INTRODUCTION
INTRODUCTION

As one of the leading institutions of higher education in the world, the University of California, Davis, is committed to serving a broad student population and society at large through the generation and advancement of knowledge and discovery. Over its 100-year history, the University of California, Davis, has grown from its early beginnings as an agricultural college into a world-class comprehensive research university. Originally founded as the University Farm in 1905, UC Davis was formally designated an independent University of California campus in 1959. *U.S. News & World Report* ranks UC Davis ninth among public universities nationally, and the campus is among only 62 universities admitted into the prestigious Association of American Universities (AAU).

Advancing Knowledge

A comprehensive research university, UC Davis offers 101 undergraduate majors and 94 graduate and professional degrees across four colleges and six professional schools. One-third of the 51 UC Davis doctoral programs participating in the National Research Council's 2010 *Assessment of U.S. Doctoral Programs* ranked in the top 25 percent in their respective fields, with six programs ranking in the top five percent. With students from across California, the nation and the world, UC Davis is home to a diverse student body now numbering more than 34,000 students.

The campus’ reputation has attracted a distinguished faculty of scholars and scientists in all fields. Honors received by UC Davis faculty include five U.S. Presidential Awards, 279 National Academy memberships, 13 Fulbright Senior Scholars and two Pulitzer Prizes.

A Place for Discovery

Research at UC Davis works toward solving the world’s most difficult problems and supports California’s economic, intellectual and social development. Over the last decade, annual research funding at UC Davis increased by 150 percent, from $300 million to over $730 million. The campus’ varied research programs explore the intellectual frontiers across the sciences, humanities and arts, with particular global leadership in agricultural science and environmental sustainability.

Research is an integral part of teaching at UC Davis. Faculty members share their research findings in the classroom, and students learn firsthand about discovery while working with professors in the laboratory and field. A number of undergraduate research programs offer students the opportunity to work on a research project in a faculty laboratory, in some cases as early as their freshman year.

Leader in Public Service

In the tradition of land-grant universities, UC Davis uses knowledge and discovery in addressing the needs of the region, state, nation and globe.

The UC Davis Health System serves the needs of 6 million people in 33 counties and operates the region’s only Level 1 trauma center as well as a National Cancer Institute-designated cancer center, a comprehensive children’s hospital and a world-renowned telemedicine network. The UC Davis Veterinary Medical Teaching Hospital cares for more than 45,000 small and large animals each year. The School of Law offers community support in the areas of immigration, prison law, civil rights litigation and family protection. And since its inception in 2002, the School of Education has prepared nearly 6,000 teachers for California classrooms. The University’s most recent school, the Betty Irene Moore School of Nursing, was founded in 2009 and uniquely serves the role of increasing patient safety and creating interprofessional opportunities for nurse leaders.

Life at UC Davis

Life at UC Davis is as diverse as the members of our university community. Students enjoy sports, community internships, public service, outdoor activities, concerts and clubs.

UC Davis is known for its student-run facilities; the Coffee House, the radio station KDVS and the Unitrans bus service provide paid employment and real-world experience to hundreds of students each year. Some 70 percent of UC Davis students interested in gaining work experiences participate in internships locally, nationally and globally through the Internship and Career Center, among the largest university-based academic internship programs in the country.

A cultural center in the region, the Robert and Margrit Mondavi Center for the Performing Arts features internationally known artists and speakers and showcases the university’s music and theatre and dance departments. Museums and galleries house valuable teaching, research and general interest collections that range from the Bohart Museum of Entomology’s insects to contemporary Native American art at the C.N. Gorman Museum. In 2014, the University broke ground for a way to showcase its art collections with the construction of the Jan and Maria Manetti Shrem Art Museum.

In 2007, UC Davis made the transition to Division I of the National Collegiate Athletic Association. UC Davis sponsors 14 varsity sports for women and nine for men. Thirty-seven club sports, organized by students, compete against other area colleges. Intramural sports annually draw some 19,000 students who participate in 60 different men’s, women’s and coed activities.

A city of more than 65,000 people, Davis is known as an environmentally aware, physically fit and socially innovative community. The city was named best bicycle community in the U.S. by the League of American Bicyclists (the only city ever to receive platinum recognition) and has more than 103 miles of dedicated bike lanes and paths and nearly 500 acres of parks and greenbelts. Davis’ proximity to the state capital, Lake Tahoe and the San Francisco Bay Area makes it easy to take advantage of big-city attractions while enjoying the lifestyle of a university town.
THE UNIVERSITY OF CALIFORNIA

UC Davis is one of 10 campuses of the University of California, which was chartered as a land grant college in 1868 and has become the country’s premier system of public higher education. Together, the campuses have an enrollment of more than 240,000 students, with more than 1.7 million alumni living and working around the world. Some 150 laboratories, extension centers, research and field stations strengthen teaching and research while providing public service to California and the nation. The collections of the more than 100 UC campus libraries are surpassed in size in the United States only by that of the Library of Congress.

VISITING THE CAMPUS

UC Davis Welcome Center
530-752-8111; http://visit.ucdavis.edu/
Welcome Center operating hours are 8:00 a.m.–5:00 p.m., Monday-Friday and 9:00 a.m.–3:00 p.m. Saturday and Sunday. Monday-Friday campus tours are offered at 9:00 a.m. and 1 p.m. Saturday and Sunday tours are offered at 11:00 a.m. Over-the-counter admissions advising is offered seven days per week at the Welcome Center. To register for a tour, visit http://visit.ucdavis.edu or call 530-752-8111. If you have questions regarding application procedures or entrance requirements, write or visit the UC Davis Welcome Center at 550 Alumni Lane, Davis, CA 95616.

THE UNDERGRADUATE COLLEGES

The College of Agricultural and Environmental Sciences
College Office
150 Mrak Hall
530-752-0108; http://www.caes.ucdavis.edu
The College of Agricultural and Environmental Sciences offers a diverse program of majors and courses and is committed to education that emphasizes a spirit of discovery. Based on the premise that tomorrow’s citizens will need to anticipate, understand and solve emerging societal problems and contribute to the discovery and application of new knowledge, the college fosters:

• Critical thinking and an appreciation for diversity in thought and approaches to problem solving
• An ethos of lifelong learning—of teaching oneself and others while confronting challenges and solving problems
• An ability to move beyond either/or thinking and to pursue innovative and integrative understanding of the agricultural sciences, environmental sciences and human sciences
• Intellectual skills that prepare individuals to secure a life-affirming physical and cultural environment based on sound, respectful management of resources
• A commitment to serve the public with informed and open-minded dedication to understanding, critiquing and addressing complex societal needs and interests

The college is proud of its rich agricultural history. From this foundation, it has expanded its educational offerings to encompass programs that highlight interconnections among the environment, plant and animal sciences, biological sciences and human sciences. Through a wide array of major programs, the college prepares high-potential students for advanced studies in diverse disciplines and leadership in such arenas as public policy; research and development; managerial and natural resource economics; agricultural systems; environmental protection, safety and design; human nutrition, health and development; and the food, fiber, textile and apparel industries.

Undergraduate students enjoy early contact with faculty advisers, graduate students and postgraduate researchers, enriching and broadening the educational experience of all.

Several levels of academic advising are available that are designed to enhance your undergraduate experience. Advisers help you plan your courses, meet degree requirements and take maximum advantage of the resources available at UC Davis. You are encouraged to meet regularly with your assigned faculty adviser and with the Advising Associates and departmental peer advisers. Through a shared commitment to education for service to society, college faculty, staff and students work together to improve the relationship between humanity and the natural world.

The College of Biological Sciences
Biology Academic Success Center
1023 Sciences Laboratory Building
530-752-0410; http://biosci.ucdavis.edu/BASC
The mission of the College of Biological Sciences is to prepare students to fully engage and actively participate in all areas of the exciting and rapidly expanding field of biology. Courses offered by the college span the basic biological disciplines of biochemistry, behavior, cell biology, evolution, ecology, genetics, physiology and neurobiology and apply these concepts to the study of microbes, plants and animals ranging from genetic model organisms to humans. Recent additions to the curriculum, including courses in genomics, bioinformatics and computational biology, reflect the profound changes sweeping biology as new technologies enable new areas of research.

Coursework in the college’s majors is rich in hands-on laboratory instruction as well as lectures and seminars. Every department in the College offers laboratory courses in the Sciences Laboratory Building—a state-of-the-art facility featuring advanced instrumentation and a student-friendly environment. In addition, many students in the college participate in laboratory research and internships that enable them to bridge classroom experiences to life beyond the university.

Biology is integral to a multitude of career options. Whether interested in a professional career in the health sciences, research, education, environmental work, business, law, administration, pharmaceutical sales or communications, students in the College of Biological Sciences receive the attention and preparation they need to excel in their chosen field.

To learn more about the nine majors offered through the College of Biological Sciences, see our website at http://biosci.ucdavis.edu/BASC, select Students, then Undergraduate Students, and then select Learn about the Majors Offered.
University of California, Davis

Principles of Community

THE UNIVERSITY OF CALIFORNIA, DAVIS, is first and foremost an institution of learning and teaching, committed to serving the needs of society. Our campus community reflects and is a part of a society comprising all races, creeds, and social circumstances. The successful conduct of the University's affairs requires that every member of the University community acknowledge and practice the following basic principles:

WE AFFIRM THE DIGNITY inherent in all of us, and we strive to maintain a climate of justice marked by respect for each other. We acknowledge that our society carries within it historical and deep-rooted misunderstandings and biases, and therefore we will endeavor to foster mutual understanding among the many parts of our whole.

WE AFFIRM THE RIGHT of freedom of expression within our community and also affirm our commitment to the highest standards of civility and decency towards all. We recognize the right of every individual to think and speak as dictated by personal belief, to express any idea, and to disagree with or counter another's point of view, limited only by University regulations governing time, place, and manner. We promote open expression of our individuality and our diversity within the bounds of courtesy, sensitivity, and respect.

WE CONFRONT AND REJECT all manifestations of discrimination, including those based on race, ethnicity, gender, age, disability, sexual orientation, religious or political beliefs, status within or outside the University, or any of the other differences among people which have been excuses for misunderstanding, dissension, or hatred. We recognize and cherish the richness contributed to our lives by our diversity. We take pride in our various achievements, and we celebrate our differences.

WE RECOGNIZE that each of us has an obligation to the community of which we have chosen to be a part. We will strive to build a true community of spirit and purpose based on mutual respect and caring.

The “Principles of Community” were prepared and adopted after extensive discussion within the campus community about the need for a statement that reflects UC Davis’ commitment to a learning environment characterized by diversity, understanding and the acceptance of all people. This statement of common principles was published on April 20, 1990, carrying the endorsement of Chancellor Theodore L. Hullar and the leadership of the Davis Division of the Academic Senate, the Academic Staff Organization, the UCD Staff Assembly, the UCDMC Staff Assembly, the Associated Students of UC Davis (ASUCD), and the Graduate Student Association.
PHILOSOPHY OF PURPOSE

Mission Statement:
Philosophy of Purpose

The core purpose of UC Davis as a comprehensive research university is the generation, advancement, dissemination and application of knowledge. To that end, UC Davis is committed to offering leading programs throughout the academic disciplines and in its professional schools. These programs integrate three purposes: teaching students as a partnership between faculty mentors and young scholars; advancing knowledge and pioneering studies through creative research and scholarship; and applying that knowledge to address the needs of the region, state, nation and globe. UC Davis is committed to the land-grant tradition on which it was founded, which holds that the broad purpose of a university is service to people and society.

UC Davis offers its undergraduates an experience which comprises the central elements of a liberal education—a broad general education with specialization in a scholarly discipline—and opportunities for personal development and academic enrichment through undergraduate research, work-learn experiences and extracurricular student life. To its post-baccalaureate students, UC Davis offers an array of programs which draw upon its wide range of specialized academic fields. By stimulating cross-disciplinary approaches and using its distinctive graduate groups, UC Davis continues to follow and redefine the mandate of a major research university.

The campus is committed to advancing teaching and scholarly work in the arts, humanities and the social sciences—studies that enrich the life of each person and society as a whole, and infuse the pursuit of careers in education, law, management and medicine. UC Davis’ prominence in the STEM fields, including distinguished programs in agricultural and environmental sciences, make the campus a leader in solving critical issues in local, state, national and global health and sustainability.

UC Davis extends service to the region, state, nation and the world in many forms, such as cooperative extension to agriculture and education; medical services to central California and beyond through the multifaceted UC Davis Health System in Sacramento; University Extension programs that share knowledge with the region; the emerging work of the World Food Center; voluntary contributions of faculty, staff and students; and athletic and cultural programs for the campus and community at large.

UC Davis is surrounded by vibrant, local communities and its proximity to the state capital gives this outreach urgency and opportunity. Collaborative studies and cooperation between UC Davis and state agencies and the Legislature are both a special responsibility and a unique opportunity. UC Davis is characterized by a distinguished faculty, a dedicated and high-achieving staff and students of great potential and accomplishment. As we move forward, we recognize that our continued excellence is dependent upon our ability to diversify our university community, consonant with the citizenry of California.
Educational Objectives for Students

The Educational Objectives for Students were adopted by the Academic Senate in April 2002. They articulate our aspirations for student learning; help to establish campus priorities and guide decision making related to student development; and guide academic programs in the review of how their classes and course requirements interact with the goals to demonstrate educational effectiveness.

- **Develop effective communication skills:**
  Written, oral, interpersonal, group

- **Develop higher cognitive skills:**
  Critical thinking, creativity, analytical ability

- **Cultivate the virtues:**
  Ethics, responsibility, honor, tolerance, respect for others, empathy

- **Develop focus and depth in one or more disciplines**

- **Develop leadership skills:**
  Ability to stimulate and direct collaborative learning and collaborative action

- **Develop a global perspective:**
  Broad intellectual and cultural experience through active engagement, an understanding of the interactions among the individual, society, and the natural world

- **Prepare for lifelong learning:**
  Independent thinking and learning, learning to find information, asking the right questions
The College of Engineering

Dean's Office
1050 Kemper Hall
http://www.facebook.com/UCDEngineering

The College of Engineering at UC Davis is among the top engineering colleges in the nation.

With a strong record of academic excellence, a rich tradition of interdisciplinary research and a diverse and distinguished faculty, the College's undergraduate program has earned a place among our nation's top twenty public undergraduate colleges of engineering and among the top forty public university graduate engineering programs.

With an enrollment of 3,460 undergraduates and 1,130 graduate students, the College is one of the largest undergraduate engineering colleges in the University of California system.

We have 198 engineering faculty, with 16 current and emeriti members named to the National Academies of Engineering, Science and Medicine.

The Engineering Accreditation Commission of ABET (http://www.abet.org) accredits the following ten programs:

- Aerospace Science and Engineering
- Biochemical Engineering
- Biological Systems Engineering
- Biomedical Engineering
- Chemical Engineering
- Civil Engineering
- Computer Engineering
- Electrical Engineering
- Materials Science and Engineering
- Mechanical Engineering

The Engineering Accreditation Commission and the Computing Accreditation Commission of ABET accredit the following program:

- Computer Science and Engineering

The College maintains a long-standing commitment to undergraduate students, preparing them to contribute to the engineering professions as well as ongoing engineering research. To that end, our academic programs balance the fundamentals of engineering theory with practice, visionary research with practical application—preparing students for entry into engineering practice and graduate-level research.

Undergraduate research experiences and mentoring services smooth the transition from undergraduate to graduate study at UC Davis. Undergraduates are able to interact with faculty and graduate students from ten graduate engineering programs as well as researchers from a broad spectrum of disciplines university-wide. Award-winning faculty researchers strive to develop more effective, real world solutions to society's most complex problems in the uniquely friendly, open society of collaborative, cross-disciplinary and rigorous scholarship for which UC Davis is widely known. Undergraduates have opportunities to be contributing members of this rich learning environment.

In the proud tradition of America's great land-grant research universities, the UC Davis College of Engineering integrates teaching, research and service to society. While advancing the leading edge of engineering knowledge, the College trains the next generation of engineers who will make a difference in our world.

The Department of Biological and Agricultural Engineering combines study in engineering with instruction in the biological sciences to solve challenging environmental and technical problems.

The Department of Biomedical Engineering educates students in a highly interdisciplinary combination of the biological sciences and engineering as this combination applies to medicine.

The Department of Chemical Engineering and Materials Science offers curricula integrating knowledge of chemistry, biological sciences or materials science and engineering that enable students to solve problems in both current and future manufacturing technologies or to analyze the structure, properties and behavior of materials.

The Department of Civil and Environmental Engineering educates students to plan and design safe and sustainable infrastructure systems that have a direct impact on the quality of human life and on health and human productivity.

The Department of Computer Science offers programs in all aspects of the design and use of computer hardware and software systems. The department also plays a significant service role for programs throughout the campus.

The Department of Electrical and Computer Engineering offers programs in research and education crucial for the continued success of high technology industries in California and the nation, preparing students to design, analyze and use electronic and computer systems effectively.

The Department of Mechanical and Aerospace Engineering educates students in the design and manufacture of complex engineering systems for transport, industry or energy and in the design, manufacture and operation of aircraft and aerospace structures.

Every effort has been made to provide engineering students with the maximum flexibility consistent with rigorous professional education standards. The key to flexibility is academic advising. You are expected to attend the New Student Orientation program, held the summer before your first quarter on campus. New Student Orientation sessions can give you the information you need to make your academic experience both rewarding and effective. As an incoming student, you will be given the name and office hours of your departmental staff adviser; you should arrange to meet with your adviser before you register for courses for the first time. Academic and peer advisers in the Undergraduate Advising Office in 1050 Kemper Hall supplement departmental advisers.

Undergraduate education in engineering at UC Davis serves as a sound basis for beginning professional practice in engineering design and development, as a preparation for careers in corporate or governmental operations and as a foundation for graduate study. To these ends, the college emphasizes fundamental sciences to give students the maximum postgraduate flexibility. In order to remain relevant in a quickly changing technical world, engineering education must be based on fundamentals or rapidly become obsolete.
Engineers will continue to face new challenges in the race to improve the quality of life for everyone and keep our state and nation competitive in the global marketplace.

As part of one of the nation's 76 land-grant institutions, UC Davis Engineering's mission is to help maintain the United States' technical leadership and advance technology for the benefit of everyone.

The College of Letters and Science

Undergraduate Education and Advising Office
200 Social Sciences and Humanities Building
530-752-0392; http://www.ls.ucdavis.edu

The College of Letters and Science provides students with the opportunity to actively engage the central academic disciplines of the university. The largest of the four undergraduate colleges at UC Davis, the College of Letters and Science offers the majority of the campus' general education courses, more than 50 major programs of study and thousands of courses per year across a broad range of subject areas. Its nearly 500 faculty members are organized into three Divisions—Humanities, Arts and Cultural Studies; Mathematical and Physical Sciences; and Social Sciences. The college confers Bachelor of Arts (A.B.), Bachelor of Science (B.S.) and Bachelor of Arts and Science (B.A.S.) degrees.

The College of Letters and Science is a community of scholars and students sharing a commitment to liberal education rather than to specialized, vocationally-oriented training. The college exposes you to the worlds of human experience, of ideas, of artistic accomplishments and of matter and things. Within this curriculum you are able to explore a variety of academic fields, engage in the pursuit of fundamental knowledge and gain the capacity for independent study and thought. By learning to think carefully and critically, you will be able to continue the ongoing process of education that begins in the classroom but continues over a lifetime. You will have learned how to learn—the ultimate objective of a liberal arts education.

The educational goals of the college are reflected in the three primary groups of requirements established by the faculty: the English Composition Requirement, the Foreign Language and Area Requirements and the Major Requirements.

The English Composition Requirement ensures that you are well versed in written communication skills.

The Foreign Language and Area Requirements provide you with a broad background of knowledge, guide you in an exploration of the interdependencies of knowledge and acquaint you with other cultures.

The College of Letters and Science acknowledges the value of language learning and encourages students to acquire proficiency in a foreign language before graduating from UC Davis. The goals of language learning are the following: communicating complex ideas in the target language; acquiring understanding of a variety of cultural perspectives and differences; fostering intercultural communicative competence; gaining access to cultural production from another time and place; enhancing knowledge of other disciplines through the target language; recognizing the nature and structure of languages, including one's own; and developing the capacity to participate actively in multilingual communities both at home and abroad.

The Major Requirements provide you with intellectual depth and competence in a selected area of study.

The college has a well-developed system of faculty advisers, professional staff advisers and student peer advisers who are available for individual consultations with undergraduates in a variety of settings, from the college undergraduate education and advising office to departmental offices to campus residence halls.

The strength of the college lies in the faculty's commitment to advancing the frontiers of human knowledge through research, artistic expression and other creative endeavors and to the effective communication and application of that knowledge through teaching and public service. Together, faculty and students in the College of Letters and Science create a climate that enables students to achieve their highest potential.

GRADUATE STUDY

Office of Graduate Studies
250 Mrak Hall
530-752-0650; http://gradstudies.ucdavis.edu

Graduate students at UC Davis have the opportunity to work with and learn from accomplished faculty, recognized for their contributions to research in their fields. The Office of Graduate Studies oversees nearly 100 graduate programs leading to master's and doctoral degrees, which together enroll approximately 4,800 graduate students. Many graduate programs are offered through graduate groups, an interdisciplinary concept that allows students to study and work with faculty in interrelated areas to broaden their intellectual experiences; see Graduate Studies, on page 110.

PROFESSIONAL STUDY

UC Davis has six professional schools—the School of Law (J.D.), the School of Medicine (M.D.), the School of Veterinary Medicine (D.V.M., M.P.V.M.), the School of Education (M.A., Ph.D., Ed.D.), the Betty Irene Moore School of Nursing (M.S., Ph.D.), and the Graduate School of Management (M.B.A.). These schools and programs are described in later chapters.
ACADEMIC RESOURCES

The University Library

The University Library is an integral part of the University of California, Davis, one of the top 100 research university libraries in the U.S. It also participates in and benefits from the collective activities of the University of California’s system of libraries and the California Digital Library. The library’s multidisciplinary and highly regarded collections and research services have long supported the faculty, students and researchers of the university, as well as the health care professionals of the UC Davis Health System and the citizens of California.

The Library’s vision is to be the academic hub of UC Davis, advancing research, education and innovation in a networked world. The Library will be an interdisciplinary resource for the entire community that enables transformative research and education through its provision of critical scholarship, tools, and services.

The University Library is comprised of four facilities: the Peter J. Shields Library, the Physical Sciences & Engineering Library, the Loren D. Carlson Health Sciences Library, and the F. William Blaisdell Medical Library in Sacramento. The combined collections of the various University Library facilities total more than 4 million volumes. An extensive variety of journal titles, government documents, maps, microfilms, media, and other formats are also part of the collection, including over 600,000 ebooks. The law library, administered by the School of Law, is located in King Hall.

Library services and resources information is available at the Library’s website; http://www.lib.ucdavis.edu. In addition, the library’s online catalogs identify library collections at UC Davis and at the other nine UC campuses which include full-text electronic journals and ebooks. The Library provides classes on the use of the online catalogs, as well as subject specific electronic journals and databases. Librarians are available for consultation to effectively and efficiently identify and use information resources for research projects and dissertations. Research workstations are available for patron use in all library facilities. The campus wireless network is available within all libraries and connects authorized laptop users to library and campus resources and services.

UC Davis Arboretum and Public Garden
Arboretum and Public Garden Headquarters
530-752-4880, http://arboretum.ucdavis.edu

UC Davis—already known for its heritage trees and park-like atmosphere—elevated the profile of its outdoor spaces by launching the UC Davis Arboretum and Public Garden in 2011. Through close partnerships with students, academic departments, and community members, the UC Davis Arboretum and Public Garden seeks to provide a visitor-friendly, living museum complete with educational and sustainable landscapes that showcase our campus’ academically-diverse expertise hand-in-hand with programs that allow for a wide-range of community participation including student internships, volunteer opportunities, and all-ages programming highlighting the arts and sciences.

One of the gems of the campus landscape is the 103-acre UC Davis Arboretum, founded in 1936, which contains a documented collection of more than 50,000 trees, shrubs and perennials from Mediterranean-climate areas throughout the world. Here visitors enjoy winding paths for walking, jogging, and bicycling, benches for enjoying the views, and picnic tables for casual gatherings. Demonstration gardens of drought-tolerant flowering perennials and collections of California native plants, oaks, acacias, conifers, and eucalyptus are resources for teaching and research; these landscapes also serve as a backdrop for a diverse array of events in addition to operating as an outdoor gallery for student and community-created art.

Students are integral to the Arboretum and Public Garden’s vision for transforming our campus grounds into an engaging outdoor experience through internship opportunities in sustainable horticulture, arts in the environment, education, and museum science. Students gain leadership skills and expertise in areas including nursery management, landscape design, geographic information systems (GIS), project management, exhibit development, and sustainable farming. Students, as well as community members, are also invited to volunteer for short-term projects ranging from event management to garden planting.

Although still in its infancy, the UC Davis Arboretum and Public Garden is gaining national attention for its sustainable landscape management as well as its practice of harnessing community collaboration to enhance the visitor experience.

Information and Educational Technology

IT Express
530-754-HELP (4357); ithelp@ucdavis.edu

Information and Educational Technology (IET) provides a wide range of services and support to undergraduate and graduate students. For more information, and to access those services, see the Student Computing Guide at http://studentcomputing.ucdavis.edu/.

Taking Care of Business Online

• Enroll in classes, add or drop courses, view and print your class schedule
• Access course grades
• View and print your unofficial academic record
• Check balances, view bills, make payments, and manage your student account
• Apply for and view financial aid awards
• Chart and plan your degree; see http://sisweb.ucdavis.edu/
• Make campus bookstore purchases; see http://ucdavisstores.com

Learning and Teaching with Technology

• Manage coursework and collaborate online with SmartSite. You can use it to communicate with your instructors and fellow students; collaborate on papers and projects; manage assignments and study with classmates; or just set up your own project site; see http://smartsite.ucdavis.edu

• Searchable electronic databases. Find them at Shields Library. You’ll have free, easy access from on- or off-campus; see http://www.lib.ucdavis.edu

• iTunes, YouTube and podcasting. Digital audio recording equipment is installed in several lecture halls, and portable digital recorders are available for rental from IET-Academic Technology Services (Surge II). Audio and video podcasting services are available to all instructors and campus groups; see http://podcasting.ucdavis.edu & http://itunes.ucdavis.edu
• **Classroom technology.** All 128 general assignment classrooms have audio, network and projection capabilities, and include a projector, CD player, DVD player, VCR, built-in microphone and laptop hook-up. Classrooms with more than 30 seats also have assistive hearing systems; see [http://iet.ucdavis.edu/rooms/classrooms.cfm](http://iet.ucdavis.edu/rooms/classrooms.cfm)

**The Essentials: Computers, Email, Software, Labs**

• **Email.** Every student has a free Gmail-based email account; see [http://davis.ucdavis.edu](http://davis.ucdavis.edu)

• **Computer purchases.** Our recommendations can help guide your purchases. Financial aid is available for qualified applicants; see [http://computerownership.ucdavis.edu](http://computerownership.ucdavis.edu). To buy computers and accessories at the campus bookstore, see [http://ucdavisstores.com](http://ucdavisstores.com)

• **Software.** Various programs are available free of charge or at a discount; see [http://software.ucdavis.edu](http://software.ucdavis.edu)

• **The Virtual Lab** lets you remotely log on to software in IET’s computer labs after hours; see [http://virtuallab.ucdavis.edu](http://virtuallab.ucdavis.edu)

• **Multimedia.** You’ll want to check out the video, audio, and graphic design software, as well as printers, scanners, etc., in the IET Media Lab; see [http://clm.ucdavis.edu/rooms/rooms.html#medialabs](http://clm.ucdavis.edu/rooms/rooms.html#medialabs)

• **Computer rooms.** Computer classrooms and labs distributed around the campus provide access to PCs, Macs and printers. Some labs have both Mac and PC computers, and many have extended hours during the week; see [http://iet.ucdavis.edu/rooms](http://iet.ucdavis.edu/rooms)

• **Printing.** All computer rooms are equipped with printers, and seven rooms also have color printing; see [http://clm.ucdavis.edu/rooms/printing](http://clm.ucdavis.edu/rooms/printing). You may also send a print job from your computer, over the Internet, to any printer in five locations; see [http://wirelessprinting.ucdavis.edu](http://wirelessprinting.ucdavis.edu)

**Networking**

• **Wireless Internet.** MoobilenetX is the campus secure wireless network. You can access it throughout much of the central campus, including Shields Library and the Memorial Union. For access requirements and instructions, see [http://wireless.ucdavis.edu](http://wireless.ucdavis.edu)

• **Wired Internet.** Students living on campus can connect to the Internet by using ResNet, the high-speed residence hall network. Each residence hall also has a computer center with computers, printers, and scanners; see [http://www.housing.ucdavis.edu/computers/](http://www.housing.ucdavis.edu/computers/)

**Security**

**Computer security.** Blocking computer viruses and preventing unauthorized access to computing systems are important parts of campus computing life. Keep up with campus security efforts, review instructions on how to maintain your computer system, and guard against security problems, including compromised passwords and identity theft; see [http://security.ucdavis.edu](http://security.ucdavis.edu)

**Technical Support**


**RESEARCH PROGRAMS AND RESOURCES**

**Organized Research Units**

Organized Research Units (ORUs) are campus-wide interdisciplinary research programs that further the university's missions of teaching, research and public service, but do not offer courses of instruction. Members of an ORU come from more than one department and normally from more than one school, college division.

**Air Quality Research Center (AQRC)**

3050 Bainer Hall 530-754-6558
Anthony Wexler, Director; awexler@ucdavis.edu
[http://airquality.ucdavis.edu](http://airquality.ucdavis.edu)

The Air Quality Research Center provides support for teams of collaborative researchers to conduct scientific, engineering, health, social and economic research to inform planning and regulations for air quality and climate change. The AQRC educates through conferences, outreach, scholarly publications, and training grants. Researchers at UC Davis employ theoretical approaches, mathematical models, measurements in the field and in laboratories, and policy analysis to tackle state, federal and intercontinental air quality problems. The center is composed of over 60 faculty and research staff members from six schools and colleges across campus. This breadth of expertise allows us to take a broad, interdisciplinary approach to air-quality problem solving.

**Bodega Marine Laboratory and Reserve**

Bodega Marine Laboratory
P.O. Box 247
Bodega Bay, CA 94923
707-875-2211; Fax 707-875-2009
ucdbml@ucdavis.edu; [http://bml.ucdavis.edu](http://bml.ucdavis.edu)

The Bodega Marine Laboratory is dedicated to research and teaching in marine science. Research areas include: Ecology and Evolution—invasive species, biodiversity, community ecology, etc., Coastal Oceanography—upwelling, estuaries and land runoff, nearshore hydrodynamics, ocean observing, Ocean Health—developmental and reproductive toxicology, shellfish health, environmental assessment, Physiology—comparative physiology and biochemistry, reproductive physiology, seagrass and seaweed physiological ecology, Conservation—fisheries management, marine protected areas, endangered species restoration, Climate Change—ecological impacts, ocean acidification, paleoceanography. Well-equipped facilities feature running seawater in two classrooms and many laboratories, a marine science library, lecture hall, housing facilities, computer labs, state of the art microscopy imaging facility, experimental climate change facility, greenhouses, experimental freshwater system for anadromous/estuarine invertebrate and fish studies, network of automated environmental sensors on marine and terrestrial habitats, 42-foot research vessel and various small boats, and a dive locker and air station. Faculty teach a number of undergraduate and graduate courses during the academic year and summer session. The laboratory is located in Bodega Bay, Sonoma County, 100 miles west of Davis.
The Bodega Marine Reserve, part of the UC Natural Reserve System, is 362 acres of remarkably diverse habitats, including an excellent rocky intertidal zone, sand beaches, saltmarsh, lagoon tidal flats, freshwater marsh, coastal prairie and dunes. The reserve also administers adjacent subtidal sand and rock habitats in a marine life refuge. Areas of research include a broad spectrum of field studies of plants and animals in coastal marine, intertidal and terrestrial ecosystems.

**California National Primate Research Center**

Primate Center  
530-752-0447; [http://www.cnpr.ucdavis.edu](http://www.cnpr.ucdavis.edu)

The California National Primate Research Center (CNP RC) investigates selected human health problems for which the nonhuman primate is the animal model of choice. Research programs include brain, mind and behavior, reproductive sciences and regenerative medicine, respiratory diseases, infectious diseases, immunology, stem cell biology, gene therapy, genetics and a variety of biomedical collaborative research projects. Self-sustaining breeding colonies of macaques are available for study of behavior and spontaneously occurring disorders.

**Center for Health and the Environment**

530-752-1340; [http://che.ucdavis.edu/](http://che.ucdavis.edu/)

The Center for Health and the Environment (CHE) coordinates and engages in interdisciplinary research on environmental agents, including chemicals and radiation, and health outcomes in humans, animals and other organisms. Researchers conduct epidemiologic studies in human populations, as well as experiments in whole animals, organisms, cells and molecules. Research on the development of agents for population control of humans and wildlife seek to mitigate the adverse effects of overabundance on the environment. Studies on toxic, radioactive, mutagenic, carcinogenic and teratogenic compounds are carried out in special animal holding facilities. Laboratories are equipped for studies in analytical chemistry, biochemical toxicology, cell and molecular biology, endocrinology, inhalation toxicology, morphology and reproductive and developmental biology. The Center houses a major university-wide program and federally funded center in occupational and agricultural medicine, nanotechnology and, a School of Medicine program in reproductive biology.

**Crocker Nuclear Laboratory**

530-752-1460; [http://crocker.ucdavis.edu](http://crocker.ucdavis.edu)

The Crocker Nuclear Laboratory is an interdepartmental laboratory for the application of nuclear science to a variety of disciplines, including air pollution and visibility, nuclear physics and chemistry, medical therapy with proton beams, material damage studies, and the effect of background and extraterrestrial radiation on electronic components.

**Institute for Data Analysis and Visualization**

2343 Academic Surge 530-752-0481  
Kenneth Joy, Director; [kjjoy@ucdavis.edu](mailto:kjjoy@ucdavis.edu)  
[http://idaiv.ucdavis.edu](http://idaiv.ucdavis.edu)

The mission of the Institute is the integration of research efforts at UC Davis in data analysis and visualization. The Institute draws students and faculty from a variety of departments and colleges, allowing researchers to work together on real-world, applied problems that deal with the massive data analysis and visualization problems encountered in science, engineering, and other fields. The integration of the two fields, especially in biological application of high throughput biological assay data such as gene expression arrays, proteomics, metabolomics and NMR spectroscopy, produce methods that impact a substantial number of scientific fields. In neuroscience, computer science, computational science, computational physics, and engineering applications, the Institute contributes data exploration and problem-solving methods through visualization, computer graphics, data analysis, and expressive interfaces that enable discovery and analysis from massive information streams. The collaborative efforts of the faculty and students of the Institute enable the University to address a wide-variety of application areas and contribute methods that enable scientists and engineers to make decisions from their data.

**Institute of Governmental Affairs**

469 Kerr Hall  
530-752-0966; Fax 530-752-8666; [http://iga.ucdavis.edu](http://iga.ucdavis.edu)

The Institute of Governmental Affairs (IGA) serves as a research base for social science faculty at UC Davis. IGA serves approximately 60 faculty from 10 campus departments as well as scholars visiting from throughout the United States and around the world.

Located in the core of the UC Davis campus, IGA houses eight formal research programs: Center for International Data; Center for State and Local Taxation; Center for the Evolution of the Global Economy; Conflict Processes Group; Economy, Justice and Society (EJS); Migration Dialogue; the Network Sciences Group; the Public Opinion Workshop, and the Rural Economies of the Americas Program (REAP).

Specialized services include grant advising, preparation and administration; research program development; library and data services; social science computing, programming and statistical consulting; seminar, workshop and conference organization; and much more. The institute sponsors an active public affairs program and enhances the education of students by providing research opportunities. IGA serves as the UC Davis liaison to the system-wide program, Institute on Global Conflict and Cooperation (IGCC) and the All-UC Group in Economic History.

**Institute of Transportation Studies**

West Village, 1605 Tilia St, Suite 100; 530-752-6548  
Dan Sperling, Director; [d sperling@ucdavis.edu](mailto:d sperling@ucdavis.edu)  
[http://www.its.ucdavis.edu](http://www.its.ucdavis.edu)

The Institute of Transportation Studies conducts multidisciplinary research on complex problems related to the transportation system and disseminates research results to the broader academic and professional community. Research priorities are travel behavior, alternative-fueled vehicle technology and policy, energy and environmental projects and advanced vehicle and highway systems. About 60 faculty members and 130 graduate students from more than 13 academic disciplines, including four Engineering departments, Economics, Environmental Science and Policy, Ecology, Agricultural and Resource Economics, and the Graduate School of Management, participate in the research activities of the Institute. The Institute administers a graduate program in Transportation Technology and Policy, and a number of research centers, including the National Center for Sustainable Transportation, the UC Davis Energy Efficiency Center (EEC), the UC Davis Plug-In Hybrid Electric Vehicle (PH&EV) Center, the Sustainable Transportation Energy Pathways (NextSTEPS) program, the UC Davis Western Cooling Efficiency Center (WCCEC), the China Center for Energy and Transportation (C-CET), and the Urban Land Use and Transportation Center (ULTRANS).
John Muir Institute of the Environment
Mark Schwartz, Director 530-754-9135
The John Muir Institute of the Environment (JMIE) supports innovation and discovery aimed at solving real-world environmental problems. The Institute’s faculty are committed to strengthening the scientific foundation for environmental decision making through collective entrepreneurship, a team-oriented approach that recognizes the complexities of environmental problems and the societal context in which they occur. JMIE champions science and technological innovation, provides campus-wide leadership, hosts centers and projects, and seeds research and educational initiatives to solve real-world environmental problems. The Institute links science and technology to policy by providing the intellectual setting for interactions between researchers, regulatory agencies, policy-makers and the public.

Nanomaterials in the Environment, Agriculture and Technology (NEAT)
4415 Chemistry Annex 530-752-3292
Alexandra Navrotsky, Director; anavrotsky@ucdavis.edu
http://neat.ucdavis.edu/
NEAT is a multidisciplinary research and education program linking the fundamental physics, chemistry, and engineering of small particles and nanomaterials to several challenging areas of investigation, including applications in ceramic, chemical, electronic, environmental, and agricultural technology; environmental transport and transformation and the resulting factors of environmental pollution and remediation; and interactions with the biosphere, especially microorganisms and the consequential effects on health.

Program in International and Community Nutrition
Kathryn G. Dewey
3293 Meyer Hall
530-752-1992; Fax 530-752-3406; hgdewey@ucdavis.edu
http://picn.ucdavis.edu
Faculty members of the Program in International and Community Nutrition are studying the epidemiology and causal mechanisms of the major nutritional problems of human populations in low-income countries and in disadvantaged ethnic minority groups in the United States, with the ultimate objective of planning, implementing and evaluating programs to ameliorate these problems. Current areas of research include maternal and child nutrition, control of micronutrient deficiencies, determinants of food intake, nutrition and infection, nutritional assessment, and food and nutrition programs and policy.

ADDITIONAL RESEARCH CENTERS AND RESOURCES

Adult Fitness Program
UC Davis Sports Medicine Program
916-734-6805
The UC Davis Adult Fitness Program is designed to help individuals improve their health and physical fitness to prevent disease and improve quality of life. Our team of exercise specialists includes sports medicine physicians, exercise physiologists and nutritionists trained by UC Davis Sports Medicine, Exercise Biology and Nutrition Faculty in exercise testing and prescription and sports nutrition. This program exists to provide a public health service to the university and surrounding communities; to provide clinical learning opportunities for UC Davis students; to provide opportunities to study the benefit of exercise and proper nutrition in the prevention of disease and assist individuals in evaluating their progress through discounted repeat testing and evaluation.

Advanced Highway Maintenance & Construction Technology (AHMCT) Research Center
Academic Surge 1003 530-752-5981
Steve Velinsky, Director; savelinsky@ucdavis.edu
Bahram Ravani, Director; bravani@ucdavis.edu
http://www.ahmct.ucdavis.edu/
In cooperation with state, federal, and private agencies, the Center for Advanced Highway Maintenance and Construction performs applied and basic research to develop innovative technologies in the areas of highway and civil infrastructure construction, maintenance, and operations. Our ultimate goal is the deployment of these technologies. Our efforts center on safety, mobility, lean operations, reliability, and the minimization of environmental impacts. To achieve these aims, we combine and leverage advanced automation and robotics, information technology, sensing and mechatronics, design and sustainability, life-cycle analysis, and advanced communication and computer technologies.

The Center also helps Caltrans access university and industry research, maintain a leadership position in maintenance and construction technology, access federal and pooled funds for research, test and evaluate new technologies, improve the Caltrans public image as a technology-oriented organization, and train students and professionals in transportation operations and technology.

Advanced Materials Characterization and Testing Laboratory (AMCaT)
Kemper Hall; lower level
Lab Manager: Fred Hayes; fahayes@ucdavis.edu
The AMCaT labs place their major emphasis on analytical electron microscopy (micro analysis) in the material sciences. The vision and goal of AMCaT is to embrace and support a multi-disciplinary user base of students (undergraduate and graduate), post doctoral fellows, and faculty researchers at UC Davis. The facility also offers its users a variety of sample preparation equipment, a light microscopy lab with image analysis, an x-ray lab, and a materials testing lab. AMCaT supports numerous lab classes in engineering.

Advanced Transportation Infrastructure Research Center Facility (ATIRC)
West Campus
John Harvey, Director (UCPRC); jtharvey@ucdavis.edu
The UC Davis Advanced Transportation Infrastructure Research Center (ATIRC) project provides a facility for two research programs: the UC Pavement Research Center (UCPRC) and the Advanced Highway Maintenance and Construction Technology Research Center (AHMCT). Research at the UCPRC at ATIRC includes accelerated pavement testing of new types of materials and pavement structures using the Heavy Vehicle Simulators, laboratory specimen preparation and testing, and analyses. ATIRC houses the UC Davis staff of the UCPRC.
Agricultural Sustainability Institute
Thomas P Tomich, Director
143 Robbins Hall
530-752-3915; Fax 530-752-2829; asi@ucdavis.edu
http://asi.ucdavis.edu/

The Agricultural Sustainability Institute (ASI) provides a hub that links initiatives and education in sustainable agriculture and food systems across all divisions of the College of Agricultural and Environmental Sciences at UC Davis, across the University of California, and with other partners across the state, nation, and planet. ASI includes:

• Advising and internship coordination for the UC Davis undergraduate major in Sustainable Agriculture and Food Systems
• UC Davis Student Farm
• UC Davis Russell Ranch Sustainable Agriculture Facility
• UC ANR statewide Sustainable Agriculture Research & Education Program (SAREP)
• The Inter-institutional Network on Food, Agriculture and Sustainability (INFAS), a national academic network

California Agricultural Experiment Station
College of Agricultural and Environmental Sciences
530-752-1610

The California Agricultural Experiment Station has branches on the UC Davis, UC Riverside and UC Berkeley campuses. The UC Davis branch includes approximately 400 faculty and CE Specialists, mostly in the College of Agricultural and Environmental Sciences, but also in the College of Biological Sciences and the School of Veterinary Medicine. In addition to laboratory facilities, it has approximately 3,000 acres devoted to field research in the environmental and crop sciences, as well as facilities to support animal and long-term experimental research. The Experiment Station supports faculty in research involving agricultural production, food processing, nutrition, animal care and disease prevention, consumer sciences and community development and in natural resources and ecosystem science management, with an emphasis on maintaining and improving environmental quality of both natural and managed ecosystems.

Center for Advanced Laboratory Fusion Science and Engineering (CALFUSE)
3001 Ghausi Hall 530-754-9069
Neville Luhmann, Director; ncluhmann@ucdavis.edu
David Hwang, Director; dhwang@ucdavis.edu
http://calfuse.ucdavis.edu/

The purpose of Center for Advanced Laboratory Fusion Science and Engineering (CALFUSE) is to promote interaction between research and educational entities within the University and among the University, the national laboratories, and industrial laboratories. Fusion research is an extremely broad field, encompassing topics that cut across numerous engineering, science, and policy disciplines. The initial set of topics includes plasma accelerators, high-energy particle accelerators, plasma diagnostics (specifically, millimeter wave and Terahertz technology developments), advanced computing, advanced materials, and energy policy. The Center invites participation from all fields that may have relevance to fusion education and research.

Center for Biophotonics (C4B)
2700 Stockton Blvd., Suite 1400
Sacramento, CA 95817 916-734-8600
Dennis Matthews, Director; dmatthews@ucdavis.edu
http://cbst.ucdavis.edu/

The Center for Biophotonics applies biophotonics—the science of light interaction with biological matter—to solve problems in biology and medicine. Work at C4B advances the research, development, and application of new optical/photonic tools and technologies in medicine and the life sciences, enabling engineers to collaborate with basic scientists and physicians at the UC Davis Medical Center to translate new technologies from the benchtop to the bedside. Center projects are highly diverse and include superresolution optical microscopies, advanced imaging and manipulation of living cells and other biological systems, engineered fluorescent proteins, label-free cell analysis by Raman spectroscopy and second harmonic generation, molecular sensors and assays, in vitro and in vivo devices and assays for diagnosis, monitoring and treatment of disease.

C4B is the successor of the NSF Center for Biophotonics Science and Technology, which was funded by the National Science Foundation and participating institutions between 2002-2013.

Center for Child and Family Studies
Center for Child and Family Studies (main office in West House) 530-752-2888; http://ccfs.ucdavis.edu

The Center for Child and Family Studies (CCFS) houses the Early Childhood Laboratory (ECL), a research, teaching and demonstration laboratory of the Division of Human Development and Family Studies in the Department of Human Ecology. At the ECL, students enrolled in human development courses learn observational techniques and participate with peers, children, parents and professionals in developmental programs for infants through preschoolers. Students study early development in a naturalistic setting, linking research and theory to principles of interaction and learning about developmental differences. Selected undergraduate students participate in faculty and graduate student research at the laboratory. The CCFS also houses several research and outreach facilities, including the Eichhorn Family House.

Center for Geotechnical Modeling
2655 Brooks Road 530-752-7929
Ross W. Boulanger, Director; rwboulanger@ucdavis.edu
http://cgm.engineering.ucdavis.edu/

The Center performs research in the broad area of geotechnical engineering, with a focus on earthquake engineering problems such as dynamic site response, liquefaction, ground failure, and soil-foundation-structure interaction for buildings, bridges, dams, tunnels, and port facilities. The Center emphasizes physical modeling using one of the world’s largest and most advanced geotechnical centrifuge facilities, but also performs numerical simulations using advanced computational tools, develops design procedures, and develops new techniques for site characterization. The centrifuge is available for shared use by researchers from around the country and is supported by the George E. Brown, Jr., Network for Earthquake Engineering Simulation.
**Center for Information Technology in the Interest of Society (CITRIS)**

3179 Kemper Hall 530-752-7063
Nina Ameni, Director; http://ucdavis.citris-uc.org

The Center for Information Technology Research in the Interest of Society (CITRIS) is one of the California Institutes of Science and Innovation. The Center involves a partnership among four UC campuses: UC Davis, UC Berkeley, UC Merced and UC Santa Cruz.

CITRIS creates information technology solutions for many of our most pressing social, environmental, and health care problems. CITRIS was created to "shorten the pipeline" between world-class laboratory research and the creation of start-ups, larger companies, and whole industries.

CITRIS facilitates partnerships and collaborations involving faculty members and students from numerous departments at the four UC campuses with industrial researchers from corporations. Current initiatives include i4Energy (using information technology, sensors, and controls for stable and sustainable energy); the delivery of quality health care everywhere for Californians; intelligent infrastructure for water, transport, and cities; and data and democracy.

**Center for Mind and Brain**

267 Cousteau Place, Davis, CA 95618 530-297-4651
Steven J. Luck, Director; http://mindbrain.ucdavis.edu/

The Center for Mind and Brain is an interdisciplinary research center that is dedicated to understanding the nature of the human mind. Our scientists probe the mind using state-of-the-art approaches from the social, biological, engineering, and medical sciences. Our core research areas include attention, development and aging, memory, multisensory integration, music, and disorders of mind and brain. We focus on both discovering the fundamental principles of the healthy human mind and understanding and treating conditions such as autism, schizophrenia, and Alzheimer’s disease.

**Center for Molecular Genomic Imaging (CMGI)**

451 Health Sciences Drive 530-754-8960
Simon Cherry, Director; srcerry@ucdavis.edu
http://imaging.bme.ucdavis.edu/

The Center for Molecular Genomic Imaging (CMGI) offers the research community dedicated, state-of-the-art imaging technologies for in vivo and specimen imaging. Imaging modalities include PET, SPECT, CT, MRI, ultrasound, autoradiography, and optical (fluorescence and bioluminescence). The CMGI has become a core facility serving a wide range of campus investigators and is integrated in many major centers, programs, and institutes.

Imaging studies can provide new insights in many areas of biomedical research, including oncology, cardiology, neuroscience and pharmacology. Molecular and genomic imaging can play an important role in advancing basic science investigations and in the development of new diagnostic and therapeutic approaches for use in the clinical setting. CMGI staff provide services that include consultation, protocol planning and experimental design, animal handling and physiologic monitoring, injection of contrast agents and radiopharmaceuticals, scanning, data reconstruction and visualization, image analysis and data backup. CMGI facilities are open to all researchers at UC Davis, and are also open, on a space-available basis, to external researchers.

**Center for Nano and Micromanufacturing**

The Center for Nano and Micromanufacturing (CNM2) includes a 10,000 square-foot Class 100 cleanroom, offering a broad line of lithography tools with resolution capabilities down to 50nm, metal and dielectric thin-film deposition, dry etching, as well as numerous characterization tools to support device manufacturing for a variety of industries and applications. The facility has capabilities to accommodate a wide variety of substrate materials including: Si, SiO2, borosilicate glass, InP, GaAs as well as biocompatible polymer materials such as PDMS. External to the cleanroom we have an additional 3000+ square feet of research space which houses both a high-resolution SEM and FIB system used for sample characterization and TEM sample preparation.

The staff is available from 9:00 a.m.-5:00 p.m. (PST) to assist internal and external users with process development and training to help streamline research projects.

**Center for Neuroscience**

Cameron Carter, Director
1544 Newton Ct., Davis, CA 95618
530-737-8708; Fax 530-757-8827; http://neuroscience.ucdavis.edu

The Center for Neuroscience is an interdisciplinary unit that serves as the focal point for the study of the neurosciences at UC Davis. Faculty affiliated with the Center are from 13 departments and sections. The center sponsors a seminar series, conferences and symposia, provides research space for center members and supports graduate students, postdoctoral scholars and distinguished visitors.

Faculty and students are engaged in the study of brain mechanisms responsible for normal human cognitive and perceptual processes and in the study of fundamental aspects of nerve cell function and development. A core group of cognitive neuroscientists uses various imaging techniques and electrophysiological techniques to study both the normal and lesioned cerebral cortex to understand how the normal brain controls behavior. Other faculty members use either animal models to understand how information is processed in the brain or simple systems to study the fundamental biology of nerve function and development and disorders affecting them.

**Center for Population Biology**

Storer Hall 530-752-1274
Jay Stachowicz, Director; jstachowicz@ucdavis.edu
http://cpb.ucdavis.edu

The UC Davis Center for Population Biology (CPB) aims to advance understanding of the fundamental ecological and evolutionary processes that control the origins and maintenance of biological diversity, at all levels of organization ranging from molecules to ecosystems. Our activities promote integrative, multidisciplinary research in population biology through collaborations, mentorships, workshops and meetings. Faculty in the Center are drawn from nine academic departments and three colleges (Biological Sciences, Agriculture and Environmental Sciences, and Letters and Sciences).
Center for Science and Innovation Studies
1246 Social Sciences and Humanities Building & 1127 King Hall
Mario Biagioli, Ph.D., Program Director
http://innovation.ucdavis.edu/

The Center for Science and Innovation Studies (CSIS) studies the many dimensions of the process of technoscientific innovation. We focus predominantly on the upstream spectrum of innovation—from the design, articulation, and funding of research programs to the patenting and publication of their outcomes—paying particular attention to the process, practices, instruments, and techniques of innovation and to the conceptual and practical problems of knowledge transfer. Through detailed case studies (contemporary as well as historical), CSIS analyzes the role that training, cultural background, and cross-disciplinary mobility play in the emergence of innovation, as well as the new institutional, technical, and social arrangements that sustain it (from innovative laboratory architecture and university-industry configurations, to distributed and cyberinfrastructure-based collaborations, to alternative systems of publication and new metrics of quality and performance assessment). Intellectual property (both traditional regimes and more recent platforms like free software, open source, science commons, and norm-based reward systems) is a central focus of CSIS, as are issues pertaining to bioprospecting and the access to and reward of traditional knowledge.

Coastal and Marine Sciences Institute
Storer Hall 530-752-1274
Rick Grosberg, Founding Director; rgrosberg@ucdavis.edu
http://cansi.ucdavis.edu

The UC Davis Coastal and Marine Sciences Institute (CMSI) aims to catalyze and foster innovative partnerships for discovering, understanding, and communicating science for effective stewardship of ocean and coastal environments in California and beyond. We especially strive to build collaborations with diverse stakeholders, including private-sector organizations and corporations that have significant economic, social, and environmental interests in the coastal ocean and at the land-sea interface. We believe that such partnerships can lead to the development of sustainable policies that protect biodiversity, nurture ecosystems, and enhance beneficial uses of the ocean in parallel with socio-economic development. With its focus on humans and the coastal oceans, the institute assembles globally-recognized experts from more than 20 academic units on the main campus and Bodega Marine Laboratory. CMSI also coordinates research and academic programs across campus, including a new major in Marine and Coastal Sciences, as well as emerging graduate and professional programs.

Computer Security Laboratory
2063 Kemper Hall; seclab-contact@cs.ucdavis.edu
Matt Bishop, Hao Chen, Karl Levitt, Felix Wu, Directors; bishop@ucdavis.edu, levitt@ucdavis.edu, wu@ucdavis.edu, hchen@ucdavis.edu
http://seclab.cs.ucdavis.edu/

The mission of the UC Davis Computer Security Laboratory is to improve the current state of computer and information security and assurance through research and teaching. The Security Lab investigates security problems in the network infrastructure, in computer security, and in information assurance in general. Current projects include research into the balance between privacy and analysis in data sanitizing, vulnerabilities analysis, social links, the provision of a secure programming clinic, forensic logging and auditing, e-voting research, and biology-inspired security techniques. The Security Laboratory also researches and detects malicious code (viruses, worms, time bombs, etc.) in programs and detects attempts to penetrate or misuse computer systems. Research projects are supported by corporate and government organizations.

Genome Center
4303 Genome and Biomedical Sciences Facility 530-754-9648
Richard Michelmore, Director; rwmichelmore@ucdavis.edu
http://genomecenter.ucdavis.edu

The UC Davis Genome Center integrates experimental and computational approaches to address questions at the forefront of genomics and bioinformatics. The Center is housed in a purpose-built research building with state-of-the-art computational and laboratory facilities. The Center has recruited 16 research faculty and established five technology cores that serve the whole campus. The five service cores are DNA Technologies, Expression Analysis, Proteomics, Metabolomics, and Bioinformatics. These technology service cores have been established to provide researchers with access to the latest technologies on an at-cost, as-needed basis. Further details are available from the website.

Health Sciences Research Laboratory—Animal Surgery
Buildings H and J, Center for Laboratory Animal Science 530-752-7756; latalthr@ucdavis.edu, jesdavis@ucdavis.edu

This unit is a surgical research facility in compliance with NIH, AAALAC and USDA standards. Instruction in surgical techniques is available including multiple training stations for larger groups. Surgical instruments, drapes, anesthesia machines, scrub suits, and equipment for monitoring vital signs and physiologic parameters are available. Assistance with animal procurement is available. Staff are available to perform or assist with both survival and non-survival surgical procedures depending on the investigator’s requirements. Staff are also available for post-operative care, data and sample collection as required, and assistance with preparation of the IACUC Protocol for Animal Care and Use.

Human Performance Laboratory
164 Hickey Gym 530-752-0965

The Human Performance Laboratory (HPL) was founded in 1963 and has a long history of basic and applied research and outreach in exercise physiology, biomechanics and sports psychology. The HPL has been involved in a variety of research areas since its inception including metabolism, heat stress, fluid balance, injury prevention, body composition and health benefits of physical activity and fitness. The HPL is represented by full-time and adjunct faculty members with varying research backgrounds and scientific interests. The HPL facilities allow measurement of a comprehensive list of human performance characteristics. Investigators have access to advanced data acquisition systems for evaluation in the areas of biomechanics, motor learning, environmental physiology, cardiopulmonary and thermoregulatory physiology, human nutrition and exercise and muscle metabolism. Specific technologies and capabilities include extensive computing facilities, high speed 3-D video motion analysis, ground reaction force measurement, ultrasound imaging, a temperature and humidity controlled environmental chamber and systems for measurement of oxygen consumption, body composition and psychomotor performance. The HPL meets the needs of today’s creative researcher and has the capacity to assist in answering tomorrow’s research questions.
Introduction

Humanities Institute

David Biale, Director
Molly McCarthy, Associate Director
227 Voorhies Hall 530-752-1254; Fax 530-752-4263

The UC Davis Humanities Institute (DHI) is an interdisciplinary research center that fosters intellectual collaborations and facilitates access to resources for faculty and graduate students who are actively engaged in research and teaching in the humanities, the arts, cultural studies and the humanistically oriented social sciences. It advocates for the humanities within the UC Davis community and works with funding agencies to secure individual and programmatic resources for faculty. To explore emerging research areas and provide collaborative opportunities for faculty and graduate students, the Institute sponsors faculty and graduate research fellowships, interdisciplinary research clusters, and administers the Mellon Research Initiatives in the Humanities. The Institute also organizes conferences, workshops and lectures and provides partial funding for events that serve humanities scholars at UC Davis.

Institute for Ultra-Scale Visualization

2121 Kemper Hall;
530-734-8579
Kwan-Liu Ma, Director; http://www.scidac.gov/viz/ultraviz.html

The SciDAC Ultra-Scale Visualization Institute is a research, education, and outreach effort sponsored by the DOE SciDAC program. The Institute’s mission is to address the upcoming petascale and exascale visualization challenges facing computational science and engineering. The Institute fosters the exchange of knowledge between universities, DOE laboratories, and industry to make advanced visualization an integrated component in scientific discovery. The Institute revolutionizes the very process of scientific discovery by equipping scientists with tools that shed light on the knowledge hidden in previously incomprehensible datasets.

Mann Laboratory

105 Mann Laboratory
Trevor Suslow, Faculty Contact
Lee Ann Richmond, Facility Manager and Safety Officer
530-754-8313; Fax 530-752-4554

Plant scientists in the Louis K. Mann Laboratory study the physiology, biochemistry, microbiology and molecular biology of preharvest and harvested fruits, ornamentals, and vegetables to improve and maintain their quality and safety during harvest, storage, processing, distribution and marketing. The three current faculty and two Emeritus Faculty housed in this facility are members of the Department of Plant Sciences and one USDA/ARS research scientist. Research and extension activities are supported by students, postdoctoral researchers and visiting scientists. Research includes basic plant molecular biology, plant physiology, applied postharvest biology and technology, produce safety microbiology, and practical storage technologies for horticultural crops, including whole and highly processed products. Results are of interest to other researchers in the plant sciences and food science as well as to growers, shippers, transportation and logistics providers, marketers and consumers of fresh fruit and vegetables. This Special Postharvest Facility is a CAES resource and is equipped with 18 controlled-temperature rooms, eight research laboratories, specialized postharvest analytical equipment, advanced rapid test equipment for human pathogens, and a small conference room for up to 25 with a 60" wall-mounted flat-screen monitor.

Natural Reserve System

John Wingfield, Director
Virginia Boucher, Associate Director
The Barn
530-752-6949; http://bhrs.ucdavis.edu; http://nrs.ucop.edu

The UC Davis campus administers five reserves that are available for teaching and research.

- Bodega Marine Reserve, located at Bodega Bay, 100 miles west of campus, consists of both terrestrial and coastal marine habitats including grasslands, dunes, freshwater and brackish marshes, mudflats, sandy beaches, rocky intertidal and subtidal areas. There are facilities for overnight and longer stays.
- Jepson Prairie Reserve, located in Solano County 13 miles south of Dixon, consists of native California bunchgrass grasslands, vernal pools, playa lakes and freshwater sloughs.
- Donald and Sylvia McLaughlin Reserve, located near Clear Lake about 70 miles northwest of campus, consists of Inner Coast Range habitat with a mix of serpentine and non-serpentine soils. The reserve has a facility for overnight and longer stays and a camping area for class groups.
- Quail Ridge Reserve consists of Inner Coast Range habitat located about 30 miles west of campus on a peninsula jutting into Lake Berryessa. The reserve has facilities for overnight and longer stays and tent cabins for class groups.
- Stebbins Cold Canyon Reserve, located about 24 miles west of campus, has representative populations of several different plant communities found in California’s Inner and Outer Coast Ranges. A five mile loop trail is popular with recreational hikers.

The University of California maintains 39 reserves throughout the state, many of which are available for teaching and research.

Nuclear Magnetic Resonance Facility

Medical Sciences 1D
530-752-7677; http://www.nmr.ucdavis.edu

The Nuclear Magnetic Resonance Facility provides access to state-of-the-art NMR instrumentation for spectroscopy and imaging to researchers in the biological, medical and physical sciences. At present, the facility operates ten spectrometers of varying purposes and capabilities at field strengths from 300 to 800 MHz. Applications include structural characterization of organic molecules, determination of protein structure and dynamics, metabolomics, imaging and in vivo spectroscopy of small animals, plants, and materials, and spectroscopy of solids. The Facility also has workstations for off-line data processing. Three full-time staff members are available to assist campus researchers in utilizing the instrumentation. A training course, Biological Chemistry 230, is offered in the fall quarter.

UC Pavement Research Center

2001 Ghausi Hall;
530-754-6409
John Harvey, Director, UC Davis Site; jtharvey@ucdavis.edu
http://www.ucprc.ucdavis.edu

The UC Pavement Research Center (UCPRC) uses innovative research and sound engineering principles to improve pavement structures, materials and technologies. Work at the UCPRC focuses on asphalt and concrete pavements, including design, materials, rehabilitation, life cycle, maintenance and reconstruction; pavement cost analysis and strategy selection; the effects of
pavement activities on traffic in urban areas; pavement performance modeling; and environmental life-cycle assessment for pavements.

**Social Science Data Service**

105 Social Sciences and Humanities Building
530-752-4009; [http://www.sdsd.ucdavis.edu](http://www.sdsd.ucdavis.edu)

The Social Science Data Service (SSDS) is a unit in the Division of Social Sciences. SSDS provides quantitative computing and consulting services in support of faculty and graduate students involved in social science research on the UC Davis campus. SSDS provides consulting services for the wide range of software used by social scientists and assists with questions regarding the use of SSDS computers and statistical and data-related programming. SSDS manages a UNIX system and a PC research lab used for quantitative social science computing.

**Sustainable Transportation Energy Pathways (NextSTEPS)**

Institute of Transportation Studies, UC Davis
Joan Ogden, Director; [jmo@ucdavis.edu](mailto:jmo@ucdavis.edu)
Paul Gruber, Manager; [pwgruber@ucdavis.edu](mailto:pwgruber@ucdavis.edu)

NextSTEPS is a four-year (2011-2014) research consortium that addresses the technical, operational, logistical, and strategic issues related to the transition to an alternative fuel-based economy. The program comprises 100+ interdisciplinary research projects addressing the potential transportation energy pathways: electricity, hydrogen, biofuels, and fossil fuels. These pathways are analyzed and compared across program threads: consumer demand and travel behavior; innovation and business strategy; infrastructure system analysis; environmental, energy and cost analysis; vehicle technology evaluation; policy analysis; and integrative scenarios and transition strategies.

The program draws upon research methods from a broad range of academic fields including: vehicle engineering and design, systems analysis and operations research, chemical and mechanical engineering, lifecycle cost and emissions analysis, market research, sociology and anthropology, economics and business strategy, and policy analysis.

The overarching program goal of NextSTEPS is to generate new insights about the transitions to a sustainable transportation energy future and disseminate that knowledge to decision-makers in the private sector and governmental agencies so that they can make informed technology, investment, and policy choices.

**Tahoe Environmental Research Center (TERC)**

UC Davis Administration Office; Watershed Sciences Building; 530-754-8372
TERC site Laboratories in Incline Village, NV 775-881-7560
Geoffrey Schladow, Director; [gschladow@ucdavis.edu](mailto:gschladow@ucdavis.edu)

The Tahoe Environmental Research Center is dedicated to research, education and public outreach on lakes and their surrounding watersheds and airsheds. Lake ecosystems include the physical, biogeochemical and human environments, along with the interactions among them. The Center is committed to providing objective scientific information for the restoration and sustainable use of the Lake Tahoe Basin and for freshwater ecosystems worldwide.

**UC Agricultural Issues Center**

252 Hunt Hall; 530-752-2320; [agissues@ucdavis.edu](mailto:agissues@ucdavis.edu)
[http://www.aic.ucdavis.edu](http://www.aic.ucdavis.edu)

The UC Agricultural Issues Center is a university-wide research and outreach unit with core competencies in economics while drawing on expertise from many disciplines. The Center focuses on California’s agricultural issues related to science and technology, international trade and markets, agribusiness trends, rural-urban issues, natural resources and the environment, human resources and agricultural policy.

**UC Davis Center for Plant Diversity**

Formally the UC Davis Herbarium
Dr. Dan Potter, Director; Ellen Dean, Curator
1026 Sciences Laboratory Building, Department of Plant Sciences
530-752-1091; [http://herbarium.ucdavis.edu](http://herbarium.ucdavis.edu)

The UC Davis Center for Plant Diversity provides information on the names, uses, toxicity and distribution of plants. Anyone can visit the Herbarium to use its dried plant collections (300,000 specimens), botanical library and microscopes, but a phone call is suggested to make sure staff will be available to assist you. The collections are used most commonly to check plant identifications, but they are also used by campus faculty and students for teaching and research in plant systematics and ecology. Herbarium staff answer hundreds of public service requests each year (especially identification of weeds and poisonous plants). Collections include vascular plants, bryophytes, lichens and algae. The majority of these specimens are angiosperms (flowering plants), mainly from California, but the collections are worldwide in scope, with strong holdings from North America, Ecuador, Baja California and regions with Mediterranean climate regimes. The Herbarium is well known for its collection of weeds and poisonous plants, although it also has world-class collections of grasses, oaks and spurge. The Herbarium’s support group, the Davis Botanical Society, hosts a wide range of botanical events, workshops and trips each year.

**UC Davis Energy Institute**

West Village, 1605 Tilia St, Suite 100; 530-752-4900
Dan Sperling, Director; [energy@ucdavis.edu](mailto:energy@ucdavis.edu)
[http://energy.ucdavis.edu](http://energy.ucdavis.edu)

The Energy Institute at UC Davis is home to energy research and education programs of the University of California, Davis. It was established to accelerate the global transformation to a sustainable energy future and is structured to coordinate the world-class strengths of UC Davis in energy research, education and outreach to foster new innovations, expand public service and inform decision-making about new energy solutions. The Energy Institute encompasses critical areas of energy research at UC Davis—including renewable and sustainable energy systems, energy efficiency, fuels and transportation, infrastructure, environment, and economics. The Institute actively targets the demand for well-trained energy professionals.
UC Davis J. Amorocho Hydraulics Laboratory (JAHL)

Dept. of Civil and Environmental Engineering; 530-752-2385
M. Levent Kavvas, Director; mlkavvas@ucdavis.edu
http://jahl.Engr.ucdavis.edu/

The research areas at the UC Davis J. Amorocho Hydraulics Laboratory include engineering hydraulics, fisheries protection, and ecological and environmental hydraulics. UC Davis JAHL was built to perform hydraulic modeling studies for the California State Water Project and has been conducting hydraulic investigations through scaled physical, prototype and numerical models to provide modeling services to federal, state, and local water agencies and private entities. With the recently constructed large flume, which has a circulation capacity of 200 cfs, it is now possible to perform prototype physical modeling studies at the laboratory. Recent research projects have included the assessment of hydraulics, fish behavior, and swimming, near unscreened diversions; studies of sturgeon passage; and investigations of the effects of California riparian vegetation on flow, roughness, and erosion. With the help of the state and federal agencies, researchers have actively participated in the development of solutions to fish protection for the Bay Delta river system and are developing a better understanding of the hydraulic and biological issues in the Sacramento River and Bay Delta system. Fish biologists, hydraulic engineers and other UC Davis JAHL researchers have many years of experience in testing Sacramento River and Bay Delta fish species under various hydraulic and environmental conditions and in handling invasive water plant species that occur in the Delta fish facilities.

X-Ray Crystallographic Laboratory

James C. Fettinger, Ph.D.
Department of Chemistry
530-754-7822

The X-Ray Crystallographic Laboratory, located in the Department of Chemistry, provides crystal structure determinations for researchers. Single crystals from all branches of chemistry are studied. The laboratory is equipped with three single crystal Bruker X-ray diffractometers, an APEX Duo equipped with both Cu and Mo anode sources, and two Mo source systems, an APEXII and a SMART1000. The laboratory also possesses a stereo-microscope. All instruments have variable low temperature systems including the capability of cooling the crystal to 5K. Consultation and collaboration on a variety of single crystal related projects can be arranged.