

**Mathematical Reasoning With Connections:  
Development of a conceptually-based fourth year math course**  
(Development; Absolute Priority 2; Competitive Preference Priority-novice i3 applicant)

Math achievement is one of the most significant barriers to college completion faced by our students. Based upon 2015 Early Assessment Placement math exams, only 6% of Riverside and 7% of San Bernardino County students scored ‘college prepared’. To address this educational crisis, we will develop a year-long fourth year high school math course to enable students who are college-bound to develop habits of mind that include flexibility, transferability, and critical reasoning. The unique contribution lies in the innovative pedagogical techniques being developed, and its alignment with Common Core State Standards and mathematical practices.

**Objectives & Outcomes**

- Deliver course to high-need high school students
  - 75% percent of participants will receive a grade of C or better who matriculate to a postsecondary institution at graduation will place into college math
  - Students who complete MRWC will increase in math competency, learning motivation and perceived confidence with math
- Provide MRWC professional development to 160 math teachers
  - Improved teacher pedagogical skill, math content knowledge, self-efficacy, and flexibility
  - Teachers use the pedagogical techniques in other courses they teach
  - Teachers report positive impact on student math achievement and engagement
- Provide professional development to counselors and principals
  - K-12 administrators and staff demonstrate greater understanding of the curriculum, the importance of target student enrollment in MRWC, and the intended impact on student achievement and teacher effectiveness
  - 20+ principals are able to recognize the use of and explain the effectiveness of the standards of mathematical practices
- Develop a MRWC professional development trainer certification workshop to support district adoption and sustainability
  - At least 20 teacher leaders will attain certification to provide MRWC professional development
- Long-term goal of advocating for IHE enrollment policy change and state adoption of MRWC

4800 target high school students

Applicant: RCOE; Partners: CSUSB (coordinate IHE partners), SBCSS (recruit San Bernardino K-12s)