The CREATE STEM Success Initiative (CSSI) is a visionary collective effort linking UC San Diego faculty, staff and students and the San Diego education community in a shared effort to support K-20 STEM (science, technology, engineering and mathematics) education in the region. Launched by Chancellor Pradeep Khosla, the CSSI supports core staff at the Center for Research on Educational Equity, Assessment, and Teaching Excellence (CREATE) to work with campus and community partners to plug leaks in the local pipeline to STEM skills, degrees and jobs.

From April 2013 to April 2014, the CREATE team has held over 720 distinct meetings supporting campus and community partners to design, deliver and assess high-quality K-20 STEM pipeline interventions. We’re pinpointing learning opportunities that students need and networking university resources with local partners’ to create those opportunities. In non-stop partnership efforts with campus and community colleagues, we’ve all helped create new opportunities for thousands of underrepresented students (K20) and educators by leveraging grants professors want to write or spend, courses students want to take, donations philanthropists want to offer, the time of deeply committed CREATE coordinators, and campus commitment.

Who have we served on campus?
As a core facility, CREATE works with all UCSD entities—all Divisions, SIO, the School of Medicine, Student Affairs, the Chancellor’s Office, Development, the Colleges, and Organized Research Units.

What have we accomplished?
In just 12 months of working as a broader impact infrastructure for campus, CREATE staff have helped campus and community colleagues accomplish the following. Collectively, we’re realizing UC San Diego’s strategic plan goals of bridging research, teaching, and service.

We’ve helped colleagues write, submit, and execute nearly 50 grants, contracts, and funded projects to support K-20 STEM education efforts with campus and community partners, collectively bringing $2,056,379 to campus to date (with an additional $610,000 going straight to community partners) with more than $26M in pending grant applications. Of the pending applications, roughly 36% are STEM research grants with education outreach components and 64% are direct grants/contracts to improve STEM education in our region.

Nearly 40 additional campus and community STEM education projects are under development through consultations and in-kind service by CSSI and CREATE staff.

- We’ve helped dozens of UC San Diego professors design competitive outreach and broader impact plans for their grants, matching outreach design to local education need.

- We have helped professors, student orgs, and community/industry partners to plan and assess STEM education interventions designed to help underrepresented students to succeed in K-20 STEM-based courses, majors and careers.

- We’ve helped colleagues create 4 new experiential learning programs sending UC San Diego students into high-need K-12 schools, supporting hundreds of on-campus and off-campus students simultaneously. We’ve also helped secure 3 vans for school service transport with the UC San Diego Center for Student Involvement.

- We have linked UC San Diego faculty, students and staff to high-need schools, educators, students, and community programs that value specific UC San Diego STEM contributions.

- We’ve helped colleagues on campus design and plan to assess programs to support first-generation, low-income college students through STEM courses and degrees.

- We’ve supported UC San Diego faculty, staff, and students into well-attended STEM events and new grant-bearing relationships with schools & community programs.

- We have forged new relationships with high-profile philanthropy and industry orgs now funding collective UC San Diego projects for students and teachers.

- We’ve laid the groundwork for a K-20 data warehouse with local districts, higher education partners, and the Supercomputer Center, with the joint goal of analyzing de-identified data on the K-20 education pipeline in our region.

- We’ve co-designed innovative professional development efforts leveraging UC San Diego faculty, CSSI staff and campus partners in supporting hundreds of teachers serving many
hundreds of high-need students in teaching math, science, technology and engineering in the classroom and after school.

- We’ve helped colleagues on and off campus create and test new courses that can plug a-g (college prep) and community college leaks in STEM areas.
- We’ve created dozens of public communications sharing UC San Diego STEM education efforts with the community and world.

Who are we talking with in the greater San Diego community?
A substantial CSSI effort is to meet with our colleagues in the regional education community (e.g., the San Diego County Office of Education and K-12 schools and administration), local businesses and philanthropic agencies (e.g., Qualcomm, SPAWAR & Price Philanthropies), community members (e.g., Groundwork Chollas Creek), informal science institutions (e.g., Balboa Park Museums) and state/national education organizations. As we co-design UC San Diego efforts with faculty, students, and community partners to meet the education needs of the region, significant effort has been dedicated to collaborating with local K-16 teachers and administrators to design and assess student support programs and professional development programs for teachers. CSSI efforts invest in teachers as well as students, as a particular “lever” and multiplier for STEM education improvement in our region.

Where are we working so far in Year 1? See next page!

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Year 1 CSSI Effort Locations