IMPACT is a series of publications highlighting how UC Davis’ College of Agricultural and Environmental Sciences makes a difference in the lives of Californians. Through research, teaching, and outreach programs, UC Davis research touches almost all aspects of Californian life. Today, millions of people eat safer foods, breathe cleaner air, and drink healthier water with the help of our researchers. We’re making discovery work – for California and the world.

HELPING STUDENTS SHAPE THE WORLD

THE ISSUE
Daily headlines address societal concerns about agriculture, global climate change, science literacy, nutrition, food safety, and safe communities for youth. The UC Davis College of Agricultural and Environmental Sciences (CA&ES) prepares students to address these critical issues and more.

With a focus on hands-on learning in the agricultural, environmental, and human sciences, UC Davis is preparing students to be future leaders, policymakers, educators, researchers, and scientists.

WHAT WE’RE DOING
Education at UC Davis has come a long way in the last century. From the early days of instruction in farm practice, CA&ES students now learn about plant and animal biology, atmospheric and water science, ecological restoration, biotechnology, community planning, managerial economics, nutrition and food science, and other diverse topics.

California no longer has a predominantly agrarian economy. The last century has brought population growth, changing demographics, information technology, a global economy, environmental challenges, and a role for advanced science in agricultural, food, and health systems. Employers want graduates who have a full understanding of both their discipline and large-scale, integrated systems.

With 27 undergraduate majors, an undeclared/exploratory program, and 45 graduate groups, the College of Agricultural and Environmental Sciences educates students to address these complex emerging issues. Of the 24,000 undergraduates at UC Davis, more than 5,000 are in CA&ES majors, and 25 percent of the campus’s 4,100 graduate students are in CA&ES graduate groups.

Career Discovery Groups. This program, started with the Internship and Career Center, allows freshmen to explore many careers before committing to a major. As a result, freshman success and retention is improved. Participants were 10 percent more likely to have a GPA above 3.7 for at least one quarter and as likely to remain enrolled. Results were most profound for underrepresented minorities, with a 16-percent increase in retention. Diane Ullman, Associate Dean for Undergraduate
Academic Programs in CA&ES, notes, “Career Discovery Groups integrate mentoring, small group experiences, and career discovery, which gives students a sense of belonging, keeps them in college, and helps them graduate in four years.”

Science and Society. The Science and Society umbrella covers 21 general education courses, seminars, and several learning programs including the Contemporary Leadership Minor, Explorations in Science and Society, and the Art/Science Fusion Program. One goal is to teach students about contemporary topics in science, such as global climate change, and how they fit into the social context. “It's a different way of looking at science,” says Dave Rizzo, head of the Science and Society Program, “and we're teaching students to think critically.”

New Undergraduate Majors. One of several new majors focuses on science literacy. The Agricultural and Environmental Education major, coordinated by CA&ES and the School of Education, is geared to alleviate the statewide teacher shortage in agricultural and environmental education, while also providing for people who want to teach in nonformal settings such as nature preserves and environmental camps. Undergraduates study a broad range of agricultural, environmental, and human resource development topics.

Other new majors include Plant Sciences, Environmental Science and Management, Ecological Management and Restoration, and Sustainable Agriculture and Food Systems (under development).

Multidisciplinary Graduate Groups. Few universities claim UC Davis’ consistent high rankings in agricultural sciences, entomology, food science and nutrition, plant and animal sciences, soil science, agricultural economics, agricultural engineering, plant pathology, agronomy, horticulture, and other programs. These rankings are due to a combination of excellent research, teaching, and strong graduate education programs. UC Davis’ graduate groups, which cross academic departments and disciplines, draw the best students from throughout the world.

Students who receive master's and doctoral degrees from CA&ES become leaders in the U.S. and abroad. This international bridge building establishes stable economies, provides healthy food for the world's hungry, social well-being for individuals and communities, and opportunities to collaborate on global issues such as food safety and distribution, climate change, environmental resources, and human health.

A SHARED VISION

Keeping education programs relevant to students and useful to employers is critical to the future of California and the world. As Ullman notes, “We are committed to training the leaders of tomorrow with programs that allow students to leave the campus ready to be lifelong learners and meet the dynamic needs of society. Our students are educated to think critically and ethically, to work in teams, and to solve complex problems.”

That’s impact — providing rigorous educational programs while preparing students to take on the challenges, and opportunities, of the future.