

**[School District Name]**  
**Syllabus**  
**Part II**  
**Official Course Description**

**SUBJECT AREA** **Mathematics**

**COURSE RUBRIC AND NUMBER** **[District Course Number]**

**COURSE TITLE** **College Preparatory Integrated Mathematics Course II**

**COURSE CREDIT** **0.5 Advanced Mathematics**

**I. Description**

This course addresses a variety of mathematical topics needed to prepare students for success in college-level mathematics. In addition, the course supports students in developing skills and strategies needed to success in college. Mathematics topics include: factoring techniques, radicals, algebraic fractions, complex numbers, graphing linear equations and inequalities, quadratic equations, systems of equations, graphing quadratic equations, an introduction to functions, and probability. Successful completion of this course, as defined by the Memorandum of Understanding (MOU) with the partnering institution(s), grants the student an exemption to TSI requirements for mathematics at the partnering institution(s). An overall grade for the semester of 75 or higher indicates that the student has met the college readiness standards established by the School Districts of Region 19, El Paso Community College (EPCC), and The University of Texas at El Paso (UTEP) indicating that the student is prepared for college-level mathematics.

**II. Course Learning Outcomes and Objectives**

This is the final course in the developmental mathematics sequence and its purpose is to prepare students for college level mathematics. Students are prepared to enter post-secondary work-force certificate programs with no additional remediation in mathematics. Students experience a combination of class and student-directed lab time to simulate the EPCC and UTEP course structure. Students manage their own learning through effective self-scheduling, self-monitoring, and effective peer study groups.

STUDENT LEARNING OUTCOMES	LEARNING OBJECTIVES	High School Equivalent
<b>THE STUDENT WILL:</b>		
1. Solve algebraic equations and inequalities involving rational expressions, radicals, quadratics, or linear expressions.	1.1 Add, subtract, multiply and divide polynomials.	Algebra I, Geometry, Algebra II, & Pre-Calculus
	1.2 Factor polynomials.	
	1.3 Add, subtract, multiply and divide rational expressions.	
	1.4 Simplify complex fractions.	
	1.5 Solving equations involving rational expressions.	
	1.6 Simplify equations involving rational exponents and simplify radicals.	
	1.7 Add, subtract, multiply, divide expressions involving radicals and solve radical equations.	
	1.8 Add, subtract, multiply and divide complex numbers.	
	1.9 Solve quadratic equations by factoring, completing the square, quadratic formula and square root property.	

STUDENT LEARNING OUTCOMES	LEARNING OBJECTIVES	High School Equivalent
<b>THE STUDENT WILL:</b>		
2. Examine and interpret the linear and quadratic graphs of equations and inequalities.	2.1 Graph quadratic functions and inequalities.	Algebra I & Algebra II
3. Solve application problems.	3.1 Solve word problems.	all courses
4. Use and interpret function notation in both algebraic and graphical contexts.	4.1 Recognize functional notation and evaluate functions.	Algebra I & Algebra II
5. Use counting principles and probability to quantify uncertainty in a variety of real-world contexts.	5.1 Build a finite sample space to model the outcomes of real-world events by determining the nature and number of elements using counting techniques.	Advanced Quantitative Reasoning & Statistics
	5.2 Compute and interpret the probability of a real-world event; and compute the probability of its complement and interpret its meaning.	
	5.3 Compute and interpret the probability of conditional and compound events.	
	5.4 Interpret statements about chance, risk, and probability that appear in everyday media (including terms like unlikely, rare, and impossible).	
	5.5 Interpret in context marginal, joint, and conditional relative frequencies in context for data summarized in a two-way table and identify which relative frequency is appropriate to answer a contextual question.	
	5.6 Demonstrate understanding of absolute risk and relative risk (percentage change in risk) by describing how each provides different information about risk.	

### III. Evaluation

- A. Students will take the Final Exam.
- B. If a student scores at least 60 on the Final Exam, then the student's overall grade for the semester will not be less than 75 on the high school transcript. If a student scores less than the required 60 on the Final Exam, then the student's overall grade for the semester will not exceed 74 on the high school transcript.
- C. An overall grade for the semester of 75 or higher indicates that the student has met the criteria, and the student is prepared for college level mathematics without further assessment or remediation.
- D. For the attendance policy, please refer to the [school district name]'s most current Student Handbook and Code of Conduct.