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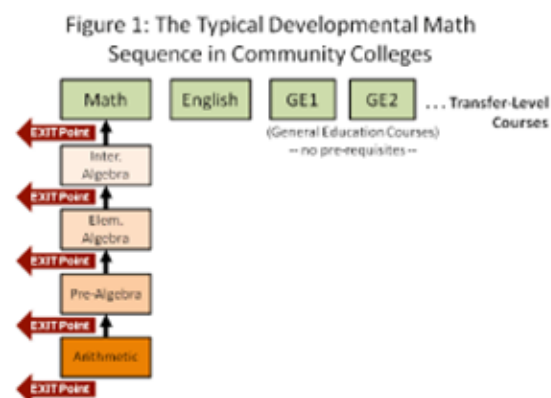
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[Home](#) > Developmental Math

Developmental Math

The Problem

[1] The nation's 1,000 community colleges enroll more than 6 million students or upward of 40 percent of all postsecondary students in the United States. These institutions are the front line in our nation's efforts to advance social equity and supply labor needs for a 21st century economy. At present, however, students with varied academic and language backgrounds enter community colleges with high aims and ambition, only to languish, sometimes for years, in developmental courses that are not credit bearing and do not move them toward a degree, certificate or transfer. This is especially true in mathematics. Recent studies report that between 60 and 70 percent of the students who are referred to developmental mathematics do not successfully complete the sequence of required courses. Many spend long periods of time repeating courses or simply leave college. Either way, they are not able to progress towards their career goals.



Both the structure and the content of the current developmental math sequence create obstacles to student success. First, the sequence is long, typically three or four courses. Most colleges begin with a basic arithmetic class. The sequence then follows the high school curriculum towards calculus: pre-algebra (covering middle school math); elementary algebra (Algebra I); and intermediate algebra (Algebra II). And the content rarely provides the mathematics skills necessary for jobs that these students will pursue.

The Carnegie Solution

Carnegie is catalyzing and supporting the growth of a Networked Improvement Community (NIC) aimed at dramatically increasing the proportion of community college students who are mathematically prepared to succeed in further academic study and/or occupational pursuits. Specifically, we are developing an *integrated pathway to and through statistics*. This is not a course- or curricular-design project, however—or not only that. This is a field-building movement that will engage practitioners, researchers, design/developers, institutional leaders and policy makers in Design, Educational Engineering, and Development (DEED) [2] in ways that fundamentally challenge and change the character of developmental mathematics.

Carnegie's Role

Carnegie is bringing together the right mix of practitioners, researchers, social entrepreneurs, policy makers, and other stakeholders—including students—to map the dimensions of the problem, identify promising solutions, and then to advocate and support the efforts of a community engaged in continuous evidence-based improvement. Longer term, we seek to “disrupt” the field, catalyzing a fundamental rethinking and remaking of the way mathematics is taught and learned—and in the process building a new infrastructure for educational improvement.

Problem Solving

Source URL: <http://www.carnegiefoundation.org/problem-solving/developmental-math>

Links:

[1] <http://www.carnegiefoundation.org/sites/default/files/problem-solving/dev-math-sequence.png>

[2] <http://www.carnegiefoundation.org/problem-solving/approach>