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Serving Underprepared Students

In many US colleges and universities, many incoming students are not prepared to take credit courses in mathematics. Traditionally, they are placed into remedial courses that they must pass before entering credit courses. However, the success rate of students placed into remedial sequences is often alarmingly low, leading to concerns about student attrition. One approach that shows promise in addressing this problem is co-remediation, or just-in-time teaching, that allows students who do not place into a course to take it by studying prerequisite material concurrently. In this talk, we will consider what can make such an approach successful and what the dangers are. With examples from several courses (calculus, precalculus, algebra, statistics), we will look at questions to consider in designing co-remediation. How should background material be designed? Where and when should it be introduced? What pedagogy is most effective? How much emphasis should be placed on testing? On study skills? We will also talk about how a department can manage and evaluate co-remediation efforts.