You'll develop marketable skills such as time management, critical thinking, problem-solving, and leadership. And you'll meet faculty researchers and graduate students who can help open doors to future opportunities. So why research? Why not?

If you participate in undergraduate research, you will engage in learning experiences beyond the classroom and gain new perspectives and insights while helping to create new knowledge. You'll learn how to work on a team in a close-knit interdisciplinary community, improve your oral and written communication skills and have a chance to discover what really interests you.

You can also find a wealth of information at the College of Letters and Science Undergraduate Research and Creative Activities (URCA) website (advising.ltsc.ucsb.edu/urca) on research opportunities and potential funding, including a list of faculty looking for research assistance.

Check out the UCSB Undergraduate Research website to read stories about other undergraduates who have done research, for information on how to approach faculty, and to identify the people and student organizations on campus that can help you.

For more information on undergraduate research visit: research.ucsb.edu/undergrad
What are the sociological effects of divorce on families? How are children affected by divorce and how do parents cope? These questions were at the heart of Shardé Davis’s work as an undergraduate researcher in communication at UCSB.

Sharde discovered how much she loved research when she began an Introduction to Research course with Professor Beth Schneider, a sociologist. Her project with Schneider was focused on women within the black family. In her sophomore year she entered the McNair Scholars Program for students interested in academic careers and began work with communication Professor Tamara Afifi on the sociological effects of divorce on families. She stayed with Professor Afifi as a research assistant through her junior and senior years, contributing to an umbrella project called “Divorce in Collectivist Cultures.”

“Coming to UCSB, I never thought of myself doing research. Me, research? No, not me, especially not as a social science major,” Shardé says.

But she was encouraged by Vice Chancellor for Student Affairs Michael Young, who became an important mentor for Shardé, and by her professors. Now she looks forward to seeing her name included on the project paper and to returning to UCSB to begin a Ph.D. program in communication.
As a double major in philosophy and history and a McNair Scholar, Angel Rodriguez keeps himself busy academically. He studies the socioeconomic history of Cuba in the 20th century under the direction of History Professor Gabriela Soto-Laveaga. She guides him through the research process and helps shape his project, giving critical feedback and suggesting resources. According to Angel, she is one of the toughest yet most inspiring people he has worked with.

Involvement in the McNair Scholars Program, which provides support for underrepresented students who plan to pursue graduate degrees, has opened up doors for Angel. He is able to extend his education beyond the classroom and learn about the life of a scholar through trips and conferences. He won first place in the area of Humanities at the campus-wide Undergraduate Research Colloquium. In the summer, he will be the only undergraduate student to participate in an intensive research program in Oaxaca, Mexico, before returning to campus to work on applying to graduate programs.

Angel suggests that all students get involved in research, even if they’re not pursuing graduate school. He says, “Being at a premier research institution, these opportunities are available to everyone who chooses to take initiative. Having the opportunity to work under professionals and experts in their fields is great way to network for life after college.”
Caitlin Fong, a biology major in the College of Creative Studies, got an early start in research at UCSB and never slowed down. An invertebrate zoology course her first year sparked an interest in biology that led to a summer research experience with Ecology, Evolution and Marine Biology Professor Todd Oakley. "He threw me in the lab, gave me an experiment, and said go," explained Caitlin.

She continued working on that project her sophomore year and eventually published the results in the Proceedings of the Royal Society. This early success allowed Caitlin to explore other research opportunities, including field work in Panama and Florida.

As a junior she won research grants from Sigma Xi and the Santa Barbara Natural History Museum and embarked on an independent project studying algae in Tahiti. This project also resulted in research publications.

Caitlin recently earned the Chancellor’s Award for Excellence in Undergraduate Research and finished her degree early. She is continuing her research as a Ph.D. student in ecology and evolutionary biology at Brown University. Based on her experience, she encourages other students to do research: "Treat research like it’s another class. It’s a primary part of one’s education, so make time for it."
Jon Conway loves all things biological, especially at the small scale. And one can’t get much smaller than nanoscale, where one nanometer is approximately one one-hundred-thousandth the width of a single strand of hair.

So Jon, an ecology and environmental biology major, has embarked on a research project to study the effects of certain nanoparticles on plant life. Working in the lab of Bren School Environmental Science Professor Arturo Keller, Jon is exposing plants to nanoparticles from seed stage through plant maturity by watering the plants with a solution infused with nanoparticles of titanium dioxide and cerium oxide.

There has been little research done in this area, and what has been done has involved seeds alone, Conway explained. Originally from Santa Cruz, Jon wants to get his Ph.D. and ultimately go into biological research at the nanoscale. And he’d like to do his doctoral work with Professor Keller.

“Nanotechnology is the next revolution. First we had the Industrial Revolution, then the Technology Revolution, and now the Nanotechnology Revolution. This could be really big and it’s really exciting for me to be starting out so early,” he explains. “It’s always been my dream, since I was a little kid, to be an environmental researcher.”
Prior to transferring to UC Santa Barbara, Mario Barela dabbled in several disciplines, including business and economics, before he eventually found his passion in applied mathematics. He was not aware of the research opportunities on campus until a teaching assistant encouraged him to get involved and to apply for scholarships.

After getting accepted into the UC LEADS Program, which provides research funding and other academic support, Mario started his search for a summer research adviser. He found a good match with Mathematics Professor Carlos Garcia-Cervera, who agreed to mentor Mario. Together they developed a summer research project looking at mathematical analyses that can be applied to a variety of science problems. Mario continued to work with Professor Garcia-Cervera during the school year and has presented the results of his research at several conferences in Southern California.

Drawing upon his experience as a community college transfer student, Mario also serves as a peer mentor for other math transfer students through the Scholarships for Transfers to Engage and Excel in Mathematics (STEEM) Program.

Though he did not originally consider graduate school, advice and encouragement from his mentors pushed him in that direction with an eye to a future in industry or as a professor. He will continue doing research in the summer at UC Berkeley and then will enroll as a Ph.D. student in applied mathematics at the University of Iowa in the fall. Mario encourages incoming students to get involved on campus and to start looking for scholarships and research experiences early.
We're here to help!

To find out more about undergraduate research, get in touch with your departmental adviser, your professors, or any of the people listed below. Visit us at research.ucsb.edu/undergrad/.

CENTER FOR SCIENCE AND ENGINEERING PARTNERSHIPS (CSEP)
www.cnsl.ucsb.edu/education
▷ M. Ofelia Aguirre
Director, Center for Science and Engineering Partnerships, California NanoSystems Institute
aguirre@cnsl.ucsb.edu

COLLEGE OF ENGINEERING
www.engineering.ucsb.edu
Office of Undergraduate Studies
▷ Tacy Costanzo
Student Affairs Liaison
tacy@engineering.ucsb.edu
▷ Dotti Pak
Director, Education Programs
MRL (Materials Research Laboratory)
pak@mrl.ucsb.edu
National Nanotechnology Infrastructure Network (NNIN)
▷ Angela Berenstein
Nanotechnology Education Programs
Coordinator, UCSB Nanofabrication Facility
berenstein@ece.ucsb.edu

BREN SCHOOL OF ENVIRONMENTAL SCIENCE AND MANAGEMENT
www.bren.ucsb.edu
▷ Bryant Wieneke
Assistant Dean for Planning and Administration
bryant@bren.ucsb.edu

GEVIRZT GRADUATE SCHOOL OF EDUCATION
www.education.ucsb.edu
▷ Kathryn Tucciarone
Student Affairs Officer
katiet@education.ucsb.edu

GRADUATE DIVISION
www.graddiv.ucsb.edu
▷ M. Ofelia Aguirre
UC LEADS Program Manager and Director, Center for Science and Engineering Partnerships, California NanoSystems Institute
aguirre@cnsl.ucsb.edu

OFFICE OF RESEARCH
www.research.ucsb.edu
▷ Meredith Murr
Director of Research Development
murr@research.ucsb.edu
▷ Whitney Winn
Research Development Analyst
winn@research.ucsb.edu

Produced by the Office of Research
Writers: Marcia Meier and Whitney Winn
2011