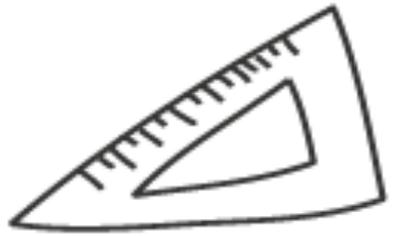




$$a+b+c$$



$$x-y=?$$



@sdmathnetwork

Zeroing in on Algebra II/Integrated III A Problem-Solving Symposium

August 11th, 2017 | Kearny High School

#zerosd17 | sdmn.events.ucsd.edu

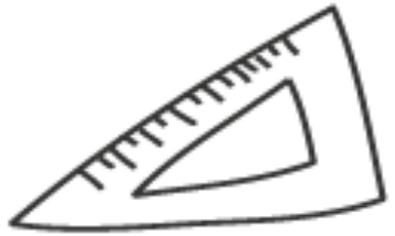


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$$a+b+c$$





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Defining the Problem

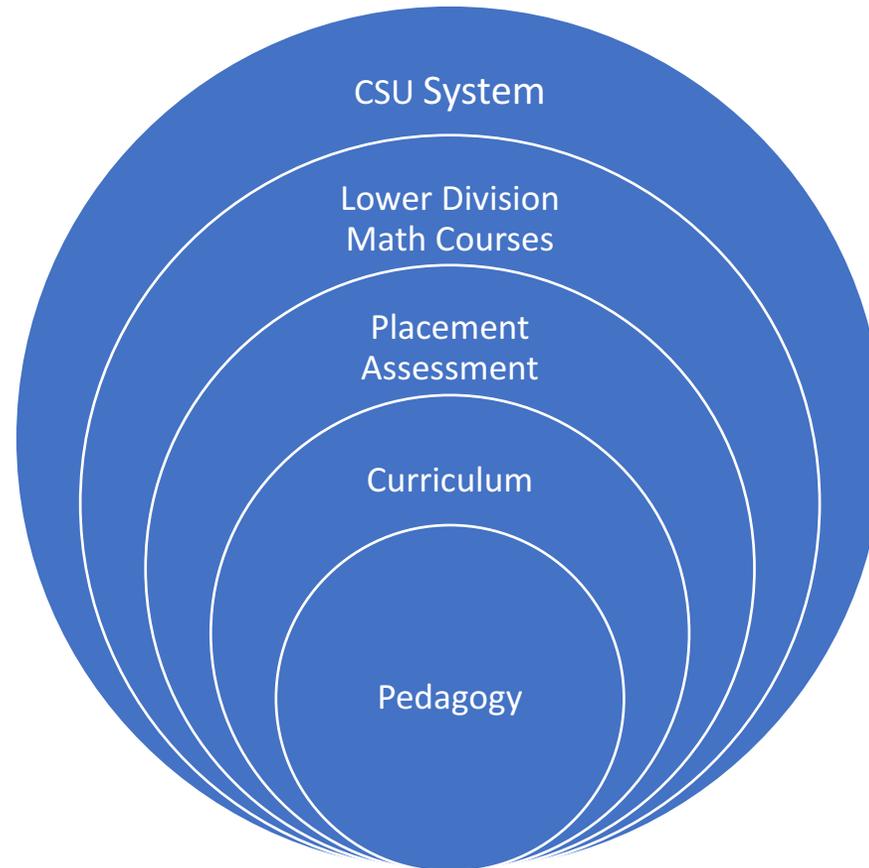
Janet Bowers, Director, Math Learning Center, Professor,
Department of Mathematics & Statistics,
San Diego State University

Math Changes @ SDSU

Janet bowers, coordinator for precalculus and director of math learning center

1. How is mathematics instruction changing at your level?

- Systems
- Courses
- Assessments
- Sequencing
- Curriculum
- Pedagogy

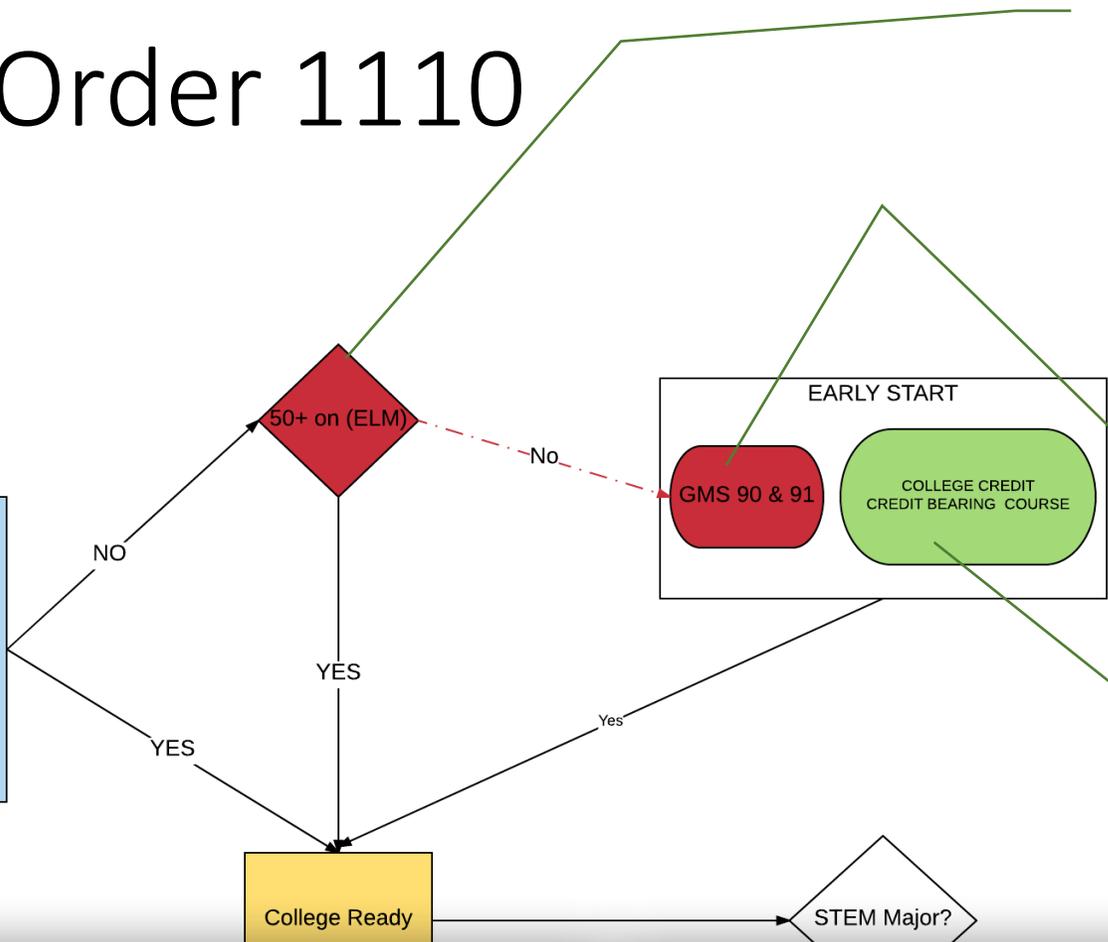


2. What are exciting efforts happening at your level around improving student success in intermediate algebra/integrated III and beyond?

- i.e., the chancellor's initiative

Executive Order 1110

- OPTIONS FOR CLEARING THE COLLEGE READY REQUIREMENT**
- 4-7 on the IB Exam
 - 570+ on SAT
 - 23+ on ACT
 - 3+ on AP test (calculus, stats, CS)
 - CAASPP Early assessment program
 - C+ or better in an approved transferrable course



1. Elimination of ELM as gate-keeper (replacements include)
 - HS GPA,
 - 12th grade course grades,
 - ACT scores/ SAT scores
 - AP Scores
 - IB scores,
 - smarter balanced assessment/EAP scores

2. Elimination of non-credit bearing courses for remediation

3. Inclusion of “supports” for students to take credit-bearing course. Two possible models:

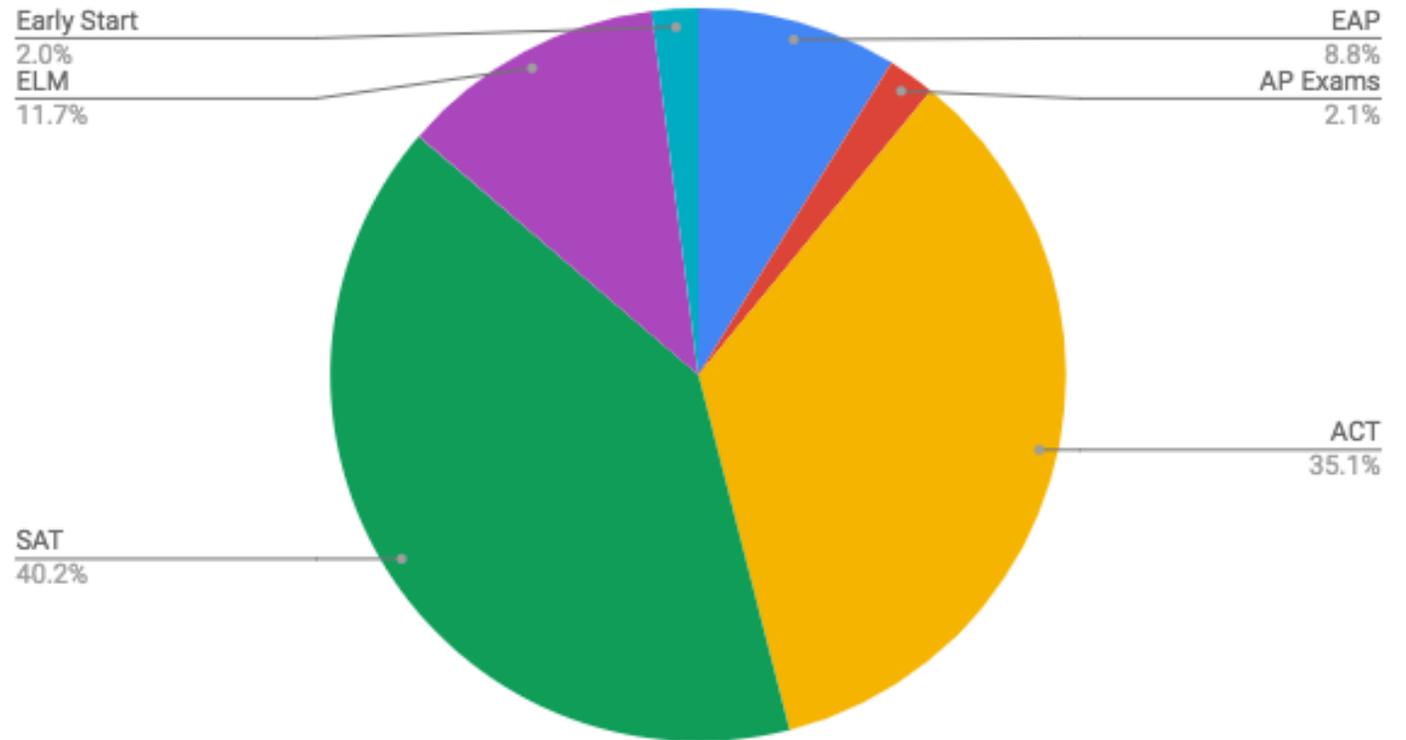
Boot Camp:
 ~4-week support course (6 hours), followed by ~12-week college course (4-5 hours).

Compressed:
 8-week support course (6 hours), followed by an 8-week college course (6 hours).

How many students are we talking about here?

- Of the 5,011 FTF students admitted in Fall of 2016, only **412 (8.2%)** were not ready for college-level mathematics by the FALL 2016 semester.
- 2% of these used Early Start .

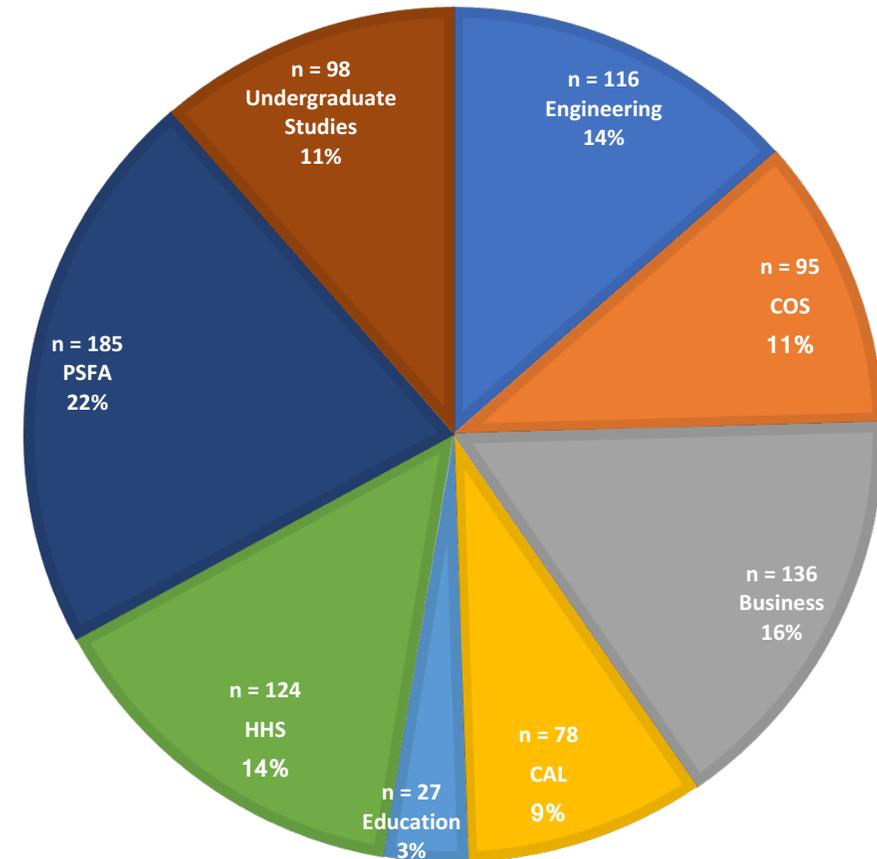
Math Proficiency 91.8% / 4,599 students



What are the majors of the students in remedial classes?

- Over the last two years of GMS 90/91, we found:
 - 14% Engineers
 - 11% College of Sciences
- Roughly 100 students/year want to be STEM majors are not college-ready by Fall.

DISTRIBUTION OF STUDENT STUDENT MAJORS IN GMS 91 (SUM 2015 - SPRING 2017)

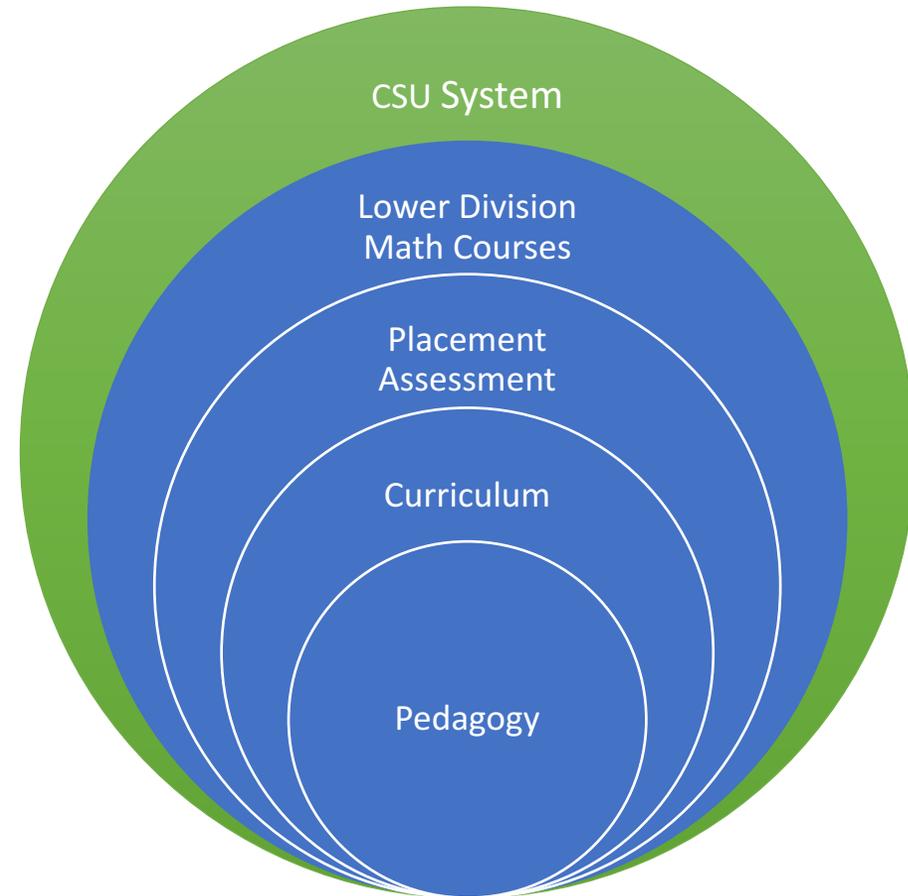


Very little is known right now re: EO 1110

- We agree with intent to support non-STEM students' efforts to graduate in 4 years and avoid "useless" math courses
- We agree with the goal of working with local high schools to increase the number and quality of math courses offered at the high school levels.
- We are not talking about too many STEM majors (maybe 25/year), which is our focus at SDSU.
- We are planning to work on CO order and will have more information on specific changes once these get underway in trial (Summer, 2018) and for real (summer, 2019).

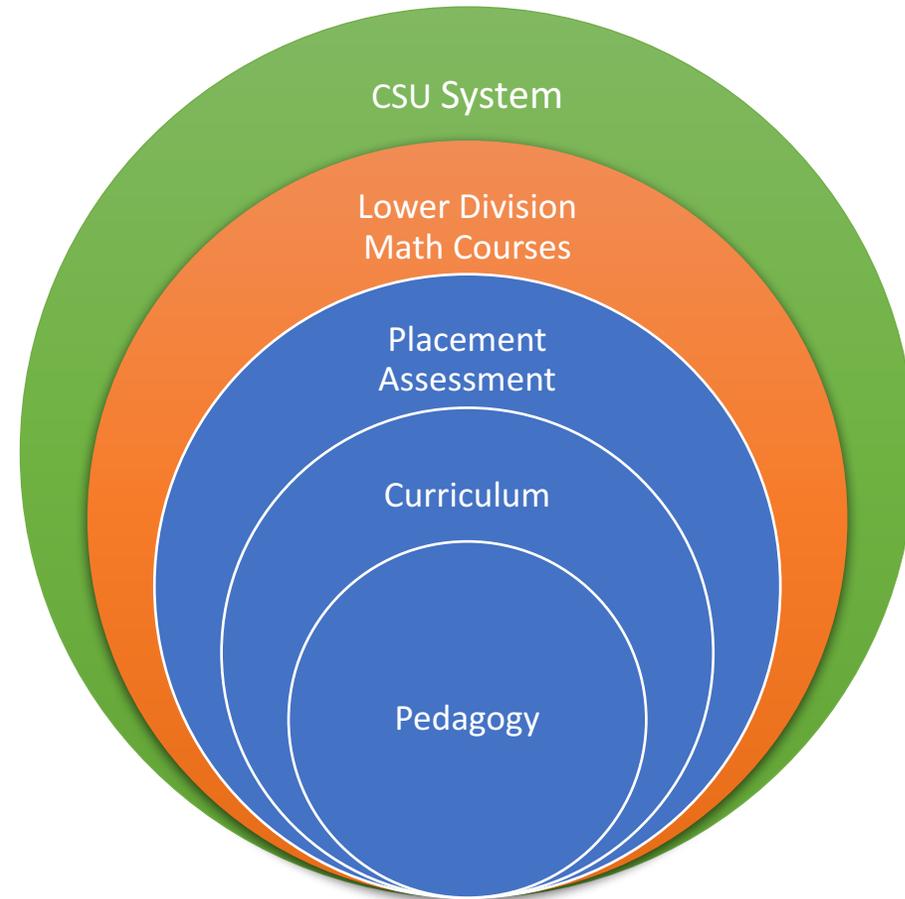
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1. How is mathematics instruction changing at your level?

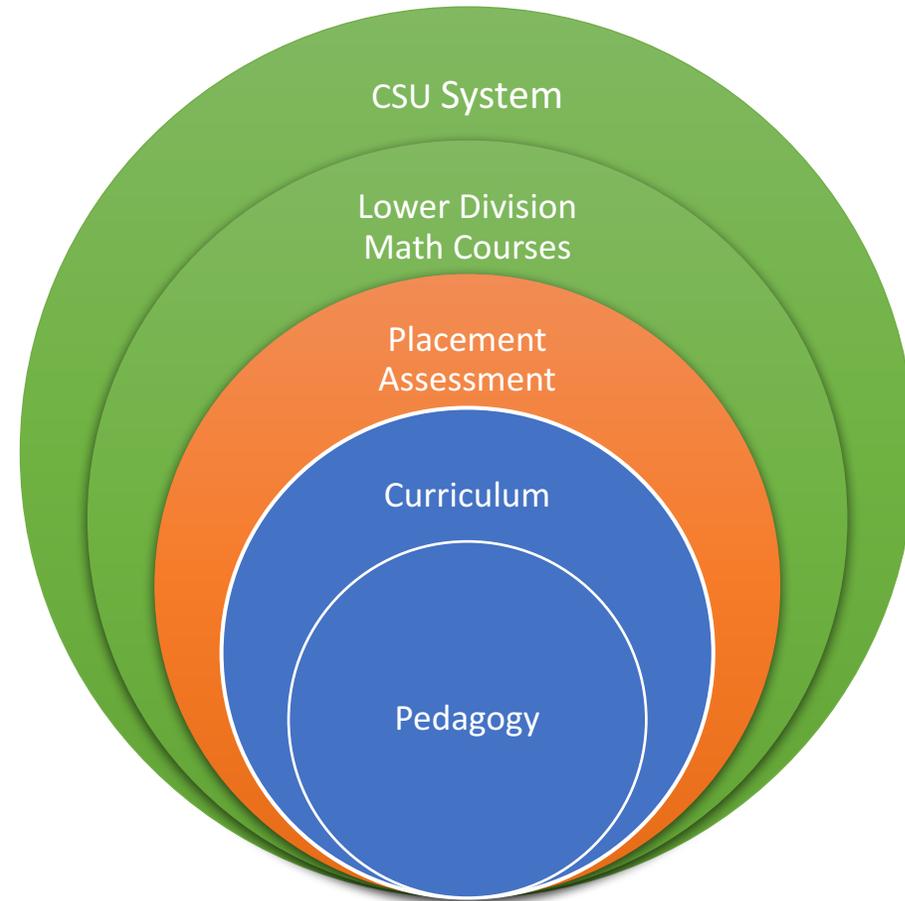
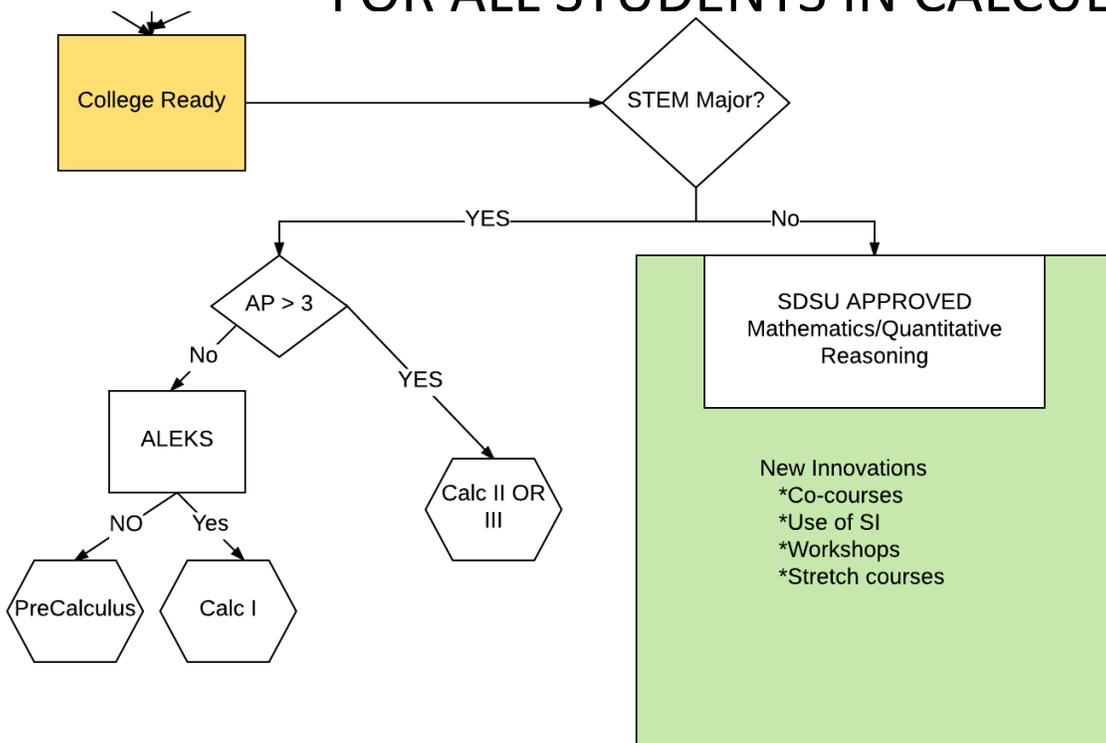
- Systems
- Courses
 - Implemented Coordination
 - Vertical and horizontal
 - Same textbook across P2C2
 - Questioning what it means to do meaningful homework



1. How is mathematics instruction changing at your level?

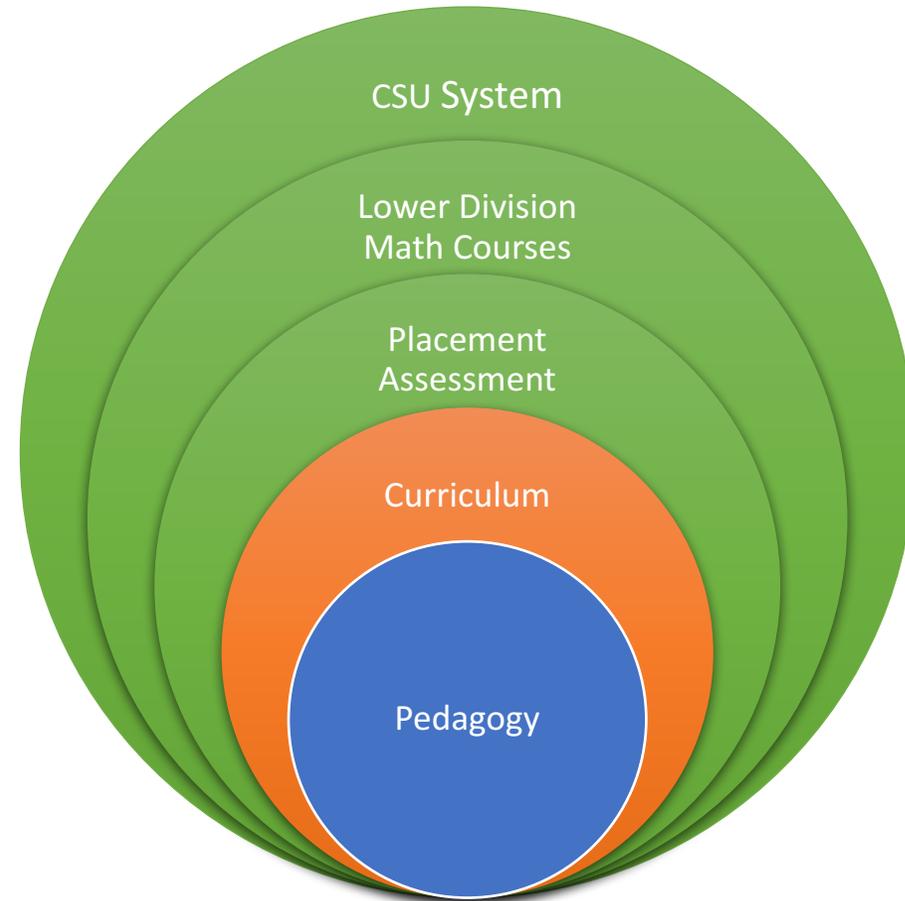
- Placement

- USE OF ALEKS FOR PLACEMENT AND “LEVELING PLAYING FIELD” FOR ALL STUDENTS IN CALCULUS I



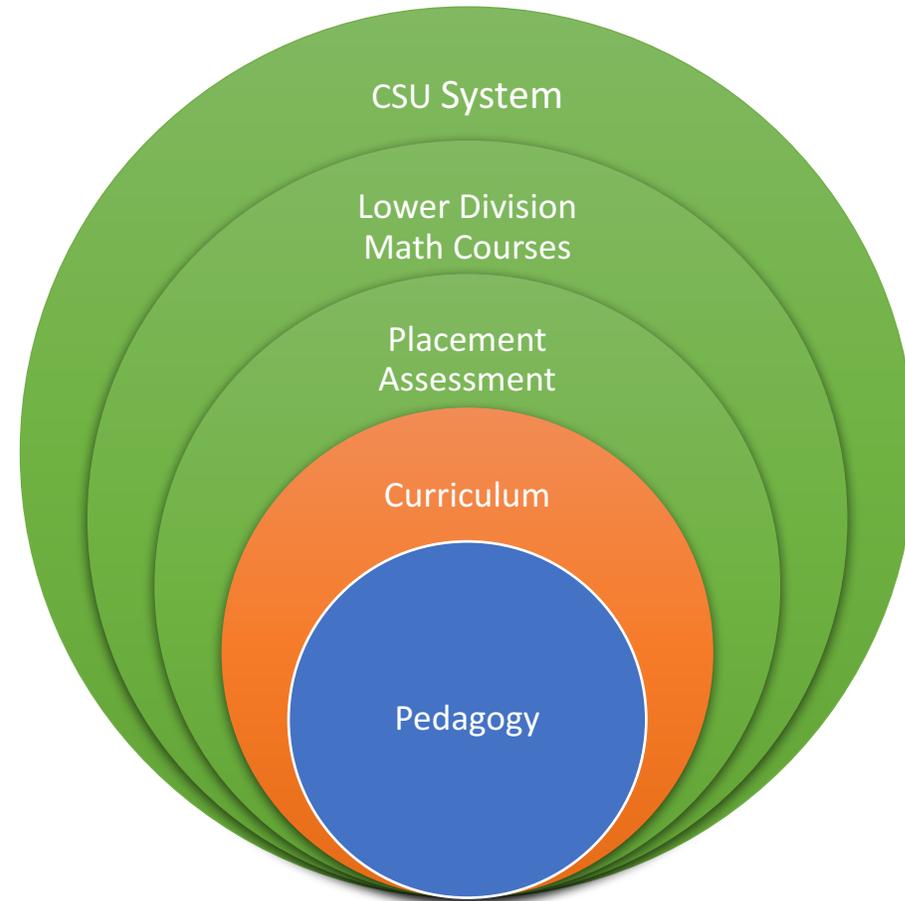
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- Systems
- Courses
- Placement
- Curriculum
 - More emphasis on conceptual questions, not just computation
 - Value placed on explanations, not just correct answers.



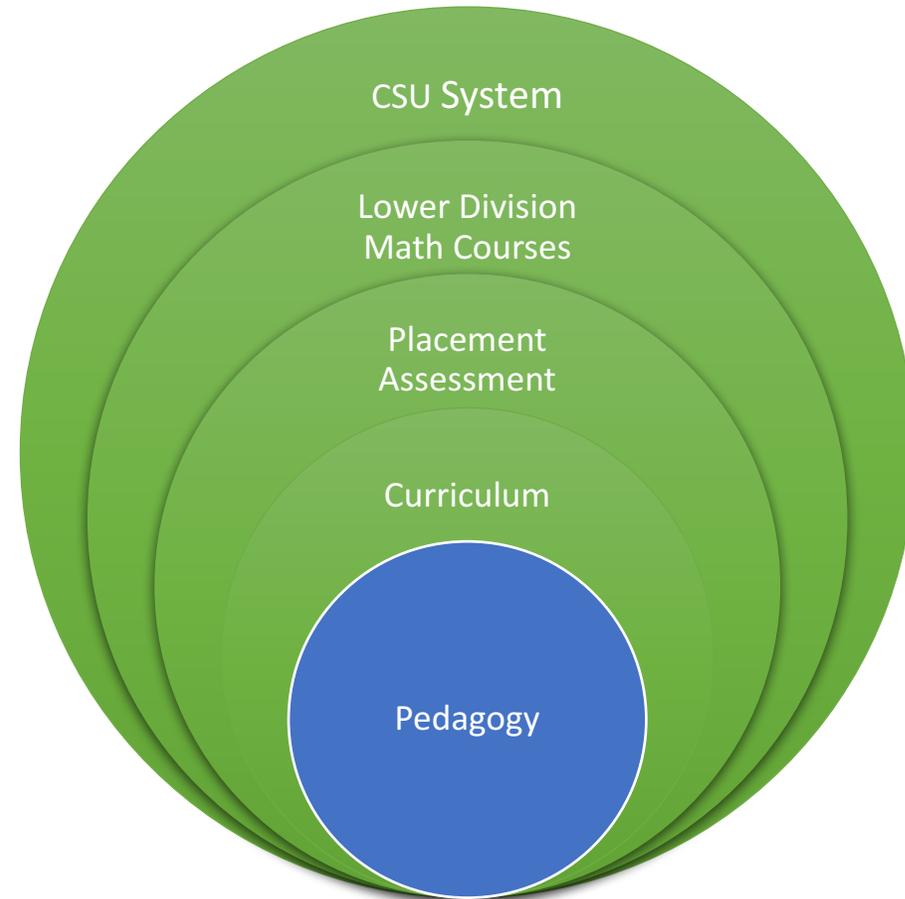
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1. How is mathematics instruction changing at your level?

- Systems
- Courses
- Placement
- Curriculum
- Pedagogy
 - Break-out sessions;
 - TA training with math ed faculty
 - Focus on cooperative groups
 - Clickers or other AL applications in lectures
 - Required attendance in lectures and break out groups



Take away> “A rising tide lifts all boats”

- Use of Supplemental Instruction
- Use of Learning Communities
- Math Learning Center
- Use of ALEKS for placement

