribution 3.0, Beginning and Intermediate Algebra

<http://wallace.ccfaculty.org/book/book.html>.

A print version of this book is available for purchase at :

<http://www.lulu.com/shop/tyler-wallace/beginning-and-intermediate-algebra-2nd-ed/paperback/product-14735119.html>

### **Textbook Supplements Include:**

- Student Solution Manual
- Practice problems
- Index of Video by Topics

**Course Online Resource:** *Schools will use an approved online homework system either for student homework or in-class lab work to provide immediate feedback and significant practice. Options are MyMathLab or Math XL – software provided by Pearson Education, and linked to textbooks such as Lial and McGinnis; or WebWork, a free software hosted by UTPA.*

**Final Exam & Grading Policy approved by RGV - IHEs:**

Students will take the Common Final Exam provided by the RGV - IHEs.

- The grading policy for the course will be decided upon by the high school in accordance with district's policies.
- The final assessment prepared by the IHE partners will compose at least 30% of the final course grade for Course A.
- Student work either in an online computer system or on paper is a required component of the coursework.
- Students who successfully complete Course A are encouraged to take the TSI Assessment.