Growing Rural Opportunities (GRÖ STEM) Residency Program: Reducing the achievement gap of students in high-need rural schools

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Organization: CSUB Auxiliary for Sponsored Programs Administration
Address: 9001 Stockdale Hwy Bakersfield, CA 93311
Project Director: Randy Schultz
Phone: (661) 654-2478
Email: rschultz@csub.edu
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Abstract: The GRÖ STEM Residency Partnership will address Absolute Priority 2: Partnership Grants for the Establishment of Effective Teaching Residency Programs by creating a rural teacher residency program that will prepare 120 postbaccalaureate multiple subject credential completers and Master’s in Curriculum and Instruction over five-years. The GRÖ STEM addresses the need for qualified educators with high teacher turnover rates in high-need rural schools of minority and English learner populations through a partnership between California State University, Bakersfield (CSUB) and three Central Valley California districts, Buttonwillow Union School District (BUSD), Lamont Elementary School District (LESD), and Semitropic Elementary School District (SESD).

This will be achieved by establishing a 15-month credential/master’s residency program and specialized professional development tailored toward the needs of rural teachers of the 21st century. The residency’s exceptional design is based on a strong theoretical foundation in the areas of distributed cognition (cohort models), intensive and extended clinical experience (co-teaching), and cultural synchronicity in order to recruit and retain a teacher population whose demographics mirror the student population of our partner districts. It supports and prepares Residents through the credential, masters, and induction process to work with minority students of low socioeconomic status with a focus on interdisciplinary integration of STEM curriculum and academic literacy. Residents will gain content knowledge, pedagogy, and experience inquiry based science, technology, engineering, and mathematics (STEM) preparation upon completion of their multiple subject credential (Competitive Preference Priority 1: Promoting Science, Technology, Engineering, and Mathematics). The partnership will also address Competitive Preference Priority 2—Implementing Internationally Benchmarked, College- and Career-Ready Elementary and Secondary Academic Standards. Residents, district teachers and administrators will participate in intensive Common Core State Standards (CCSS) and the Next Generation Science Standards (NGSS) professional development.

GRÖ STEM residency program goals: 1) Establish a 15 month residency program that prepares Residents, in cooperation with the partner districts, to develop, teach and assess high quality STEM curriculum in rural, high-need schools through a co-teaching experience beginning with a summer STEM academy, completion of a multiple subjects credential and culminating in a masters research project. 2) Develop teachers who promote the critical factors for success in the 21st Century of grit, tenacity, and perseverance through effective teaching that closes the achievement gap of high needs rural students through the use of Common Core State Standards and the Next Generation Science Standards. 3) Build and sustain a pipeline of credentialed teachers, through recruitment, mentoring and induction support, who are committed to teaching in high need rural school districts. 4) Enhance the administrative and teacher leadership skills of LEA administrators, teacher leaders and Residents in rural, high-need partner schools through the co-development and co-implementation of professional
development that support teacher leaders, site administrators, superintendents, university faculty and doctoral candidates with research based best practices that support partners’ school improvement and educational leadership efforts.