

EWU Math Co-requisites

Co-Requisites in Math: Increasing Success and Decreasing Time to Degree

A College Spark- funded project

People

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Co-requisites are 3-credit college-level math classes paired with a college math class. We use a co-mingle rather than a cohort model. Students must either place into the prerequisite for the target course or pass MTHD 103: Basic algebra.

MATH 130: corequisite for target course MATH 107 Mathematical Reasoning

MATH 131: corequisite for target course MATH 114 Algebra Concepts



Timeline and Process

August 2018-Winter 2019: Designed curricula
Spring 2019: Piloted one section of each course
Summer 2019: Analyzed data
Fall 2019: Piloting two sections of each course
Winter 2020: Will pilot two sections of 131 and three sections of 130, and will continue analyzing data and report it.
Will offer both courses in Spring 2020, and if there's enough demand, in Summer 2020.

Results so far:

Pass rates in the first two pilots (Spring & Fall 2019) were as good as the pass rates in the control groups (ie. Those students who took the prerequisite and then the target class). In Fall 2019, students in MATH 107 who concurrently took MATH 130 outperformed those students in MATH 107 who had taken a prerequisite.

Students should not expect the course to be a study hall or lab for the partner course, but rather a support that provides a foundation for the content and learning strategies needed in the partner course. They should expect to actively participate and to work with other students on problems and mathematical reasoning with support from outstanding instructors.

Framework

Transparent teaching: Explicit with students about what they are learning, how we expect them to learn, and how that learning contributes to their success in math.

Deep learning strategies: Requires students to be active learners, making connections among mathematical ideas while improving conceptual understanding and procedural fluency.

Build mathematical habits of mind: helps students develop ways of thinking and habits of learning mathematics that further support their independence as mathematical thinkers and doers.

TA support: secondary math majors help out in the classroom, with grading, and sometimes have office hours.

