



# REINVENTING THE SCIENCE & ENGINEERING LIBRARY

UC SANTA CRUZ



## Transforming an architectural gem on Science Hill into a modern center of academic discovery and student success

Science Hill at UC Santa Cruz is home to tomorrow's astrophysicists, biomolecular engineers, environmental chemists, game designers, robotics developers, and leaders in scores of other fields.

A key resource for our students and faculty—the Science & Engineering Library—has been outpaced by rapid changes in technology, the workplace, and experiences that shape how science is explored and studied. We want to change that.

Our goal is to transform it into a new center of academic discovery, interactive technology, collaboration, and social connection that serves today's diversity of students. Woven into a stand of redwoods on Science Hill, the S&E Library is an architectural gem, but its infrastructure and interiors are largely unchanged since it opened in 1991.

Its new design will welcome and orient students. It will bring faculty and students together to explore ideas and bring them to life. It will give our graduates a competitive edge in the marketplace as they launch fulfilling careers in science, technology, engineering, and math.

We invite you to be a part of making the S&E Library a modern center of discovery and student success.

**"As one of the most influential research universities in the world, the educational experience in a classroom drives our vision for remodeling the Science and Engineering Library. In evolution, we see opportunity. Now is the time for the Science and Engineering Library to evolve into a new kind of destination—a place where students at UC Santa Cruz can find support, scholarly resources, and community."**

*Cynthia Larive, Chancellor*

### New generations, changing needs

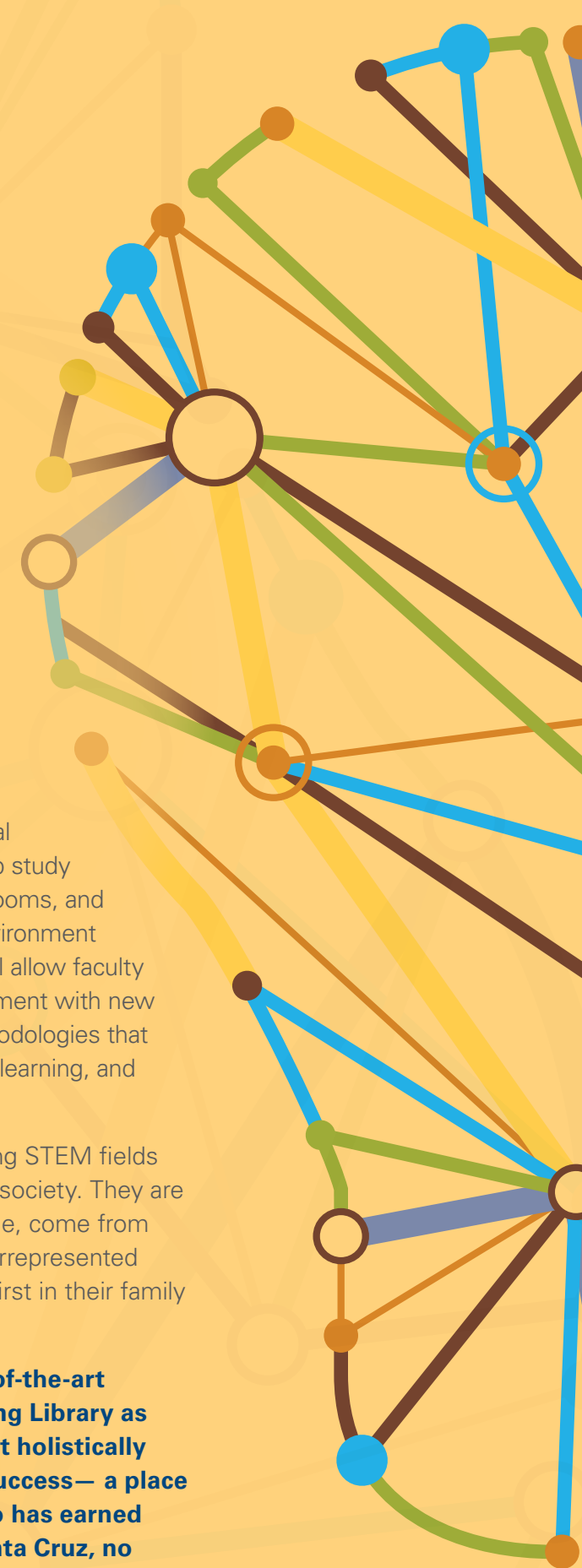
Since the Science & Engineering Library opened, our student body has nearly doubled to over 17,000. Today, students and faculty seamlessly integrate technological tools and applications that were unimaginable the day S&E opened. Simply adding more outlets to accommodate all the laptops, mobile phones, and tablets would only begin to address the possibilities.

Today's collaborative learning and teaching approaches mirror the team-focused culture used by many successful Silicon Valley start-ups. We imagine a dynamic hub for the interactive collision of ideas from all disciplines—where collaboration is not only possible but encouraged, and students easily interact with faculty and mentors. Where programming, conferences, and seminars actively bring people together.

In addition to room for quiet, focused individual study, it will have group study areas, active learning rooms, and a makerspace. The environment of shared discovery will allow faculty and students to experiment with new technologies and methodologies that can enhance teaching, learning, and research.

Today, students entering STEM fields reflect a more diverse society. They are more likely to be female, come from underserved and underrepresented communities, and be first in their family to attend a university.

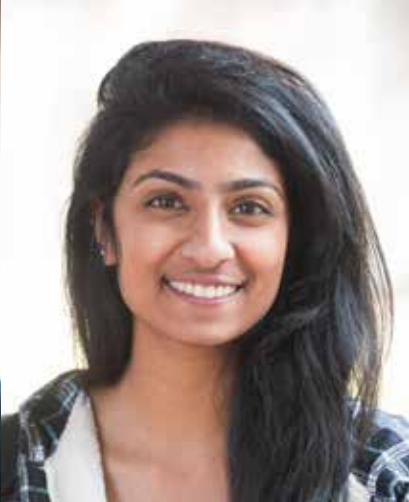
**We imagine a state-of-the-art Science & Engineering Library as a learning center that holistically prioritizes student success— a place where everyone who has earned admission to UC Santa Cruz, no matter their background, knows they can find support.**





► People are always trying to get whiteboard space. Maybe a whole wall of whiteboards, or writable glass walls, or even windows that we can write on and are able to erase.

—Ali-Moosa Mirza, MCD biology



◀ Being able to really network within the library, like using systems and applications, and being able to easily charge devices would be an immediate improvement.

—Thomas Zetino, electrical engineering

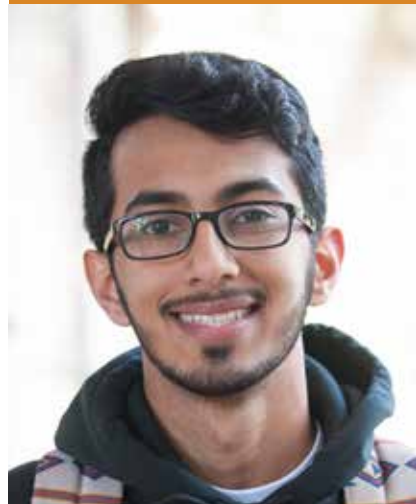
► Working in groups on projects builds community. I'd like more group study rooms with plenty of electrical outlets, movable tables, and other technology. A makerspace where we could learn in a hands-on way would be incredible.

—Shanee Dinay, computer science



◀ I made all my new friends last quarter at the library. They were in my class, but I really only knew them well once we worked together in the library.

—Kim Chuc, MCD biology



◀ The library could have a prayer or meditation room. It's a good way to de-stress, and it's important to a lot of people. Make it inclusive for people of faith as well as people who do not practice a religion.

—Shyaan Khan, computer science



◀ S&E is more like a sit-down and study space. I like that there is a quiet area and an interactive area that helps to separate what you want to do.

—Jasmin Morgia, environmental studies

## Student perspectives inform a new vision

To better understand today's science and engineering students, we analyzed demographic and graduation data. We found that students from historically underserved populations—

racial and ethnic minorities, low-income, and first-generation students—and women leave STEM studies at higher than average rates. If we are to meet the demands of the future,

we cannot afford to lose these talented and creative thinkers from these fields.

We spoke with many STEM students about their experiences and roadblocks to success.

### Students cited these challenges:

- 1 Not knowing where to find support
- 2 A feeling of isolation rather than community
- 3 Overwhelming academic pressure
- 4 No clear sense of career opportunities

Can a reinvented library help address these issues? We think the answer is a resounding "yes."

The new Science & Engineering Library will be an open and welcoming place that embraces digital technology, promotes community, and provides user services—as today's newest libraries are designed to do from the start.

## What does a library as a center for student success look like?

At its core is access to an immense array of digital and print research materials and tools. It brings students together to study, work with faculty and graduate students, build new ideas, and explore resources. It connects academic pursuits to entrepreneurship and invention, and to the world of possibilities. It shifts the dynamic by mitigating challenges many students experience:

### 1 Lowering barriers to asking questions and finding support

A central "ask us" service at the entrance will welcome and orient students and faculty. Signage throughout the library will be displayed and organized based on the user's needs or activities such as, "Find a resource," "Visualize data," or "Find a study group." Services will be connected through improved data management tools and mobile technology so library staff and faculty can more effectively support students.

### 2 Celebrating an atmosphere of community and collegiality

Group study rooms will support

collaboration by incorporating team tools, digital displays, and audio capabilities. "Work alone, together" settings will allow students to be with others even when they are working independently or quietly. A computer commons and group study spaces will be integrated with prototyping tools and other resources so learning teams can move easily from one activity to another.

### 3 Letting students catch their breath

In a pressured academic environment, there will be comfortable areas to think quietly, rest, revive and re-focus. Not only

will this bring people together, but it will also allow students, staff and faculty to remain in the library for longer stretches of time.

### 4 Offering relevant real-world experience

A Digital Scholarship Innovation Studio, game labs, and visualization labs will provide the space and technology needed to bring ideas to life. Meeting and event spaces will allow the library to host symposia, workshops, and meetups. Guests, speakers, potential mentors, and alumni will be invited to share experiences in their fields, making the unfamiliar more approachable.



## Opportunities to seize the future

Engineering and the sciences will always be challenging fields to pursue. They are about reaching for the stars, curing cancer, saving species, and countless other big ideas.

The reinvented Science & Engineering Library at UC Santa Cruz will connect students and faculty in those pursuits to 21st century resources. Supporting students with the services they need reduces stressors, speeds graduation rates, and makes room for breakthrough thinking.

We imagine a library on Science Hill that actively helps ensure everyone has the opportunity to thrive in their chosen field.

When you support this project, you will be directly meeting current student needs as well as contributing to the future advances our graduates will bring to the world.



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WE INVITE YOU TO JOIN US  
IN REINVENTING THE SCIENCE  
& ENGINEERING LIBRARY

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