



## TRANSITION TO STEM (COLLEGE ALGEBRA)

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### COURSE DESCRIPTION

The Transition to STEM (College Algebra) course is for students with career goals that require advanced algebraic skills. Successful completion of the course guarantees student placement into College Algebra or its equivalent at any Illinois community college and select universities. The main emphasis of the course is the understanding of functions (linear, polynomial, rational, radical, and exponential) and how they naturally arise through problem solving and authentic modeling situations. Essential algebraic topics include simplifying expressions, solving equations, and graphing functions, which will be explored deeply, allowing students to address any deficits.

Transition to College Algebra will be utilizing MARKS

### COURSE LEARNING OUTCOMES

By the end of this course, students will:

1. apply, analyze, and evaluate the characteristics of functions in mathematical and authentic problem solving situations.
2. simplify expressions, solve equations, and graph functions from the linear, polynomial, rational, and radical function families in mathematical and authentic problem solving situations.
3. use their understanding of exponential functions of the form  $f(x) = Cbx$ , for some constants  $b > 0$  and  $C$ , in mathematical and authentic problem solving situations.
4. create, solve, and reason with systems of equations and inequalities in mathematical and authentic problem solving situations.

### COURSE UNITS OF STUDY

#### Semester 1

Linear Functions  
Polynomial Functions  
Rational Functions

#### Semester 2

Radical Functions  
Exponential Functions  
Capstone Project

### DISTRICT RESOURCES

District Website: <https://www.u-46.org/Page/13604>

Chromebook: Charged Chromebooks are to be brought to class on a daily basis. If a student does not bring his or her Chromebook, the student is expected to continue participating in class and complete all class work.

### SPECIFIC COURSE ACTIVITIES

In order to demonstrate proficiency in course standards, students will need to:

1. Participate in class activities (take notes, contribute to group work, complete in-class tasks, ask questions, etc.)
2. Complete assigned homework as needed in order to practice and improve learning.
3. Use formative assessments to track learning progress and identify strengths and weaknesses with the course content and complete outside practice in activities when necessary.
4. Complete all assessments (formative and summative).
5. Create and follow through on a plan of improvement, when demonstrating little to no understanding of learning targets.

## MAKEUP POLICY

Summative assessments that are missed will be marked “missing” or “not evaluated” in the grade book until completed. Students have five school attendance days to complete a missed assessment. Incomplete assessments result in a lack of evidence of student’s understanding and may cause a student to fail.

## GRADE SUMMARY

Unit Summative Assessments	50%
Problem Based Learning Projects	30%
Midterm Exam	10%
Final Exam	10%

## OVERALL GRADE DETERMINATION

To successfully complete the course and earn an overall grade of C or better, students must complete all summative assessments.

### Unit Summative Assessments and Problem Based Learning Projects

Letter Grade	Proficiency Score	What Does The Proficiency Score Mean?
A	4	Demonstrates ability to apply extended thinking about the skills and knowledge of the standard
B	3	Demonstrates skills and knowledge of the standard
C	2	Demonstrates a basic understanding of the skills and knowledge of the standard
D	1	Demonstrates a below basic understanding of the standard; may demonstrate gaps in skills & knowledge
E	0	There is no, or insufficient, evidence of learning to assess the standard at this time

### Midterm and Final Grade Scale

Letter Grade	Percent
A	90-100%
B	80-89%
C	70-79%
D	60-69%
E	Below 60%

Competency based rubrics with set criteria will be used to determine students’ level of proficiency using the 0-4 scale. Rubrics will be distributed at the beginning of a unit of study and will be referred to throughout the learning progression for the purpose of providing feedback.

Infinite Campus will be used to communicate students’ proficiency in the course. The equal incremental grading scale to determine a letter grade is below.

Equal Incremental Grading	
A	3.21 – 4.00
B	2.41 – 3.20
C	1.61 – 2.40
D	0.81 – 1.60
E	0.80 - Below

## **REASSESSMENTS**

Reassessments will not be allowed on the midterm and final exam assessments

Students will have one reassessment opportunity to demonstrate higher levels of achievement on other summative assessments after evidence of re-learning has been demonstrated. The opportunities may be initiated by the instructor or the student, but always at the discretion of the teacher. Reassessments must be completed within a reasonable time of the original assessment being returned to the student.

After a reassessment, the most current grade will show in Infinite Campus. For example, if a student starts with a 2 and then earns a 1 on a reassessment, the 1 will be the score reflected within Infinite Campus and in grade determination. If the student instead earns a 3, the 3 will be the score reflected.

## **LATE WORK**

Any late work that a student may have must be turned in within the reassessment window. Once the reassessment window is closed, the assessment will no longer be accepted.

## **EXTRA CREDIT AND BONUS POINTS**

To ensure that grades reflect progress toward and achievement of the standards, giving extra credit points or bonus points will not occur in this class. The vision of U-46 is that behavior/participation will be reported separately from academic achievement and is not a component of a student's academic grade.

## **ACADEMIC DISHONESTY/PLAGIARISM POLICY**

Academic dishonesty refers to cheating, copying, plagiarizing, or otherwise representing the work of others as one's own through verbal, written, graphic, electronic, or other means. Students determined to have been academically dishonest are subject to disciplinary action. Consequences will depend on the severity of the offense, the number of offenses, the impact on other students and teacher, and/or the curriculum. Academic dishonesty undermines the learning process and will not be condoned.

## **TRANSITIONING TO COMMUNITY COLLEGE FROM TRANSITIONAL MATH STEM**

The College will ensure that any student successfully completing a transitional math course in accordance with the grading policies in the Course Documentation, is eligible to enroll in MTH 102 General Education Statistics (IAI Gen Ed: M1 902), MTH 104 Liberal Arts Mathematics (IAI Gen Ed: M1 904), MTH 107 Technical Math, MTH 110 Math for Elementary Education Teachers I, or MTH 112 College Algebra without any further placement test or other prerequisite requirement, provided the enrollment occurs within 18 months of the transitional math course completion as indicated on the student's high school transcript.