

Transitional Math Syllabus

STEM Pathway

Course Information

Course Name	
Course Pathway	High School Transitional Math 4 – STEM
ISBE SIS Code	02055A001
Portability Code	TM001
Course Duration	<i>(1 semester or 1 year)</i>

Contact Information

Teacher Name	
Teacher Email	
School Phone Number	
School Name	
Community College Name	

Course Description

Math course framework built around essential algebraic competencies designed to prepare students for college and career pathways in areas such as: Science, Technology, Engineering, and Math or STEM which require advanced algebraic skills or calculus. Course design will enable students to transition directly into credit bearing college-level algebra courses. Students will engage in deepening conceptual understanding using algebra and mathematical applications of algebra and functions and how functions naturally arise using authentic modeling situations. The function families (linear, polynomial, rational, radical, and exponential) will be emphasized. Additionally, the course shall emphasize the eight mathematical practices, particularly modeling within the setting of authentic and contextualized applications, and upon completion, the student should be able to: demonstrate and justify both orally and in writing conceptual understanding of functions combined with advanced algebraic knowledge to solve complex, contextualized, multi-step problems in authentic settings.

Evaluation

Course evaluation methods must meet the agreed upon grading structure in the MOU.

- *Include specific information on grading and assessment.*

Course Materials

Course materials must support the competencies of a transitional math course.

- *Include information on learning resources that are required and most frequently used such as textbooks, statewide resources, open educational resources (include links when feasible), etc.*

Course Units of Study

Units of study describe the organization of all the competencies and key performance indicators for the pathway as well as the required emphasis on problem/project-based learning. A Content Competencies spreadsheet corresponding to the units should accompany this syllabus.

- *Include a detailed topical outline for each unit of instruction*

Process Competencies

Transitional courses are intended to help students develop conceptual understanding and problem-solving ability as well as college and career readiness. To that end, the courses include process competencies related to mathematical and student success. While these competencies are not assessed directly, they should be a part of instruction and assessed indirectly. See page 6 in the *Competencies and Policies Document* at www.iltransitionalmath.org for more information.

- *Provide evidence illustrating how this criterion is being met. Evidence should address how the process competencies as well as the standards for mathematical practice are included throughout the course. Include a narrative describing how this criterion is met in your own words.*

Problem/Project-based Learning

Transitional math instruction provides students with the mathematical knowledge and skills to meet their individualized college and career goals and to be successful in college-level math courses, while aligning with the Illinois Learning Standards. These courses work to address the gaps in understanding by working on bigger problems, emphasizing problem-based learning and projects, communication, and integration of concepts, not just skill acquisition. Contexts used should be authentic whenever possible and apply to the student's college or career path.

- *Provide evidence illustrating how this criterion is being met. Evidence should address how problem and/or project-based learning is incorporated throughout the course. Include a narrative describing how this criterion is met in your own words. Also, include a sample problem or project.*