

## San Diego State

### Changes in Quantitative Reasoning (where we saw more areas for concern) since Last year's Data Review:

#### 1. Revised CAL201X

No longer grouping the Statistics and other Quantitative Reasoning courses in CAL into one course taught by a single instructor with TAs or a modified supplemental instruction. The College took ownership and had three different sections linked to one, two or three disciplines and taught by faculty in the college. This course needs further redesign.

#### 2. Revising MATH105 and MATH105X

Many students in Math 105 are not well-prepared for college algebra. As a consequence, the class has spent nearly 4 weeks on middle school level mathematics. Many students are struggling with that material while others are feeling bored. The class will also not get as deeply into algebra as was intended. Part of the problem is that some students are not in STEM majors, although we have tried to make it clear to students that the course is designed for students that will continue in Math 141 and then onto a calculus course (Math 124 or Math 150). We will work with advising to improve the messaging to students for next Fall. In addition, starting in 2020, Math 105 will be renumbered Math 140 so that Math 140-141 will more clearly be the preparatory sequence---college algebra to precalculus---for the calculus sequence Math 150-151.

#### 3. Utilizing CrowdMark for grading

This tool has reduced bias in grading and allowed us to see how long people take grading. It allows virtually eliminates cheating. More importantly we can quantify common student error as a way to shift pedagogy.

#### 4. Incorporating Metacognition

Math is incorporating Meta Cognitive activities into the support courses. Students are asked to look at their notes and annotate them and to reflect before and after courses.