

# BSOE COMMUNITY PARTNERSHIPS

*Existing & potential ways to collaborate*

The [Baskin School of Engineering](#) and the [Tech4Good Lab](#) at UC Santa Cruz are seeking to strengthen community-engaged projects as part of the [Creative EDG2](#) initiative (Creative Engineering Design for Global Good). The vision is to provide real-world experiential learning for students, develop community-minded technologists, and connect courses and initiatives across BSOE to supporting local businesses, non-profits, and government projects (see Professor David Lee's [TEDxSantaCruz](#) talk, [Redesigning Our Economy to Maximize People's Fullest Contribution](#)).

Let us know if you have project ideas, feedback, or want to collaborate: [bit.ly/bsoe-community](https://bit.ly/bsoe-community).

## COMMUNITY-ENGAGED PROGRAMS AND PROJECTS

*Explore existing community-engaged programs and examples of past projects.*

### CAPSTONE & CORPORATE-SPONSORED PROJECTS



Senior or MS students work on company-defined projects to gain real-world experience and solve problems for partners.

### TECH4GOOD COLLABORATORY



A Tech4Good Lab program where students work on projects for the public interest, with a focus on education, work, and communities.

### MARINE PLASTICS POLLUTION



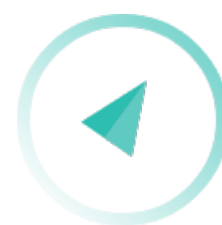
A capstone project in collaboration with Clean Oceans International to create a website and app for monitoring plastic marine pollution.

### FIRE REPORTING



A capstone project mentored by a member of the California Fire Department to create an app to pinpoint where fires start.

### EXPANDING CAREER MENTORSHIP



An ongoing project in Tech4Good to expand opportunities for students to obtain career mentorship and coaching.

### KAHZUM: LOCAL BIZ SUPPORT



A student startup centered on supporting local businesses that was developed out of UCSC's entrepreneurship courses.

Besides filling out our survey, [bit.ly/bsoe-community](https://bit.ly/bsoe-community), you can also email Professor David Lee at [dlee105@ucsc.edu](mailto:dlee105@ucsc.edu) with any questions on this initiative.



University of California, Santa Cruz  
**TECH4GOOD LAB**

## CAPSTONE COURSES

*Many of our engineering programs have capstone courses where students apply the skills they've learned towards significant projects, some of which are already community-engaged.*



### Undergraduate Seniors

Software Design Project (CSE 115bcd)  
Engineering Design Project (CSE 123ab)  
Electrical and Computer Eng. Capstone (ECE 129abc)



### Professional Masters Programs

Serious Games Studio I/II/III (GAME 255)  
Games and Playable Media Studio I/II/III (GAME 270)  
Human Computer Interaction Capstone (HCI 271)  
Natural Language Processing Capstone (NLP 271abc)

## PROJECT-BASED COURSES

*There are also many courses with hands-on assignments with potential for supporting community projects in specific skillsets. The list below is just a small sample.*



### Business & Entrepreneurship

Starting a New Technology Company (CSE 80C)  
Decision Analysis in Management (CSE 174)  
Business Strategy and Info. Systems (CSE 175)



### Analytics, Machine Learning, and Visualization

Machine Learning and Data Mining (CSE 142)  
Applied Machine Learning (CSE 144)  
Visualizing Complex Systems (CMPM 290a)



### Human-Centered Design

Interactive Design Studio (CMPM 132)  
Strategies for Designing Interactive Media (CMPM 177)  
Human-Centered Design Research (CMPM 178)



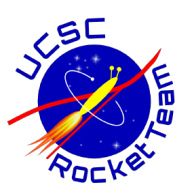
### Systems Development

Mobile Applications (CSE 118)  
Software for Society (CSE 119)  
Web Applications (CSE 183)

## STUDENT ORGANIZATIONS

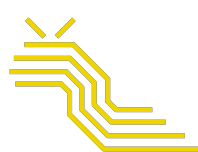
*Several student-run organizations teach K-12 students or provide services to the community.*

### UCSC Rocket Team



Teach elementary school children physics and rocketry.

### Slugbotics



Mentor middle and high schoolers with designing robots.

### Creative Tech Design



Website designs and marketing strategies for local businesses.

## PROGRAMS BEYOND BSOE

*We believe interdisciplinarity is critical, and can facilitate partnerships with community-engaged programs outside of Baskin Engineering or connect you directly to them.*

### Everett (Sociology)

Community-engaged projects on digital tools for social innovation.

### GetVirtual (Crown)

Help local businesses affected by COVID adjust to the digital landscape.

### IDEASS (Carson)

Innovation and design projects for sustainability related challenges.