

Designing Curriculum to Support Students

College of the Redwoods

Their Approach

In the hope of streamlining the college experience for students and contributing to their success across campus, College of the Redwoods (CoR) increased collaboration among disciplines. In particular, noting that fear of intermediate algebra seemed to be preventing Career Education (CE) students from completing their degrees, the math department created distinct math pathways for students pursuing different disciplines. CoR chose to focus on skills applicable to students' degrees and certificates instead of forcing them through difficult classes they don't need.

What They Did

The math department surveyed other departments about what kind of fluency in math students will need to succeed. Studying hard sciences, they found, requires a level of math fluency that studying behavioral sciences, liberal arts, and CE does not. In response, CoR devised three math pathways:

1. the STEM Pathway includes college algebra, college trigonometry, and the calculus series;
2. the Behavioral Sciences, Nursing, and Business Pathway includes statistics; and
3. the Arts and Humanities and CE Pathway includes contemporary mathematics and applied career-technical math.

Instead of learning geometry as a series of abstractions, CE students apply it to technical careers. For instance, they might determine the area of a room to tile; estimate the cost of materials to perform a job; or assess the fluid pressure inside a pipe. "It was amazing how excited and engaged faculty in CE were when they knew their concerns and expertise played such an important role in the development of the course," says math instructor Jon Pace.

What They Learned

The math department found that keeping quantitative reasoning skills connected with a profession made math more relevant for more students.

"It's important to have conversations with counselors, administrators, and folks all over campus," says math instructor Amber Buntin, "So everyone understands the changes we are going through and the transition is as seamless as possible."

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