

Region One ISDs in partnership with RGV - IHEs

TRANSITION TO COLLEGE MATH COURSE B (1 semester)

based on

College Preparatory 2 at RGV – IHEs: Intermediate Algebra

Target Students: Junior 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: Satisfactory performance in Algebra I, Geometry, the Algebra I EOC, and Transition to College Math Course A. Students may show mastery of Transition to College Math Course A through Credit by Exam.

Course Description as defined by RGV - IHEs:

Intermediate Algebra / College Preparatory 2: Topics include factoring techniques, radicals, algebraic fractions, complex numbers, graphing linear equations and inequalities, quadratic equations, systems of equations, graphing quadratic equations and an introduction to functions. Emphasis is placed on algebraic techniques in order to successfully complete College Algebra. An overall grade for the semester of 70 or higher, and a 70 or higher on the final exam indicates that the student has met the RGV – IHEs criteria for College Preparatory 2 and Intermediate Algebra, and the student is prepared for any entry level college mathematics course at the RGV - IHEs without further assessment or remediation.

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

STUDENT LEARNING OUTCOMES	LEARNING OBJECTIVES
THE STUDENT WILL:	
1. Simplify, factor, and manipulate algebraic expressions and equations.	1.1 Add, subtract, multiply and divide polynomials.
	1.2 Factor polynomials: factoring out a monomial, factoring by grouping, and factoring quadratic expressions.
	1.3 Add, subtract, multiply and divide rational expressions.
	1.4 Simplify expressions involving rational exponents and simplify radicals.
	1.5 Add, subtract, multiply, divide expressions involving radicals and solve radical equations
	1.6 Add, subtract, multiply and divide complex numbers
2. Solve algebraic equations: Linear, Quadratic, Rational, and Radical.	2.1 Solving linear equations.
	2.2 Solve quadratic equations by factoring, completing the square, the quadratic formula and the square root property.
	2.3 Solving equations involving rational and radical expressions.
	2.4 Solve systems of linear equations in two variables.
3. Examine and interpret the linear and quadratic graphs of equations and inequalities	3.1 Graph linear equations, linear inequalities, and systems of two linear equations in two variables.
	3.2 Find the slope of a line & write its equation.
	3.3 Graph quadratic equations in two variables.
4. Solve application problems.	4.1 Solve word problems involving linear and quadratic equations.
5. Use and interpret function notation in both algebraic and graphical contexts.	5.1 Recognize functional notation and evaluate functions.

Course Goal as defined by RGV-IHEs:

- This is the final course in the developmental mathematics sequence and its purpose is to prepare students for entry level college mathematics courses.

Additional Public Ed Goals:

- Students are prepared to enter post-secondary college programs with no additional remediation in mathematics.
- 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: Schools should choose a textbook that covers the learning objectives in course A and B.

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 RGV - IHEs Common Final Exam.

- The grading policy for the course will be decided upon by the high school in accordance with their district's policies.
- An overall grade for the semester of 70 or higher, and a 70 or higher on the final exam indicates that the student has met the RGV - IHEs criteria for College Preparatory 2 and Intermediate Algebra, and the student is prepared for College Algebra or other entry level mathematics courses without further assessment or remediation.
- Homework is a required component of the coursework.