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HOW TO OBTAIN THE CATALOG
Copies of this catalog may be obtained from:
Office of Admissions/Relations with Schools and Colleges
Phone: (559) 241-7474
Toll Free: (866) 270-7301
TTY: (559) 241-7434
E-mail: admissions@ucmerced.edu

PLEASE NOTE
This catalog contains information about UC Merced. Because the UC Merced Catalog must be prepared well in advance of the year it covers, changes in some programs and courses inevitably will occur. Updates to this information are available online at http://www.ucmerced.edu. The selection of courses to be offered each semester is subject to change without notice, and some courses are not offered each year. The Schedule of Classes, available on the Web shortly before registration begins each semester, provides more current information on courses, instructors, enrollment procedures and restrictions, class hours, room assignments, and final examination schedules. Students should consult the appropriate school or campus unit for even more up-to-date information. Contact information appears on page 3 of this catalog.

It is the responsibility of the student to become familiar with the announcements and regulations of the university that are printed in this catalog and other campus publications. The catalog is the document of record for undergraduate major requirements and is updated annually.

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Chief Editor
Karen Merritt

Editors
Jane Lawrence
Diana Kells
Sheryl Lichtig Wyan

Proofreading
Ana Nelson Shaw

Design and Production
Jennifer Biancucci

Contributing Photographers
Hans Marsen; Rod Searcey; Dave Thurber; Roger J. Wyan

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PLEASE VISIT US ONLINE AT WWW.UCMERCED.EDU
### Academic Calendars

#### Fall Semester 2004
- Semester begins: August 23, 2004
- Instruction begins: August 30, 2004
- Labor Day holiday: September 6, 2004
- Veterans Day holiday: November 11, 2004
- Thanksgiving holiday: November 22-24, 2004
- Instruction ends: December 10, 2004
- Final examinations: December 13-17, 2004
- Winter holiday: December 24-27, 2004
- New Year’s holiday: December 30-31, 2004

#### Spring Semester 2004
- Semester begins: January 11, 2005
- Martin Luther King, Jr. holiday: January 17, 2005
- Instruction begins: January 18, 2005
- Presidents’ Day holiday: February 21, 2005
- Spring recess: March 21-25, 2005
- Cesar Chavez Day holiday: March 25, 2005
- Instruction ends: May 10, 2005
- Final examinations preparation: May 11, 2005
- Final examinations: May 12-15, 2005
- Semester ends: May 18, 2005

#### Fall Semester 2005
- Semester begins: August 28, 2005
- Labor Day holiday: September 5, 2005
- Instruction begins: September 6, 2005
- Veterans Day holiday: November 11, 2005
- Thanksgiving holiday: November 24-25, 2005
- Instruction ends: December 15, 2005
- Final examinations preparation: December 16, 2005
- Final examinations: December 17-20, 2005
- Winter holiday: December 26-27, 2005
- New Year’s holiday: December 30, 2005-January 2, 2006

#### Spring Semester 2006
- Semester begins: January 10, 2006
- Martin Luther King, Jr. holiday: January 16, 2006
- Instruction begins: January 17, 2006
- Presidents’ Day holiday: February 20, 2006
- Spring recess: March 20-24, 2006
- Cesar Chavez Day holiday: March 25, 2006
- Instruction ends: May 10, 2006
- Final examinations preparation: May 11-12 & 14, 2006
- Final examination: May 18, 15-16, 2006
- Semester ends: May 16, 2006

#### Summer Sessions 2006
- Memorial Day Holiday: May 29, 2006
- Six-week session: June 5, 2006-July 14, 2006
- Eight-week session: June 1, 2006-July 26, 2006
- Independence Day Holiday: July 4, 2006

### Opening-Day Academic Programs

#### Undergraduate Degrees – 2005-2006
- Bioengineering, B.S.
  - Emphasis: Nanobioengineering
- Biological Sciences, B.S.
  - Emphasis: Cell Biology and Development, Microbiology/Immunology, Molecular Biology/Biochemistry, Bioinformatics/Computational Biology
- Computer Science and Engineering, B.S.
  - Emphasis: Geocomputation and Bioinformatics, Hydrologic and Climate Sciences, Ecosystem Sciences
- Environmental Engineering, B.S.
  - Emphasis: Environmental Hydrology, Environmental Quality, Energy and Environmental Sustainability
- Human Biology, B.A.
  - Emphasis: Natural Sciences
- Management, B.A.
  - Emphasis: Business Economics and Management
- Social, Behavioral and Cognitive Sciences, B.A., B.S.
  - Emphasis: Economics
- World Cultures and History, B.A.
  - Emphasis: History

#### Graduate Degrees – 2004-2006
- Individual Graduate Program M.A., M.S., Ph.D.
  - Graduate Group Emphasis: Environmental Systems, Quantitative and Systems Biology, Molecular Science and Engineering, Social, Behavioral and Cognitive Sciences (planned)

#### Planned Individual Graduate Program
- Graduate Group emphases include: Computer and Information Systems, World Cultures

### If You Are Thinking About a Career in Teaching...

UC Merced can help you prepare! California urgently needs teachers in many fields, especially in science and mathematics. An additional special need in the San Joaquin Valley is for teachers of English. UC Merced can help you prepare! California urgently needs teachers in many fields, especially in science and mathematics. An additional special need in the San Joaquin Valley is for teachers of English. UC Merced can help you prepare! California urgently needs teachers in many fields, especially in science and mathematics. An additional special need in the San Joaquin Valley is for teachers of English. UC Merced can help you prepare! California urgently needs teachers in many fields, especially in science and mathematics. An additional special need in the San Joaquin Valley is for teachers of English. UC Merced can help you prepare! California urgently needs teachers in many fields, especially in science and mathematics. An additional special need in the San Joaquin Valley is for teachers of English. UC Merced can help you prepare! California urgently needs teachers in many fields, especially in science and mathematics. An additional special need in the San Joaquin Valley is for teachers of English. UC Merced can help you prepare! California urgently needs teachers in many fields, especially in science and mathematics. An additional special need in the San Joaquin Valley is for teachers of English. UC Merced can help you prepare! California urgently needs teachers in many fields, especially in science and mathematics. An additional special need in the San Joaquin Valley is for teachers of English.
Attending a university opens a range of unexplored vistas and invites you to engage in a discovery process, examining each new vista in an open, welcoming and stimulating environment.

In the social realm, you will encounter individuals from all over the world, each of whom brings a unique perspective to the campus. Years after you graduate, you will remember discussions with your classmates that changed your perspective, modified your values, or altered a previously held position.

Individually, you will learn a great deal about yourself during the college years. You will see your unique strengths more clearly, and will be able to pinpoint your values, your preferences for careers and the qualities you appreciate in a friend. When combined with the varied intellectual experiences at a university campus, such exploration fosters personal awareness and integrity.

Intellectually, the college years promise enormous growth – a growth which then provides a baseline of intellectual inquiry for the rest of your life. Individual classes, the faculty, activities on and off campus, and study sessions conducted in an environment that promotes unfettered inquiry provoke a new awareness of the world and your place in that world.

At UC Merced, we are committed to developing the potential of every student, prompting your leadership, encouraging your intellectual advancement, providing context and depth to your ideas, and helping you chart a life course that is comfortable but challenging. We promise to prod your creativity and introduce the global society that will be the backdrop for your career. In the process, you will encounter the research that leads to breakthroughs in science and artistic achievement, gives birth to new industries, and improves our quality and understanding of the social milieu.
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The world-renowned natural splendor of Yosemite National Park is less than two hours from Merced.

LIVING IN MERCED
In the neighboring city of Merced, students interested in living off campus will find affordable housing options and an excellent quality of life. Currently home to almost 70,000 people, the city retains the charm of a small town and boasts an average commute time of only 15 minutes.

Many educational, cultural and co-curricular activities will connect students with Merced and the surrounding region, and all students are encouraged to experience the warmth of UC Merced’s host community and discover its treasures. Wandering through the pedestrian-friendly downtown is a good place to start; brick-paved walking areas, alleys decorated with murals and Italian trellises, an award-winning multicultural arts center, a community playhouse and several historically significant buildings are among the features.

Merced also is home to a number of shops, restaurants and major retail stores, with additional choices available in the nearby cities of Modesto and Fresno.

UC MERCED OPENING
UC Merced will open for the 2005-06 year with about 1,000 students, including 900 freshmen and transfer students and 100 graduate students. UC Merced seeks and welcomes students, faculty and staff of diverse ethnic and cultural backgrounds to enrich the academic, learning and social environment. The campus is expected to grow rapidly, with an addition of about 800 students in 2006 and every year thereafter. Full development of the campus is anticipated within about three decades, or around the year 2035, when UC Merced will serve an estimated 25,000 students.

UNIQUE EDUCATIONAL EXPERIENCE
To better meet the needs of students from the region, the state and the nation, a network is being created to extend outstanding educational opportunities far beyond the UC Merced campus. As part of this education network, the campus is establishing interconnect centers to serve the San Joaquin Valley and southern Sierra Nevada with a broad spectrum of programs and services. UC Merced centers in Fresno and Bakersfield and the Tri-College Center in Merced already have offered numerous UC credit courses, professional development opportunities, student outreach activities and many other programs. Other unique off-campus locations, such as the Sierra Nevada Research Institute’s Yosemite Field Station in Wawona, will expand the educational experience at UC Merced.

We invite you to visit the UC Merced campus and the Merced community to get a feel for the home of the 10th University of California campus. Available by reservation on weekdays and selected Saturdays, UC Merced guided tours consist of an admission presentation as well as a walking tour near the campus site. To make a reservation, please call the Office of Admissions/Relations with Schools & Colleges toll free in California at (866) 270-7301.

STUDENT LIFE
Back on campus, students who join UC Merced’s pioneer classes will have a once-in-a-lifetime chance to assist in crafting the student life experience for the UC Merced students who will follow. You are invited to help shape campus traditions, create student organizations and activities, and offer your ideas on student services, planning priorities and university philosophy.

As a student at UC Merced, you can gain valuable skills through internships and service learning, expand your cultural awareness and understanding, develop your leadership potential and make lifelong friends through involvement in a variety of student programs. Student government, intercultural and residential programs, intramural sports, university events and a variety of clubs and organizations will be among your choices. Students also will have access to a wide array of support services as well as academic, social, recreational and wellness activities.

ACADEMIC BUILDINGS
The first phase of campus development, spanning approximately 100 acres, includes three academic buildings, in addition to housing and dining complexes. At the heart of the campus, featuring a library collection that blends books and bytes, the Kolligian Library will be home to campus student services and administrative offices. It also will be a welcoming meeting place for individual study, small group work and encounters with your friends. The majority of your classrooms, lecture halls and computer labs will be located in the Classroom Building. Featuring the 360-seat Lakridy Auditorium and multi-media and studio laboratory spaces, other building amenities will include faculty and graduate student offices. The earth science and engineering Building will incorporate teaching into both wet and dry research laboratories.

DID YOU KNOW?
UC Merced Chancellor Carol Tomlinson-Keaney is the first woman to lead the founding of a new UC campus.

DID YOU KNOW?
UC Merced has partnerships with Lawrence Livermore National Laboratory, Yosemite National Park and Sequoia and Kings Canyon National Parks.

This January 2004 aerial view of the UC Merced campus showcases the stunning Sierra Nevada range in the background.

CONVENIENTLY located in the center of California, the 910-acre campus is under construction just outside the city of Merced, next to Lake Yosemite. Between the Sierra Nevada range to the east and the Coastal Range to the west, the campus is situated within a short two-hour drive from San Francisco, the Pacific Ocean and Sacramento, less than two hours from Yosemite National Park and other Sierra Nevada destinations; and an hour from Fresno. Merced County and the surrounding region also offer a unique selection of cultural, entertainment and recreational options for students to explore.
The University of California, Merced is opening a new chapter of academic excellence as the 10th campus of the University of California system. Welcoming students in Fall 2005, UC Merced will uphold the highest standards of teaching, research and public service.

As the nation’s first major research university to be built in the 21st century, UC Merced offers an innovative, hands-on approach to education and the unparalleled opportunity for a life-transforming educational experience. Undergraduate and graduate students will be able to explore new areas of inquiry and work with our distinguished faculty on cutting-edge research, including projects conducted through our signature research institutes, the Sierra Nevada Research Institute and the World Cultures Institute.

THE CAMPUS

UC Merced’s three initial schools — the School of Engineering, School of Natural Sciences, and School of Social Sciences, Humanities and Arts — will offer both undergraduate and graduate degree programs, and emphasize links between disciplines. State-of-the-art library resources and laboratories will further enrich your educational experience.

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LIVING ON CAMPUS

UC Merced looks forward to students living on campus within the safe, comfortable environment of the Valley Terraces. Undergraduate and graduate students will make their home-away-from-home in these apartment-style suites. Serving up a range of healthy and satisfying cuisine for breakfast, lunch and dinner, the Valley Dining Commons will cater to on-campus and commuter students, faculty and staff. Visitors and members of the campus community seeking a quick meal on the run, a light snack or a cup of coffee will find what they’re looking for as well. By Fall 2006, the Joseph Edward Gallo Recreation and Wellness Center will open its doors to offer traditional health services, recreational activities from aerobics classes to whitewater rafting, and wellness activities such as student peer health counseling, nutrition programs and more.

LIVING IN MERCED

In the neighboring city of Merced, students interested in living off campus will find first-rate housing options and an excellent quality of life. Currently home to almost 70,000 people, the city retains the charm of a small town and boasts an average commute time of only 15 minutes.

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FIAT LUX. LET THERE BE LIGHT.
Perfectly captured in this motto is the essence of the University of California, one of the largest and most highly acclaimed institutions of higher learning in the world.

Established in 1868, fewer than 20 years after California became a state, the University of California opened with 10 faculty members offering classes to 40 students the following year in Oakland. By 1873, the first academic buildings were completed on the UC Berkeley campus and the University moved to its new home. Today, the University of California serves almost 200,000 students; encompasses 10 campuses, five medical centers, four law schools and a statewide Division of Agriculture and Natural Resources; and manages three national laboratories for the U.S. Department of Energy. Each year, more than 40,000 students graduate from University of California campuses, including about 7.5 percent of the nation’s Ph.D.s. The University has awarded approximately 1.5 million degrees and has 1 million living alumni.

UNIVERSITY OF CALIFORNIA: AN ECONOMIC FORCE IN CALIFORNIA
The University also fuels the state and national economies through the creation of thousands of California jobs and billions of dollars in revenues, countless discoveries that improve our quality of life, and research to support innovation in fields critical to the future of our country. Technology developed by the University powers many of the state’s top and emerging industries, and University of California faculty and alumni have founded or led such major companies as Chiron, Genentech, Intel Corp., Apple Computer Inc., and Gap Inc.

A driving force in the daily life of Californians, the University is a critical source of civic leaders, social service programs and providers, and teachers at all levels of education.

RESEARCH AND EDUCATION NETWORK
Teaching and research are strengthened within the University through an extensive network of laboratories, museums and galleries, UC Extension centers, and research and field stations, which provide valuable public service to the communities of California and the nation. The University of California further extends its resources to the public through its performing arts centers, athletic facilities and botanical gardens. With collections totaling more than 32 million volumes, the University’s libraries are yet another valuable public asset and are surpassed in size on the North American continent only by the Library of Congress collection.

UC OUTFIT TO K-12 AND COMMUNITY COLLEGE STUDENTS
Beyond its tripartite mission of teaching, research and public service, the University is committed to expanding the educational horizons of California’s students, and is engaged in a growing number of initiatives to bolster achievement in the state’s schools and better prepare students for college. Student-centered outreach efforts connect with K-12 students through mentoring, tutoring, college advising and other academic programs, while community college students benefit from services that help them prepare for transfer to the University. The University of California’s school partnerships offer curriculum development, direct instruction and community engagement, along with additional assistance for many of California’s lowest-performing schools. For teachers and administrators, the University of California provides professional development opportunities designed to improve skills and effectiveness. Overall, the University of California’s K-12 outreach and partnership initiatives directly affect hundreds of thousands of students and educators each year.

GOVERNANCE OF THE UNIVERSITY OF CALIFORNIA
The University of California system is governed by the 26-member Board of Regents, including 18 general members appointed by the Governor of California. Charged with setting general policy and making budgetary decisions for the University, the Regents also appoint the UC President, the 10 campus chancellors, and other top administrators for individual campuses and systemswide divisions. Authority for University-wide academic matters is delegated to the Academic Senate, which is composed of faculty members and administrative officers from throughout the University of California system. For each campus, a division of the University of California Academic Senate guides academic policy. Students also have the opportunity to participate in policy-making at both the campus-wide and system-wide levels.
SERVING THE SAN JOAQUIN VALLEY THROUGH THE 10TH UNIVERSITY OF CALIFORNIA CAMPUS

UC Merced’s history dates back to 1988, when the University of California Board of Regents first authorized planning for at least one additional campus based on projections of long-range enrollment demand. The Regents targeted the San Joaquin Valley as the region where, in 1990, the University of California campus should be located. As one of the fastest-growing regions in the state, the Valley population was one of the most distant from the nine existing UC campuses. The Regents wanted to encourage more Valley students to attend the University and to extend the University’s role in contributing to the region. Following an initial review of more than 85 sites in the region, 20 were advanced for further study. Subsequently, eight were forwarded for additional consideration, and three sites were chosen to undergo final analysis and a full environmental impact report. As a result of this complex process, in May 1995 the Board of Regents selected the site in eastern Merced County owned by the Virginia Smith Educational Trust.

Locating UC Merced in the San Joaquin Valley has given the campus access to a rich natural laboratory for scientific and cultural research. UC Merced’s proximity to the Sierra Nevada has also led to creation of a special relationship for education and research with three crown jewels of the U.S. National Park System—the Yosemite National Park, Kings Canyon National Park, and Sequoia National Park.

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THE UNIVERSITY OF CALIFORNIA
THROUGH THE 10TH UNIVERSITY OF CALIFORNIA CAMPUS

UC FACULTY

A leading center for innovation for more than a century, the University of California has responded to the needs of California through research, education and public service, and has helped to transform the world. University of California faculty and researchers are pioneers in fields as diverse as agriculture, biological sciences, engineering, the environment, the arts, economics, medicine and technology, and 45 have garnered Nobel Prizes for their pioneering discoveries and advances of knowledge. Among the University’s current faculty are more members of the National Academy of Sciences than at any other university in the United States.

The Science and Engineering Building will be home to the School of Natural Sciences and School of Engineering.

The University of California also fuels the state and national economies through the creation of thousands of California jobs and billions of dollars in revenues, countless discoveries that improve our quality of life, and research to support innovation in fields critical to the future of our country. Technology developed by the University powers many of the state’s top and emerging industries, and University of California faculty and alumni have founded or led major companies as Chiron, Genentech, Intel Corp., Apple Computer Inc., and Gap Inc.

A driving force in the daily life of Californians, the University is a critical source of civic leaders, social service programs and providers, and teachers at all levels of education.

RESEARCH AND EDUCATION NETWORK

Teaching and research are strengthened within the University through an extensive network of laboratories, museums and galleries, UC Extension centers, and research and field stations, which provide valuable public service to the communities of California and the nation. The University of California further extends its resources to the public through its performing arts centers, athletic facilities and botanical gardens. With collections totaling more than 32 million volumes, the University’s libraries are yet another valuable public asset and are surpassed in size on the North American continent only by the Library of Congress collection.

UC OUTREACH TO K-12 AND COMMUNITY COLLEGE STUDENTS

Beyond its tripartite mission of teaching, research and public service, the University is committed to expanding the educational horizons of California’s students, and is engaged in a growing number of initiatives to bolster achievement in the state’s schools and better prepare students for college. Student-centered outreach efforts connect with K-12 students through mentoring, tutoring, college advising and other academic programs, while community college students benefit from services that help them prepare for transfer to the University. The University of California’s school partnerships offer curriculum support, direct instruction and community engagement, along with additional assistance for many of California’s least-performing schools. For teachers and administrators, the University of California provides professional development opportunities designed to improve skills and effectiveness. Overall, the University of California’s K-14 outreach and partnerships directly affect hundreds of thousands of students and educators each year.

A TRADITION OF ACADEMIC EXCELLENCE

UC Merced’s history dates back to 1988, when the University of California Board of Regents first authorized planning for at least one additional campus based on projections of long-range enrollment demand. The Regents targeted the San Joaquin Valley as the region where, in 1990, the University of California campus should be located. As one of the fastest-growing regions in the state, the Valley population was one of the most distant from the nine existing UC campuses. The Regents wanted to encourage more Valley students to attend the University and to extend the University’s role in contributing to the region. Following an initial review of more than 85 sites in the region, 20 were advanced for further study. Subsequently, eight were forwarded for additional consideration, and three sites were chosen to undergo final analysis and a full environmental impact report. As a result of this complex process, in May 1995 the Board of Regents selected the site in eastern Merced County owned by the Virginia Smith Educational Trust.

Locating UC Merced in the San Joaquin Valley has given the campus access to a rich natural laboratory for scientific and cultural research. UC Merced’s proximity to the Sierra Nevada has also led to creation of a special relationship for education and research with three crown jewels of the U.S. National Park System—the Yosemite National Park, Kings Canyon National Park, and Sequoia National Park.

A leading center for innovation for more than a century, the University of California has responded to the needs of California through research, education and public service, and has helped to transform the world. University of California faculty and researchers are pioneers in fields as diverse as agriculture, biological sciences, engineering, the environment, the arts, economics, medicine and technology, and 45 have garnered Nobel Prizes for their pioneering discoveries and advances of knowledge. Among the University’s current faculty are more members of the National Academy of Sciences than at any other university in the United States.

The Science and Engineering Building will be home to the School of Natural Sciences and School of Engineering.

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The University of California also fuels the state and national economies through the creation of thousands of California jobs and billions of dollars in revenues, countless discoveries that improve our quality of life, and research to support innovation in fields critical to the future of our country. Technology developed by the University powers many of the state’s top and emerging industries, and University of California faculty and alumni have founded or led major companies as Chiron, Genentech, Intel Corp., Apple Computer Inc., and Gap Inc.

A driving force in the daily life of Californians, the University is a critical source of civic leaders, social service programs and providers, and teachers at all levels of education.

Teaching and research are strengthened within the University through an extensive network of laboratories, museums and galleries, UC Extension centers, and research and field stations, which provide valuable public service to the communities of California and the nation. The University of California further extends its resources to the public through its performing arts centers, athletic facilities and botanical gardens. With collections totaling more than 32 million volumes, the University’s libraries are yet another valuable public asset and are surpassed in size on the North American continent only by the Library of Congress collection.

Beyond its tripartite mission of teaching, research and public service, the University is committed to expanding the educational horizons of California’s students, and is engaged in a growing number of initiatives to bolster achievement in the state’s schools and better prepare students for college. Student-centered outreach efforts connect with K-12 students through mentoring, tutoring, college advising and other academic programs, while community college students benefit from services that help them prepare for transfer to the University. The University of California’s school partnerships offer curriculum support, direct instruction and community engagement, along with additional assistance for many of California’s least-performing schools. For teachers and administrators, the University of California provides professional development opportunities designed to improve skills and effectiveness. Overall, the University of California’s K-14 outreach and partnerships directly affect hundreds of thousands of students and educators each year.

Examples of the University of California’s K-14 outreach and partner-
UC Merced is using the U.S. Green Building Council’s Leadership in Energy and Environmental Design (LEED™) system for all major campus development and construction. The LEED™ system provides a national standard for what constitutes a “green building.” Using these stewardship elements in campus development will have the following environmental, economic, health, and community benefits:

**RECYCLING** – Construction practices recycle more than 75 percent of the job site waste, limit the distance that materials are transported to the site and incorporate recycled content materials and sustainably harvested wood products.

**INDOORS** – The indoor environment will provide good ventilation, incorporate day lighting and views, and use low-emitting paints, carpets and sealants.

**ENERGY EFFICIENCY** – Energy-use reduction techniques will create buildings that are far more energy efficient than code requirements.

**WATER CONSERVATION** – Building and landscape designs will reduce water use.

**AIR QUALITY** – Campus layout and construction will emphasize pedestrian traffic and non-polluting circulation methods for campus traffic as well as campus-community traffic.

**LEARNING FROM THE PHYSICAL CAMPUS** – The buildings will become ongoing teaching tools for the campus and community.

**UC MERCED’S ENVIRONMENTAL STEWARDSHIP: LANDSCAPE PRESERVATION**

Thanks to support from the State of California, the Virginia Smith Trust, and groups such as the David and Lucile Packard Foundation and The Nature Conservancy, the creation of the new UC Merced campus will help protect an important part of California’s natural wetland and rangeland heritage. The Packard Foundation’s historic gift to UC Merced preserves more than 5,000 acres of vernal pool habitat next to the new campus. Funding from the State of California has supported conservation easements, allowing continued grazing and preservation of thousands of acres of additional seasonal wetland habitat in eastern Merced County. As Chancellor Carol Tomlinson-Keasey observes, “The creation of UC Merced provides an unparalleled opportunity for environmental preservation. Vernal pool habitat in eastern Merced County has been disappearing for decades. The preservation efforts undertaken as part of the creation of our campus will permanently protect thousands of acres of this sensitive habitat.”

**DID YOU KNOW?**

UC Merced is the first university campus to be designed and constructed with green building practices.

UC’s pioneering tradition

**NEW CAMPUSES – NEW GENERATIONS**

Almost 35 years ago, my UC Santa Cruz classmates and I marched into our graduation under the banner, “The Pursuit of Truth in the Company of Friends.” I transferred to Santa Cruz because I wanted to be part of that experiment, that enthusiasm, and I have never regretted my decision. The same desire to be part of something big, new and exciting has motivated my faculty colleagues and me to come to UC Merced.

– Professor Gregg Herken
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PRINCIPLES OF COMMUNITY

The University of California, Merced is committed to serving the people of the San Joaquin Valley, California, the nation and the world through excellence in education, research and public service. We strive to provide educational opportunities for all.

Our founding principles of community guide both the individual and collective behaviors of students, faculty and staff. The university expects that all of its members will emulate these fundamental principles as individuals and as a community.

We celebrate the spirit of academic excellence and strive to promote our University and its strengths through our daily interactions with students, staff, faculty and the community at large.

We maintain a working and learning environment based on integrity, fairness, cooperation, professionalism and respect.

We are a community comprised of individuals with multiple cultures, lifestyles and beliefs. We celebrate this diversity for the breadth of ideas and perspectives it brings.

We value the creativity of our students, staff and faculty, and acknowledge the ideas and perspectives it brings.

We are committed to achieving tolerance in our community. All persons – faculty, staff and students – regardless of background or lifestyle should participate and work together in a collegial atmosphere that we strive to make free of any and all acts of discrimination or harassment.

We respect, support and value the civil and respectful expression of individual beliefs and opinions.

Note: These are the Founding Principles of Community of the University of California, Merced. In the years ahead, we will undoubtedly be reviewed and modified by future UC Merced faculty, students and staff.

For those who wish to review Academic and Staff Personnel Policies regarding nondiscrimination, please refer to www.ucmerced.edu. For further information, please contact the Director of Human Resources/Affirmative Action Officer at umercedjobs@ucmerced.edu.

Approved: January 2003

UNIVERSITY OF CALIFORNIA MISSION STATEMENT

The distinctive mission of the University is to serve society as a center of higher learning, providing advanced knowledge, discovering new knowledge, and functioning as an active working repository of organized knowledge. That obligation, more specifically, includes undergraduate education, graduate and professional education, research, and other kinds of public service, which are shaped and bounded by the central pervasive mission of discovering and advancing knowledge.

— cited in the University of California Academic Plan, 1974-1978

COLLEGE ONE

College One is responsible for overseeing the general education experience at UC Merced, including the required core courses and the freshman seminar program. College One will provide a network to connect students with advising and coursework that meets the UC Merced faculty principles for a well-rounded education.

SCHOOL OF ENGINEERING

Engineering combines scientific understanding with technical innovation to build things that determine our quality of life, new products and services, new technologies and methodologies, and new technological processes and industries. Engineering education at UC Merced will provide students the knowledge and know-how to solve societal problems, and to become the technical leaders of tomorrow. The School of Engineering will offer three initial undergraduate majors: Computer Science and Engineering, Environmental Engineering and Bioengineering.

SCHOOL OF NATURAL SCIENCES

The School of Natural Sciences encompasses fields of study that are devoted to understanding our physical and natural world: mathematics, biology, physics, chemistry, and the earth sciences. Advances in these fields promise solutions to many of mankind’s most pressing problems, from fighting new diseases to creating sustainable energy sources. Students will gain a deep understanding of physical and biological processes. Natural Sciences will offer three initial undergraduate majors: Biological Sciences, Earth Systems Science and Human Biology.

I would hope that UC Merced will be a light on the hill for students in the Valley.

Paul Lo, Merced attorney and member of the UC Merced Foundation

Please visit us online at www.ucmerced.edu

OVERVIEW OF UNDERGRADUATE & GRADUATE STUDY

UC Merced deans (l. to r.): Jeff Wright, Engineering; Keith Alley, Graduate Studies; Yolanda Nakanishi, Social Sciences, Humanities and Arts; and Maria Pallastortas, Natural Sciences; with Bruce Alberts, President of the National Academy of Sciences (second from right).

GRADUATE EDUCATION AND RESEARCH

The UC Merced Division of Graduate Studies oversees master’s and doctoral degree education. Society’s most intractable problems are broad based and multifaceted. Viable solutions to these problems require a scope of multidisciplinary approaches that can benefit the people of California and the world beyond. UC Merced is committed to offering graduate students an opportunity to work on many of society’s most pressing and important problems. UC Merced will offer an individually tailored graduate program with emphases in six areas. These include Quantitative and Systems Biology; Molecular Science and Engineering; Environmental Systems; Social, Behavioral and Cognitive Sciences; World Cultures and History.

SCHOOL OF SOCIAL SCIENCES, HUMANITIES AND ARTS

The educational mission of the School of Social Sciences, Humanities and Arts is to create a rich learning environment for looking at human nature through the lenses of many disciplines broadly divided into the humanities, the social sciences and the arts.

Social Sciences, Humanities and Arts will offer three initial undergraduate majors: Management; Social, Behavioral and Cognitive Sciences; and World Cultures and History.

Students relax by the fountain in downtown Merced’s Bob Hart Square.
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We value the creativity of our students, staff and faculty, and acknowledgment both their individual and collaborative achievements.

We encourage health and wellness and strive to develop a sense of environmental responsibility and stewardship among all the members of our community.

The distinctive mission of the University is to serve society as a center of higher learning, providing long-term societal benefits through transmitting advanced knowledge, discovering new knowledge, and functioning as an active working repository of organized knowledge. That obligation, more specifically, includes undergraduate education, graduate and professional education, research, and other kinds of public service, which are shaped and bounded by the central pervasive mission of discovering and advancing knowledge.

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I would hope that UC Merced will be a light on the hill for students in the Valley.

Paul Lo, Merced attorney and member of the UC Merced Foundation
PROFESSIONAL STUDIES
UC Merced’s Division of Professional Studies was established in 1999 to increase professional development opportunities for residents throughout California’s San Joaquin Valley. In an effort to equip professionals with transferrable knowledge and skills for personal, professional, and organizational growth, the division offers seminars, conferences, certificate programs, community classes, customized training courses and traditional continuing education courses in Merced, Fresno, Modesto and Bakersfield as well as other locations throughout the region.

The high standards set by UC Merced’s Division of Professional Studies ensure expert instructors who are leaders in their fields and motivated participants who bring a wide range of experience to the classroom.

Additionally, division classes provide excellent networking opportunities. The ultimate goal of the Division of Professional Studies is to help build stronger leadership-management teams and a more highly trained workforce in the San Joaquin Valley.

Undergraduate students may wish to enroll in such Division of Professional Studies career development classes as the Business Management Certificate Program or the Leadership Development Program. For more information, please visit our Web site at http://www.ucmerced.edu/professional_devel or call (559) 241-7414.

THE UC MERCED LIBRARY

Not the way research libraries are... the way research libraries will be.

The University of California, Merced library is both a physical building – the Leo and Dottie Kolligian Library – and an information resource. As a research library for the 21st century, it is a physical place on campus as well as a digital presence on student and faculty computers. The Kolligian Library houses a concentrated, highly dynamic collection of information resources and serves as a center for study, collaboration and research. The collections and services support undergraduate and graduate instructional programs as well as advanced research. Library resources and services are available in the building and from computers connected to the campus network and to the Internet. Some library resources are in physical packages that sit on the shelves, including books, paper archives, sound recordings, photographs and much more. Others are in digital packages, such as online journal articles, data sets and geographic information systems.

In addition to library services and collections, the Kolligian Library houses Student Affairs and campus administrative offices.

The main entrance to the building opens onto the Ed and Joanne Kashian Floor, an open-air breezeway during fair weather and a lively focal point for social, educational and research activities on campus.

The entranceway reading room has an adjacent coffee house, bookstore, and print and copy services. Quieter spaces and collaborative workrooms are found throughout the building. Wireless and hard-wired computer network access is available in all library spaces. The magnificent McFadden/Willis reading room on the fourth floor is open to all for study and quiet reflection.

As an information nexus, UC Merced’s library provides instant, around-the-clock access to the resources of the California Digital Library, an unparalleled online collection of more than 150,000 online books, 8,000 online scholarly journals, 4,500 online statistical files, 250 reference databases and one of the world’s largest online collections of historical art images – more than 300,000 digital images representing everything from architecture and the visual arts. With collections totaling 32 million volumes, the libraries of the University of California system are unparalleled in size on the American continent by only the Library of Congress collection.

Using the UC MEjVL catalog, members of the UC Merced community can request next-day delivery of books and articles from any UC system library. The UC Merced library is actively involved in creating digital access to research information and in the use of new media, placing particular emphasis on the digitization of specialized materials that are of importance to the Sierra Nevada and San Joaquin Valley regions. http://www.ucmerced.edu/library

Information technology

The use of computers and networks has become pervasive in higher education. However, because information technology has evolved over a long period of time, computer applications and network use are not always straightforward or easy. UC Merced is committed to deploying the best of current and emerging technologies and practices to help students make maximum use of information technology for academic purposes, administrative transactions and other activities.

From applying to UC Merced and tracking the application process to registering for courses and ultimately seeing grades, students will be able to use the Internet. For courses in which they are enrolled, collaborative learning software will allow students to see syllabi, course materials, library resources, assignments, grades books and course calendars; submit assignments, and chat or send e-mail to other students and faculty in the course.

Additionally, many courses, including those in the social sciences and humanities, are being designed to use computers in the classroom and/or will have homework assignments using specialized software in computer labs.

Because of the pervasive use of computer technology at UC Merced, it is strongly advised that students have their own personal computers, which should be capable of running typical Web and word processing applications. Students may find that their specific school has additional recommendations or requirements. Check the UC Merced Web site in the summer of 2005 for more specific information.

STUDENT LIFE

Students – their education and development – lie at the center of all planning at UC Merced. Our goal is to be a student-centered research university with learning taking place both in and outside of the classroom. Our student life programs have been designed to support student success and to create a vibrant community where students from all backgrounds can excel as they live and learn together.

LIVING ON CAMPUS IN MERCED

As part of the pioneer class at UC Merced, you will find that living on campus will help you make friends and become familiar with the growing campus. Student and full-time residential life staff will live on campus, providing the resources, programs and services that are essential to a safe and comfortable living environment.

The campus is planned to be laptop friendly, with wireless access planned in common and outdoor areas, as well as in classrooms. Inside the library, wireless access will be available in the stacks and electrical outlets in carrels and other work areas.

Students living on campus will have 10/100 MB Ethernet connectivity to the campus network, and secure access to the campus network will be available for those living off campus. All students will have UC Merced e-mail accounts and access to the Internet through CalREN, the California research network. A customizable portal, myUCMerced, will provide a single location from which to access all applications and information, including e-mail, course software, registration materials and information, and much more.

On-campus residents will enjoy apartment-style housing with the latest features for high-tech learning and comfortable living.

It is our goal to provide on-campus housing to approximately 50 percent of our students, and our first residence complex will house 600 students. Room and board rates, once established, will be posted on the UC Merced Web site at http://students.ucmerced.edu. All freshmen, transfers and graduate students are encouraged to consider on-campus housing. On-campus housing options will continue to expand, as the campus grows, with an additional 400 beds available in the fall of 2007.
TRANSPORTATION AND PARKING SERVICES

PUBLIC TRANSIT
As limited parking will be available on campus, UC Merced encourages students and staff to use alternative public transit. Merced County boasts a full-service, comprehensive transit system. UC Merced is working with the public transit authority to provide bus service to and from the campus via various routes within Merced County.

VEHICLE PARKING
Parking, while limited, will be available on campus. Some parking will be reserved specifically for students living on campus in the residence halls. Traffic will be restricted within the academic core of the main campus. All vehicles parking anywhere on campus must display a valid regular or visitor UC Merced parking permit from 7 a.m. to 4 p.m. daily, Monday through Friday. New and commuter students will have an opportunity to purchase parking permits during orientation. Parking permits may also be obtained from the Cashier’s Office located on the first floor of the Kolligian Library. There will be a fee for permits. Information on fees can be obtained from our Off-Campus Housing listing service. Please go to the campus Student Life Web site at http://students.ucmerced.edu or contact the Office of Residential Life for more information about living off campus in Merced and Atwater.

For further information, contact:
Office of Residence and Student Life
http://students.ucmerced.edu/housing@ucmerced.edu
(209) 724-4482

TRANSPORTATION AND PARKING SERVICES

BICYCLES
Bicycles are encouraged and welcomed at UC Merced. With their flat terrain and mild climate, the city and county of Merced offer excellent conditions for bicycling. In addition, the city of Merced boasts over 12 miles of class one, grade-separated bike paths, which, along with the city’s other bike lanes, connect most of Merced’s open-space park system. Special areas have been set aside near UC Merced’s academic buildings for bicycle parking. If you plan to bring your bicycle to campus, you are encouraged to register your bicycle. It is usually a quick and simple process, and the costs are minimal. Bicycles may be registered in Merced at:
The City of Merced Police Department
611 West 22nd Street
Merced, CA
For more information call (209) 385-6912

Office of Residence and Student Life
http://students.ucmerced.edu/housing@ucmerced.edu
(209) 724-4482

COUNSELING AND HEALTH SERVICES

Health and wellness services will be provided for UC Merced students in the Joseph Edward Gallo Recreation and Wellness Center, scheduled to open in the fall of 2006. During the 2005-06 academic year, limited health services will be provided from offices located within the Valley Terraces.

Psychological counseling will be available in the Counseling Center on the first floor of the Kolligian Library. Counseling and Health Services will enable you to pursue your academic goals in an optimal state of health. To that end, the campus will provide treatment and prevention services that enhance and maintain your physical, emotional and social well-being. These services will be provided by health professionals and will range from treating asthma and allergies to reproductive health care and counseling. Professional and peer counselors will provide information on issues such as safety, stress management, nutrition, alcohol and drug use, and smoking cessation. In short, Counseling and Health Services will assist all residents in minimizing the risk of illness, injury and distress and provide cost-effective services that meet your health-related needs.

All students attending a UC campus are required to have health insurance, an important component to accessing health care and extended services when you need them. An affordable health insurance plan will be available to UC Merced students through Student Health Services. For further information on health or counseling services, contact health@ucmerced.edu.

VEHICLE PARKING

On-Campus Student Employment
The Career Services Center coordinates all on-campus, part-time student employment. When the campus opens, information on part-time job opportunities will be available on the Career Services Web site. In the interim, check UC Merced’s Student Life Web site at http://students.ucmerced.edu/ for listings of job opportunities on campus.

Internship Programs
Internship programs provide students with the opportunity to obtain career-related work experience in regional profit and non-profit organizations. Students may complete internships, some which may be paid, during the academic year or during the summer. Contact the Career Services Center at careerservices@ucmerced.edu for more information.

LEARNING ASSISTANCE CENTER
UC Merced faculty and staff committed to the academic success of every student. The Learning Assistance Center, located on the first floor of the Kolligian Library, assists students to acquire the skills they need to develop intellectually, become successful learners and achieve their academic goals. Center staff will offer programs focusing on effective study skills, critical reading and analytical writing that will help all students, regardless of major. Mathematics, science and writing courses sometimes present challenges for students. Individual tutoring and group study sessions, often led by peer tutors, will be available to provide assistance. Additional programs

and study sessions will assist students in specific courses and areas such as engineering, English, math, science and the social sciences. The Learning Assistance Center, working closely with the Career Services and Academic Advising centers, will ensure that students receive the support and assistance they need. Contact the Learning Assistance Center for more information at learning@ucmerced.edu.

A variety of off-campus housing options are highlighted on UC Merced’s Web page and on campus Student Employment. When possible, photographs and contact information. When possible, photographs

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**GENERAL INFORMATION**

**STUDENT GOVERNMENT, CLUBS AND ORGANIZATIONS**

The first UC Merced students will have the unique opportunity to establish UC Merced's Associated Student government, as well as the first clubs and organizations that will enrich campus life. These organizations will provide opportunities for students with common interests to help shape the direction of the new campus, build friendships, learn from each other, and provide opportunities for social and academic networking. The procedures and policies related to establishing student organizations will be available starting in fall 2004. Check the Student Life section of our Web site at http://students.ucmerced.edu or e-mail: studentlife@ucmerced.edu for further information.

**ARTS AND ENTERTAINMENT**

UC Merced is part of a vibrant community in the San Joaquin Valley and is located close to the city of Merced. The city has a population of almost 70,000 and offers restaurants, parks, a weekly farmers market and an active multicultural arts center. In addition to the local cinemas, Playhouse Merced and the Stober Theater have full calendars of live performances and films. A variety of speakers and shows make appearances in town, and UC Merced will work with student clubs and organizations to add to those events.

A Merced Shakespeare Festival production of “As You Like It” is performed outdoors at Applegate park.

In addition, Modesto (45 minutes to the north of Merced), Fresno (one hour to the south of Merced) and the San Francisco Bay area (two hours to the west of Merced) have an abundance of museums, theaters, art centers and events. The San Joaquin Valley region is home to a variety of attractions including Yosemite Valley, Mariposa Grove of the Giant Sequoias, the Mariposa Museum of History and Science, and many other destinations to be found on the Merced Conference and Visitors Bureau Web site at http://www.yosemite-gateway.org/attractions.htm.

A Merced Shakespeare Festival production of “As You Like It” is performed outdoors at Applegate park.

**CAMPUS AND STUDENT CONDUCT POLICIES**

The University of California, Merced is committed to providing its students with the best education possible. The finest faculty and staff, excellent facilities and co-curricular activities all contribute to the overall learning and development experience at UC Merced. In addition to the people, places and activities that are essential to a university, UC Merced strives to create an environment that fosters individual growth, freedom of expression and sense of community. The viability of this community depends on a common understanding among its members regarding their rights and responsibilities. The UC Standards of Conduct for Students (from University of California Policies Applying to Campus Activities, Organizations and Students) lays the foundation for that understanding and governs the conduct of all University of California students. It articulates the University’s expectations regarding standards of conduct – in both academic and non-academic settings. In addition, the campus Principles of Community further reinforces the expectations, obligations and privileges of participating as a member of the UC Merced community.

Student services contact list, for further information:

- Web site: http://students.ucmerced.edu
- E-mail: careerservices@ucmerced.edu
- E-mail: health@ucmerced.edu
- E-mail: learning@ucmerced.edu
- E-mail: studentlife@ucmerced.edu
- E-mail: housing@ucmerced.edu

**AVERAGE ANNUAL EXPENSES**

The range of estimated nine-month expenses, including fees, for students attending UC Merced during the 2004-2005 academic year are shown below. Cost of living expenses are adjusted annually and fees are subject to change. These figures are only a guide in computing average expenses, and your own living expenses may differ somewhat from these. If you will need funds beyond those that you and your family can provide, you should apply for financial aid via in advance of enrollment. Please see the appropriate Undergraduate or Graduate sections on Financial Aid and Scholarships for more information.

**AVERAGE ANNUAL EXPENSES (ESTIMATES ONLY)**

<table>
<thead>
<tr>
<th>Student Status</th>
<th>Living Arrangement</th>
<th>Estimated Nine-Month Expenses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undergraduate (California resident*)</td>
<td>On campus</td>
<td>$20,236</td>
</tr>
<tr>
<td>(Please note: UC Merced is not accepting undergraduate students for the 2004-2005 academic year)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Off campus</td>
<td>$18,636</td>
<td></td>
</tr>
<tr>
<td>At home</td>
<td>$14,771</td>
<td></td>
</tr>
<tr>
<td>Graduate (California resident*)</td>
<td>Off campus</td>
<td>$21,776</td>
</tr>
<tr>
<td>(Nonresident undergraduate students should add $16,956 and nonresident graduate students should add $14,984 for additional fees and nonresident tuition.)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**STUDENT FEES**

Students may be charged fees in some cases for the use, rental or consumption of materials, tools or equipment, or for the costs of materials or services necessary to provide a special supplemental educational experience. For example, course materials fees may cover the purchase of chemicals and glassware for a science laboratory or of art supplies for a studio class. They might also cover film rentals, field trips or the purchase/rental of specific equipment. Courses that are subject to the course materials fee are listed in the Schedule of Classes.

**EXPENSES AND FEES**

Students may be charged fees in some cases for the use, rental or consumption of materials, tools or equipment, or for the costs of materials or services necessary to provide a special supplemental educational experience. For example, course materials fees may cover the purchase of chemicals and glassware for a science laboratory or of art supplies for a studio class. They might also cover film rentals, field trips or the purchase/rental of specific equipment. Courses that are subject to the course materials fee are listed in the Schedule of Classes.
A Merced Shakespeare Festival production of “As You Like It” is performed outdoors at Applegate park.

In addition, Modesto (45 minutes to the north of Merced), Fresno (one hour to the south of Merced) and the San Francisco Bay area (two hours to the west of Merced) have an abundance of museums, theaters, arts centers and events. The San Joaquin Valley region is home to a variety of attractions including Hershey’s Visitors Center in Oakdale, Hilmar Cheese Factory, Castle Air Museum, and Mariposa Museum and History Center, with many other sites at the west of Merced.

The range of estimated nine-month expenses, including fees, for students attending UC Merced during the 2004-2005 academic year are shown below. Cost of living expenses are adjusted annually and fees are subject to change. These figures are only a guide in computing average expenses, and your own living expenses may differ somewhat from these. If you need funds beyond those that you and your family can provide, you should apply for financial aid in advance of enrollment. Please see the appropriate Undergraduate or Graduate sections on Financial Aid and Scholarships for more information.

**AVGARE ANNUAL EXPENSES**

<table>
<thead>
<tr>
<th>Student Status</th>
<th>Living Arrangement</th>
<th>Estimated Nine-Month Expenses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undergraduate (California resident)*</td>
<td>On campus</td>
<td>$20,236</td>
</tr>
<tr>
<td>(Please note: UC Merced is not accepting undergraduate students for the 2004-2005 academic year)</td>
<td>Off campus</td>
<td>$18,636</td>
</tr>
<tr>
<td></td>
<td>At home</td>
<td>$14,771</td>
</tr>
<tr>
<td>Graduate (California resident)*</td>
<td>Off campus</td>
<td>$21,776</td>
</tr>
<tr>
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**STUDENT FEES**

- University registration fee: $336.50
- Educational fee: $2,485.00
- Nonresident tuition fee: N/A

**GRADUATES**

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<th>Estimated Nine-Month Expenses</th>
</tr>
</thead>
<tbody>
<tr>
<td>University registration fee</td>
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</tr>
<tr>
<td>Educational fee</td>
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<tr>
<td>Nonresident tuition fee</td>
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<td>$3,788.00</td>
</tr>
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</table>

**UC EMPLOYEE-STUDENT FEES**

- Reduced fees are available to UC career employees and certain UC retirees who are eligible for admission to the university. Once admitted, the employee-student must file a petition for the reduction in fees before each semester of enrollment. Employee-students pay one-third of the full-time registration fee and one-third of the full-time educational fee. Employee-students may enroll for up to nine units or three courses per semester, whichever is greater. Contact the Human Resources office for further information.
Mosaics decorate the Mainplace Stadium Cinemas in downtown Merced.

PAYMENT OF REGISTRATION FEES
Registration at UC Merced is a two-step process: (1) enrollment in classes and (2) payment of fees. You must enroll first so that your fees can be assessed. You can pay fees anytime after you enroll in classes, but a failure to pay fees in full by the 10th day of instruction will result in you being dropped for non-payment and officially withdrawn from the university.

A billing statement will be available to you after enrollment; however, if you wait to enroll just prior to the enrollment deadline, do not wait for a billing statement to pay your fees. Fees are due and payable by the published deadline whether or not a billing statement is available.

Your billing statement from the university will list credits and charges. Credits include all payments as well as financial aid disbursements. Charges include registration fees, housing charges, parking charges and charges for other services. If you are a financial aid recipient, the funds disbursed through UC Merced will be applied to allowable charges on your account. Financial aid disbursed, less allowable charges, will be refunded to you. You are responsible for the payment of any charges not covered by your financial aid.

REGISTRATION AND OTHER PAYMENTS THROUGH THE CAMPUS CASHIER'S OFFICE
You must make your registration payment as soon after enrolment as possible. The campus cashier's office accepts payments for all university services. Checks or money orders should be made payable to UC Regents. Additional payment options will be available.

DEADLINES AND PENALTY FINES
You must pay all prior delinquent debts prior to registering. An additional charge will be made for failure to pay required fees or deposits by the dates announced in this catalog. If you enroll in courses after the enrolment deadline, you may be assessed a late enrolment fee and/or a late payment fee.

RETURNED CHECK POLICY
Campus cashing at UC Merced accepts personal checks as well as cash payments. Any individual who writes checks with insufficient funds will be subject to all legal action deemed appropriate by the university and will be assessed a fine currently set at $20 per returned check. In addition, anyone who writes to the university three or more checks that are subsequently returned will have his/her check writing privileges permanently revoked.

FEE REFUNDS
CANCELLATION, WITHDRAWAL AND FEE REFUNDS
To cancel registration before the first day of instruction or to withdraw from the university on or after the first day of instruction, you must complete a Cancellation/Withdrawal form and return the form to the Office of the Registrar. If you do not submit a Cancellation/Withdrawal form, you will be liable for fees according to University policy (below). It is very important that you contact the Office of the Registrar and initiate withdrawal/leave of absence procedures even if your fees are fully paid by financial aid or other programs. Failing to do so may result in you owing money to the university.

The effective date for determining a refund of fees is the date the completed Cancellation/Withdrawal form is received by the Office of the Registrar. It is presumed that no university services will be provided to the student after that date. If a student is enrolled in classes, he or she will be dropped from all courses automatically when the Cancellation/Withdrawal form is processed.
Mosaics decorate the Mainplace Stadium Cinemas in downtown Merced.

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**REGISTRATION AND OTHER PAYMENTS**

**THROUGH THE CAMPUS CASHIER’S OFFICE**

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The effective date for determining a refund of fees is the date a completed Cancellation/Withdrawal form is received by the Office of the Registrar. It is presumed that no university services will be provided to the student after that date. If a student is enrolled in classes, he or she will be dropped from all courses automatically when the Cancellation/Withdrawal form is processed.

The percentage of fees that may be refunded is determined by the number of calendar days (not school days) elapsed, beginning with the first day of instruction of the semester. For students who paid fees and then canceled or withdrew by filing with the Office of the Registrar, fees may be refunded according to the Schedule of Refunds.

**New undergraduate students:**

The $100 deposit paid with the Statement of Intent to Register (SIR) is not refundable. Because it is not refundable, it is not included in the balance when applying the Schedule of Refunds. Thus, before or on the first day of instruction, registration fees paid are refunded in full minus $100.

**All continuing students, readmitted students and new graduate students:**

On or before the first day of instruction, registration fees are refunded in full minus a service charge for cancellation/withdrawal. After the first day of instruction, the Schedule of Refunds is applied to the total of fees assessed.

**Failure to submit a Cancellation/Withdrawal form:**

If you are not a financial aid recipient and you fail to submit a Cancellation/Withdrawal form to the Office of the Registrar, you will be presumed to have left at the end of the semester and will not be eligible for a fee refund. If you are a financial aid recipient, you must contact the Office of Financial Aid and Scholarships for information on how this will affect your refund.

**SCHEDULE OF FEE REFUNDS**

The Schedule of Fee Refunds applies to all new students who do not receive federal financial aid* and continuing and readmitted students.

The Schedule of Refunds refers to calendar days beginning with the first day of instruction of the semester. The number of days elapsed is determined from the date the completed Notice of Cancellation/Withdrawal form is received in the Office of the Registrar. Percentages listed (days 1-54) should be applied respectively to the university registration fee, educational fee, nonresident tuition and other student fees.

**University Registration Fee, Educational Fee, Nonresident Tuition and Other Student Fees:**

**CALENDAR DAYS ELAPSED**

<table>
<thead>
<tr>
<th>DAYS</th>
<th>PERCENTAGE OF FEES REFUNDED</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-1</td>
<td>100% less any applicable fees</td>
</tr>
<tr>
<td>2-11</td>
<td>75%</td>
</tr>
<tr>
<td>12-27</td>
<td>50%</td>
</tr>
<tr>
<td>28-53</td>
<td>10%</td>
</tr>
<tr>
<td>54 days or more</td>
<td>0%</td>
</tr>
</tbody>
</table>

*New students who receive federal financial aid and withdraw during their first academic term may be refunded fees according to a Modified Fee Refund Schedule, available at the Office of Financial Aid and Scholarships.

Federal regulations require UC Merced to calculate the amount of federal financial aid that has been "earned" for all students who are receiving financial aid and withdraw from UC Merced during a semester. If the student withdraws prior to completing 60 percent of the semester, a pro rata portion of the aid must be returned to the federal government. Any portion of unearned aid that must be returned to federal aid programs by UC Merced will be deducted from the amount of the tuition and fee refund. If the amount UC Merced must return to federal aid programs exceeds the amount of the student’s institutional refund, the student's account may be billed for the balance.
Prospective students interested in attending the University of California, Merced are encouraged to contact Admissions/Relations with Schools and Colleges well in advance of their intended entrance. The office provides information and advice for prospective students as they prepare for university work. Future UC Merced students planning to enroll as freshmen or transfer students can gain assistance in planning their pre-university coursework and with the application process. If you are interested in enrolling at UC Merced, Admissions/Relations with Schools staff members are available to assist you via e-mail, telephone or in person.

Admissions/Relations with Schools and Colleges (ARSC)

555 East Shaw Avenue, Suite 165
Fresno, CA 93710
(559) 241-7474
(866) 270-7301 (toll-free in California)
Web site: http://students.ucmerced.edu/Apply
E-mail: admissions@ucmerced.edu

In August 2005, Admissions/Relations with Schools and Colleges (ARSC) will move to the UC Merced campus site.

UC Merced Office of Financial Aid and Scholarships

P.O. Box 2039
Merced, CA 95344
(209) 724-4384
Web site: http://students.ucmerced.edu/Apply
E-mail: finaid@ucmerced.edu

When to Apply

To ensure that applicants are considered for admission, the completed application and the application fee should be postmarked (or electronically filed) during the priority filing period shown below. Prospective applicants who have not filed during the priority filing period should contact Admissions/Relations with Schools and Colleges for more information about the advisability of filing a late application.

Filing Period

<table>
<thead>
<tr>
<th>Semester of Attendance</th>
<th>Priority Filing Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall 2005</td>
<td>November 1 – 30, 2004</td>
</tr>
<tr>
<td>Spring 2006</td>
<td>July 1 – 31, 2005</td>
</tr>
</tbody>
</table>

The online application center opens for fall applications prior to November 1, usually during early October, and in late June for spring applications. Students can begin the application, save their information on the secure site and continue filling out the application at their convenience up to the filing deadline. Applicants must meet the deadline (last day of the application filing period). Students who miss the November 30 deadline for fall or the July 31 deadline for spring should contact ARSC for assistance.

Application Advice

All applicants are asked to submit self-reported academic records on the application. Obtain copies of your grades and test scores prior to completing the application. Do not rely on memory. Your admission to UC Merced is provisional, based on verification of the information you provide. If admitted, you will be asked to submit final, official transcripts from all schools and colleges attended and official test score reports for the purpose of verifying the information you provided on your application.

Application Acknowledgement

After you submit your application for admission you will receive notification that it was received. If you do not receive notification that UC Merced received your application within six weeks of submitting it, contact ARSC immediately by calling (866) 270-7301 or sending an e-mail message to admissions@ucmerced.edu.

Mercedes Golden Valley High School students look forward to the summer.
HOW TO OBTAIN A FEE WAIVER

High school students who may use the College Board fee waiver, available from your school counselor or may obtain a fee waiver authorization from any UC campus Admissions and Relations with Schools office. Opportunity Program office. California community college students enrolled in an Extended Opportunity Programs and Services (EOPS) program can obtain a fee waiver authorization from the EOPS office. All students: If you cannot afford the application fee and meet fee waiver guidelines, you can request a fee waiver authorization from any UC campus Admissions, Schools or Educational Opportunity Programs and Services office, or simply request a fee waiver when you submit the online application. Be prepared to answer questions about your gross family income and family size.

CATEGORIES OF APPLICANTS

• Undergraduate or regular status applicants are students who wish to enroll in an established curriculum of a school at UC Merced for the purpose of completing the Bachelor of Arts or Bachelor of Science degree.

• Freshman applicants are students who are currently enrolled in high school at the time of application or students who have graduated from high school— or have completed a California Certificate of Proficiency, an equivalent proficiency examination from another state or the General Education Development (GED) term certificate— but have not enrolled in a college or university since the summer after leaving high school.

• Transfer applicants are students who have enrolled in a regular term at a college or university after leaving high school. Students who meet this definition cannot disregard their college record or declare themselves as freshmen.

• Nonresident applicants are students who have permanent legal residence (as determined by the University) outside of the State of California. Nonresident applicants are generally required to pay nonresident tuition and must also present a higher grade point average than is required of California residents.

• International applicants are students who hold or expect to hold student, exchange, visitor or diplomatic visas. International applicants are required to pay nonresident tuition and must also present a higher grade point average than is required of California residents. At the time of catalog publication, UC Merced has not yet been authorized by the U.S. government to grant admission to nonresident applicants.

• Second baccalaureate applicants are college or university graduates who have earned a bachelor’s degree but do not have a candidate for an advanced degree, or have completed a substantial amount of college work with satisfactory grade point average. Prospective students must submit an undergraduate application with fees as well as a limited status petition and official transcripts from all schools attended.

• Limitations on nonresidents are established for the purpose of limiting the number of students in a college or university since the summer after leaving high school.

• Transfer applicants are students who have enrolled in a regular term at a college or university after leaving high school. Students who meet this definition cannot disregard their college record or declare themselves as freshmen.

• Nonresident applicants are students who have permanent legal residence (as determined by the University) outside of the State of California. Nonresident applicants are generally required to pay nonresident tuition and must also present a higher grade point average than is required of California residents.

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• Special status applicants are students whose special attainments qualify them to take certain courses in the university toward a definite and limited objective. To apply for limited status admission, students must either have a bachelor’s degree or be a candidate for an advanced degree, or have completed a substantial amount of college work with satisfactory grade point average. Prospective students must submit an undergraduate application with fees as well as a limited status petition and official transcripts from all schools attended. Limited status students are expected to maintain a certain scholarship average during a predetermined time of enrollment. Admission requires the approval of the dean of the school in which the student intends to study.

• Approval to matriculate also must be made by the dean of the school.

• Application, fees and filing dates are the same as those for new applicants and a petition for special status must be submitted with the application.

READMISSION TO UC MERCED

Students who were formally admitted, registered and enrolled at UC Merced, then interrupted their studies for any length of time other than summer, must apply for readmission to the campus. The application for readmission is available from the Office of the Registrar.

IMPORTANT DEADLINES RELATED TO ADMISSION 2005-06

November 30 Application priority filing deadline for fall semester

March 2 Application priority filing deadline for spring semester Check the Financial Aid section of the UC Merced catalog for more information.

May 1 Statement of Intent to Register (SIR) fall semester deadline: freshmen

June 1 Statement of Intent to Register (SIR) fall semester deadline: transfers

July 15 Final, official transcripts due to ARSIC (fall term applicants)

August 15 Statement of Intent to Register (SIR) spring semester deadline

October 15 Final, official transcripts due to ARSIC (spring term applicants)

PREPARING FOR UNIVERSITY WORK

As a prospective UC Merced undergraduate, you are encouraged to give thoughtful consideration to preparing yourself adequately in reading, writing, mathematics and other subject areas relevant to your intended major. Many undergraduate majors require preparation in mathematics beyond the three years required for admission to the University. The more comprehensive the challenge your college preparation provides, the better prepared you will be for your course work at UC Merced. Honors-level, Advanced Placement and college courses are good preparation for UC Merced. These challenging courses will help you develop the study habits and skills you will need at UC Merced. Give priority to completing the high school or college course patterns required for admission and for your interest area. Check the UC Merced Admissions Web site at http://students.ucmerced.edu for the most current information.

University of California Entry-Level Writing Requirement/Analytical Writing Placement Exam (Formerly Subject A)

Every undergraduate is required to demonstrate an acceptable level of ability in English taken in the seventh and eighth grades. For further details on the UC Entry-Level Writing Requirement and Analytical Writing Placement Exam, see the General Education section of this catalog.

FRESHMAN ADMISSION

California Residents

There are three pathways of eligibility for resident students to enter UC Merced as freshmen: eligibility in the statewide context, eligibility in the local context and eligibility by examination alone.

Eligibility in the statewide context is the path by which most students attain UC eligibility. To be eligible in the statewide context, students must satisfy the subject, scholarship and examination requirements described below.

SUBJECT REQUIREMENT

To satisfy the subject requirement you must complete, with grades of C or better, the 15 units of high school course work listed in the following subject pattern, known as the A-G requirements. One-year courses are equivalent to one unit and a one-semester course is equal to one-half unit. Courses certified to meet the A-G requirements are identified for each California high school on the UC-certified course list available online at www.ucop.edu/doorways, or in paper format from your principal or guidance counselor. Courses from schools and colleges outside California must provide the same rigour and level of instruction to meet the A-G requirements.

A-G Subject Requirements

A. History/Social Science: 2 years required. Two years of history/social science, including one year of U.S. history or one-year of U.S. history and one-year of civics or American government; and one year of world history, cultures and geography.

B. English: 4 years required. Four years of college-preparatory English composition and literature. All English courses must require frequent and regular writing and reading of classic and modern literature, poetry and drama. Not more than two semesters of ninth-grade English may be used for the “E” requirement if your high school accepts them as equivalent to its own courses.

C. Mathematics: 3 years required; 4 years recommended. Three years of college preparatory mathematics that include the topics covered in elementary and advanced algebra and two- and three-dimensional geometry. Approved integrated math courses may be used to fulfill part of or the entire requirement, as may courses taken in the seventh and eighth grades that your high school accepts as equivalent to its own math courses.

D. Laboratory science: 2 years required; 3 years recommended. Two years of laboratory science providing fundamental knowledge in at least two of these three disciplines: biology (which includes anatomy, physiology, marine biology, general zoology, etc.), chemistry and physics. Laboratory courses in earth sciences are acceptable if they have as prerequisites or provide basic knowledge in biology, chemistry or physics. The appropriate two years of an approved, integrated science program may be used to fulfill this requirement. Not more than one year of ninth-grade laboratory science can be used to meet this requirement.

E. Language other than English: 2 years required; 3 years recommended. Two years of the same language or three years of different languages.

F. Visual and performing arts: 1 year required. One year of visual and performing arts chosen from the following: dance, drama/theater, music and/or visual art.

Note about the visual and performing arts requirement: Beginning with applicants for Fall 2004 and Fall 2005, students must satisfy the “V” requirement by completing two semesters of approved arts courses from a single visual or performing arts (VPA) discipline. Beginning with applicants for Fall 2006, students must satisfy the “V” requirement by completing a yearlong, approved course from a single VPA discipline.

G. College-preparatory electives: 1 year required. One year (two semesters), in addition to those required in “A-U” above, chosen from the following areas: visual and performing arts (non-introductory level courses), history/social science, English, advanced mathematics, laboratory science and language other than English (a third year in the language used for the “V” requirement or two years of another language).
EXAMINATION REQUIREMENT

Students applying for admission during November 2004 for the Fall 2005* term must submit the following test scores:

• Either the SAT I: Reasoning Test or the ACT. Verbal and mathematics scores on the SAT I must be from the same sitting.

• Three SAT II: Subject Tests, including Writing, Mathematics Level I or II, and one test in any of the following areas: English literature, foreign language, science or social studies.

For more information about taking the tests to fulfill the examination requirement, talk to your school counselor or contact the appropriate testing organization. Contact information for the SAT I is available at www.collegeboard.com; for the ACT at www.act.org. The University requires you to take these tests by December of your senior year. To be eligible in the Statewide Context, your combined test scores must match or exceed the scores indicated for your “A-G” GPA. See the Table 1: Eligibility Index and Table 2: ACT to SAT I Conversion Table, below.

*NOTE: For admission to the Fall 2006 term, students must submit scores in the new SAT core Critical Reading, Writing, and Mathematics and the new ACT with Writing. The University will notify ELC students of their status at the time of decision.

Did You Know?

UC Merced professor Dunya Ramicova is an Emmy Award-winning costume designer.

The university calculates your GPA in the “A-G” subjects by assigning point values to the grades you earn, totaling the points and dividing by the total number of “A-G” course units. Points are assigned as follows: A=4 points, B=3 points, C=2 points, D=1 point and F=0 points.

Only the grades you earn in “A-G” subjects in the tenth, eleventh and twelfth grades are used to calculate your GPA. Courses you take in ninth grade can be used to meet the subject requirements if you earned grades of C or better, but they will not be used to calculate your GPA.

• Honors courses: The University assigns extra points for up to 4 units of certified honors-level and Advanced Placement courses taken in grades 10 – 12: A=5 points, B=4 points and C=3 points. No more than 2 units of certified honors-level courses taken in grade 10 may be assigned extra points. Grades of D are not assigned extra points. The courses must be in the following “A-G” subjects: history, English, advanced mathematics, laboratory science and visual and performing arts. In these fields, as well as in the fields of computer science and social science, courses that are designed to prepare students for Advanced Placement Examinations, the International Baccalaureate Higher Level Examination and college courses that are transferable to the University are acceptable honors-level courses.

• D/F and repeated grades: Students who receive D and F grades in “A-G” courses must repeat those courses with grades of C or better. In the subject areas of mathematics, chemistry and foreign language, however, a D or F grade can be “validated” by earning a C grade or better in the second semester or more advanced level in the same subject. Courses that have been “validated” with a more advanced level course cannot be subsequently repeated for a better grade. Consult with the Office of Admissions/Relations with Schools and College or your counselor to determine how D or F grades can be improved and how the University will use them in evaluating your scholarship record. Grades will not be used for repeated courses in which you initially received a C or better.
Eligibility by Examination Alone

If you do not meet the requirements for Eligibility in the Statewide Context or Eligibility in the Local Context, you may be able to qualify for admission to the University by examination. To satisfy the minimum requirements for eligibility by examination alone, you must achieve a total score of at least 1400 on the SAT I, or a composite score of 31 or higher on the ACT.

In addition, you must earn a total score of 1780 or higher on the three SAT II Subject Tests, with a minimum score of 530 on each test. You cannot qualify for admission by examination alone if you have completed 12 or more units of transferable college or university courses following high school graduation, or if you have taken transferable college courses in any subject covered by the SAT II Subject Tests.

Nonresident Freshmen Applicants

There are two paths to UC eligibility for nonresidents at the freshman level. The first is the same as described above under Eligibility in the Statewide Context and the second is the same as described above under Eligibility by Examination Alone, with the following exceptions:

- Scholarship Requirement: Your grade point average in the “A-G” subjects must be 3.4 or higher, regardless of your SAT I or ACT scores. The Eligibility Index (for grade point averages lower than 3.4) is used only for California residents.

- Admission by Examination Alone: You must earn a composite score of 31 or higher on the ACT or a total score on the SAT I at least 1400. Your total score on the three SAT II Subject Tests must be at least 1850, with a minimum score of 530 on each test.

MINIMUM ELIGIBILITY VS. SELECTION: FRESHMAN APPLICANTS

If the number of applicants exceeds the spaces available for a particular term or major, UC Merced may use selection criteria beyond the minimum “A-G” requirements.

- Quality of your senior-year program, as measured by the type and number of academic courses in progress or planned.
- Quality of your academic performance relative to the educational opportunities available in your secondary school.
- Outstanding performance in one or more academic subject areas.
- Outstanding work in one or more special projects in any academic field of study.
- Recent, marked improvement in academic performance, as demonstrated by your academic GPA and the quality of course work completed or in progress.
- Special talents, achievements and awards in a particular field, such as visual and performing arts, communication or athletic endeavors; special skills, such as demonstrated written and oral proficiency in other languages; special interests; such as intensive study and exploration of other cultures; experiences that demonstrate unusual promise for leadership, such as significant community service or significant participation in student government; or other significant experiences or achievements that demonstrate your promise for contributing to the intellectual vitality of the campus.
- Completion of special projects undertaken either in the context of your high school curriculum or in conjunction with special school events, projects or programs.
- Academic accomplishments in light of your life experiences and special circumstances.
- Location of your secondary school and residence.

OUTDOOR HIKING AND RECREATION OPPORTUNITIES

Outdoor hiking and recreation opportunities, such as those available at Hites Cove, are a short drive from Merced.
ADMISSION AS A TRANSFER STUDENT
If you have enrolled in a regular session of college or university-level course work after leaving high school, you are considered to be a transfer student and cannot ignore your college records to apply as a freshman. UC Merced has a strong commitment to enrolling well-prepared transfer students. Following California's Master Plan for Higher Education, UC Merced will give highest priority to students transferring from California's community colleges. UC Merced will give priority to junior-level transfer students—a student who completed 80 or fewer units at a four-year institution and cannot ignore your college records to apply as a freshman. UC Merced has a strong commitment to enrolling well-prepared transfer students.

FOUNTAIN COLOR FOR TRANSFER TO UC MERCED
Students who graduated from high school before June 2004 and began their college course work using the Foundations for Transfer to UC Merced, published in 2001, are encouraged to contact ARSC for advising updates.

TRANSFERABLE COLLEGE UNITS AND GRADE POINT AVERAGE (GPA)
The University awards transfer credit for courses that are determined by Admissions/Relations with Schools and Colleges (ARSC) to be essentially the same as those offered for the undergraduate degree at any UC campus, and taken at a regionally accredited institution of higher education. Transferable courses offered by California Community Colleges are listed on the UC Transferable Courses section of the California public institution articulation database, found on the Web site at www.assist.org.

Grade points for all UC-transferable courses attempted on a letter grade basis will be computed into the grade point average (GPA) that will be used to determine admission. Units for courses in which you earned grades of W, Pass or Credit, and No Pass or No Credit, are excluded from the computation of your grade point average. Honors courses taken in college are not weighted when computing the transferable GPA for admission. For more information about determining your GPA, contact ARSC or visit the Web site: http://students.ucmerced.edu.

If you have attended only community colleges or two-year postsecondary institutions, all of your UC-transferable college courses will be accepted in transfer for subject credit and your GPA for admission is computed using all UC-transferable college courses attempted. When you transfer, however, the total number of units is limited to a maximum total of 70 semester units (105 quarter units).

EXCESS UNITS
Students transferring to UC Merced from a regionally accredited four-year college or university may have up to 80 transferable semester (120 quarter) units and still be eligible to transfer. It is important to note, however, that UC Merced considers students who have completed more than 80 semester units to have excess units, and will not admit those students without special approval. A student who completed 80 or fewer units at a four-year institution, then transfers to a community college to complete course work that is necessary for admission, will not have excess units and can be considered for admission to UC Merced.

ADMISSION ELIGIBILITY FOR TRANSFERS
California Residents
There are three ways for you to meet the University’s minimum eligibility requirements for transfer admission:

1. Eligible for admission upon high school graduation: If you were eligible for admission to the University when you graduated from high school—meaning you satisfied the subject and scholarship requirements—you are eligible to transfer if you have a C (2.0) grade point average in your transferable college course work.

2. Lacking in subject requirements upon high school graduation: If you meet the scholarship but you did not satisfy the subject requirements when you graduated from high school, you must take transferable college courses in the subjects you are missing, earn a grade of C or better in each of these required courses, and earn an overall C (2.0) average in all transferable college course work to be eligible to transfer.

3. Lacking in scholarship requirement upon high school graduation: If you were not eligible for admission to the University when you graduated from high school because you did not meet the scholarship requirement, you must complete all of the following in (a) and (b) below. Any student planning to enter UC Merced as a junior-level transfer student may complete the following requirements in place of (1) or (2) above.

(a) 60 semester units (90 quarter units) of UC-transferable college course work with a grade point average of at least 2.4, and

(b) A course pattern requirement to include:

- Two transferable college courses (3 semester or 4-5 quarter units each) in English composition, and
- One transferable college course (3 semester or 4-5 quarter units) in mathematical concepts and quantitaive reasoning, and
- Four transferable college courses (3 semester or 4-5 quarter units each) chosen from at least two of the following subject areas:
  - Arts and humanities
  - Behavioral and social sciences
  - Physical and biological sciences

Students who have completed courses listed on the Intersegmental General Education Transfer Curriculum (IGETC) before they transfer to the University will have already satisfied the course pattern requirement.
TRANSFER REQUIREMENTS FOR NONRESIDENTS
Transfer students who are not residents of California must meet the same requirements as California residents and must have a grade point average (GPA) of 2.8 or better in all transferable college work.

MINIMUM ELIGIBILITY VS. SELECTION: TRANSFER APPLICANTS
If the number of transfer applicants exceeds the number of enrollment spaces available, UC Merced may use supplemental criteria to select from among the qualified transfer applicants. Higher priority is given to students transferred from a California Community College who meet the University’s definition of a California Community College student.

Definition of a California Community College student: A California Community College student applying for admission to the University of California in advanced standing will be given priority admission over all other applicants if: 1) he/she was enrolled at one or more California Community Colleges for at least two terms (excluding summer sessions); 2) the last college he/she attended before admission to a UC campus was a California Community College (excluding summer sessions); and 3) he/she has completed at least 30 semester (45 quarter) UC transferable units at one or more California Community Colleges.

WHAT I LEARNED IN COLLEGE
If you get a chance to go on a semester abroad, take it, especially if you’re able to go to a country where they don’t speak your native language.

Gail Benedict, Assistant to the Vice Chancellor of Administration

SELECTION CRITERIA FOR TRANSFER APPLICANTS:
- Completion of a specified pattern or number of courses that meet breadth or general education requirements.
- Completion of a specified pattern or number of courses that provide continuity with upper division courses in your major.
- Your grade point average in all transferable courses.
- Participation in academically selective honors courses or programs.
- Special talents, achievements and awards in a particular field, such as visual and performing arts, communication or athletic endeavors; special skills, such as demonstrated written and oral proficiency in other languages; special interests, such as intensive study and exploration of other cultures; experiences that demonstrate unusual promise for leadership, such as significant community service or significant participation in student government; or other significant experiences or achievements that demonstrate your promise for contributing to the intellectual vitality of the campus.

TRANSFER ADMISSION PROGRAMS
Concurrent Enrollment Program (CAP). Admissions/Relations with Schools and Colleges (ARC) coordinates the Concurrent Enrollment Program that identifies potential participants at specified local high schools for simultaneous admission to UC Merced and one of the following community colleges at the point of high school graduation: Fresno City College, Merced College and Modesto Junior College. Participants in CAP are advised on a frequent basis and invited to participate in special activities designed to motivate them for transfer. CAP students are guaranteed transfer to UC Merced when they meet specified criteria. Interested high school seniors may contact ARC at (559) 241-7474 or (866) 270-7301 toll-free in California.

TRANSFER ADMISSION GUARANTEE (TAG)
UC Merced offers transfer Admission Guarantee (TAG) contracts for California Community College students throughout California. TAG contracts specify the courses to be completed and grade point averages students must earn at the community college to be guaranteed admission to their major. If you are interested in receiving a TAG contract, call ARC at (559) 241-7474 or (866) 270-7301 toll free in California. The following majors are available for fall 2005 and 2006 TAG contracts:

<table>
<thead>
<tr>
<th>Required GPA</th>
<th>Major, Degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.40</td>
<td>Computer Science, B.S.</td>
</tr>
<tr>
<td>2.50</td>
<td>Environmental Engineering, B.S.</td>
</tr>
<tr>
<td>2.50</td>
<td>Biological Sciences, B.S.</td>
</tr>
<tr>
<td>2.55</td>
<td>Earth Systems Science, B.S.</td>
</tr>
<tr>
<td>2.55</td>
<td>Human Biology, B.A.</td>
</tr>
<tr>
<td>2.80</td>
<td>Social, Behavioral and Cognitive Sciences, B.A., B.S.</td>
</tr>
<tr>
<td>2.80</td>
<td>World Cultures and History, B.A.</td>
</tr>
</tbody>
</table>

Students enjoy taking a break in downtown Merced.

• Earn a score of 560 or higher on the SAT II Writing examination. Information about the SAT II is available at www.collegeboard.com
• Earn grades of B or better in each of two UC-transferable English composition courses taken at a nationally accredited post-secondary institution in the United States.

COST OF ATTENDANCE AND FINANCIAL AID
See the Financial Aid section of this catalog for detailed information about the estimated cost of attendance and information about financing your education.

ORIENTATION FOR ADMITTED STUDENTS
All admitted students receive an invitation to attend New Student Orientation during Summer 2005 for fall semester and during January 2006 for spring semester. At orientation, students will meet with an academic advisor; plan their program of study and enroll in classes. See the Orientation section of this catalog for more information.

CALIFORNIA RESIDENCY STATUS
The admission requirements for California residents also apply to dependents of the University of California employee. The manner in which legal residence is defined for tuition purposes is different than that for admission purposes. If you have questions about your residency status for tuition purposes, contact the Office of the Registrar at registrar@ucmerced.edu.
FINANCIAL AID AND SCHOLARSHIPS

The Office of Financial Aid and Scholarships strives to make a college education affordable for all students regardless of their families’ financial status.

While students are expected to contribute a certain amount toward their education, UC Merced will offer a number of financial aid and scholarship resources to assist students in meeting their educational expenses. (Exceptions: The Office of Financial Aid and Scholarships does not have funds available to offer assistance to international students, students on special or limited status or students enrolled in the Division of Professional Studies.)

All students, regardless of income, are encouraged to apply for financial aid. Throughout the University of California system, 65 percent of all undergraduate students receive some form of financial assistance. Financial aid is intended both to remove financial barriers for families who cannot afford the cost of higher education and to fill in the gap for families who can afford only part of the cost. A number of factors in addition to family income are considered in determining your financial eligibility, including the size of your family and the number and occupation of family members in college. Although most grant awards are based on financial need, some loans and scholarships are available regardless of need.

The Office of Financial Aid and Scholarships is dedicated to helping students and their parents understand the financial aid opportunities available as well as the criteria used in determining eligibility for the various financial aid programs available at UC Merced. The Office of Financial Aid and Scholarships welcomes your questions and is here to provide services and guidance that will contribute to your educational experience at UC Merced. If you have questions or need additional information, please do not hesitate to contact us.

Office of Financial Aid and Scholarships:
Web site: http://students.ucmerced.edu
E-mail: finaid@ucmerced.edu
Phone: (209) 724-4384
Address: P.O. Box 2039
Merced, CA 95344

OTHER IMPORTANT WEB ADDRESSES:
Web site: CSAC: http://csac.ca.gov

APPLICATIONS AND FILING

Applying for Financial Aid is as easy as 1,2,3!
2. Complete and submit the Free Application for Federal Student Aid (FAFSA) and a GPA Verification form by March 2, 2005.
3. Complete and return any additional documents requested by the Office of Financial Aid and Scholarships.

TYPES OF FINANCIAL AID

Students who receive financial aid may receive funds from one or more of the following sources: scholarships, grants and loans.

Scholarships

Scholarships are awarded on the basis of merit, academic achievement or special talents and do not have to be repaid. Some scholarships are also awarded on the basis of financial need. The University of California, Merced will administer a number of scholarship funds designed to benefit undergraduate students. These scholarships are provided through the generosity of UC alumni, friends of UC Merced, corporations, businesses, professional associations and the university itself. Following is a partial list of scholarships that will be available for undergraduate students:

- Regents Scholarship
- Louis P. Gonella Memorial Scholarship
- Lucia Myers Endowed Scholarship
- SBC Pacific Bell Scholarship
- Stewart A. Neierc Scholarship
- Wells Fargo Scholarship
- Willer-BURK Scholarship

To be considered for all campus scholarships, students simply fill out the 2005-2006 University of California Application for Admissions & Scholarships (for students entering UC Merced for the first time). Student must have a 3.25 cumulative GPA to be considered for a UC Merced scholarship. Students should carefully read the Application for Undergraduate Admission and Scholarships for information about required supporting documentation and deadline dates. To be considered for need-based scholarships, students will need to complete and submit the Free Application for Federal Student Aid (FAFSA). Students who do not meet these deadlines will be considered as having no need. To be considered for all other campus scholarships, the student was awarded and any federal or state resources the student receives and a standard work and loan contribution from the cost of attendance.

Grants

Grants are awarded on the basis of financial need and do not have to be repaid. The federal government provides funds for some grants (Federal Pell Grants). The State of California also offers grants to qualified undergraduate students (Cal Grants A and B). In addition, grant funds are provided by the University of California.

Federal Pell Grants: To be eligible for a Federal Pell Grant, applicants must be U.S. citizens or eligible noncitizens, be enrolled as undergraduates, and have previously received a bachelor’s degree and demonstrate financial need. The amount you receive depends on your financial need as determined by completing the FAFSA.

Cal Grants: To be eligible for a Cal Grant award, applicants must be California residents, demonstrate financial need and meet appropriate deadlines. The California Student Aid Commission (CSAC) administers the Cal Grant program. Go to the CSAC Web site at http://www.csac.ca.gov for more information.


er A Awards are based on financial need and academic achievement. This grant pays partial registration fees.

Cal Grant B awards are based on financial need and are for entering undergraduate students, primarily from low-income backgrounds. Cal Grant B pays a stipend each semester for living expenses for first-year students, and a portion of the registration fees plus a stipend each semester for living expenses for students in their second through fourth years.

University Grants: The University offers an institutional grant program to eligible students. To determine eligibility, submit a student and parent contribution, any federal or state resources the student receives and a standard work and loan contribution from the cost of attendance.

Student Aid (FAFSA) and a GPA Verification form by November 30, 2004.

Average Federal Unsubsidized Stafford Loans

Federal Unsubsidized Stafford Loans are available to all eligible students regardless of need. The loan is “unsubsidized” in that the U.S. government pays the interest while the student is in school and during the grace period (the first six months after leaving school or dropping to less than half-time enrollment status).

Eligibility Requirements

Federal financial aid programs are subject to regulations that define the criteria students must meet to qualify and maintain eligibility for those programs. The regulations state that a student must:

1. be a U.S. citizen or an eligible noncitizen of the U.S.;
2. be accepted for admission to the University; (3) be enrolled in good standing at the University (units taken through the Division of Professional Studies are not counted toward half- or full-time enrollment); (4) demonstrate financial need (except for Federal Unsubsidized Loans and Federal PLUS Loans); (5) maintain satisfactory academic progress for financial aid, as outlined below; (6) be registered for the selective service if the student is a male at least 18 years old, born after December 31, 1960, and not on active duty with the armed forces; and (7) not owe a refund on a federal grant or loan.

Full-time enrollment and satisfactory academic progress.

Students not enrolled full time by the end of the fifth week of the semester may have to pay back some of their financial aid.

Full-time enrollment and satisfactory academic progress.

Students not enrolled full time by the end of the fifth week of the semester may have to pay back some of their financial aid.

Federal regulations require that financial aid recipients meet the published standards for satisfactory academic progress for Financial Aid purposes each semester, grade point average and maximum semesters of attendance allowed to obtain a degree.
LIMITED NUMBER OF SEMESTERS

Financial aid is not available for an indefinite period. You are allowed up to 10 semesters of financial aid eligibility, depending on your class standing when you were admitted.

The semester limit applies to time you have spent at any college or post-secondary institution; it includes semesters during which you received no financial aid, as well as terms during which you withdrew. It does not include semesters when you were not registered or summer sessions. The initial class level is assigned by the Office of Admissions and Relations with Schools and Colleges and it is based on transfer credits accepted, including Advanced Placement units. Note: Terms that you withdraw count toward the total number of semesters.

Student’s Status Financial Aid Eligibility at UC Merced

- Entering freshman 10 semesters
- Entering sophomore 8 semesters
- Entering junior 6 semesters
- Entering senior 4 semesters

MINIMUM NUMBER OF UNITS EACH YEAR

You must accumulate a certain number of units by the end of each year to remain eligible for financial aid. If you fail to complete sufficient units, you will receive a warning letter. If you do not complete the minimum unit level within a year after being sent a warning letter, you are no longer eligible for financial aid. The chart below shows the number of units you must have completed by the end of each term at UC Merced to maintain your eligibility.

<table>
<thead>
<tr>
<th>Academic Year</th>
<th>Normal Progress</th>
<th>Subject to Probation</th>
<th>Subject to Disqualification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshman</td>
<td>27–30</td>
<td>&lt;27</td>
<td>&lt;18</td>
</tr>
<tr>
<td>Sophomore</td>
<td>54–60</td>
<td>52–53</td>
<td>52</td>
</tr>
<tr>
<td>Junior</td>
<td>81–90</td>
<td>78–80</td>
<td>&lt;80</td>
</tr>
<tr>
<td>Senior</td>
<td>108–120</td>
<td>106–107</td>
<td>&lt;106</td>
</tr>
</tbody>
</table>

Dropped, failed and incomplete courses, remedial courses for which no credit is received, and repeated courses (in which you previously received a passing grade) do not count toward unit credit. To earn units for a course, you must complete and pass that course. Units are measured and warning letters are mailed at the end of the spring semester.

SATISFACTORY GRADES

An undergraduate student will be placed on academic probation if at the end of any term the student’s grade point average:

- is less than 2.0, but not less than 1.5, for the term;
- or is less than 2.0 for all courses taken within the University of California.

An undergraduate student is subject to academic disqualification for further registration in the University if at the end of any term:

- the student’s grade point average for that term is less than 1.5; or
- if the student has completed two consecutive terms on academic probation without achieving a cumulative grade point average of 2.0.

You may receive financial aid while you are on probation, but you will lose all financial aid if you are dismissed (unless dismissal is waived).

APPEALS

If your financial aid is denied, suspended or terminated for failure to achieve satisfactory academic progress, you may appeal if extenuating circumstances hindered academic performance. Appeal forms are available from the Office of Financial Aid and Scholarships. To file an appeal, complete the form, obtain and attach all documents that support the basis for your appeal, and return the form and documentation to the Office of Financial Aid and Scholarships. You are strongly encouraged to file your appeal form immediately after receiving notification that your aid has been denied. You are not eligible to receive financial aid while your appeal is under consideration, and the appeal process normally takes 2-4 weeks.

EFFECTS OF WITHDRAWING ON FINANCIAL AID

Students sometimes find that they need to withdraw from school. This may be owing to illness or a family emergency. If you leave school after the term begins this is considered a withdrawal. If you cancel your registration for a term before the term begins, you are not eligible to receive any financial aid for that term. Whatever the reason, if you are considering withdrawal, you should first discuss your decision with a financial aid advisor. Financial aid recipients who withdraw may no longer be eligible for all of the financial aid they have received. If you are a financial aid recipient and withdraw, you should expect to pay back part of your financial aid. UC Merced uses the Federal Formula required for Title IV aid recipients ( Pell Grants, FFELP, Parent Loans for Undergraduate Students) to determine the amount of all forms of aid a student must return, including Cal Grants and scholarships.

The percentage of aid to be repaid is the percentage of the total days in the semester that are remaining after the date of withdrawal. For instance, if you received $2,000 in financial aid and withdraw when the semester is exactly 50 percent over, you will need to repay $1,000.

IMPORTANT WARNING: Your semesters of financial aid eligibility are limited. When you withdraw you use up one semester of eligibility!

For ADDITIONAL INFORMATION:

Please refer to the Money Matters Web site (http://students.ucmerced.edu) for additional information and assistance.

THE ACADEMIC YEAR

THE SEMESTER SYSTEM

The University of California, Merced is on the semester system. The academic year is divided into two semesters and two summer sessions. Quarter units earned previously at another institution are converted to semester units by multiplying by two-thirds; for example, 180 quarter units equals 120 semester units.

SUMMER COURSES

Every summer, students can earn units, expand their knowledge, take special study courses, fulfill prerequisites, and complete general education or major requirements by enrolling in summer courses. UC Merced offers two summer sessions. A wide variety of courses are offered each summer in subjects that are transferable to most campuses. Enrollment in summer session courses is open to UC Merced students and other UC students, as well as students from other colleges and universities, adults, and high school juniors and seniors. For additional information about summer courses, contact summersession@ucmerced.edu.

ENROLLMENT AND ENROLLMENT LIMITS

ENROLLING IN COURSES

UC Merced students register each semester using the online registration system, RegCat. The registration process includes enrolling in classes, paying fees and other financial obligations, filing a current address with the Office of the Registrar, and completing and filing other information forms. RegCat is an interactive computer system that allows the student to enroll in classes via the Internet. With UC Merced’s Internet registration, students will always receive the most up-to-date information regarding their registration and class enrollment. Pre-assigned appointments that are spread throughout the registration period regulates access to the registration system. For security purposes, students are assigned a unique login user code and password/PIN that must be entered to access RegCat. Students may add and drop courses during the add/drop period, which starts one week before instruction and extends through the first three weeks of instruction.

A new or re-entering student must also:

- Obtain a student ID card, and
- Submit a Statement of Legal Residence (see Appendix)

The Schedule of Classes and other information on registration are available on the RegCat Web site.

WHAT I LEARNED IN COLLEGE

Study what your heart yearns for, not necessarily what your head tells you to do. The journey will take you to places you never imagined.

Max Masumoto, San Joaquin Valley author and farmer

Please visit us online at www.ucmerced.edu

Registration Priority: Access to registration (via RegCat) is by priority groups. The groups are established according to student class level as determined by the number of units completed, with the seniors registering first, juniors second, etc. The number of semester units a student has completed determines undergraduate classification:

<table>
<thead>
<tr>
<th>Class Level</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshman</td>
<td>0–29</td>
</tr>
<tr>
<td>Sophomore</td>
<td>30–59</td>
</tr>
<tr>
<td>Junior</td>
<td>60–89</td>
</tr>
<tr>
<td>Senior</td>
<td>90.0+</td>
</tr>
</tbody>
</table>

Late Registration

Students who have not registered prior to the first day of instruction are considered late registrants. Late registration begins after the first day of instruction and extends through the 10th day of instruction. Students are, however, assessed a late registration fee. Approval from the student’s school is required to register late.

Adding and Dropping Courses

Adding a Course: During the first week of instruction, students may add a course or courses if space is available. During the sec-

A C A D E M I C P O L I C I E S & P R O C E D U R E S

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The UC Irvine campus shown here in its early years of development, shares with UC Merced its agricultural origins.

San Joaquin Valley author and farmer


The journey will take you to places you never imagined.

San Joaquin Valley author and farmer

PLEASE VISIT US ONLINE AT WWW.UCMERCEDEDU
LIMITED NUMBER OF SEMESTERS
Financial aid is not available for an indefinite period. You are allowed up to 10 semesters of financial aid eligibility, depending on your class standing when you were admitted. The semester limit applies to time you have spent at any college or post-secondary institution; it includes semesters during which you received no financial aid, as well as terms during which you withdrew. It does not include semesters when you were not registered or summer sessions. The initial class level is assigned by the Office of Admissions and Relations with Schools and Colleges and it is based on transfer credits accepted, including Advanced Placement units. Note: Terms that you withdraw count toward the total number of semesters.

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<td>27-30</td>
<td>&lt;27</td>
<td>1/3</td>
</tr>
<tr>
<td>2</td>
<td>54-60</td>
<td>52-53</td>
<td>&lt;52</td>
</tr>
<tr>
<td>3</td>
<td>81-90</td>
<td>79-80</td>
<td>&lt;80</td>
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EFFECTS OF WITHDRAWING ON FINANCIAL AID
Students sometimes find that they need to withdraw from school. This may be owing to illness or a family emergency. If you leave school the term begins this is considered a withdrawal. If you cancel your registration for a term before the term begins, you are not eligible to receive any financial aid for that term. Whatever the reason, if you are considering withdrawal, you should first discuss your decision with a financial aid advisor. Financial aid recipients who withdraw may no longer be eligible for all of the financial aid they have received. If you are a financial aid recipient and withdraw, you should expect to pay back part of your financial aid. UC Merced uses the Federal Formula required for Title IV aid recipients ( Pell Grants, FFELP, Parent Loans for Undergraduate Students) to determine the amount of all forms of aid a student must return, including Cal Grants and scholarships.

The percentage of aid to be repaid is the percentage of the total days in the semester that are remaining after the date of withdrawal. For instance, if you received $2,000 in financial aid and withdraw when the semester is exactly 50 percent over, you will need to repay $1,000.

IMPORTANT WARNING: Your semesters of financial aid eligibility are limited. When you withdraw you use up one semester of eligibility!

If financial aid is denied, suspended or terminal for failure to achieve satisfactory academic progress, you may appeal if extenuating circumstances hindered academic performance. Appeal forms are available from the Office of Financial Aid and Scholarships. To file an appeal, complete the form, obtain and attach all documents that support the basis for your appeal, and return the form and documentation to the Office of Financial Aid and Scholarships. You are strongly encouraged to file your appeal form immediately after receiving notification that your aid has been denied. You are not eligible to receive financial aid while your appeal is under consideration, and the appeal process normally takes 2-4 weeks.

APPEALS

The academic year is divided into two semesters and two summer sessions. A wide variety of courses are offered each summer in subjects that are transferable to most campuses. Enrollment in summer session courses is open to UC Merced students and other UC students, as well as students from other colleges and universities, adults, and high school juniors and seniors. For additional information about summer courses, contact summersession@ucmerced.edu.

ENROLLMENT AND ENROLLMENT LIMITS

ENROLLING IN COURSES
UC Merced students register each semester using the online registration system, RegCat. The registration process includes enrolling in classes, paying fees and other financial obligations, filing a current address with the Office of the Registrar, and completing and filing other information forms. RegCat is an interactive computer system that allows the student to enroll in classes via the Internet. With UC Merced’s Internet registration, students will always receive the most up-to-date information regarding their registration and class enrollment. Pre-allocated appointments that are spread throughout the registration period regulate access to the registration system. For security purposes, students are assigned a unique login user code and password/PIN that must be entered to access RegCat.

Students may add and drop courses during the first week of instruction, which starts one week before instruction and extends through the first three weeks of instruction. A new or re-entering student must also:
- Obtain a student ID card, and
- Submit a Statement of Legal Residence (see Appendix).

The Schedule of Classes and other information on registration are available on the RegCat Web site.

WHAT I LEARNED IN COLLEGE

Study what your heart yearns for, not necessarily what your head tells you to do. The journey will take you to places you never imagined.

Mas Masumoto, San Joaquin Valley author and farmer

THE ACADEMIC YEAR

THE SEMESTER SYSTEM
The University of California, Merced is on the semester system. The academic year is divided into two semesters and two summer sessions. Quarter units earned previously at another institution are converted to semester units by multiplying by two-thirds; for example, 180 quarter units equal 120 semester units.

SUMMER COURSES
Every summer, students can earn units, expand their knowledge, take special study courses, fulfill prerequisites, and complete general education or major requirements by enrolling in summer courses. UC Merced offers two summer sessions. A wide variety of courses are offered each summer in subjects that are transferable to most campuses. Enrollment in summer session courses is open to UC Merced students and other UC students, as well as students from other colleges and universities, adults, and high school juniors and seniors. For additional information about summer courses, contact summersession@ucmerced.edu.

REGISTRATION

Registration Priority: Access to registration (via RegCat) is by priority groups. The groups are established according to student class level as determined by the number of units completed, with the seniors registering first, juniors second, etc. The number of semester units a student has completed determines undergraduate classification:

<table>
<thead>
<tr>
<th>Class Level</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshman</td>
<td>0-29 9</td>
</tr>
<tr>
<td>Sophomore</td>
<td>30-39 9</td>
</tr>
<tr>
<td>Junior</td>
<td>40-49 9</td>
</tr>
<tr>
<td>Senior</td>
<td>50.0+ 9</td>
</tr>
</tbody>
</table>

Late Registration
Students who have not registered prior to the first day of instruction are considered late registrants. Late registration begins after the first day of instruction and extends through the 10th day of instruction. Students are, however, assessed a late registration fee. Approval from the student’s school is required to register late.

Adding and Dropping Courses
Adding a Course: During the first week of instruction, students may add a course or courses if space is available. During the second and third weeks of instruction, a student may add courses only with the permission of the instructor. After the third week of instruction, students may add a class only with the permission of both the instructor and the appropriate dean. A fee will be assessed for adding a course after the third week.
- First week: Students may add if space available
- Second and third weeks: Students may add only with instructor’s approval
- After third week: Students may add only with instructor’s and appropriate dean’s approvals; fee assessed
During the first three weeks of instruction, students may drop a class or classes without paying a fee and without a dean’s approval. After the third week of instruction, a student may drop only if the student is not failing the course, if the student is not subject to disqualification and if dropping the course would be to the educational benefit of the student. For courses dropped after the third week, the student must receive the appropriate dean’s approval, a fee will be assessed and a notation indicating the week of the term in which the course was dropped will appear on the student’s transcript. The Undergraduate Council may designate certain courses to have a drop date that is shorter than three weeks.

- First through third week: Students may drop with no penalty
- After third week: Students may drop only with the appropriate dean’s approval, fee assessed

Repetition of Courses

A student may repeat only those courses in which a grade of D, F, or U was earned. A student may drop any course in which the student received a D or F, only the most recently earned grade and grade points shall be used for the first 16 units repeated. In the case of courses in which the student received a D or F, only the most recently earned grade assigned at each enrollment shall be permanently recorded. The student must file for part-time status each semester. To be considered eligible, undergraduate students must be registered for 10 units (including workload units) or fewer by the 10th day of instruction that semester, and graduate students must be registered in 6 units or fewer by the 10th day of instruction. Minimum progress requirements are waived for approved part-time students. Undergraduate petitions are available on the Office of the Registrar’s Web site at registrar.ucmerced.edu, and at the Graduate Studies Web site at grad.ucmerced.edu.

Students approved for enrollment on a part-time basis pay the same fees as full-time students, but pay only one-half of the Educational Fee. Part-time nonresidents pay one-half of the Nonresident Tuition Fee. Undergraduates file their part-time petition with the Office of the Registrar; graduate students file their petition with the Graduate Studies division.

Normal Progress to Degree

UC Merced undergraduate degree programs are designed to be completed in eight terms or four academic years. To meet the normal progress requirement, undergraduate students are required to enroll in an average of 15 units per term, completing the 120 units necessary for graduation in four years. The Office of the Registrar and the appropriate dean will ensure that students are making normal progress toward their degree. An extension of enrollment beyond nine terms requires the approval of the student’s school. In order to remain in good standing, students must meet minimum progress requirements of the campus. (See Minimum Progress section of catalog.)

Enrollment Status

Certification of Full-Time Status: Undergraduate students are considered full-time students at the time of enrollment (including workload units) each semester in order to maintain normal progress toward their degree. At least 12 units are required for undergraduates to be certified as full-time students for financial aid purposes and to meet minimum progress requirements. Graduate students must also carry a study load of at least 12 units each semester in order to be certified as full-time students.

Part-Time Student Status: If, for reasons of occupation, family responsibility, health or graduating senior status (one term only), a student is unable to attend the university on a full-time basis, he/she may qualify for enrollment in part-time status. The student must file for part-time status each semester. To be considered eligible, undergraduate students must be registered for 10 units (including workload units) or fewer by the 10th day of instruction that semester, and graduate students must be registered in 6 units or fewer by the 10th day of instruction. Minimum progress requirements are waived for approved part-time students. Undergraduate petitions are available on the Office of the Registrar’s Web site at registrar.ucmerced.edu, and at the Graduate Studies Web site at grad.uc.ucmerced.edu.

Intercampus Exchange Program for Graduate Students

A graduate student registered on the UC Merced campus may become an intercampus exchange student for a full term at any of the other UC campuses with the approval of the graduate adviser, the director of the graduate group and the deans of Graduate Studies on both the home and host campuses. To be eligible, the graduate student must have attended UC Merced for a minimum of one term before participating in the intercampus exchange program. Students are limited to a maximum of two consecutive semester-based terms or three quarter-based terms on intercampus exchange. Permission for exchange is done on a semester-by-semester basis. Application forms may be obtained in the Office of Graduate Studies and should be submitted four weeks in advance of the semester you wish to participate.

Intercampus exchange students register at both campuses and pay fees on their home campus, but they have access to student services available on the host campus. Students should make arrangements with the Office of the Registrar to follow the enrollment procedure of the host campus so that the grades students obtain in courses taken on the host campus will be transferred to your record on the home campus. Grades from courses completed on the host campus will be transferred to the home campus and become part of the student’s official graduate transcript. Exchange students are considered graduate students in residence on the home campus and are not formally admitted to the host graduate school and department. For further information, contact Graduate Studies and the Office of the Registrar.

Concurrent Credit from Another Institution: With the exception of current and former UC Merced students, graduate students may be enrolled for concurrent credit from another institution. Concurrent credit cannot be obtained only by petitioning the appropriate school dean(s) in advance of the desired registration, and the student must still be enrolled in at least 12 units at the UC Merced campus during the term in which the exception applies.

ADDITIONAL ENROLLMENT OPPORTUNITIES

Intercampus Transfer: Undergraduates may apply for transfer to another University of California campus. Copies of the Application for Undergraduate Admission are available from the Office of Admissions. Interdepartmental or intradivisional transfers within the University of California, Undergraduate Application Processing Service, P.O. Box 23460, Oakland, CA 94623-0460.

The application is also available online at UC’s PATHWAYS Web site at www.ucop.edu/pathways. Students may apply online or download a copy of the application to mail to the postal address above.

Students who are or have been enrolled in a regular UC merced semester may apply for an intercampus transfer to another UC campus, provided they have not been registered subsequently in a regular term at another collegiate institution. A nonrefundable fee is required at the time an application is submitted.

UC/CSU/Community College Intersegmental Cross-Enrollment: Senate Bill 361 requires that the University of California, California State University, and the California Community Colleges permit students to enroll in one course per term at a campus of either of the other two systems on a space-available basis at the discretion of the two campuses involved. Enrollment is limited to one course per term and participating students need the approval of both the home campus and the host campus.

Please see the Office of the Registrar’s Web site for specific eligibility criteria. Generally, students will be allowed to add a class, if space is available, after the add/drop period on the host campus. To add a course, students must obtain the faculty member’s approval and signature on a Cross-Enrollment form, available at their home campus Registrar’s Office. The student submits the signed form to the Office of the Registrar at the host campus for processing. All course work taken via the Intersegmental Cross Enrollment program is recorded on a host campus transcript and must follow the normal transfer of credit procedures at the home campus.

Simultaneous Enrollment for Graduate Students: UC Merced graduate students may enroll, without formal admission and without payment of additional University fees, in courses at another UC campus on a space-available basis at the discretion of the appropriate campus authorities on both campuses. To qualify for this program, students must complete a minimum of 12 units as a matriculated student at the home campus. (This requirement can be waived at the discretion of the Graduate Studies Dean.) Students must be enrolled at both campuses in the current term with a minimum of 12 units as a matriculated student at the home campus. (This requirement can be waived at the discretion of the Graduate Studies Dean.) Students must be enrolled at both campuses in the current term with a minimum of 12 units as a matriculated student at the home campus, be in good academic standing, and be certified by their home campus as to eligibility, residency, fees, financial aid and health status.

To participate in this program, please see the Office of the Registrar’s Web site for forms (that must be completed by appropriate authorities on both campuses, and to ensure that the application of a non-home UC course will satisfy degree, graduation or other specific requirements (other than unit credit). Failure to ensure the applicability of the non-home UC course to UC Merced requirements could result in a refusal to allow the course to satisfy any specific requirements (other than unit requirements). For further information, contact Graduate Studies and the Office of the Registrar.
During the first three weeks of instruction, students may drop a class or classes without paying a fee and without a dean’s approval. After the third week, students may drop classes only with the appropriate dean’s approval. A student who is not failing the course, if the student is not subject to disqualification and if dropping the course would be to the educational benefit of the student. For courses dropped after the third week, a student must receive the appropriate dean’s approval, a fee will be assessed and a notation indicating the week of the term in which the course was dropped will appear on the student’s transcript. The undergraduate Council may designate certain courses to have a drop date that is shorter than three weeks.

• First through third week: Students may drop with no penalty.
• After third week: Students may drop only with the appropriate dean’s approval, fee assessed.

Dropping a Course:

A student may repeat only those courses in which a grade of D, F, or not passed was received. Undergraduate courses in which a grade of D or F has been earned may not be repeated on a pass/ no-pass basis. Similarly, a graduate course in which a C, D, or F is received may not be repeated on a pass/ no-pass basis. Students in the College of Natural and Agricultural Sciences are permitted to repeat a course up to three times. Students in other colleges are permitted to repeat a course up to two times. Students may not repeat a course for which they have already earned a passing grade (P, NP, C, or S). The grade assigned at each enrollment shall be permanently recorded.

Repetition of Courses:

• After third week: Students may drop only with the appropriate dean’s approval, fee assessed.
• After third week: Students may drop only with the appropriate dean’s approval, fee assessed.

Enrollment Status:

Certification of Full-Time Status: Undergraduate students are certified as full-time units (including workload units) each semester in order to maintain normal progress toward their degree. At least 12 units are required for undergraduates to be certified as full-time students for financial aid purposes and to meet minimum progress requirements. Graduate students must also carry a study load of at least 12 units per semester in order to be certified as full-time students.

Part-Time Student Status:

For majors, exceptions can be obtained only by petitioning the appropriate dean in all instances. Degree credit for a course will be given only once, but the grade assigned at each enrollment shall be permanently recorded. The student must file for part-time status each semester. To be considered eligible, undergraduate students must be registered for 10 units (including workload units) or fewer by the 10th day of instruction that semester, and graduate students must be registered in 6 units or fewer by the 10th day of instruction. Minimum progress requirements are waived for approved part-time students. Undergraduate petitions are available on the Office of the Registrar’s Web site at registrar.ucmerced.edu, and at the Graduate Studies Web site at graduate.ucmerced.edu.

Students approved for enrollment on a part-time basis pay the same fees as full-time students, but pay only one half of the Educational Fee. Part-time nonresidents pay one half of the Nonresident Tuition Fee. Undergraduates file their part-time petition with the Office of the Registrar; graduate students file their petition with the Graduate Studies division.

Normal Progress to Degree:

UC Merced undergraduate degree programs are designed to be completed in eight terms or four academic years. To meet the normal progress requirement, undergraduate students are permitted to enroll in an average of 15 units per term, completing the 120 units necessary for graduation in four years. The Office of the Registrar and the appropriate dean will ensure that students are making normal progress toward their degrees. An extension of enrollment beyond nine terms requires the approval of the student’s school. In order to remain in good standing, students must meet minimum progress requirements of the campus. (See Minimum Progress Section of catalog.)

What I Learned in College:

True or false: A problem has to be solved before you can understand it. False. Will Shadish, Profesor of Psychology, UC Merced

ADDITIONAL ENROLLMENT OPPORTUNITIES

Intercampus Transfer:

Undergraduate students may apply for transfer to another University of California campus. Copies of the application for Undergraduate Admission are available from the Office of Admissions & Relations with Schools & Colleges and must be filed with the University of California. Undergraduate Application Processing Service, P.O. Box 23460, Oakland, CA 94623-0460. The application is also available online at UC PATHWAYS Web site at www.ucop.edu/pathways. Students may apply online or download a copy of the application to mail to the postal address above.

Students who are or have been enrolled in a regular UC Merced semester may apply for an intercampus transfer to another UC campus, provided they have not been registered subsequently in a regular term at another collegiate institution. A nonrefundable fee is required at the time an application is submitted.

UC/CSU/Community College Intersegmental Cross-Enrollment:

Senate Bill 361 requires that the University of California, California State University, and the California Community Colleges permit students to enroll in one course per term at a campus of either of the other two systems on a space-available basis at the discretion of the two campuses involved. Enrollment is limited to one course per term and participating students need the approval of both the home and the host campus. Please see the Office of the Registrar’s Web site for specific eligibility criteria. Generally, students will be allowed to add a class, if space is available, after the add/drop period on the host campus. To add a course, students must obtain the faculty member’s approval and signature on a Cross-Enrollment form, available at their home campus Registrar’s Office. The student submits the signed form to the Office of the Registrar at the host campus for processing. All course work taken via the Intersegmental Cross Enrollment program is recorded on a host campus transcript and must follow the normal transfer of credit procedures at the home campus.

Simultaneous Enrollment for Graduate Students:

UC Merced graduate students may enroll, without formal admission and without payment of additional University fees, in courses at another UC campus on a space-available basis at the discretion of the appropriate campus authorities on both campuses. To qualify for this program, students must complete a minimum of 12 units as a matriculated student at the home campus. (This requirement can be waived at the discretion of the Graduate Studies Dean.) Students must be enrolled at both campuses in the current term with a minimum of 12 units as a matriculated student at the home campus, be in good academic standing, and be certified by their home campus as to eligibility, residence, financial aid and health status.

To participate in this program, please see the Office of the Registrar’s Web site for the forms (that must be completed by appropri- ate authorities on both campuses, and to ensure that the application of a non-home UC course will satisfy degree, graduation or other specific requirements (other than unit credit). Failure to ensure the applicability of the non-home UC course to UC Merced requirements could result in a refusal to allow the course to satisfy any specific requirements (other than unit requirements). For further information, contact Graduate Studies and the Office of the Registrar.

Intercampus Exchange Program for Full-Time Study:

A graduate student registered on the UC Merced campus may become an intercampus exchange student for a full term at any of the other UC campuses with the approval of the graduate advisor, the director of the graduate group and the deans of Graduate Studies on both the home and host campuses. To be eligible, the graduate student must have attended UC Merced for a minimum of one term before participating in the intercampus exchange program. Students are limited to a maximum of two consecutive semester-based terms or three quarter-based terms on intercampus exchange. Permission for exchange is done on a semester-by-semester basis. Application forms may be obtained in the Office of Graduate Studies and should be submitted four weeks in advance of the semester you wish to participate.

Intercampus exchange students register at both campuses and pay fees on their home campus, but they have access to student services available on the host campus. Students should make arrangements with the Office of the Registrar to follow the enrollment procedure of the host campus so that the grades students obtain in courses taken on the host campus will be transferred to your record on the home campus. Grades from courses completed on the host campus will be transferred to the home campus and become part of the student’s official graduate transcript. Exchange students are considered graduate students in residence on the home campus and are not formally admitted to the host graduate school and department. For further information, contact Graduate Studies and the Office of the Registrar.

Concurrent Credit from Another Institution:

With the exception of courses listed in the UC/CSU/Community College Intersegmental Cross-Enrollment Program, a student may not obtain transfer credit for courses at a non-University of California campus in a term during which the student is registered as a full-time student at UC Merced. An exception can be obtained only by petitioning the appropriate student dean well in advance of the desired registration, and the student must still be enrolled in at least 12 units at the UC Merced campus during the term in which the exception applies.
### EXAMINATIONS

**Scheduling:** The Schedule of Classes lists the times that final examinations are to be held. These are set up according to the day-and-hour periods in which the classes are given during the semester. This information is available online or in the Schedule of Classes each term so that students can avoid final examination conflicts. A student who has multiple exams on the same day may discuss the situation with the instructors of the course. An instructor has the option to agree to provide the student the exam on a different day, but is not required to do so.

**Disabilities:** Students with documented disabilities may be entitled to in-class accommodations. The student must provide the instructor with a letter from the Disability Services Center recommending those academic accommodations that the instructor is responsible for providing. Students must request accommodations as soon as possible to allow the university reasonable time to evaluate the request and offer necessary adjustments. No accommodations shall alter the nature of the academic demands made of the student nor decrease the standards and types of academic performance, nor require facilities or personnel that cannot reasonably be provided. The instructor should consult with the student and the Disability Services Center with any questions or concerns.

**Religious Observances:** UC Merced seeks to accommodate any student who, in observance of a religious creed, encounters an unavoidable conflict with an examination schedule. In order to request accommodation, the student is responsible for providing, in writing and at the beginning of the semester, notification of a potential conflict to the individual responsible for administering the examination. Instructors will consider such requests on a case-by-case basis and determine whether such conflicts can be resolved without imposing on the instructor or the other students in the class an undue hardship that cannot be reasonably avoided. If so, the instructor will determine, in consultation with the student, a time during which the student can take the examination without including a penalty or violation of the student’s religious creed.

**Credit by Examination:** Students currently registered in any regular term and in good academic standing who by reason of advance preparation believe they have completed more advanced work, (4) for elementary and intermediate courses, may request a change of grade when a computational or procedural error occurred in the original assignment of the grade. The grade IP is not included in the grade point average.

**Academic Policies & Procedures**

To earn credit through the credit by examination process, the examination must be given by a UC Merced instructor and be for a course listed in the current General Catalog. The final results will be reported to the Office of the Registrar, who will record the appropriate grade and grade points. Since failure to pass the examination will be recorded as an F, students are encouraged to prepare fully for such an examination before attempting it.

### Grades, Progress to Degree and Dismissal

**Grades:** The work of all students on the UC Merced campus is reported in terms of the following grades:

- A (excellent)
- B (good)
- C (fair)
- D (barely passing)
- F (not passing)
- P (passed at a minimum level of C- or better by an undergraduate student)
- S (satisfactory - passed at a minimum level of B or better by a graduate student)

Grades of A, B, C and D may be modified by a plus (+) or minus (-). Grades of A, B, C and D may be modified by a plus (+) or minus (-).

- A- = 0.9
- A = 4.0
- B+ = 3.7
- B = 3.0
- B- = 2.7
- C+ = 2.3
- C = 2.0
- C- = 1.7
- D+ = 1.3
- D = 1.0
- D- = 0.7
- F = 0.0

**IP (in progress):** Grades are recorded as IP when the student has not completed the work as specified by the instructor. Students should not register without permission of the appropriate dean.

**NR (No report):** If an instructor fails to report a grade for a student, the student has not completed the work as specified by the instructor. Students should not register without permission of the appropriate dean.

**U (unsatisfactory):** Grades of A, B, C, D and F are used in determination of the grade point average. The grades P, S, NP, A, B, C, D, F and U carry no grade points and are excluded from all grade point computations. The grade P is not included in the grade point average.

**NP (not passed):** A student’s grade point average is computed on courses undertaken in the University of California, with the exception of courses undertaken in University Extension. Grades A, B, C, D and F are used in determining the grade point average; grades I, IP, S, NP and U carry no grade points and are excluded from all grade point computations. The grade I is excluded from computations.

**IP (In Progress):** Any grade that has not been replaced within the deadlines above will be converted to grade F (or IPU if taken pass/fail). After that time, but not retroactively, the grade is counted in computing a student’s grade point average.

**Exception:** If a grade is confirmed before the end of the deadlines above following the assignment of an IP, the grade will not be converted to an F (or IPN). However, the student still has the option of removing the grade IP within the deadlines above.

**IPU (In Progress-Honor):** The grade IPU is not included in the grade point average.

**I (Incomplete):** The grade I (incomplete) may be assigned when the instructor determines that a student’s work is of passing quality and represents a significant portion of the requirements for a final grade, but is incomplete for a good cause. (Good cause may include current illness, serious personal problems, an accident, a recent death in the immediate family, a large and necessary increase in work load, or other situations of equal gravity.) It is the student’s responsibility to obtain written permission from the instructor to receive an I grade as opposed to a non-passing grade. An incomplete petition is available from the Office of the Registrar. The student must provide the Office of the Registrar with any additional work required by the instructor. An instructor has the option to agree to provide the student an extra day or two to complete the work, but is not required to do so.

**Academic Policies & Procedures**

**Academic Policies & Procedures**

Examination of the student's record will be subject to the rules pertaining to I grades.

**Grades of A, B, C, D and F are used in determination of the grade point average.**

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**IPU (In Progress-Honor):** The grade IPU is not included in the grade point average.

**I (Incomplete):** The grade I (incomplete) may be assigned when the instructor determines that a student’s work is of passing quality and represents a significant portion of the requirements for a final grade, but is incomplete for a good cause. (Good cause may include current illness, serious personal problems, an accident, a recent death in the immediate family, a large and necessary increase in work load, or other situations of equal gravity.) It is the student’s responsibility to obtain written permission from the instructor to receive an I grade as opposed to a non-passing grade. An incomplete petition is available from the Office of the Registrar. The student must provide the Office of the Registrar with any additional work required by the instructor. An instructor has the option to agree to provide the student an extra day or two to complete the work, but is not required to do so.

**Academic Policies & Procedures**

**Academic Policies & Procedures**

Examination of the student's record will be subject to the rules pertaining to I grades.
EXAMINATIONS

FINAL EXAMINATIONS

Scheduling: The Schedule of Classes lists the times that final examinations are to be held. These are set up according to the day-and-hour periods in which the classes are given during the semester. This information is available online or in the Schedule of Classes each term so that students can avoid final examination conflicts. A student who has multiple exams on the same day may discuss the situation with the instructor of the course. An instructor has the option to agree to provide the student the exam on a different day, but is not required to do so.

Disabilities: Students with documented disabilities may be entitled to in-class accommodations. The student must provide the instructor with a letter from the Disability Services Center recommending those academic accommodations that the instructor is responsible for providing. Students must request accommodations as soon as possible to allow the university reasonable time to evaluate the request and offer necessary adjustments. No accommodations shall alter the nature of the academic demands made of the student nor decrease the standards and types of academic performance, nor require facilities or personnel that cannot reasonably be provided. The instructor should consult with the student and the Disability Services Center with any questions or concerns.

Religious Observances: UC Merced seeks to accommodate any student who, in observance of a religious creed, encounters an unavoidable conflict with an examination schedule. In order to request accommodation, the student is responsible for providing, in writing and at the beginning of the semester, notification of a potential conflict to the individual responsible for administering the examination. Instructors will consider such requests on a case-by-case basis and determine whether such conflicts can be resolved without imposing on the instructor or the other students in the class an undue hardship that cannot be reasonably avoided. If so, the instructor will determine, in consultation with the student, a time during which the student can take the examination without incurring a penalty or violation of the student’s religious creed.

Credit by Examination: Students currently registered in any regular term and in good academic standing who by reason of advanced preparation believe they are adequately grounded in the materials and principles of a given course may petition for credit by examination for any course offered at UC Merced without formally enrolling in that course. Students may obtain a petition and a copy of the prescribed conditions from the Office of the Registrar, who will record the appropriate grade and credit on the student’s permanent academic record. The petition is subject to the approval of the instructor giving the examination and the dean of the school involved. Once the petition has the signed approvals of the appropriate dean, it should be submitted to the Office of the Registrar, accompanied by the mandatory fee.

Due to special features of the instruction, such as extensive laboratory work, certain courses may not be considered appropriate for obtaining credit by examination. In addition, credit by examination will not be approved in the following circumstances: (1) if the student has had prior instruction in the topic, (2) for the purpose of repeating a course, (3) for courses in subjects in which the student has completed more advanced work, (4) for elementary and intermediate courses in a student’s native language, or (5) for granting credit for a course which the student has attended and audited.

To earn credit through the credit by examination process, the examination must be given by a UC Merced instructor and be for a course listed in the current General Catalog. The final results will be reported to the Office of the Registrar, who will record the appropriate grade and grade points. Since failure to pass the examination will be recorded as an F, students are encouraged to prepare fully for such an examination before attempting it.

Grades, Progress to Degree and Dismissal

Grades: The work of all students on the UC Merced campus is reported in terms of the following grades:

- A (excellent)
- B (good)
- C (fair)
- D (barely passing)
- F (not passing)
- P (passed at a minimum level of C– or better by an undergraduate student)

Grades of A, B, C, and D may be modified by a plus (+) or minus (–). Grades of A, B, C, and D, with the exception of IP or In-Progress, may be modified by a plus (+) or minus (–) if the grade has been assigned based on all work submitted before the end of the deadlines above.

Grades of I or IP are not counted until such times as they are replaced by a grade. An I grade received in the fall term must be replaced before the first day of instruction in the following term. An I grade received in the spring or summer term must be replaced by the first day of instruction in the following spring term.

Grades of I or IP are not counted in computing the grade point average. An I grade received in the fall term must be replaced by the first day of instruction in the following term. An I grade received in the spring or summer term must be replaced by the first day of instruction in the following spring term.

For a course extending over more than one term where the evaluation of the student’s performance is transferred until the end of the final term, provisional grades of In Progress (IP) shall be assigned in the intervening terms. The provisional grades shall be replaced by the final grades if the student completes the full sequence. The grade IP is not included in the grade point average. If the full sequence of courses is not completed, the IP will be replaced by a grade of Incomplete. Further changes in the student’s record will be subject to the rules pertaining to I grades.

Credit Toward Degree Requirements: A course in which the grade A, B, C, D, or F is received is counted toward degree requirements. A course in which the grade I, NP, or U is received is not counted toward degree requirements. Grades of I or IP are not counted until such times as they are replaced by a grade. An I grade received in the fall term must be replaced by the first day of instruction in the following term. An I grade received in the spring or summer term must be replaced by the first day of instruction in the following spring term.

Credit by Examination: Students with 15 or more units of I on their record may request a change of grade when a computational or procedural error occurred in the original assignment of a grade, but a grade may not be changed as a result of re-evaluation of a student’s work. No final grade may be revised as a result of re-examination or the submission of additional work after the close of term.

Grade IP (In Progress): For a course extending over more than one term where the evaluation of the student’s performance is transferred until the end of the final term, provisional grades of In Progress (IP) shall be assigned in the intervening terms. The provisional grades shall be replaced by the final grades if the student completes the full sequence. The grade IP is not included in the grade point average. If the full sequence of courses is not completed, the IP will be replaced by a grade of Incomplete. Further changes in the student’s record will be subject to the rules pertaining to I grades.

Exception: If a degree is conferred before the end of the deadlines above following the assignment of an I grade, the grade will not be converted to an F (or NP) before the end of the deadlines above. Students with 15 or more units of I on their record may request a change of grade, but a grade may not be changed as a result of re-evaluation of a student’s work. No final grade may be revised as a result of re-examination or the submission of additional work after the close of term.

Students with 15 or more units of I on their record may request a change of grade, but a grade may not be changed as a result of re-evaluation of a student’s work. No final grade may be revised as a result of re-examination or the submission of additional work after the close of term.

Grade I (Incomplete): The grade I may be assigned when the instructor determines that a student's work is passing quality and represents a significant portion of the requirements for a final grade, but is incomplete for a good cause. (Good cause may include current illness, serious personal problems, an accident, a recent death in the immediate family, a large and necessary increase in work- ing hours, or other situations of equal gravity.) It is the stu- dent's responsibility to obtain written permission from the instructor to receive an I grade as opposed to a non-pass- ing grade. An incomplete petition is available from the Office of the Registrar and must be filed prior to the end of the final examination period.

If an I grade is assigned, students may receive unit credit and grade points by satisfactorily completing the course-work as specified by the instructor. Students should not re- ceive the course credit unless they, in agreement with the instructor, are satisfied that the work is completed and permissible to receive the grade of I. A grade of I is automatically converted to a grade of NP one year after the date the instructor forwards the request to the Registrar’s Office. Only one petition per course is permitted. Students may not repeat I grades.

When an instructor fails to report a grade, the grade is reported as IP (in progress). The grade will be replaced within the deadlines above will be converted to the grade that would have been assigned based on all work submitted before the end of the deadlines above.
Passed/Not Passed (P/NP): Undergraduate students in good standing who are enrolled in at least 12 units may take certain courses on an earned/pass or passed/flag (P/F) basis. Students may enroll in one course per term on a P/NP basis (two courses if they have not elected the P/NP grading option in the preceding term).

Unless otherwise specified by the dean of the student’s school in which the student is enrolled. Should a former UC Merced student later wish to be readmitted to UC Merced, the authority to do so rests with the dean of the school from which the student was dismissed. Students are encouraged to see their adviser or go to the dean's office of their school if they need academic advising about probation and dismissal.

To transfer from one campus of the University to another, or from one school to another on the same campus, a student who has been academically disqualified or is on academic probation must obtain the approval of the dean to whose jurisdiction the student seeks to transfer.

Transcripts of all work done through UC Merced’s Division of Professional Studies must be requested directly from that division. Contact Professional Studies at (559) 241-7400. Transcripts of work completed at another campus of the University or at another institution must be requested directly from the campus or institution concerned.

Access to Records: Students are entitled by law and University policy to examine and challenge most of the records that the University maintains on them. These records are confidential and in most circumstances may be released to third parties only with the student's prior consent. Such matters are detailed on Office of the Registrar's Web site.
Passed/Not Passed (P/NP): Undergraduate students in good standing who are enrolled in at least 12 units may take certain courses on a passed/not passed (P/NP) basis. Students may enroll in one course each term on a P/NP basis (two courses if they have not elected the P/NP in the preceding term).

Changes to and from the P/NP option must be made during the enrollment period. No changes can be made after the first two weeks of classes without the approval of the appropriate dean.

I may be revised by examination or the submission of additional work after the close of the semester.

If a clerical or procedural error in the reporting of a grade by the instructor can be documented, the student may request a change of grade with a petition available from the office of the dean. The request must be made by the fifth week of the following semester.

Grade changes for the “final” errors (such as incorrect addition of points), upon documentation, are automatically granted. Requests to interchange P NP, 5 or U grades with normal letter grades based upon student need (such as to allow graduation or to meet entrance requirements for professional school) do not involve clerical or procedural errors, and are automatically denied. Thus, students should exercise the passed/not passed or satisfactory/unsatisfactory grading options with caution.

Students are reminded of their responsibility to be aware of the procedures and regulations contained in this catalog and the Schedule of Classes, to verify their class schedules, and to familiarize themselves with the expectations of their instructors.

No changes, except completion of an I grade as noted above, can be made to the student's record once he or she has graduated.

Final Grades

Grades are generally available as soon as possible after a semester has ended. Students can check their grades online using the RegCat enrollment/records system.

Grade Reports: After grades are recorded for a semester or summer session, they are available online via RegCat. With the availability of online grade reporting, students can print their grade reports from the Internet. Grade reports printed by the Office of the Registrar will be provided at the request of the student.

Minimum Progress

The following provisions apply to all undergraduates. Graduate and professional students with scholarship deficiencies are subject to action at the discretion of the Office of the Registrar.

The satisfactory/un satisfactory satisfactory (S/U) grade assignment is awarded to graduate students for work in graduate courses that would otherwise receive a grade of B or better.

Students are reminded of their responsibility to be aware of the procedures and regulations contained in this catalog and the Schedule of Classes, to verify their class schedules, and to familiarize themselves with the expectations of their instructors.

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Engineering Professor Roger Bales enjoys kayaking in Merced area waterways.

Postdoctoral researcher Bob Rice (on left) and undergraduate student Ryan Dewitt lay out snow measurement stakes at Gin Flat in Yosemite National Park, with Park Service research coordinator Jim Rocha (in back). In December 2003. Ryan Dewitt was an under-graduate at Merced College working part time at UC Merced on snow research at the time.

A ll universities aspire to educate the whole student. As John Nichols of St. Joseph’s University puts it, your major will prepare you to make a living, while general education will equip you with the skills, knowledge and attitudes to make a life. Society’s thorniest problems increasingly require practitioners with diverse knowledge and training to blend their skills in the search for solutions. General education is a pathway for a student to become one of the problem-solvers. You will be entering society in an era of fast-paced change; your future career may be in a field that doesn’t even exist today. Through general education, you will craft for yourself the tools that will let you continue to grow in a world that demands lifelong learning for success.

Throughout your four undergraduate years, UC Merced’s general education program will help you build your ability to communicate with words, numbers and images and let you discover the many ways in which knowledge is created. While your major in a single field will help you gain an in-depth mastery, general education promises you the flexibility to be ready for the six or seven career changes that most Americans experience during their working lives.

General education at UC Merced places a high premium on demonstrating your ability to communicate with others; to recognize and integrate the expertise of others; to know both how to interpret scientific information and effectively apply quantitative tools; to appreciate the various and diverse factors bearing on decisions and the know-how to assemble, evaluate, interpret and use information effectively for critical analysis and problem solving; to reason effectively in both leadership and team roles, capably making connections and integrating their expertise with the expertise of others; to be responsible for achieving the full promise of their abilities, including psychological and physical well-being.

ACADEMIC POLICIES & PROCEDURES

Graduation
Undergraduate Students
Declaration of Candidacy: Students expecting to complete their degree by the end of a semester must declare their candidacy by filing an Application for Graduation, accompanied by an appropriate fee, with the Office of the Registrar for the semester in which they plan to receive the degree. Students have until the end of the fifth week of classes in which to declare.
Nonregistered Students: Students who are not registered must submit the Declaration of Candidacy form that can be downloaded from the Office of the Registrar’s Web site at registrar.ucmerced.edu. It can be mailed along with the appropriate fee to the Office of the Registrar. The form must be received by the Registrar’s Office by the end of the fifth week of classes.
Degree Check: The Office of the Registrar will check all pertinent records to ensure that the student has completed a minimum of 120 units and appropriate institutional requirements and is in good academic standing. The student’s school will check for the fulfillment of major and school requirements.
Confirmation of Candidacy: Students will receive an electronic notification indicating whether they have been advanced to candidacy. To report an error, go to the Office of the Registrar.
Graduate Students
Before a graduate degree can be conferred, candidates must have been advanced to candidacy and completed the master’s thesis or doctoral dissertation and any comprehensive or oral examinations.
Commencement
Commencement exercises honor students who have earned baccalaureate and graduate degrees, and to recognize and awards to students who are graduating with distinction, are held each year in May. Students who have earned their degrees in the previous fall semester or in summer sessions are welcome to participate.
Diplomas
Diplomas are not distributed at commencement but are available several months afterward. A student may pick up his or her diploma at the Office of the Registrar or request that it be mailed for a domestic/international mailing fee. The Office of the Registrar will retain diplomas for five years only.

QUESTIONS
For further questions on Academic Policies and Procedures, registration or grades, please contact the Office of the Registrar at (209) 724-2960, visit the Web site at http://registrar.ucmerced.edu, or e-mail registrar@ucmerced.edu.

Education is what remains after one has forgotten everything...learned in school.
Albert Einstein, Recipient of Nobel Prize in Physics and Professor of Theoretical Physics, Princeton University

Guiding Principles for General Education at UC Merced

UC Merced’s planning experiences designed to prepare well-educated people of the 21st century for the workplace, for advanced education and for a leadership role within their communities. UC Merced graduates will be exceptionally well prepared to navigate and succeed in a complex world. The principles guiding the design and implementation of our academic program are envisioned within a continuum that ranges from preparatory and advanced curricula in general education and in the majors, through a variety of educational activities inside and outside the classroom.

All UC Merced graduates will reflect these principles, which provide the foundation for their education:

Scientific Literacy: To have a fundamental understanding of scientific, technological and quantitative information, and to know both how to interpret scientific information and effectively apply quantitative tools;

Decision Making: To appreciate the various and diverse factors bearing on decisions and the know-how to assemble, evaluate, interpret and use information effectively for critical analysis and problem solving;

Communication: To convey information to and communicate with and interact effectively with multiple audiences, using advanced skills in written and other modes of communication;

Self and Society: To understand and value diverse perspectives in both the global and community contexts of modern society in order to work knowledgeably and effectively in an ethnically and culturally rich setting;

Ethics and Responsibility: To follow ethical practices both in their professions and communities, and care for future generations through sustainable living and environmental and societal responsibility;

Leadership and Teamwork: To work effectively in both leadership and team roles, capably making connections and integrating their expertise with the expertise of others;

Aesthetic Understanding and Creativity: To appreciate and be knowledgeable about human creative expression, including literature and the arts; and

Development of Personal Potential: To be responsible for achieving the full promise of their abilities, including psychological and physical well-being.
Engineering Professor Roger Bales enjoys kayaking in Merced area waterways.

Leaving UC Merced
Cancellation/Withdrawal from the University: Students who find that they will not attend the University for a semester in which they have enrolled may cancel their registration only if instruction for that semester has not yet begun. To do so, they must formally request a cancellation of their registration from the University. If instruction has already begun and students find it necessary to stop attending classes, they must formally request a withdrawal from the University. Whether students cancel or withdraw, any classes in which they are enrolled will be dropped from their schedule, and they will no longer be eligible to attend for that semester or any future semester until they are readmitted.

Accommodations for Students with Disabilities
If you believe you have a disability, you are encouraged to seek services from the Office of Access and Diversity located in 125 Forest Hall, or via the Web site at access.ucmerced.edu. You may request reasonable accommodations by completing the appropriate forms. A person who requests accommodations under the Americans with Disabilities Act must inform the Office of Access and Diversity of the nature of the disability and the accommodations the student requests.

Graduation
Undergraduate Students
Declaration of Candidacy: Students expecting to complete work for their degree by the end of a semester must declare their candidacy by filing an Application for Graduation, accompanied by an appropriate fee, with the Office of the Registrar for the semester in which they plan to receive the degree. Students have until the end of the fifth week of classes in which to declare.

Nonregistered Students: Students who are not registered must submit the Declaration of Candidacy form that can be downloaded from the Office of the Registrar’s Web site at registrar.ucmerced.edu. It can be mailed along with the appropriate fee to the Office of the Registrar. The form must be received by the Registrar’s Office by the end of the fifth week of classes.

Degree Check: The Office of the Registrar will check all pertinent records to ensure that the student has met the 120 units and appropriate institutional requirements and is in good academic standing. The student’s school will check for the fulfillment of major and school requirements.

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Before a graduate degree can be conferred, candidates must have completed the necessary thesis or doctoral dissertation and any comprehensive or oral examinations.

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— Albert Einstein, Recipient of Nobel Prize in Physics and Professor of Theoretical Physics, Princeton University

GUIDING PRINCIPLES FOR GENERAL EDUCATION AT UC MERCED

UC Merced’s planning experiences designed to prepare well-educated people of the 21st century for the workplace, for advanced education and for a leadership role within their communities. UC Merced graduates will be exceptionally well prepared to navigate and succeed in a complex world. The principles guiding the design and implementation of our academic program are envisioned within a continuum that ranges from preparatory and advanced curricula in general education and in the majors, through a variety of educational activities inside and outside the classroom.

All UC Merced graduates will reflect these principles, which provide the foundation for their education:

• Scientific Literacy: To have a functional understanding of scientific, technological and quantitative information, and to know both how to interpret scientific information and effectively apply quantitative tools;

• Decision Making: To appreciate and have a functional understanding of the problem-solvers. You will be entering society in an era of fast-paced change, to consider the full implications of this action.

• Self and Society: To understand and value diverse perspectives in both the global and community contexts of modern society in order to work knowledgeably and effectively in an ethnically and culturally rich setting;

• Ethics and Responsibility: To follow ethical practices in their professions and communities, and care for future generations through sustainable living and environmental and societal responsibility;

• Leadership and Teamwork: To work effectively in both leadership and team roles, capable making connections and integrating their expertise with the expertise of others;

• Aesthetic Understanding and Creativity: To appreciate and be knowledgeable about human creative expression, including literature and the arts; and

• Development of Personal Potential: To be responsible for achieving the full promise of their abilities, including psychological and physical well-being.

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Throughout general education, you will craft for yourself the tools that will let you continue to grow in a world that demands lifelong learning for success. General education at UC Merced will help you grow intellectually by:

• Building your abilities in quantitative reasoning and written, oral and other communication skills;

• Providing functional exposure to broad domains of knowledge: arts and humanities; social, behavioral and cognitive sciences; natural sciences; and technologies and engineering methods.

Throughout your four undergraduate years, UC Merced’s general education program will help you build your ability to communicate with words, numbers and images and let you discover the many ways in which knowledge is created. While your major in a single field will help you gain an in-depth mastery, general education promises you the flexibility to be ready for the six or seven career changes that most Americans experience during their working lives.

General education at UC Merced places a high premium on demonstrating the ways in which the disciplines can make links with each other. There will also be opportunities to practice and apply what you are learning in the classroom, an educational value also reflected in the undergraduate majors at UC Merced.

Withdrawal from the University means disenrollment from all courses in which a student is enrolled. Students who withdraw during a term must file a Notice of Withdrawal, available from the Office of the Registrar’s Web site at registrar.ucmerced.edu. Before withdrawing, students are urged to consult an academic advisor and the Office of Financial Aid and Scholarships, if appropriate, to consider the full implications of this action.

The Notice of Withdrawal requires approval from the appropriate dean. Please review the refund policies for specific details on refund rules. Students who fail to submit an approved petition for withdrawal will receive F, NP or U grades, as appropriate, for all courses in which they are enrolled for that term.

Please visit us online at www.ucmerced.edu

Change of Name and Address
Change of Name: Students may petition to change their name on official University records. These petitions can be downloaded from the Web site of the Registrar’s Web site. Legally recognized proof of the change of name will be required before the petition is accepted and implemented. (Students planning to graduate should file this petition no later than the fifth week of the semester in which they intend to graduate.)

Change of Address: Students may also update their address(es) using RegCat or a Change of Address form downloaded from the Office of the Registrar’s Web site. Failure to file a current address can result in a hold on a student’s registration.

Please review the refund policies for specific details on refund rules. Students who are not registered must submit the Declaration of Candidacy form that can be downloaded from the Office of the Registrar’s Web site at registrar.ucmerced.edu. It can be mailed along with the appropriate fee to the Office of the Registrar. The form must be received by the Registrar’s Office by the end of the fifth week of classes.

Questions
For further questions on Academic Policies and Procedures, registration or grades, please contact the Office of the Registrar at (209) 724-2960, visit the Web site at http://registrar.ucmerced.edu, or e-mail registrar@ucmerced.edu.

A ll universities aspire to educate the whole student. As John Nichols of St. Joseph’s University puts it, your major will prepare you to make a living, while general education will equip you with the skills, knowledge and attitudes to make a life. Society’s thorniest problems increasingly require practitioners with diverse knowledge and training to blend their skills in the search for solutions. General education is a pathway for a student to become one of the problem-solvers. You will be entering society in an era of fast-paced change, your future career may be in a field that doesn’t even exist today.

Throughout general education, you will craft for yourself the tools that will let you continue to grow in a world that demands lifelong learning for success. General education at UC Merced will help you grow intellectually by:

• Building your abilities in quantitative reasoning and written, oral and other communication skills; and

• Providing functional exposure to broad domains of knowledge: arts and humanities; social, behavioral and cognitive sciences; natural sciences; and technologies and engineering methods.

Throughout your four undergraduate years, UC Merced’s general education program will help you build your ability to communicate with words, numbers and images and let you discover the many ways in which knowledge is created. While your major in a single field will help you gain an in-depth mastery, general education promises you the flexibility to be ready for the six or seven career changes that most Americans experience during their working lives.

General education at UC Merced places a high premium on demonstrating the ways in which the disciplines can make links with each other. There will also be opportunities to practice and apply what you are learning in the classroom, an educational value also reflected in the undergraduate majors at UC Merced.

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The University of California general education program consists of courses that are guided by the Guiding Principles and meet the following requirements for graduation:

- University requirements
- Campus requirements
- School requirements

A. University Requirements

University of California Entry Level Writing Requirement (formerly, Subject A Requirement)

To succeed at UC Merced, you must be able to understand and respond adequately to written material. Typical of reading assignments in freshman courses, including being able to structure and develop an essay that uses written English effectively. If you have not yet satisfied this entrance requirement through one of the alternatives listed below, it is essential that you complete it by the end of the second semester of enrollment at UC Merced.

Failure to complete this requirement in the time allowed will result in a hold on a student's registration. Students may satisfy the University of California Entry Level Writing Requirement in any of the following ways:

- Score 3, 4 or 5 on the College Board Advanced Placement Examination in English (Language or Literature);
- Score 680 or higher on the SAT II: Subject Test in Writing;
- Score 5 or higher on the International Baccalaureate Higher Level Examination in English (Language A only);
- Prior to enrolling in the University, complete with a grade of C or better a transferable college course in English composition worth four quarter or three semester units;
- Achieve a passing score on the University Writing Proficiency Examination, called the University of California Analytical Writing Placement Exam (formerly, Subject A Examination); or
- Complete an acceptable writing course at UC Merced (see the UC Merced Web site during Spring 2005 for courses that fulfill this requirement).

The University offers the University of California Analytical Writing Placement Exam (formerly, Subject A Examination) each spring on the second Saturday in May at test centers throughout the state for students who plan to enroll in the University the following fall. California residents who will enter the University as freshmen in Fall 2005 must take the exam if they have not otherwise satisfied the requirement (by one of the methods listed above). Students must pay a nonrefundable fee of $55 to cover test administration costs. Students who received admission application fee waivers will automatically have this fee waived.

Students will receive detailed information about the exam in April from the Educational Testing Service (ETS). Students must make checks or money orders payable to ETS and submit them by the date indicated. A post-paid return envelope will be included. Students who are not from California may take the exam in the fall after enrolling at the University.

UNIVERSITY OF CALIFORNIA, MERCED – INAUGURAL CATALOG

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G E N E R A L E D U C A T I O N

G E N E R A L E D U C A T I O N

University of California Entry Level Writing Requirement/Subject A Online: Comprehensive information about the University of California Entry Level Writing Requirement/Subject A Requirement and examination is available at http://www.ucop.edu/about-uc/academic-requirements/education/General-Education.

American History and Institutions Requirement: As a candidate for an undergraduate degree at UC Merced, you need to demonstrate knowledge of American history and of the principles of American institutions under the federal and state constitutions. You may meet the requirement by completing specified courses or earning a certain score on an examination. Transfer students are urged to complete the requirement before they enroll.

You may satisfy both the American History and American Institutions requirements in the following ways:

1. Complete in high school one year of United States history with grades of C or better, or one semester of United States history and one semester of United States government with grades of C or better;
2. Achieve a score of 3, 4 or 5 on the College Board Advanced Placement Examination in United States History;
3. Achieve a score of 550 or better on the SAT II: U.S. History test;
4. Complete acceptable course work at a community college or other accredited institution;
5. Complete acceptable course work at UC Merced (see the UC Merced Web site during Spring 2005 for courses that fulfill this requirement).

Philosophy faculty member Jeff Yoshimi encourages UC Merced students to achieve philosophical insights and let their spirits soar.

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Philosophy faculty member Jeff Yoshimi encourages UC Merced students to achieve philosophical insights and let their spirits soar.

B. Campus Requirements

- Two-Semester Core Course
- Lower Division writing course
- College-Level mathematics/quantitative reasoning course

Two-Semester Core Courses: Each new freshman class will share a common intellectual experience through signature Core Courses that are linked and interdisciplinary and that integrate ideas and concepts from the arts, humanities, social sciences, natural sciences and engineering.

CORE 1 and CORE 2: The World at Home—Planning for the Future in a Complex World

In the Core Courses for 2005-2008, you will study how individuals and societies can make the best choices in preparing for an uncertain future. How can we understand the myriad factors that lead to societal and personal decisions, as well as their inevitable, unexpected consequences? The courses will link such diverse topics as economics, government, urban planning, health care policy, religion, and science-based risk-assessment through a series of thematic modules. Multidisciplinary faculty teams will assemble each module to provide an in-depth understanding of how their disciplines tackle the problem, and how working together enables a better understanding of the problem and related issues. The contemporary San Joaquin Valley will act as a common reference point for highlighting the regional implications of global events or the global consequences of seemingly local choices. In the Core Courses, you will work both individually and in teams with fellow students, with a strong emphasis on writing, quantitative reasoning, critical thinking and understanding events in their historical and cultural contexts.

Lower Division Writing Course: Analytical writing is a means for understanding better what you are learning and conveying your ideas to different audiences. Your instructor, your fellow students and people outside the university. The lower division writing requirement will start you on a path of writing development that will continue through your four years at UC Merced.

WR 1: College Reading and Composition

This course is designed to help you develop your college-level skills in effective use of language, analysis and argumentation, organization, and strategies for creation, revision and editing. It must be completed during your freshman or sophomore year.

Mathematics/Quantitative Reasoning: All students will take a college-level mathematics/quantitative reasoning course. For some of you, mathematics and statistics will be an essential tool for mastering a field in depth. For others, you will build your ability to understand how quantitative methods are applied in society to support arguments and solve problems. A variety of courses will be available to meet this requirement, based on your field of interest.

C. School Requirements

The Schools of Engineering, Natural Sciences, and Social Sciences, Humanities and Arts each have a set of general education requirements to be completed if you choose a major offered by that school. School requirements include courses to help you build the collateral knowledge and skills you will need in order to succeed in your major. School requirements also include courses to help you understand the broad domains of knowledge. Check the school section of this catalog for specific requirements.

College One

College One is responsible for assuring that your general education experience succeeds in meeting the Guiding Principles above. College One is the home of the Core Courses, which will start UC Merced students on their intellectual adventure together. In the larger sense, it is the academic framework from which UC Merced’s students and faculty will focus on common problems and possibilities.

College One will sponsor the Freshman Seminar program—an opportunity for you to meet in a small student group with a faculty member on a specific research question or academic topic. College One is the cornerstone of a learning environment having the following goals:

- Making the big university small—maintaining a place where students can work with and get to know a group of fellow students and faculty personally, from their freshman year on;
- Offering a unique intellectual experience through general education that will be shared by students in the College.

College One will provide an information framework and student support services for your general education. This framework will connect you with:

• Advising for freshmen, sophomores, juniors and seniors who have questions about any aspect of their general education programs
• Information on courses that meet general education requirements
• Information on the Freshman Seminar program
• Advising for students who have not yet decided on their major
• Information for undergraduates who would like to work with faculty on their research
• Referrals for students interested in internships or in the University of California’s unique programs in Washington, D.C., and Sacramento

College One is committed to helping all undergraduates identify and obtain the courses and services that will assure a rich educational experience at UC Merced.
To the engineer falls the job of clothing the bare bones of science with life, comfort and hope. — Herbert Hoover, Engineer and 31st President of the United States

School of Engineering

The mission of the School of Engineering is to provide an exceptional technical and professional education that instills in our students advanced technical skills, effective leadership qualities, and the ability to recognize and build on individual strengths throughout one’s career.

What is engineering?

Engineering is about problem solving and innovation and about the creation of devices, systems, processes and structures for human use. Engineers create new ideas, and then transform those ideas into products and services that improve people’s lives. Engineers apply mathematics and the principles of science—particularly chemistry and physics—to solve problems and meet the needs of society. Engineering spans the very small to the very large, from microsensors that can continuously monitor human health to space stations that deliver exciting new products and services to society.

Engineers have been and will continue to be the builders of the things that improve people’s lives. Engineering education is a launch pad. Some of you will become the tools that you will use in solving problems of the future, and others will pursue graduate education in engineering or perhaps go on to other professions such as law or medicine. Once you master engineering fundamentals, you will have the skills and flexibility to chart your own course. You are to be congratulated for your vision and initiative. I look forward to welcoming you into our program, and watching you develop into a leader of tomorrow.

Jeff Wright, Dean
School of Engineering

Members of UC Merced’s Engineering Vanguard—a inaugural engineering students from the region—gain hands-on experience while preparing to enroll at UC Merced. Shown are Engineering Dean Jeff Wright (top 2nd from r.) with (top row, l. to r.) Juan Soriano, Benjamin Sherrill, Paul Sherrill, Antony Hayes. Isaac Asimov, Russian-American biochemist and writer
Service Learning (SL) Under the advisement of a faculty mentor, students will have the opportunity to form teams that will work with and for an approved community non-profit organization — or client — to solve practical engineering problems. For example, a team composed of both lower and upper division students might work together to design, develop, implement and test an information system to serve the needs of a local non-profit service organization. Students will develop skills to create organizational structures within the team; a communications structure with their client organization; and a strategic plan, mission statement and work plan to guide the activities of the team. Interacting closely and continuously with the client, students will learn about the needs of the organization, delineate project objectives, formulate work plans, conduct design activities, implement resulting solutions, and monitor and assess program effectiveness. Students’ performance and contribution to the team effort will be formally assessed through regular written reports and panel interviews.

In addition to obtaining practical experience that complements their formal course work, students will gain experience in working in teams, organizing and writing reports and proposals, interacting with clients, performing and evaluating basic engineering designs, and formally evaluating outcomes. Because teams and team activities will extend across multiple semesters and years, clients will be assured of continuity of technical support and ongoing attention to their needs. Students electing to enroll in the UC Merced Service Learning Initiative may earn up to two credits per semester for participation, depending on their leadership position within the team for that semester. Not more than a total of 10 service learning credits may be used to fulfill the degree requirement, including up to 6 units that may be counted as general education units.

Engineering fundamentals, major area upper division courses, and technical electives requirements are specific to each major. Those are presented in the following section on majors.

THE MAJORS

COMPUTER SCIENCE AND ENGINEERING PROGRAM

The undergraduate major in Computer Science and Engineering is designed to provide students with both breadth and depth in the exciting and rapidly expanding fields of:

• Computer science — the study of computation, including algorithms and data structures, and

• Computer engineering — including hardware, software and network architecture

A degree in Computer Science and Engineering from UC Merced will prepare students to assume leadership roles in designing, building and implementing a vast array of powerful new technologies that will continue to advance humankind. As the foundation for innovation in areas ranging from robotics and automation, to informatics and personal computation, careers in computer science and engineering are among the most satisfying and rewarding of any.

Computer Science and Engineering students at UC Merced will work with the top computer scientists and engineers in the world. Our faculty has developed a program of study that combines practical exposure to the most modern technologies available with a theoretical foundation that will empower students to master future changes and innovation as technologies continue to evolve at an astonishing pace. Our graduates will thus have both tools and insights to propel them into positions of responsibility and leadership across virtually any occupation.

Computer science and engineering constitutes one of the strongest industrial sectors in the region and the nation, offering a broad spectrum of career opportunities. Education at UC Merced will provide the opportunity to participate in innovative classroom learning experiences, to become involved in laboratory research, to participate with fellow students in team activities and projects, and to interact directly with our remarkable faculty. From introductory programming courses through architecture design experiences and research and team project activities, our students will gain insights that will allow them to excel throughout their chosen career path.

The program includes service learning components designed to engage students in the solution of real-world problems in their community. The team projects will resemble what is found in actual engineering practice, with increasing responsibility as students progress through the program. Because work, students will gain experience in working in teams, organize and lead the design and writing of reports and proposals, interacting with clients, performing and evaluating basic engineering designs, and formally evaluating outcomes. Because teams and team activities will extend across multiple semesters and years, clients will be assured of continuity of technical support and ongoing attention to their needs. Students electing to enroll in the UC Merced Service Learning Initiative may earn up to two credits per semester for participation, depending on their leadership position within the team for that semester. Not more than a total of 10 service learning credits may be used to fulfill the degree requirement, including up to 6 units that may be counted as general education units.

Engineering fundamentals, major area upper division courses, and technical electives requirements are specific to each major. Those are presented in the following section on majors.

REQUIREMENTS FOR THE COMPUTER SCIENCE AND ENGINEERING (CSE) MAJOR

The additional requirements that must be met to receive the B.S. in Computer Science and Engineering at UC Merced:

Computer Science and Engineering Core (30 units): The computer science and engineering core consists of 8 courses (2 lower division and 6 upper division) designed to provide students a common foundation of core knowledge specific to the discipline.

Lower Division Courses
• Introduction to Computer Science and Engineering (CSE 31) 4 units
• Computer Programming I and II (CSE 30 and CSE 31) 6 units

Upper Division Courses
• Algorithms and Data Analysis (CSE 100) 4 units
• Computer Organization (CSE 140) 4 units
• Introduction to Operating Systems (CSE 150) 4 units
• Computer Architecture (CSE 140) 4 units
• Data Structures (CSE 111) 4 units
• Software Engineering (CSE 120) 4 units
• Programming in C (CSE 160) 4 units

Technical Electives: Technical electives should be selected in a manner that is complimentary to, yet integrated with, your major area of study, and should be determined through close interaction with your major area advisor. These courses should be selected from the computer science upper division technical electives, or with approval, include other upper division courses outside your major.
Environmental engineers are distinguished from other environmental professionals through their focus on problem solving, design and implementation of technological or management systems. Environmental engineers search for creative and economical ways to use resources efficiently, limit the release of residuals into the environment, develop sensitive techniques to track pollutants released and find effective methods to remediate spoiled resources. They serve as the vital link between scientific discovery, technological development, and the societal need for protecting human health and ecological integrity. In the coming decades, environmental engineers will increasingly be called upon to address broader issues of environmental sustainability by minimizing the release of residuals through altered production processes and choice of materials; by capturing the resource value of wastes through recovery, recycling and reuse; and by managing natural resources to meet competing societal objectives.

UC Merced emphasizes a highly interdisciplinary approach to environmental engineering, combining a strong theoretical foundation with field studies, laboratory experiments and computations. Core courses within the major provide students with a firm foundation in the physical and life sciences and the tools that they apply to energy, hydrology, air and water quality issues. Emphasis areas allow students the flexibility to study in more depth by following tracks developed in consultation with their academic advisors. The main areas of emphasis for Environmental Engineering at UC Merced are hydrology, water quality and energy sustainability.

The program includes service learning components designed to engage students in the solution of real-world problems in their community. The team projects will resemble those found in actual engineering practice, with increasing responsibility as students progress through the program. Engineers need to understand not only the technical but also the social and political contexts of their work. They must be able to communicate, and to plan, finance and market their products and ideas. Social science, business, humanities and arts are an important part of the curriculum. The result is a curriculum that is hands-on and creative, engaging and adaptable.

REQUIREMENTS FOR THE ENVIRONMENTAL ENGINEERING (ENVE) MAJOR

The additional requirements that must be met to receive the B.S. in Environmental Engineering at UC Merced:

- Upper Division Courses
  - Meteorology and Air Pollution (ENVE 130) . 4 units
  - Hydrology and Climate (ENVE 110) 4 units
  - Meteorology and Air Pollution (ENVE 130) 4 units

- Technical electives: Technical electives should be selected in a manner that is complementary to, yet integrated with, your major area of study, and should be determined through close interaction with your major area advisor. These courses should be selected from the following list of approved technical electives or, with approval, include other upper division courses outside your major:
  - Subsurface Hydrology (ENVE 112) . 4 units
  - Mountain Hydrology of the Western States (ENVE 114) . 4 units
  - Global Change (ENVE 118) . 4 units
  - Environmental Microbiology (ENVE 121) . 4 units
  - Water Resources and Management (ENVE 140) 3 units
  - Remote Sensing of the Environment (ENVE 152) . 3 units
  - Sustainable Energy (ENVE 160) . 4 units
  - Modeling and Design of Energy Systems (ENVE 162) 3 units
  - Contaminant Fate and Transport (ENVE 170) 3 units
  - Water and Wastewater Treatment (ENVE 176) . 3 units
  - Field Methods in Snow Hydrology (ENVE 181) 1-3 units
  - Field Methods in Surface Hydrology (ENVE 182) 1-3 units
  - Field Methods in Subsurface Hydrology (ENVE 183) 1-3 units
  - Field Methods in Environmental Chemistry (ENVE 184) 1-3 units
  - Wastewater Biogeochemistry (ESS 105) 3 units

- Additional degree requirements (5-7 units):
  - Principles of Organic Chemistry (CHEM 8) . 4 units
  - At least one Field Methods course 1-3 units
## SAMPLE PLAN OF STUDY FOR ENVIRONMENTAL ENGINEERING DEGREE – ENVIRONMENTAL HYDROLOGY TRACK

<table>
<thead>
<tr>
<th>SEMESTER 1</th>
<th>SEMESTER 2</th>
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<tbody>
<tr>
<td>CORE 1 The World at Home .................. 4</td>
<td>CORE 2 The World at Home .................. 4</td>
</tr>
<tr>
<td>CSE 20 Introduction to Computing I .......... 2</td>
<td>CSE 21 Introduction to Computing II .......... 2</td>
</tr>
<tr>
<td>BIS 1 Contemporary Biology ................ 4</td>
<td>CHEM 2 General Chemistry ................... 4</td>
</tr>
<tr>
<td>ICP 1 Integrated Calculus and Physics I ...... 4</td>
<td>ICP 2 Integrated Calculus and Physics II ...... 4</td>
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<tr>
<td>ENGR 90x Freshman Seminar or Service Learning ...... 1</td>
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**Semester Units** 14 15

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<tr>
<th>SEMESTER 3</th>
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<tbody>
<tr>
<td>MATH 10 Probability and Statistics .......... 3</td>
<td>ENGR 55 Engineering Economic Analysis .......... 4</td>
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<tr>
<td>General Education Elective ..................... 4</td>
<td>ENGR 52 Computer Modeling and Analysis .......... 4</td>
</tr>
<tr>
<td>ENVE 20 Introduction to Environmental .......... 4</td>
<td>WRI 1 College Reading and Composition .......... 4</td>
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<tr>
<td>Service Learning ............................. 1</td>
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**Semester Units** 16 16

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<tr>
<th>SEMESTER 5</th>
<th>SEMESTER 6</th>
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<tbody>
<tr>
<td>ENGR 120 Fluid Mechanics .................... 4</td>
<td>ENVE 100 Environmental Chemistry ................ 4</td>
</tr>
<tr>
<td>ENVE 110 Hydrology and Climate ................ 4</td>
<td>ENGR 180 Spatial Analysis and Modeling .......... 4</td>
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<tr>
<td>MATH 126 Applied Mathematical Methods II ...... 3</td>
<td>MATH 127 Applied Mathematical Methods III ........ 3</td>
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<tr>
<td>General Education Elective .................... 4</td>
<td>ENVE 112 Subsurface Hydrology .................. 4</td>
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<th>SEMESTER 8</th>
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<tbody>
<tr>
<td>ENVE 130 Meteorology and Air Pollution .......... 4</td>
<td>ESS 105 Watershed Biogeochemistry .............. 3</td>
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<tr>
<td>ENVE 140 Water Resources Planning and .......... 3</td>
<td>ENVE 114 Mountain Hydrology of the Western U.S. .... 3</td>
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<tr>
<td>Management .................. 3</td>
<td>Field Methods, Service Learning or Research .......... 3</td>
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<td>ENVE 152 Remote Sensing of the Environment ...... 3</td>
<td>Free Elective .................. 4</td>
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<td>General Education Elective .................... 4</td>
<td>Field Methods .................. 2</td>
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<td>Service Learning ............................. 1</td>
<td>ENGR 191 Professional Seminar .................. 1</td>
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**Semester Units** 15 16

**Total Track Units** 124

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## SAMPLE PLAN OF STUDY FOR ENVIRONMENTAL ENGINEERING DEGREE – ENVIRONMENTAL QUALITY TRACK

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<td>MATH 127 Applied Mathematical Methods III ........ 3</td>
</tr>
<tr>
<td>General Education Elective .................... 4</td>
<td>ENVE Elective w/lab .................. 4</td>
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<tr>
<td>ENVE 130 Meteorology and Air Pollution .......... 4</td>
<td>ENVE Elective w/Design .................. 3</td>
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<td>ENVE Elective w/Design .................. 3</td>
<td>Technical Elective .................. 3</td>
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<tr>
<td>ENVE Elective w/lab .................. 4</td>
<td>Technical Elective, Service Learning or Research .......... 3</td>
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<tr>
<td>General Education Elective .................... 4</td>
<td>Free Elective .................. 4</td>
</tr>
<tr>
<td>Service Learning ............................. 1</td>
<td>Field Methods .................. 1</td>
</tr>
<tr>
<td>ENGR 191 Professional Seminar .................. 1</td>
<td>ENGR 191 Professional Seminar .................. 1</td>
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**Semester Units** 16 16

**Total Program Units** 124
The undergraduate major in Bioengineering is designed to provide students with both breadth and depth in the exciting and rapidly expanding field of nanobioengineering. The nanobioengineering track reflects the fact that synergy between the “nano” and “bio” themes in engineering and science is here to stay. The name also highlights an initial focus on things molecular, supramolecular, cellular and material, which will allow the program to draw efficiently on the talents of the biologists, chemists, physicists and other UC Merced faculty in basic engineering and science programs.

UC Merced Bioengineering graduates will find employment in diverse fields encompassing healthcare delivery, medical device technology, interdisciplinary research, patent consultancy, materials science, education, food biotechnology, personal care products industries and government agencies. Bioengineers are attractive to employers because, through studying and graduating in this type of especially creative intellectual environment, they have clearly demonstrated an ability to bridge traditional divides between disciplines, communicate flexibly with different intellectual constituencies and thrive in a context in which knowledge is being created especially rapidly.

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### BIOENGINEERING PROGRAM

Bioengineering is a highly interdisciplinary field in which the techniques, devices, materials and resourcefulness of engineers are used to address problems in biology and healthcare, and lessons from biology are used to inspire design and inform progress in engineering. During the past 40 years, this synergy between biology and engineering has led to a wide range of implantable materials, diagnostic devices, sensors and molecular characterization techniques, and it has produced tools that greatly expedited the sequencing of the human genome. With these practical innovations has come a rapidly increasing need for personnel with the necessary hybrid skills to capitalize on them, and so undergraduate bioengineering programs have proliferated alongside the continued growth of bioengineering research.

Most recently, convergence between engineering and biology at the nanoscale level—the level of biological molecules, molecular aggregates and cellular processes—has begun to offer new, rich areas of study and commercialization. Examples of the devices, processes, interactions and materials that are of interest in this interdisciplinary context include:

- Computers inspired by biological analogs that are smaller and/or faster and/or process information more efficiently than today’s computers; use of individual molecules as switches and data storage media; methods for manipulating the molecules from which such “hardware” is produced
- Food-related innovations: for example smart packaging that can sense the internal and external environment and provide a signal (such as a color change) that alerts users to undesirable storage conditions, product spoiling or product tampering
- Adaptive materials that can change their properties (shape, transparency, strength, flexibility) in response to changes in their environment and self-healing materials
- Interactions between nanoparticles and biological tissue
- Tailored interfaces between biomolecules and artificial substrates
- Self-assembly of materials, structures and devices
<table>
<thead>
<tr>
<th>Upper Division Requirements</th>
<th>Lower Division Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thermodynamics (ENGR 130)</td>
<td>Introduction to Materials (ENGR 45)</td>
</tr>
<tr>
<td></td>
<td>Computer Modeling and Analysis (ENGR 52)</td>
</tr>
<tr>
<td></td>
<td>Engineering Economic Analysis (ENGR 55)</td>
</tr>
</tbody>
</table>

Bioengineering Core (27 units): The bioengineering core consists of 7 courses (1 lower division and 6 upper division) designed to give all students a common foundation of core knowledge specific to the discipline.

<table>
<thead>
<tr>
<th>Lower Division Courses</th>
<th>Upper Division Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction to Bioengineering (BIOE 30)</td>
<td>Thermodynamics (ENGR 130)</td>
</tr>
<tr>
<td>Physiology for Engineers (BIOE 100)</td>
<td>Modeling Nanoscale Processes in Biology (BIOE 101)</td>
</tr>
<tr>
<td>Biosensors (BIOE 102)</td>
<td>Molecular Machinery of Life (BIS 100)</td>
</tr>
<tr>
<td>Molecular Biology (BIS 102)</td>
<td>Biophysics (BIS 104)</td>
</tr>
</tbody>
</table>

Technical Electives: Technical electives should be selected in a manner that is complementary to, yet integrated with, your major area of study, and should be determined through close interaction with your major area advisor. For the initial track in Nanobioengineering, these electives should be chosen from among the following:

- Self-Assembling Molecular Systems (BIOE 110)
- Biomembranes (BIOE 111)
- Biomolecule-Substrate Interactions (BIOE 112)
- Bioinstrumentation (BIOE 113)
- Research credit taken during the senior year: 1-5 units

**Additional degree requirements (11-14 units):**

- Principles of Organic Chemistry (CHEM 3) 4 units
- Service Learning (ENGR 97 or ENGR 197) 7-10 units

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**PARTNERSHIP WITH LAWRENCE LIVERMORE NATIONAL LABORATORY**

In 2000, UC Merced and Lawrence Livermore National Laboratory signed an agreement to collaborate on mutual goals for research and education. Livermore has a history of creating science and engineering teams to work on areas such as environmental sciences, advanced computing and biotechnology. This integration will strengthen UC Merced research and teaching programs in natural sciences and engineering. Livermore also has years of service in engaging students and K-12 teachers in hands-on science education. UC Merced has partnered with Livermore and UC Davis in sponsoring the Edward Teller Education Teams. Livermore has years of service in engaging students and K-12 teachers in hands-on science education. UC Merced has partnered with Livermore and UC Davis in sponsoring the Edward Teller Education.

**Total Program Units: 124**
SCIENCE IS ABOUT UNDERSTANDING THE HUMAN CONDITION

The scientist does not study nature because it is useful; he studies it because he delights in it, and he delights in it because it is beautiful. If nature were not beautiful, it would not be worth knowing, and if nature were not worth knowing, life would not be worth living.

—Albert Szent-Györgi (1893–1986)

Understanding and prediction must precede protection. Students in the School of Natural Sciences will fully understand the complex interactions between the physical and biological world and the consequences of society’s actions on the earth and its biota. With this understanding, they will be well positioned to manage and preserve our resources for future generations.

SCIENCE IS ABOUT STEWARDSHIP OF OUR NATURAL RESOURCES

The biological sciences address many of the most important and fundamental questions about our world. What is life? How does our brain produce our ideas and emotions? What are the limits to human life and physical capabilities? How do we feed the world’s growing population? How can we ensure that our children won’t have to worry about disease? Moreover, there has never been a more exciting and important time to study biology. From the mapping of the genome to understanding the molecular basis of human disease to predicting the effects of global climate change on ecosystems, the biological sciences are at the forefront of finding answers to some of society’s most vexing problems.

The undergraduate major in Biological Sciences is an excellent first step toward exciting careers in biology and the health sciences. This program teaches biology as a multidisciplinary science, increasing the importance of the role of chemistry, physics, mathematics, computer science and advanced technologies in the life sciences. The core of the Biological Sciences major is a series of six courses that provide a solid foundation in the key areas of modern life sciences: molecular, evolutionary and cellular biology, genetics and genomics, and computational biology. Students majoring in Biological Sciences will then choose an emphasis area that will provide in-depth lecture and laboratory courses on specific biological topics. UC Merced will open with four biological sciences emphasis areas: 1) molecular biology and biochemistry; 2) cell biology and development; 3) microbiology and computational biology; and 4) microbiology and immunology. Biological sciences majors also have the opportunity to apply for a master’s degree program requiring an additional year of study.

The major in Biological Sciences will provide students with the skills and knowledge to pursue studies in graduate programs and professional schools in preparation for careers in basic and applied biological research, medicine, dentistry, veterinary medicine, nursing, pharmacy and other health-related fields. Graduates of this program will also be well prepared for positions in the biotechnology and pharmaceutical industries and in health care, as well as careers such as law, policy and administration, which increasingly involve the biological sciences. In addition, the breadth and rigor of this program will be an excellent preparation for graduates to teach science at the elementary or high school level.

Dean Martin Pallaviccini and Natural Sciences Professor Michael Saavedra with summer computational biology students Kristina Sheffield (2nd from l.) and Merced College student Felicia Macias (on far r.).
### Biological Sciences Requirements (59-64 units)

The Biological Sciences major consists of 16 courses (4 lower division and 12 upper division) designed to give all students a common foundation of core knowledge specific to the discipline.

#### Lower Division Courses
- **Contemporary Biology (BIS 1)** 4 units
- **Principles of Organic Chemistry (CHEM 8)** 4 units
- **Principles of Physical Chemistry (CHEM 10)** 4 units
- **Mathematical Biology (MATH 30)** 4 units

#### Upper Division – Core Courses
- **Molecular Machinery of Life (BIS 100)** 4 units
- **The Cell (BIS 110)** 4 units
- **Evolution of Biological Diversity (BIS 140)** 4 units
- **Genes and Genomes (BIS 141)** 4 units
- **Introduction to Scientific Modelling (BIS 180)** 4 units
- **Survey of Computational Biology (BIS 181)** 4 units
- **Research Seminar (BIS 190)** 1 unit
- **Independent Lab Research (BIS 195)** 2-6 units
- **One non-biology Science or Engineering course** 3-4 units

#### Emphasis Track
- **One course with lab from emphasis track** 5 units
- **Two additional courses from emphasis track** 8 units

#### Emphasis Track courses should be chosen from the following list:
- **Molecular Biology**
  - **Biochemistry (BIS 101)** * 4 units
  - **Molecular Biology (BIS 102)** * 4 units
  - **Enzymology (BIS 105)** * 4 units
  - **Signal Transduction and Growth Control (BIS 112)** 4 units
  - *One must be taken with lab component*

- **Bioinformatics and Computational Biology**
  - **Biophysics (BIS 104) and Laboratory (BIS 104L)** 5 units
  - **Comparative Genomics (BIS 142)** 4 units
  - **Biostats (BIS 175)** 4 units
  - **Bioinformatics (BIS 182)** 4 units
  - **Algorithm Design and Analysis (CSE 100)** 4 units
  - **Database Systems (CSE 111)** 4 units
  - *Required for emphasis*

- **Microbiology and Immunology**
  - **General Microbiology (BIS 120)** * 4 units
  - **Molecular Pathogenesis (BIS 122)** 4 units
  - **Human Parasitology (BIS 123)** 4 units
  - **Emerging Public Health Threats (BIS 125)** 4 units
  - **Molecular Immunology (BIS 151)** * 4 units
  - **Cancer Genetics and Tumor Biology (BIS 152)** 4 units
  - *One must be taken with lab component*

- **Cell Biology and Development**
  - **Cells, Tissues and Organs (BIS 111)** 4 units
  - **Signal Transduction and Growth Control (BIS 112)** 4 units
  - **Embryos, Genes and Development (BIS 150)** 4 units
  - **Comparative Physiology (BIS 160)** * 4 units
  - **Neurobiology (BIS 170)** * 4 units
  - *One must be taken with lab component*

- **Genetics, Genomes and Evolution**
  - **Genes and Genomes (BIS 141)** 4 units
  - **Comparative Genomics (BIS 142)** 4 units
  - **Algorithm Design and Analysis (CSE 100)** 4 units
  - **Database Systems (CSE 111)** 4 units
  - *Required for emphasis*

- **Molecular Biology**
  - **Biochemistry (BIS 101)** * 4 units
  - **Molecular Biology (BIS 102)** * 4 units
  - **Enzymology (BIS 105)** * 4 units
  - **Signal Transduction and Growth Control (BIS 112)** 4 units
  - *One must be taken with lab component*

- **Bioinformatics and Computational Biology**
  - **Biophysics (BIS 104) and Laboratory (BIS 104L)** 5 units
  - **Comparative Genomics (BIS 142)** 4 units
  - **Biostats (BIS 175)** 4 units
  - **Bioinformatics (BIS 182)** 4 units
  - **Algorithm Design and Analysis (CSE 100)** 4 units
  - **Database Systems (CSE 111)** 4 units
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  - **Molecular Pathogenesis (BIS 122)** 4 units
  - **Human Parasitology (BIS 123)** 4 units
  - **Emerging Public Health Threats (BIS 125)** 4 units
  - **Molecular Immunology (BIS 151)** * 4 units
  - **Cancer Genetics and Tumor Biology (BIS 152)** 4 units
  - *One must be taken with lab component*

- **Cell Biology and Development**
  - **Cells, Tissues and Organs (BIS 111)** 4 units
  - **Signal Transduction and Growth Control (BIS 112)** 4 units
  - **Embryos, Genes and Development (BIS 150)** 4 units
  - **Comparative Physiology (BIS 160)** * 4 units
  - **Neurobiology (BIS 170)** * 4 units
  - *One must be taken with lab component*

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  - **Genes and Genomes (BIS 141)** 4 units
  - **Comparative Genomics (BIS 142)** 4 units
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  - **Embryos, Genes and Development (BIS 150)** 4 units
  - **Comparative Physiology (BIS 160)** * 4 units
  - **Neurobiology (BIS 170)** * 4 units
  - *One must be taken with lab component*

- **Genetics, Genomes and Evolution**
  - **Genes and Genomes (BIS 141)** 4 units
  - **Comparative Genomics (BIS 142)** 4 units
  - **Algorithm Design and Analysis (CSE 100)** 4 units
  - **Database Systems (CSE 111)** 4 units
  - *Required for emphasis*

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  - **Biochemistry (BIS 101)** * 4 units
  - **Molecular Biology (BIS 102)** * 4 units
  - **Enzymology (BIS 105)** * 4 units
  - **Signal Transduction and Growth Control (BIS 112)** 4 units
  - *One must be taken with lab component*

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  - **Biophysics (BIS 104) and Laboratory (BIS 104L)** 5 units
  - **Comparative Genomics (BIS 142)** 4 units
  - **Biostats (BIS 175)** 4 units
  - **Bioinformatics (BIS 182)** 4 units
  - **Algorithm Design and Analysis (CSE 100)** 4 units
  - **Database Systems (CSE 111)** 4 units
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  - **General Microbiology (BIS 120)** * 4 units
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  - **Comparative Physiology (BIS 160)** * 4 units
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- **Genetics, Genomes and Evolution**
  - **Genes and Genomes (BIS 141)** 4 units
  - **Comparative Genomics (BIS 142)** 4 units
  - **Algorithm Design and Analysis (CSE 100)** 4 units
  - **Database Systems (CSE 111)** 4 units
  - *Required for emphasis*

- **Molecular Biology**
  - **Biochemistry (BIS 101)** * 4 units
  - **Molecular Biology (BIS 102)** * 4 units
  - **Enzymology (BIS 105)** * 4 units
  - **Signal Transduction and Growth Control (BIS 112)** 4 units
  - *One must be taken with lab component*
Transfer Students: Transfer students who wish to major in Earth Systems Science should complete one year of calculus, one year of physics, one year of general chemistry, one to two semesters of organic chemistry and two to three semesters of general biology. Students should check with the UC Merced admissions staff for more information on courses will transfer to UC Merced.

REQUIREMENTS FOR THE EARTH SYSTEMS SCIENCE (ESS) MAJOR

The additional requirements that must be met to receive the B.S. in Earth Systems Science at UC Merced are:

1. Earth Systems Science Requirements (46-49 units): The Earth Systems Science program consists of 13 courses (6 lower division and 7 upper division) designed to give all students a common foundation of core knowledge specific to the discipline.

   a. Lower Division Courses
      - Introduction to Earth Systems Science (ESS 1)
      - Introduction to Biological Earth Systems (ESS 5) or Course in Biology (BIS 1)
      - Fundamentals of Earth Processes (ESS 20)
      - Principles of Organic Chemistry (CHEM 8)

   b. One additional science or engineering course from the following list (other courses by approval):
      - Introduction to Ecosystem Science (ESS 25)
      - Principles of Physical Chemistry (CHEM 10)
      - Introduction to Environmental Science and Technology (ENVE 20)
      - Applied Mathematical Methods (MATH 25)
      - Introduction to Computing II (CSE 21)

   c. Upper Division – Core Courses
      - Environmental Chemistry (ESS 102)
      - Hydrology and Climate (ESS 110)
      - Geomicrobiology (ESS 120)
      - Field Methods in Earth Systems (ESS 180)

   d. Emphasis Track
      - Three courses from emphasis track

2. Additional Degree Requirements (18-27 units)

   a. Intermediate Microeconomic Theory (ECON 100)
   b. Undergraduate Seminar (ESS 190)
   c. Course emphasizing policy and ethics
   d. Three elective courses in Natural Sciences or Engineering

3. Fundamentals in Earth Systems (ESS 20) 4 units

4. Emphasis Track course should be chosen from the following list (other courses by approval)

   a. Geochemistry and Biogeochemistry
      - Chemistry and Mineralogy of Soils (ESS 102) 3 units
      - Geochemistry of Earth Systems (ESS 103) 3 units
      - Organic Geochemistry (ESS 104) 3 units
      - Watershed Biogeochemistry (ESS 105) 3 units
      - Microbial Ecology (ESS 125) 4 units
      - Environmental Microbiology (ENVE 121) 4 units

   b. Hydrologic and Climate Sciences
      - Watershed Biogeochemistry (ESS 105) 3 units
      - Ecology and Ecosystems (ESS 124) 4 units
      - Subsurface Hydrology (ENVE 112) 4 units
      - Mountain Hydrology of the Western U.S. (ENVE 114) 4 units
      - Global Change (ENVE 118) 4 units
      - Meteorology and Air Pollution (ENVE 130) 4 units
      - Contaminant Fate and Transport (ENVE 170) 3 units

   c. Ecosystem Science
      - Watershed Biogeochemistry (ESS 105) 3 units
      - Ecology and Ecosystems (ESS 124) 4 units
      - Microbial Ecology (ESS 125) 4 units
      - Environmental Genomics (ESS 126) 4 units
      - Subsurface Hydrology (ENVE 112) 4 units
      - Mountain Hydrology of the Western U.S. (ENVE 114) 4 units
      - Global Change (ENVE 118) 4 units
      - Remote Sensing of the Environment (ENVE 152) 3 units
      - Evolution of Biological Diversity (BIS 140) 4 units

   d. Additional Degree Requirements (18-27 units)
      - Intermediate Microeconomic Theory (ECON 100) 4 units
      - Undergraduate Seminar (ESS 190) 1 unit
      - Course emphasizing policy and ethics 3-4 units
      - Three elective courses in Natural Sciences or Engineering 9-12 units

   e. Research and/or Service Learning
      - Undergraduate Seminar (ESS 190) 1 unit
      - Research and/or Service Learning (ENGR 97 or ENGR 197) 1-6 units

The research station at Wawona in Yosemite National Park is a valuable resource for field research.
## SAMPLE PLAN OF STUDY FOR EARTH SYSTEMS SCIENCE DEGREE

<table>
<thead>
<tr>
<th>SEMESTER 1</th>
<th>SEMESTER 2</th>
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<tbody>
<tr>
<td>Lower Division Science Course</td>
<td>ICP 2 Integrated Calculus and Physics II</td>
</tr>
<tr>
<td>CHEM 2 General Chemistry</td>
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<tr>
<td>CORE 1 The World at Home</td>
<td>CORE 2 The World at Home</td>
</tr>
<tr>
<td>CSE 20 Introduction to Computing I</td>
<td>CSE 21 Introduction to Computing II</td>
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<tr>
<td>ESS 90x Freshman Seminar</td>
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</table>

**Semester Units** 14  
**Semester Units** 15

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## SEMESTER 3

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<tbody>
<tr>
<td>Free Elective</td>
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<tr>
<td>CHEM 8 Principles of Organic Chemistry</td>
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<td>MATH 25 Applied Mathematical Methods</td>
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<td>Lower Division Science Course</td>
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<td>General Education Elective</td>
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**Semester Units** 15  
**Semester Units** 15

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## SEMESTER 5

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<th>SEMESTER 6</th>
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<tbody>
<tr>
<td>ESS 110 Hydrology and Climate</td>
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<td>ESS 180 Field Methods in Earth Systems</td>
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<td>Free Elective</td>
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<td>Service Learning</td>
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**Semester Units** 16  
**Semester Units** 16

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## SEMESTER 7

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<th>SEMESTER 8</th>
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<tbody>
<tr>
<td>ESS Emphasis</td>
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<tr>
<td>ESS Emphasis</td>
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<tr>
<td>ECON 100 Intermediate Microeconomic Theory</td>
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<tr>
<td>Free Elective</td>
</tr>
<tr>
<td>ESS 190 Undergraduate Seminar</td>
</tr>
</tbody>
</table>

**Semester Units** 16  
**Semester Units** 16

**Total Program Units** 123

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## HUMAN BIOLOGY PROGRAM

The Human Biology major will provide students with a rich education in the scientific and humanist disciplines that underlie modern health sciences. This major is an excellent preparation for entrance into health-related professional careers including medicine, dentistry, pharmacy, genetic counseling, health education, public health, clinical psychology, epidemiology, environmental health sciences and health administration, among others. The Human Biology major will also provide a strong foundation for careers in science and biomedical research.

The undergraduate Human Biology major is a highly interdisciplinary and broad-based program that integrates biology, social sciences and humanities. This major builds upon the powerful convergence linking genomics and molecular biology to our understanding and treatment of human health and disease. The breadth of the program gives students interested in health professions a well-rounded appreciation of cultural and psychological influences on patient health, as well as a strong foundation in the physical and life sciences.

Students considering a Human Biology major will meet with an advisor and choose a curriculum based upon their interests and requirements for graduate or professional school goals. The undergraduate major in Human Biology currently offers two emphasis tracks: Natural Sciences and Social Sciences. Both emphasis areas build on a strong foundation in biology and require the courses needed for medical schools and other biomedical professional schools. The natural science emphasis includes more upper division courses in biology, whereas the social science emphasis includes more courses in social science, particularly psychology. Both programs allow a significant flexibility in choosing courses.

### Undergraduate Major in Human Biology Research Requirement:

As a capstone to the Human Biology program and to integrate the background students will have obtained in their first five semesters of separate courses in natural science and social science, all Human Biology majors will participate in a research project that links biology and the social sciences. This will involve having their independent laboratory research courses jointly mentored by biology and social science faculty members. In the spring semester of their junior year, students will attend presentations of faculty research. The students will then meet in groups with a biologist and social scientist to plan their senior-year research project. The final student research seminar will also be a joint NSSS course. Examples of research areas would be in epidemiology (sociology and biology) or neurobiology (psychology/cognitive science and biology).

### Transfer Students

Transfer students who wish to major in Human Biology should complete one year of calculus, one year of physics, one year of general chemistry, one to two semesters of organic chemistry, and two to three semesters of general biology. Students should check with UC Merced admissions staff for more information on how courses will transfer to UC Merced.
<table>
<thead>
<tr>
<th>School of Natural Sciences</th>
<th>Sample Plan of Study for Human Biology Degree – Natural Science Emphasis</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SEMESTER 1</strong></td>
<td><strong>SEMESTER 2</strong></td>
</tr>
<tr>
<td>HBIO 195 Independent Laboratory Research</td>
<td>ICP 1 Integrated Calculus and Physics I</td>
</tr>
<tr>
<td>CHEM 2 General Chemistry</td>
<td>CHEM 8 Principles of Organic Chemistry</td>
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<tr>
<td>CORE 1 The World at Home</td>
<td>CORE 2 The World at Home</td>
</tr>
<tr>
<td>CSE 20 Introduction to Computing I</td>
<td>PSY 1 Introduction to Psychology</td>
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**Semester Units** | **Semester Units** |
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<tr>
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<tbody>
<tr>
<td>15</td>
<td>16</td>
</tr>
</tbody>
</table>

**SEMESTER 3**

**SEMESTER 4**

| BIS 100 Molecular Machinery of Life | BIS 110 The Cell | 4 units |
| CHEM 10 Principles of Physical Chemistry | MATH 10 Probability and Statistics | 4 units |
| ICP 2 Integrated Calculus and Physics II | MATH 30 Mathematical Biology | 4 units |
| WRI 1 College Reading and Composition | SOC 1 Introduction to Sociology | 4 units |

**Semester Units** | **Semester Units** |
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<tbody>
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<td>16</td>
<td>15</td>
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</table>

**SEMESTER 5**

**SEMESTER 6**

| BIS 140 Evolution of Biological Diversity | BIS 141 Genes and Genomes | 4 units |
| SHA Elective | SHA Elective | 4 units |
| General Education Elective | General Education Elective | 4 units |
| (with emphasis on communication) | HBIO 195 Independent Laboratory Research | 4 units |
| NS Elective | 4 |

**Semester Units** | **Semester Units** |
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<tbody>
<tr>
<td>16</td>
<td>14</td>
</tr>
</tbody>
</table>

**SEMESTER 7**

**SEMESTER 8**

| NS Elective | NS Elective wLab | 4 units |
| SHA Elective | Non-science or engineering course | 4 units |
| General Education Elective | General Education Elective | 4 units |
| Free Elective | HBIO 195 Independent Laboratory Research | 4 units |
| HBIO 195 Independent Laboratory Research | BIS 190 Research Seminar | 1 |

**Semester Units** | **Semester Units** |
<table>
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<tbody>
<tr>
<td>17</td>
<td>14</td>
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</table>

**Total Program Units** | 123 |

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In the first semester of Independent Laboratory Research, we recommend that students attend presentations of the faculties of Natural Sciences and Social Sciences who will participate in human biology research training.

* Students interested in medical school should take a second semester of organic chemistry.
The educational mission of the School of Social Sciences, Humanities and Arts is to create a rich learning environment for looking at human nature through the lenses of our many disciplines, broadly divided into the humanities, social sciences, and arts. As a new campus, UC Merced has the special opportunity to offer an environment that draws from these disciplinary research traditions, but is not limited by their boundaries. Consider these two examples:

Imagine the question: “What is a metaphor?” Poets and novelists use metaphor to evoke vivid images in their readers. Scientists rely on metaphor to make leaps in discovery and theory. Teachers use metaphor to explain logarithmic functions, quarks and other relatively abstract phenomena. Politicians employ metaphor to frame issues and influence public policy. We all use metaphor in our daily conversations and writing, and often we are not even aware of it. Our interdisciplinary programs will allow students to explore the use and power of metaphors across several disciplines, including psychology, cognitive science, literature, art, history, philosophy and public policy. What does metaphor say about everyday thought? How does it influence society?

Imagine the question: “What is social change?” Throughout human history, people have created new societies, regimes and systems of belief. Social change can be studied at a global scale over thousands of years, yet California’s Central Valley is also a laboratory for understanding these issues. Agricultural fields that replaced meadow land only a hundred years ago are being converted to housing and industry. Explosive population growth is fundamentally transforming the local economy, while at the same time pressuring the capacity of public infrastructure and social services. In order to understand changes like these, students need to step away from thinking of economics and business, history, sociology, government, biology and geography as a set of simple disciplinary silos. Instead, students need to learn to integrate key ideas and expertise in methodological domains such as social statistics, historiography, GIS, economics, cultural analysis and cognitive science.

The School of Social Sciences, Humanities and Arts offers undergraduate and graduate programs that allow flexible courses of study and opportunities for research at the intersections where the interesting questions lie. Students will have the opportunity to follow personal paths of discovery in an interdisciplinary curriculum, while at the same time gaining depth and expertise in methodological domains such as social statistics, historiography, GIS, economics, cultural analysis and cognitive science.

THE SCHOOL OF SOCIAL SCIENCES, HUMANITIES AND ARTS WILL OFFER THE FOLLOWING MAJORS IN 2005-06:

- Social, Behavioral and Cognitive Sciences
- World Cultures and History
- Management

I studied psychology, English, drama, history and sociology. The more I understand about people and their relationships and the more I understand about how human actions shaped the course of history, the better I am able to evaluate the issues and options that I face every day. The insights and wisdom that come from studying humanities and the social sciences have made my life richer, and prepared me for the challenges of my career in public service.

Carol Whitmire, President of the Great Valley Center and former Mayor of the City of Modesto
### SAMPLE PLAN OF STUDY FOR HUMAN BIOLOGY DEGREE – SOCIAL SCIENCE EMPHASIS

<table>
<thead>
<tr>
<th>SEMESTER 1</th>
<th>SEMESTER 2</th>
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</thead>
<tbody>
<tr>
<td>BIS 1 Contemporary Biology</td>
<td>ICP 1 Integrated Calculus and Physics I</td>
</tr>
<tr>
<td>CHEM 2 General Chemistry</td>
<td>CHEM 8 Principles of Organic Chemistry</td>
</tr>
<tr>
<td>CORE 1 The World at Home</td>
<td>CORE 2 The World at Home</td>
</tr>
<tr>
<td>CSE 20 Introduction to Computing I</td>
<td>PSY 1 Introduction to Psychology</td>
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<tr>
<td>Freshman Seminar</td>
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<tr>
<td>Semester Units</td>
<td>15 Semester Units</td>
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<tr>
<th>SEMESTER 3</th>
<th>SEMESTER 4</th>
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<tbody>
<tr>
<td>BIS 100 Molecular Machinery of Life</td>
<td>BIS 110 The Cell</td>
</tr>
<tr>
<td>CHEM 10 Principles of Physical Chemistry</td>
<td>MATH 10 Probability and Statistics</td>
</tr>
<tr>
<td>ICP 2 Integrated Calculus and Physics II</td>
<td>MATH 30 Mathematical Biology</td>
</tr>
<tr>
<td>WRT 1 College Reading and Composition</td>
<td>SOC 1 Introduction to Sociology</td>
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<tr>
<td>NS Elective</td>
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<tr>
<td>Semester Units</td>
<td>16 Semester Units</td>
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<tr>
<th>SEMESTER 5</th>
<th>SEMESTER 6</th>
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<tbody>
<tr>
<td>BIS 140 Evolution of Biological Diversity</td>
<td>BIS 141 Genes and Genomes</td>
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<tr>
<td>PSY or COGS Elective</td>
<td>PSY or COGS Elective</td>
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<tr>
<td>General Education Elective</td>
<td>General Education Elective</td>
</tr>
<tr>
<td>(with emphasis on communication)</td>
<td>HBIOD 195 Independent Laboratory Research</td>
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<tr>
<td>NS Elective</td>
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<tr>
<td>Semester Units</td>
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<th>SEMESTER 7</th>
<th>SEMESTER 8</th>
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<tbody>
<tr>
<td>NS Elective</td>
<td>NS Elective w/Lab</td>
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<tr>
<td>PSY or COGS Elective</td>
<td>Non-science or engineering course</td>
</tr>
<tr>
<td>General Education Elective</td>
<td>General Education Elective</td>
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<tr>
<td>General Education Elective</td>
<td>HBIOD 195 Independent Laboratory Research</td>
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<tr>
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</table>

Total Program Units: 123

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The School of Social Sciences, Humanities and Arts offers undergraduate and graduate programs that allow flexible courses of study and opportunities for research at the intersections where the interesting questions lie. Students will have the opportunity to follow personal paths of discovery in an interdisciplinary curriculum, while at the same time gaining depth and expertise in methodological domains such as social statistics, historiography, GIS, economics, cultural analysis and cognitive science.

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Carol Whitnall, President of the Great Valley Center and former Mayor of the City of Modesto
THE MAJORS
SOCIAL, BEHAVIORAL AND COGNITIVE SCIENCES PROGRAM

The undergraduate major in Social, Behavioral and Cognitive Sciences will offer broad preparation that cuts across economics, psychology, political science, sociology and anthropology. Introductory coursework will lay the basis for understanding the major questions and methodologies across the social, behavioral and cognitive sciences, including a common core of statistical and experimental methods courses. Upper division courses and projects will allow students to synthesize their cross-disciplinary learning and experiences.

Within this broad framework, two emphases will be developed within the initial program: Psychology and Economics. Students will select one of these emphases and will receive a notation on their transcript and diploma. Other emphases will be developed as the faculty and program enrollments grow.

The Psychology emphasis will provide broad preparation in psychology as a field and in the research methodologies of psychology. Special emphases will include human development (biological and cognitive) and social psychology. Cross-school programs will emphasize the interactions of psychology with the biological sciences through programs in human biology. Emphasis in human development and social psychology will include multicultural perspectives. Psychology emphasis students will have opportunities to work with faculty on research. While most Social, Behavioral and Cognitive Sciences majors will receive the B.A., some Psychology emphasis students may choose a B.S. option, with more intense preparatory coursework in the natural sciences.

Built on a strong basis of theoretical and statistical training, the Economics emphasis will give students a solid grounding in economic theory and quantitative methods. The economics emphasis will provide students with an understanding of how incentives and institutions shape society. Special emphases will include labor economics, public economics, environmental economics, political economy, public policy and quantitative methods. Opportunities to do research with faculty members will also be available.

Depending upon their emphasis within social, behavioral and cognitive sciences, students will be well prepared for advanced study in law, management, public administration, urban and regional planning, and medicine; or for admission into graduate school in one of the social science emphasis fields. Career paths include business; social services agencies; federal, state and local government service; non-governmental organizations and non-profit agencies; community development; and counseling and training programs.

REQUIREMENTS FOR THE SOCIAL, BEHAVIORAL AND COGNITIVE SCIENCES (SBCS) MAJOR

General Education Requirements: UC Merced requires a minimum of 45 units in general education courses. The following is a summary of general-education requirements for the Social, Behavioral and Cognitive Sciences major.

Lower Division General Education Requirements

• College One Core Courses, The World at Home (CORE 1, and 2) 8 units
• College Reading and Composition (WR 1) 4 units
• Science/Engineering introductory course with laboratory field or studio component 4 units
• Second Science/Engineering course 4 units
• Quantitative Analysis course 4 units

• Humanities/Arts introductory course 4 units

Upper Division General Education Requirements

• Four upper division courses outside area of emphasis track 16 units

Social, Behavioral and Cognitive Sciences Course Requirements:

The Social, Behavioral and Cognitive Sciences major requires 44 units (some of which are transferable by general education requirements). Courses in the major emphasis must be taken for a letter grade and specifically may not be taken on a pass/no pass basis unless the course is only offered on a pass/no pass basis.

Required courses include:

Lower Division Major Requirements (12 units):

• Introduction to the Social, Behavioral and Cognitive Sciences 8 units

Two courses chosen from:

• Introduction to Cognitive Science (COGS 1) 4 units
• Introduction to Economics (ECON 1) 4 units
• Introduction to Psychology (PSY 1) 4 units
• Introduction to Political Science (POL 1) 4 units
• Introduction to Sociology (SOC 1) 4 units

Quantitative Methods 4 units

One course chosen from:

• Psychology emphasis – Analysis of Psychological Data (PSY 10) 4 units
• Economics emphasis – Analysis of Economic Data (ECON 10) (Counts toward the General Education Quantitative Requirement) 4 units

Upper Division Major Requirements (32 units)

Economics emphasis:

• Intermediate Microeconomic Theory (ECON 100) 4 units
• Intermediate Macroeconomic Theory (ECON 101) 4 units
• Econometrics (ECON 130) 4 units
• Five additional upper division economics courses 20 units

Psychology emphasis:

• Research Methods in Psychology (PSY 105) 4 units
• Psychological Perspectives on Cultural, Racial and Ethnic Diversity (PSY 150) 4 units

• One upper division Psychology emphasis course from each of the following three groups:
  • Group A (Cognition, Brain and Behavior): PSY 120, 121, or any upper division COGS course
  • Group B (Social Personality Development): PSY 130, 131, 132, 133
  • Group C (Applied Psychology): PSY 140, 141, 145, 146, SBCS 140, SBCS 145

• At least three additional upper division courses in Psychology or Cognitive Science 12 units

Transfer Students: Transfer students who wish to major in Social, Behavioral and Cognitive Sciences should complete the Intersegmental General Education Transfer Curriculum (IGETC) at their community college. In addition, students should complete at least two UC-transferable introductory courses, one each selected from psychology and economics, and two lower division natural science or engineering courses, at least one of which have a lab, field or studio component. Students interested in the Economics emphasis should also take a two-course UC transferable sequence in calculus.

SCHOOL OF SOCIAL SCIENCES, HUMANITIES & ARTS

SAMPLE PLAN OF STUDY FOR SBCS DEGREE – ECONOMICS EMPHASIS

SEMESTER 1

CORE 1 The World at Home 4
ECON I Introduction to Economics 4
MATH 21 Calculus of a Single Variable I 4
WRI 1 College Reading and Composition 4
Elective 4

SEMESTER 2

Elective 4
Upper Division course outside Economics 4
Upper Division ECON course 4
Upper Division ECON course 4
Elective 4

SEMESTER 3

ECON 100 Intermediate Microeconomic Theory 4
ECON 101 Intermediate Macroeconomic Theory 4
Lower Division General Education Requirements

SEMESTER 4

ECON 100 Intermediate Microeconomic Theory 4
ECON 101 Intermediate Macroeconomic Theory 4
Upper Division ECON course 4
Upper Division ECON course 4
Upper Division ECON course 4
Elective 4

SEMESTER 5

Elective 4

SEMESTER 6

ECON 130 Econometrics 4
ECON 130 Econometrics 4
Upper Division ECON course 4
Upper Division ECON course 4
Upper Division ECON course 4
Elective 4

SEMESTER 7

Elective 4

SEMESTER 8

Upper Division ECON course 4
Upper Division ECON course 4
Upper Division ECON course 4
Elective 4

SEMESTER 9

Elective 4

SEMESTER 10

Upper Division ECON course 4
Upper Division ECON course 4
Upper Division ECON course 4
Elective 4

SEMESTER 11

Upper Division course outside Economics 4
Upper Division course outside Economics 4
Upper Division course outside Economics 4
Elective 4

SEMESTER 12

Elective 4

Total Program Units 128
SAMPLE PLAN OF STUDY FOR SBCS DEGREE – PSYCHOLOGY EMPHASIS

**SEMESTER 1**

- **CORE 1 The World at Home** ..................................................... 4
- **PSY 1 Introduction to Psychology** ........................................... 4
- **WR1 College Reading and Composition** .......................... 4
- Elective ................................................................................. 4

**Semester Units** 16 **Semester Units** 16

**SEMESTER 2**

- **CORE 2 The World at Home** ..................................................... 4
- **PSY 10 Analysis of Psychological Data** ........................ 4
- **Nat Sci/Engin w/LabField Work/Studio** ................. 4
- Elective ................................................................................. 4

**SEMESTER 3**

- **SBCS Introductory course outside Psychology** ............ 4
- **PSY 105 Research Methods in Psychology** ........ 4
- **Natural Science/Engineering course** ...................... 4
- **PSY 150 Psychological Perspectives on Culture** .... 4

**Semester Units** 16 **Semester Units** 16

**SEMESTER 4**

- **Cultural, Racial and Ethnic Diversity** ............................... 4
- **Upper Division course in Psych/Cog Science** ......... 4

**SEMESTER 5**

- **PSY Group A course** ............................................................. 4
- **Upper Division course in Psych/Cog Science** ....... 4

**Semester Units** 16 **Semester Units** 16

**SEMESTER 6**

- **Upper Division course outside Psych/Cog Science** .... 4
- **Upper Division course outside Psych/Cog Science** .... 4

**SEMESTER 7**

- **PSY Group C course** ............................................................. 4
- **Upper Division course outside Psych/Cog Science** .... 4

**Semester Units** 16 **Semester Units** 16

**SEMESTER 8**

- **Upper Division course outside Psych/Cog Science** .... 4

**Total Program Units** 128

**WORLD CULTURES AND HISTORY PROGRAM**

The undergraduate major in World Cultures and History will invite students to study questions of society and culture in a comparative context. It will address such questions as: What constitutes a society and a culture, and how are they formed? How and why do societies and cultures come into conflict? What happens at the crossroads of culture – for example, California and the San Joaquin Valley – when people from many different backgrounds come into contact?

These questions can best be understood through the prism of the humanities, arts and social sciences. Thus, this major will bring together a variety of disciplines previously thought of as dissimilar, including anthropology, history and political science, language and literature, music and performance studies, philosophy and religious studies, and area and ethnic studies.

In UC Merced’s opening years, the World Cultures and History major will particularly examine the interaction of nations and cultures from both a literary and an historical perspective. Within both these fields, lively scholarly debates on the subject of culture abound. This major will appeal to students who are interested in learning the methods and tools of history, literature and allied fields; to understand how societies and cultures have developed and continue to evolve. A special feature of this major will give students the opportunity to apply their classroom learning to research contemporary problems outside the classroom, where students may contribute to expanding public knowledge and awareness of cultural issues.

Two emphases will be developed within the initial program: History and Literature. Students will select one of these emphases and receive a notation to that effect on their transcript and diploma. Other emphases will be developed as the faculty and program enrollment grow.

The History emphasis will prepare students to understand and use the methods by which historians examine society and culture, through historical research and writing. Students will learn to locate, evaluate and interpret evidence, and then use that evidence to construct an argument or develop a thesis, using both historical case studies and comparative studies. Students will explore history as a field, including the examination of depth of issues concerning world, national or state, and local history. Initially, the History emphasis will focus on world history, the history of California and the American West, environmental history, the history of immigration and migration, and the history of science and technology.

The Literature emphasis will prepare students in the multiple perspectives from which literature as a product of culture is read. Students will learn how to interpret texts by applying different critical methods and hone their own interpretive skills through analysis and writing. Students will have the opportunity to study a literary tradition in depth and to compare the literatures of different societies and cultures. Students will use this study to build written, oral and other communication skills. They will develop the ability to create well-crafted analyses for specialists in their field, as well as to interpret the results of their research and analyses for a non-specialist public.

During their undergraduate careers, World Cultures and History majors will have a variety of opportunities to apply what they are learning. Possibilities include undergraduate research with an individual faculty member; community or regional internships in a variety of cross-cultural settings; and enrichment experiences through the World Cultures Institute. The rich and diverse historical experiences and cultural heritage of California and the San Joaquin Valley offer an excellent living laboratory for this research.

A unique part of the World Cultures and History major will be a public research project that enables students to use their research and communication skills either individually or as part of a team to educate and inform the public. Students might work, for example, on researching and writing an interpretative account linking the environmental and human histories of nearby Yosemite or Sequoia National Park, or on presentations through the arts of a San Joaquin Valley cultural group at a local museum, or on an aspect of irrigation history and water policy for a public agency in the region. The public research project might be in the form of an interpretive Web site that combines written and oral texts with visual material; an interpretive text for the public, or a written and oral report to a sponsoring agency. Extensive writing will be a keystone of the World Cultures and History, and a requirement of any public research project.

World Cultures and History majors may also elect to study overseas through the University of California Education Abroad Program (EAP) or participate in the University of California programs in Washington, D.C. (UCDC) or Sacramento. To fulfill the public research project requirement, the EAP, UCDC or Sacramento experience would need to be planned under UC Merced faculty supervision and lead to completion of a final written report addressed to a well-defined public audience. (EAP students may prepare this report in English or in the language of the EAP country.)

Students will also complete a two-semester senior proseminar in which they will explore connections among the world cultures and history courses they have completed and write a senior thesis. The proseminar will require students to demonstrate their skills in communicating effectively both orally and in writing with an audience with their emphasis field. Semester one will focus on directed research in preparation for writing a senior thesis and semester two will be devoted to completing the thesis.

World Cultures and History students will be well prepared to enter advanced study programs in law, education, journalism, diplomacy, library science and management, as well as graduate study in their field of emphasis. Career opportunities will be found in academia, business, publishing, public service, non-governmental organizations and at museums and archives. Public as well as private agencies seeking employees with strong cross-cultural communication skills and understanding should find graduates from this program especially appealing.

SCHOOL OF SOCIAL SCIENCES, HUMANITIES & ARTS

UNIVERSITY OF CALIFORNIA, MERCED – INAUGURAL CATALOG

PLEASE VISIT US ONLINE AT WWW.UCMERCED.EDU
Sample Plan of Study for WCH Degree – History Emphasis

Semester 1
- **CORE 1** The World at Home .......................................................... 4
- Nat Sci/Engin course w/Lab/Field Work/Study ........................................... 4
- SBCS Elective ......................................................................................... 4
- WRI 1 College Reading and Composition .............................................. 4
- Introductory History Sequence .............................................................. 4
- Introductory History Sequence .............................................................. 4
  - Freshman Seminar .................................................................................. 1
  
  Semester Units: 16 Semester Units ......................................................... 17

Semester 2
- Literature Electives ................................................................................. 4
- SBCS Introductory course ........................................................................ 4
- Natural Science or Engineering course ..................................................... 4
  - Elective ..................................................................................................... 4
  - Elective ..................................................................................................... 4
  
  Semester Units: 16 Semester Units ......................................................... 16

Note: freshman and/or sophomore year may include advanced foreign language study.

Semester 5
- HIST 100 The Historian’s Craft .............................................................. 3
- History Elective ......................................................................................... 4
- Elective ..................................................................................................... 4
- WCH 192 Public Research Project ............................................................ 3
- Upper Division course outside History .................................................... 4
  
  Semester Units: 15 Semester Units .......................................................... 15

Semester 6
- WCH 190 Proseminar in World Cultures .................................................. 4
  - and History: Research ............................................................................. 3
  - and History: Senior Thesis ..................................................................... 3
- History Topics course ................................................................................ 4
- History Elective ........................................................................................ 4
- History Elective ........................................................................................ 4
- Upper Division course outside History .................................................... 4
  
  Semester Units: 15 Semester Units .......................................................... 15

Total Program Units: 125
MANAGEMENT PROGRAM

The Management program responds to the growing need of California industry, especially in the Central Valley. UC Merced’s management education is interdisciplinary and consists of a blend of courses from the fields of economics, management theory, social sciences and engineering. Real-life management problems don’t fit neatly into subject areas. Today’s managers and economists tackle issues that involve a number of management functions, so solutions need to account for all the areas involved. The UC Merced approach is a step away from thinking of management and economics as a set of simple, separate disciplines. Instead, students will learn to integrate key ideas from across subject areas to understand all the dimensions of a given issue. Creativity, innovation and entrepreneurship will be emphasized.

The Management major at UC Merced represents a unique, hands-on approach to management development and economics, positioning courses at the leading edge of dynamic business performance. The practical and project-based approach reflects the principle that learning is more rewarding when put into practice. Expertise can be taught, yet skills development demands live employment in the real world of work. The major is based on the premise that organizations of different kinds—for-profit, non-profit and governmental—require employees who are trained in a holistic approach to decision making, work well in teams and projects, are comfortable in many cultures, are well-rounded in sciences and humanities, and have learned the art of self-directed learning.

Using a multidisciplinary approach, the Management major prepares students for a variety of management-related careers. The curriculum includes a foundation in economics, organization, business, finance, accounting, communication, statistics and management theory. UC Merced’s Management program also emphasizes the historical and cultural dimensions of economics and management. It focuses on analysis and problem solving across a wide spectrum of management activities. The theoretical underpinning for the undergraduate program comes from economics and management science disciplines that use tools and techniques based on applied mathematics and statistics to solve problems in virtually all areas of business and government. Management students will develop skills to build quantitative models of complex operations and use those models to facilitate decision making.

The Management major includes two emphases:

Business Economics and Management

This emphasis combines a breadth of education in social sciences, humanities and arts with specific emphasis in professional education in business administration and economics.

Public Policy and Management

Students who choose this emphasis will be trained in the formation, implementation and evaluation of solutions to policy problems. There is a growing need for professionals who can solve problems that result from economic and technological change.

Students who graduate with a major in management will be able to:

• Analyze information, solve problems and make decisions from a holistic, multidisciplinary perspective

SCHOOLS OF SOCIAL SCIENCES, HUMANITIES & ARTS
A defined core of 66 units is required. The required Business Economics and Management core courses are:

Lower Division Core Courses (24 units):
- Case Study Seminar on Business and Management (MGMT 2) 2 units
- Introduction to Finance and Accounting I and II (MGMT 25 and 26) 6 units
- Introduction to Economics (ECON 10) 4 units
- Analysis of Economic Data (ECON 10) 4 units
- Introduction to Psychology (PSY 1) 4 units
- Introduction to Computing I and II (CSE 20 and 21) 4 units

Upper Division Core Courses (42 units):
- Intermediate Microeconomic Theory (ECON 100) 4 units
- Intermediate Macroeconomic Theory (ECON 101) 4 units
- Econometrics (ECON 130) 4 units
- Industrial and Organizational Psychology (PSY 141) 4 units
- Case Studies in Decision Making in History 4 units
- Financial Management 4 units
- Introduction to Decision Science 4 units
- Financial Accounting 4 units
- Management Accounting 4 units
- Strategic Management 3 units
- Marketing 3 units

Students who want a concentration in public policy management of health care also must complete 8 units in:

Health Economics (ECON 145) 4 units
Economics of the Environment (ECON 128) 4 units

Additional emphasis requirements: Business Economics and Management track students are required to take at least 12 units (lower and upper division) but no more than 20 units of elective management courses that should be selected to provide depth in a specific management area, which can be accounting, finance, strategy, marketing, operations, decision science or information management.

PUBLIC POLICY MANAGEMENT (B.A.)
The Public Policy Management emphasis provides an interdisciplinary education that prepares students for leadership in public organizations. The program educates managers who can apply the knowledge and tools of the social and natural sciences to help achieve societal goals. Students are exposed to a broad spectrum of courses, from political science to biology. Communication skills and conceptual skills are emphasized. The program focuses on issues of today and emerging problems of tomorrow. The approach is learning-by-doing and interdisciplinary, centering on solving real-world problems. Scientific breakthroughs in fields such as biosciences, technology and especially information technology bring about major economic and societal changes. Governments, government business enterprises and non-profit organizations increasingly demand professionals trained in policy making and management who have a sound understanding of these fields.

Psychology professor Will Shadish’s door is always open to students.
### Sample Plan of Study for Management Degree – Public Policy Management Track

#### Semester 1
- **CORE 1 The World at Home** 4 Semester Units
- **ECON 1 Introduction to Economics** 4 Semester Units
- **WRI 1 College Reading and Composition** 4 Semester Units
- **Elective** 4 Semester Units

#### Semester 2
- **CORE 2 The World at Home** 4 Semester Units
- **ECON 10 Analysis of Economic Data** 4 Semester Units
- **Nat Sci/Engin w/Lab/Field Work/Studio** 4 Semester Units
- **PSY 1 Introduction to Computing II** 4 Semester Units
- **Freshman Seminar** 1 Semester Unit

#### Semester 3
- **Elective** 4 Semester Units
- **Natural Science/Engineering course** 4 Semester Units
- **MGMT 2 Case Study Seminar on Business and Management** 1 Semester Unit

#### Semester 4
- **MGMT 25 Introduction to Finance and Accounting I** 3 Semester Units
- **CSE 20 Introduction to Computing I** 2 Semester Units

#### Semester 5
- **ECON 152 Law and Economics** 4 Semester Units
- **Upper Division course outside Management** 4 Semester Units
- **Systems Thinking and Problem Solving** 4 Semester Units

#### Semester 6
- **ECON 100 Intermediate Microeconomic Theory** 4 Semester Units
- **ECON 151 Public Economics** 4 Semester Units
- **Upper Division course outside Management** 4 Semester Units
- **Financial Accounting** 4 Semester Units

#### Total Program Units
125
**SAMPLE PLAN OF STUDY FOR MANAGEMENT DEGREE – PUBLIC POLICY MANAGEMENT TRACK**

<table>
<thead>
<tr>
<th>SEMESTER 1</th>
<th>SEMESTER 2</th>
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<tr>
<td>CORE 1 The World at Home</td>
<td>CORE 2 The World at Home</td>
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<tr>
<td>ECON 1 Introduction to Economics</td>
<td>ECON 10 Analysis of Economic Data</td>
</tr>
<tr>
<td>WRI 1 College Reading and Composition</td>
<td>Nat Sci/Engin wLabField Work/Studio</td>
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<tr>
<td>Elective</td>
<td>PSY 1 Introduction to Computing II</td>
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<td>Freshman Seminar</td>
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<td>WCH Introductory course</td>
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<td>Natural Science/Engineering course</td>
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<td>MGMT 2 Case Study Seminar on Business and Management</td>
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<td>MGMT 25 Introduction to Finance and Accounting I</td>
<td>MGMT 26 Introduction to Finance and Accounting II</td>
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<td>CSE 20 Introduction to Computing I</td>
<td>CSE 21 Introduction to Computing II</td>
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<td>ECON 151 Public Economics</td>
<td>Financial Management</td>
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<td>Financial Accounting</td>
<td>Systems Thinking and Problem Solving</td>
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<td>ECON 130 Econometrics</td>
<td>Case Studies in Decision-Making in History</td>
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<tr>
<td>PSY 141 Industrial and Organizational Psychology</td>
<td>ECON 155 Political Economics</td>
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<td>Upper Division course outside Management</td>
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<td>ECON 152 Law and Economics</td>
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**Total Program Units 125**

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**WELCOME FROM THE DEAN**

Graduate education is an experience in learning the process of discovery. Be it in the laboratory, the field, a museum or library, students will learn how to identify, investigate and analyze major problems of importance to society. As a natural laboratory for research of international significance, California’s San Joaquin Valley is defined by the diversity of its people and the proximity of the Sierra Nevada mountains. These elements offer a critical venue for a broad palette of studies that span the gamut from the humanities and social sciences to the natural and engineering sciences. The University of California, Merced is building both a world-class faculty and world-class partnerships with Yosemite and Sequoia/Kings Canyon National Parks and with Lawrence Livermore National Laboratory. These provide abundant opportunities for graduate students to interact with a broad range of internationally acclaimed scientists and policy makers while also providing access to some of the world’s most powerful research instrumentation. I hope you will explore UC Merced for your graduate education. As the 10th and newest campus of the University of California, we can offer our founding graduate students the matchless experience of being there at the beginning. You will have a profound impact on the campus spirit, culture and traditions that will become the hallmarks of the San Joaquin Valley’s first UC campus.

Graduate education is about adventure and exploration; so too is the development of a new campus. The entrepreneurial spirit that drives the best graduate students is identical to that needed for the creation of a new campus. The faculty and the Graduate Division look forward to providing our students an educational experience that will be the stepping stone to a truly exceptional career.

Keith Alley, Dean
Graduate Studies

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**SOLVING SOCIETY’S CHALLENGES**

UC Merced’s matchless experience in learning the process of discovery benefits the people of California and the world beyond. UC Merced is committed to offering graduate students an opportunity to work on many of society’s most pressing and important problems. The research interests of our faculty reach across the spectrum of modern science and scholarship. Research interests among UC Merced’s initial faculty include:

- History of the Cold War and nuclear armament
- Immigration, health services, border controls, patterns of immigrant naturalization and implications for policy of migration patterns
- Ethnic diversity and political participation
- Psychology of bilingualism and second language learning
- Experimental and quasi-experimental design, meta-analytic methods, program evaluation and effects of psychotherapy
- U.S. economic history and political economy
- Digital cultural attunement for history and heritage preservation
- Space, mapping and power in pre-industrial Eurasia
- Spanish language literature of the Americas and Spain
- Transport of organic and inorganic contaminants in natural systems
- Structural and functional characteristics of biomaterials
- Design of environmental sensors for contaminant transport
- Computational biology, genomics and proteomics
- Philosophical issues in neuroscience and cognitive science
- Nanotechnology and solar energy

Given UC Merced’s plans for substantial growth during its early years, this list will expand rapidly. The current list of UC Merced faculty can be found online at http://www.ucmerced.edu/faculty/facultylist.asp While the scope of graduate education at UC Merced will be national and international, the campus location also offers unique research avenues. From the cultural diversity of the San Joaquin Valley to the ecological diversity of the Sierra and the coastal mountains, the interior of California offers an abundance of unique living, learning and research opportunities. The interdependence of the Valley and the surrounding mountains provides a natural laboratory for creating environmental sustainability in the presence of an expanding and diverse population base.

UC Merced will offer an individually tailored graduate program with emphases in six areas. These include Quantitative and Systems Biology, Molecular Science and Engineering, Environmental Systems; Social, Behavioral and Cognitive Sciences; World Cultures and History; and Computer and Information Systems. Each of these is highly interdisciplinary in approach and designed to facilitate interactions between faculty and students from a broad scope of traditional academic disciplines. The graduate group structures for overseeing each of these emphases is composed of faculty from multiple schools. This is intended to offer graduate students the flexibility to address major societal problems using the tools of a wide variety of disciplines. 

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**UNIVERSITY OF CALIFORNIA, MERCED – INAUGURAL CATALOG**

**PLEASE VISIT US ONLINE AT WWW.UCMERCED.EDU**
**PREPARING FOR AN ADVANCED DEGREE**

Admission to a graduate program at UC Merced requires a bachelor’s degree, or its equivalent, that is awarded by the University of California both in the level of scholarly achievement and in the distribution of academic subject matter. Although applications for graduate study will be evaluated primarily on scholarly achievement, UC Merced will utilize the totality of a prospective student’s qualifications, including research, work experience, recommendations and other creative accomplishments, to render a decision. To be eligible for admission to the UC Merced Graduate Division you must have a minimum B average in your undergraduate course work. In addition to your undergraduate transcripts and an application, you will need to submit Graduate Record Examination (GRE) scores, letters of recommendation and, for certain programs, examples of your written work that can be evaluated by the graduate admissions committee. Information regarding the GRE is available online at www.ets.org or by phone at 609-771-7670.

**APPLYING FOR ADMISSION**

An applicant can be considered for only one program area during a term. Applications to UC Merced can be electronically filed at http://graduatedivision.ucmerced.edu/. If this is not possible, request an application from Graduate Division, University of California, Merced, P.O. Box 2039, Merced, CA 95344. Applications are accepted for the Fall semester only. Prospective students are encouraged to begin the admissions process as early as possible in the prior academic year. International applicants should consult the UC Merced Graduate Division Web site listed above for details regarding application and admission. Residents of the United States must have all application materials at UC Merced by February 1. In order for an application to be fully considered, a non-refundable application fee of $70 must be paid. Checks should be made payable to UC Regents and mailed to the Graduate Division Office.

**INTERNATIONAL STUDENTS**

Students with credentials from universities outside the United States should begin the application process well in advance of the deadline date. Official copies or certified copies of all transcripts in English and in the original language are required. Applicants whose native language or language of instruction is not English must show evidence of having recently taken the Test of English as a Foreign Language (TOEFL) or the International English Language Testing Service (IELTS) examination. UC Merced requires a minimum score of 100 on the paper test or 213 on the computer-based TOEFL test or a score of at least 7 on the IELTS. Information on the TOEFL is available online at www.toefl.org and IELTS information is available at www.ielts.org. These requirements are waived for applicants who have completed an English-taught degree program in their home country. Information about each of the areas of study can be found on the Graduate Division Web site at http://graduate.division.ucmerced.edu. At opening we are planning to offer individual graduate instruction with an emphasis in the following areas of concentration.

**QUANTITATIVE AND SYSTEMS BIOLOGY**

The life sciences are undergoing a vast and fundamental metamorphosis from a discipline based on qualitative observation and description into a quantitative science based on comprehensive datasets and predictive models. The Quantitative and Systems Biology Graduate Group at UC Merced offers individualized, research-based courses of study leading to M.S. and Ph.D. degrees. Research projects are available on topics ranging from intercellular signaling to computational molecular biology, and course work will provide a background in the tools of modern biology, including computational biology, genomics and advanced instrumentation. The graduate group will offer opportunities for students interested in multidisciplinary projects at the interface among biology, computer science and bioengineering.

Initial faculty members participating in the Quantitative and Systems Biology graduate emphasis include:

- KEITH ALLEY, Professor of Natural Sciences
- MICHAEL E. COLVIN, Professor of Natural Sciences
- HENRY FORMAN, Professor of Natural Sciences
- JESSICA GREEN, Assistant Professor of Natural Sciences
- VALERIE LEPPERT, Assistant Professor of Engineering
- PEGGY O’DAY, Associate Professor of Natural Sciences
- SAMUEL TRAINE, Professor of Natural Sciences
- ROLAND WINSTON, Professor of Engineering and Natural Sciences
- JEFF WRIGHT, Professor of Engineering

**ADMISSIONS AND REGISTRATION**

A formal notice from the dean of the Graduate Division is the prerequisite for admission to study at UC Merced. Successful applicants will be notified as soon as possible after the program faculty has made its recommendation. Applicants will be asked to verify their intention to register by filling out and returning a Statement of Intention to Register. Applicants are required to fill this form in order to reserve their place in the program. If you should not accept to accept the offer of admission, we ask that you also notify us by completing the Declaration of Admission section so that we can offer the place to another applicant.

Individuals must register each semester to retain graduate student status. Registration provides the necessary access to courses, facilities and faculty. Students holding nonimmigrant visas must register for each semester covered by their visa.

**PROGRAMS OF STUDY**

UC Merced will offer the Master of Science (M.S.), Master of Arts (M.A.) and Doctor of Philosophy (Ph.D.) degrees. New students will be assigned a faculty advisor and committee who will assist them in developing a curriculum to meet the requirements. Although considerable flexibility to meet individual needs exists, requirements usually include a core of required material that a student must master. The M.S. and M.A. degrees are either Plan I or Plan II programs. Plan I requires a minimum of 20 semester units of upper division and graduate courses plus completion of a thesis. Plan II requires at least 24 semester units of upper division and graduate courses, followed by a comprehensive examination administered by the faculty.

Students pursuing M.S. or M.A. Plan I degrees will begin their research at the end of the first year. Although they may continue to take additional graduate seminars or independent study, the majority of the second year will involve thesis research and writing. The thesis committee must approve the scope of the thesis and provide guidance during the process of developing the thesis. Approval of the thesis must be unanimous for the award of the master’s degree. The Ph.D. degree is designed to prepare students for creative activity and original research. A doctoral degree is awarded in recognition of a student’s knowledge of a broad field of learning and for distinguished accomplishment in that field through an original contribution of significant knowledge. The dissertation must demonstrate a high level of critical ability, imagination and synthesis. In contrast to the master’s degrees, there are no University unit requirements for the doctorate. However, students must complete at least four seminars of academic residence at UC Merced and successfully complete the course requirements before they are allowed to take the Qualifying Examination.

**ENVIRONMENTAL SYSTEMS**

The Environmental Systems Graduate Group offers individualized, research-based courses of study leading to the M.S. and Ph.D. It strives to equip students with the knowledge and skills to improve the scientific understanding of Earth as an integrated system of atmosphere, hydrosphere, lithosphere and biosphere. This understanding is gained through the systematic study of the biological, chemical and physical processes. Courses are designed to provide the scientific principles underlying the function and sustainability of natural and engineered ecosystems. The program places the principles of natural science and engineering in the context of pollution prevention, treatment and ecosystem restoration as well as integrating physical, chemical and biological cycles in environmental systems. Environmental Systems Graduate Group members are affiliated with the School of Natural Science and Engineering.

Programs of study emphasize laboratory, field and modeling studies of the natural and engineered environments from the perspective of biological, chemical and physical processes in addition to research efforts at UC Merced. Environmental Systems faculty members are collaborating on interdisciplinary research topics with other University of California investigators as well as with scientists at Lawrence Livermore National Laboratory, Lawrence Berkeley National Laboratory, the National Park Service at Yosemite and Sequoia/Kings Canyon, the U.S. Geological Survey and others. Updated information can be found on the Graduate Division Web site at http://graduatedivision.ucmerced.edu.

Initial faculty members participating in the Environmental Systems graduate emphasis include:

- ROGER BALD, Professor of Engineering
- MARTHA CONKLIN, Professor of Engineering
- JESSICA GREEN, Assistant Professor of Natural Sciences
- THOMAS HARMON, Associate Professor of Engineering
- VALERIE LEPPERT, Assistant Professor of Engineering
- PEGGY O’DAY, Associate Professor of Natural Sciences
- SAMUEL TRAINE, Professor of Natural Sciences
- ROLAND WINSTON, Professor of Engineering and Natural Sciences
- JEFF WRIGHT, Professor of Engineering
MOLECULAR SCIENCE AND ENGINEERING
The optical, electrical, magnetic and mechanical properties of materials, as well as their biological activity and chemical reactivity, are consequences of the fundamental properties of their constituent molecules and the manner in which those molecules are assembled and interact. Research in the Molecular Science and Engineering Graduate Group is directed toward understanding the physical and chemical behavior of individual molecules, nano- and meso-scale molecular assemblies, and macroscopic materials, and utilizing this knowledge to design new molecules and materials for applications including biology and medicine, energy conversion, optics, information storage and transmission, and structural materials. Activities of the graduate group include chemical synthesis, characterization through a broad range of optical, spectroscopic, microscopic, diffraction, thermal and imaging methods, kinetic studies; and computer simulations and modeling. Research in this graduate group spans the traditional disciplines of chemistry and physics through materials science and engineering.

The Molecular Science and Engineering Graduate Group program at UC Merced offers individualized, research-based courses of study leading to the Ph.D. degree. While the M.S. degree is also offered, admission will usually be granted only to students who intend to pursue the Ph.D. Interdisciplinary projects are highly encouraged, as are interactions with faculty members or senior scientists outside UC Merced as collaborators, graduate committee members or co-advisors. We invite applications from a wide variety of undergraduate majors including chemistry, physics, biochemistry, molecular biology, materials science, computer science, and biomedical, chemical, materials, mechanical, electrical and environmental engineering.

Initial faculty members participating in the Molecular Science and Engineering graduate program include:
- MICHAEL E. COLVIN, Professor of Natural Sciences
- ANNE MYERS KELLEY, Professor of Natural Sciences
- DAVID P. KELLEY, Professor of Natural Sciences
- VALERIE LEPPERT, Assistant Professor of Engineering
- CHRISTOPHER VINEY, Professor of Engineering

SOCIAL, BEHAVIORAL AND COGNITIVE SCIENCES
Ph.D. students in progress to create a graduate group in Social, Behavioral and Cognitive Sciences which will offer individualized, research-based courses of study leading to M.S. and Ph.D. degrees in Social, Behavioral and Cognitive Sciences, beginning in the fall 2005. Social, Behavioral and Cognitive Sciences graduate training is likely to focus initially on the areas represented by current faculty – economics and experimental psychology – with the additional potential for interdisciplinary graduate training in Cognitive Science or other areas. In subsequent years, additional students and graduate students in sociology, political science, public policy or anthropology may be added.

Building a strong faculty will help make UC Merced a pre-eminent institution and ensure our students receive the best possible education.

David Ashley
Executive Vice Chancellor and Provost

Students interested in graduate education in Social, Behavioral and Cognitive Sciences for Fall 2005 should check the UC Merced Graduate Division Web site at http://graduatedivision.ucmerced.edu beginning in November 2004. That site will be updated periodically with more specific information about graduate programs in Social, Behavioral and Cognitive Sciences.

Initial faculty members participating in the Social, Behavioral and Cognitive Sciences graduate program include:
- KENJI HAKUTA, Professor of Social Sciences, Humanities and Arts
- SHAWN KANTOR, Professor of Social Sciences, Humanities and Arts
- TEENIE MATLOCK, Assistant Professor of Social Sciences, Humanities and Arts
- BELINDA REYES, Assistant Professor of Social Sciences, Humanities and Arts
- WILLIAM SHADISH, Professor of Social Sciences, Humanities and Arts
- CAROL TOLMINSON-KEASEY, Professor of Social Sciences, Humanities and Arts
- J. ARTHUR WOODWARD, Professor of Social Sciences, Humanities and Arts
- JEFFREY YOSHMI, Assistant Professor of Social Sciences, Humanities and Arts

Students阁n the graduate group in Social, Behavioral and Cognitive Sciences which will offer individualized, research-based courses of study leading to M.S. and Ph.D. degrees in Social, Behavioral and Cognitive Sciences.

World Cultures and History
It is anticipated that this program will be available in Fall 2006. A Graduate Group in Computer and Information Systems is being formed to offer individualized, research-based courses of study leading to the M.A. and Ph.D. degrees. The program will serve as a focal point for research by students who desire to make contributions to fields such as digital information processing and informatics, networking and distributed computing, database design and development, high-performance simulation and modeling, parallel and distributed systems, algorithm design and testing, image processing and analysis, and software engineering. The group will focus on research the theory and foundations of computing, system software and computer system and networks design, applications across the full spectrum of science and engineering. Computer and information systems are highly cross-disciplinary and will involve faculty within all three initial Schools at UC Merced. The faculty who are being recruited to UC Merced will determine initial curricular emphases within this broad framework for Computer and Information Systems, with additional disciplinary areas to be developed as faculty are added.

Graduate education in Computer and Information Systems will be characterized by multi-investigator, multi-disciplinary effort. It is also expected that there will be research collaborations between students and faculty members affiliated with the graduate group, and scientists at the Lawrence Livermore National Laboratory, particularly with respect to the use of specialized computational equipment. Since the construction of the Computer and Information Systems Graduate Group is currently ongoing, please consult the graduate division Web site at http://graduate division.ucmerced.edu for additional information on the group’s faculty and their research interests.

Graduate study is administered by the Graduate Council, an elected committee of the Academic Senate, and by the dean of Graduate Affairs. The Coordinating Committee on Graduate Affairs is a systemwide body that assures coordination between the campuses and develops general policies that govern graduate education throughout the University of California.

Please visit us online at www.ucmerced.edu

GRADUATE STUDIES
FINANCIAL SUPPORT

The Office of Financial Aid and Scholarships coordinates all forms of financial support and administers need-based financial aid programs for graduate students. We are here to help students understand the financial aid opportunities as well as the criteria utilized in determining eligibility for the various financial aid programs available at UC Merced.

Several forms of financial support will be available to facilitate the pursuit of a graduate education at UC Merced. Most forms of support are granted for merit, while others are granted for financial need or for a combination of merit and need. In large part, the Graduate Division provides financial support for graduate students, and we work closely with that office to coordinate all forms of student support.

TYPES OF AID

Financial support is available at UC Merced in the form of graduate student research positions, teaching assistantships, fellowships and loans. All students, regardless of income, are encouraged to apply.

Graduate Student Research (GSR) Positions

Research positions offer excellent opportunities to gain invaluable experience in areas of importance to your graduate education and to receive financial support at the same time. Information and application materials for GSR positions are available from the Graduate Division.

Teaching Assistantships (TA)

Graduate students working toward advanced degrees are given duties in undergraduate courses that may include conducting discussion or laboratory sections, grading students’ work and providing students with individual help in the subject. Teaching assistants are chosen for their scholarship and promise as teachers. They serve apprentice roles under active tutelage and supervision of regular faculty members. Teaching assistants are engaged in learning how to teach, working closely with faculty mentors. A limited number of teaching assistantships are available each year. On the recommendation of the academic dean, the Graduate Division makes appointments to teaching assistantships.

Fellowships

Fellowships are awarded primarily on the basis of scholarship and the promise of outstanding academic and professional achievement. Consideration is given to the extent and quality of previous undergraduate and graduate work, evidence of ability in research or other creative accomplishment, evidence of intellectual capacity and promise of productive scholarship. Financial need or the availability of other forms of financial support in your graduate program is not relevant to the evaluation of academic merit, but may be an additional criterion for some fellowships. Students must establish eligibility for need-based fellowships by filling out a Free Application for Federal Student Aid (FAFSA). For faster and more accurate processing, you may fill out this form online at http://www.fafsa.ed.gov. This form is used to determine financial need; federal aid programs are based on federal need. Financial need is a component of the eligibility criteria for many forms of financial support. If you need assistance with your application, please contact the Office of Financial Aid and Scholarships.

To be considered for graduate student research or teaching assistant positions: Graduate students who are interested in obtaining a graduate student research position or a teaching assistant position should contact the Graduate Studies Division as soon as possible.

FOR ADDITIONAL INFORMATION:

Please refer to the Money Matters Web site at http://graduatesdivi
sion.ucmerced.edu for additional information and assistance.

Loans

Financial aid awards that require repayment. Loans offer the opportunity to defer the cost of your educational expenses by borrowing now and repaying later. Some loan programs are based on financial need, but there are loan programs available to all students regardless of income. Loan programs available through UC Merced are federally funded, providing long-term, low-interest loans.

Federal Subsidized Stafford Loans: These loans are awarded to students with financial need. This loan is “subsidized” in that the federal government pays the interest while the student is in school and during the grace period (the first six months after leaving school or dropping to less than half-time enrollment status).

Federal Unsubsidized Stafford Loans: Not based on financial need, these loans are available to all eligible students, regardless of income. This loan is “unsubsidized” in that the student is responsible for paying all interest due. There is no federal interest subsidy for this loan. Interest accrues immediately upon disbursement. Borrowers may elect to pay accrued interest on a monthly or quarterly basis or have it added back to the principal balance in a process called capitalization.

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- Teaching Assistantships (TA)
- Teaching assistants are engaged in learning how to teach, working under active tutelage and supervision of regular faculty members. They serve apprentice positions. Teaching assistantships provide financial support for graduate students, and we work closely with that office to coordinate all forms of student support.

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**How to apply**

- To be considered for fellowships and loans: Graduate applicants who are US citizens, permanent residents or immigrants are required to file a “Free Application for Federal Student Aid” (FAFSA). Although the FAFSA can be filed at any time, it is strongly suggested that you file by the priority deadline of March 2. If the March 2 deadline has passed, you may still submit this form. We process some forms of financial aid throughout the year. For faster and more accurate processing, you may fill out this form online at http://www.fafsa.ed.gov. This form is used to determine financial need. Financial aid is a component of the eligibility criteria for many forms of financial support. If you need assistance with your application, please contact the Office of Financial Aid and Scholarships.

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- Fellowships are awarded primarily on the basis of scholarship and the promise of outstanding academic and professional achievement. Consideration is given to the extent and quality of previous undergraduate and graduate work, evidence of ability in research or other creative accomplishment, evidence of intellectual capacity and promise of productive scholarship. Financial need or the availability of other sources of support in your graduate program is not relevant to the evaluation of academic merit, but may be an additional criterion for some fellowships. Students must establish eligibility for need-based fellowships by filing a Free Application for Federal Student Aid (FAFSA). For faster and more accurate filing, students can fill out the FAFSA online at http://www.fafsa.ed.gov.

**Research at University of California, Merced**

R

**“As the first new University of California campus in almost 40 years, UC Merced is in a position to integrate emerging technologies that enhance education, research, communications and outreach very much as we uphold the University’s long tradition of excellence.”** Carol Tomlinson-Keaszy, Chancellor of UC Merced

The mission of the Sierra Nevada Research Institute is accomplished through:

- Collaborative, multidisciplinary, fundamental research conducted by faculty, students, staff and affiliated scientists in natural science, engineering and social sciences.
- Strong interactions with related research units within the UC system and close collaborative relations with scientists and managers at National Laboratories, local, state and federal agencies, and the National Park Service.
- Extensive sharing of Sierra Nevada Research Institute data and information with public and private stakeholders.

The Sierra Nevada Research Institute is organized around an Earth Systems science model. This model combines the earth sciences (soils, geology, water and atmospheric sciences) with biological sciences (ecology and molecular biology) as well as environmental science and social science in integrated studies of complex problems at the systems level. Through these balanced research efforts, the Sierra Nevada Research Institute serves as a source of objective scientific information as California faces the growing challenge of sustaining the integrity and quality of its human and natural resources into the future.

Through the Sierra Nevada Research Institute our students and faculty will have access to a variety of biological field stations in the Sierra Nevada, located in Yosemite, Sequoia and Kings Canyon National Parks. In addition, the Virginia Smith Trust Reserve adjacent to the UC Merced campus provides additional sites for research.
THE WORLD CULTURES INSTITUTE

Merced and the San Joaquin Valley are historically and today a crossroads for rich mixes of peoples from throughout the world. For millennia before the arrival of Europeans, Native Americans developed an interdependent relationship with the Valley, foothills and mountain ecosystems. Today, the Valley is also part of a dynamic global economy, calling for a broad and deep understanding of many cultures and traditions. As a rapidly growing agricultural region, the Valley is a place for understanding the ways in which different cultures think about stewardship of the environment.

California’s location and immigrant heritage have situated it within the Pacific Rim region as one of the greatest centers of trade, commerce and cultural exchange the world has ever known. The Pacific Region is defined by mobility and migration that have resulted in new cultural practices and knowledge. The region is an unparalleled arena for the study of the changes rung in by sophisticated technologies and of the cultural effects of those changes.

People have come from around the world to make the San Joaquin Valley, California and the United States what they are today. The World Cultures Institute will be a place to understand better what has shaped and is shaping our modern cultural identities.

As the World Cultures Institute grows, its faculty and staff will address several themes:

- Migration and displacement
- Histories and cultures of California, and particularly in the San Joaquin Valley
- Local, regional and national identities and boundaries, and their crossings
- Economics, religion, the arts and ethnic identity in the formation of the individual and society
- Nature and culture; and the relation of wilderness to the manmade landscape, with the role of technological invention in affecting both
- Agriculture and society
- Evolving and competing images (artistic, literary, cinematic, architectural) of California

Students are invited to participate in research with historians, anthropologists, artists, political scientists and policy specialists, economists, scholars of literature and languages, and others—even scientists. Internships with a cultural resources emphasis are anticipated with museums, arts centers, historical societies, community groups, libraries, public education organizations and National Parks.

FUTURE INSTITUTES

As UC Merced’s faculty grows and common research interests emerge across disciplines, additional institutes will be organized to support cross-cutting research. At present, an Energy Institute and a Systems Biology Institute are under discussion. UC Merced researchers are envisioning a new approach for work across institutes that would expand and reinforce research conducted to address a single problem. The following presents a model for this strategy that is also currently being discussed at UC Merced.
model for this strategy that is also currently being discussed at UC Merced. The following presents a approach for work across institutes that would expand and reinforce research conducted to address a single problem. The region is an unparalleled arena for the study of the changes rung in by sophisticated technologies and of the cultural effects of those changes. People have come from around the world to make the San Joaquin Valley, California and the United States what they are today. The World Cultures Institute will be a place to understand better what has shaped and is shaping our modern cultural identities. As UC Merced’s faculty grows and common research interests emerge across disciplines, additional institutes will be organized to support cross-cutting research. At present, an Energy Institute and a Systems Biology Institute are under discussion. UC Merced researchers are envisioning a new University of California, Merced – Inaugural Catalog

THE WORLD CULTURES INSTITUTE

The World Cultures Institute is a new institute at UC Merced, whose mission is to foster interdisciplinary research and teaching in the humanities and social sciences. The Institute seeks to bring together faculty and students from across the University to study the complex and dynamic interactions between human societies and the natural environment. The Institute is committed to promoting a culture of diversity and inclusion, and to addressing the urgent challenges facing our planet today.

THE FUTURE INSTITUTES

The Future Institutes at UC Merced are designed to bring together students, faculty, and community partners to address the grand challenges facing the world. These institutes focus on areas such as water, energy, health, and the environment, and are committed to addressing these challenges through interdisciplinary research, education, and outreach.

RESEARCH AT UNIVERSITY OF CALIFORNIA, MERCED

The University of California, Merced has a strong commitment to research and innovation. The University is home to a number of centers and institutes that are dedicated to advancing knowledge and addressing some of the world’s most pressing problems. These include the Center for Environmental Science, the Institute for Stem Cell Research, and the Center for Biotechnology and Public Policy.

THE WORLD CULTURES INSTITUTE

The World Cultures Institute is an interdisciplinary program that seeks to foster understanding and appreciation of the diverse cultures and traditions that shape our world. The Institute offers courses in a wide range of disciplines, including anthropology, history, and sociology, and provides opportunities for students to engage in research and community service projects.

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BIS 100: The Cell [4] An introduction to the functions and structure of the cell, including plant and animal cells, with an emphasis on universal cellular systems, including regulation of subcellular organization; control of cellular processes by internal and external signaling; and energy capture, storage, and use. Prerequisites: BIS 1, CHEM 101, ICP 1 or equivalent, BIS 100.

BIS 111: Cells, Tissues and Organs [4] Introduction to principles of cell structure and the organization of the cells into tissues, organs, and organ systems. Both the cellular and extra-cellular composition of the primary tissues and their compilation into the major organ systems will be covered. Emphasis on understanding molecular mechanisms underlying these topics, as well as the role of health and disease. Prerequisites: BIS 110.

BIS 112: Signal Transduction and Genomics [4] Signal transduction in mammalian cells with an emphasis on molecular and genetic regulation of these processes and their role in cell function. Prerequisites: BIS 110.

BIS 120: General Microbiology [4] Molecular biology for basic research in bacteria and organelles. Significance of molecular diversity in microbial biology, genetic, physiologic and genetic regulation. Emphasis on the remarkable ability of these organisms to adapt to the environment. Prerequisites: BIS 110.

BIS 121: Microbial Pathogenesis [4] Principles of microbial pathogenesis, with emphasis on bacterial, viral, and fungal pathogens. Prerequisites: BIS 120.


BIS 141: Genes and Genomes [4] Comprehensive introduction to the language of genes and genomes, including genealogy to phenotype relationships, gene regulation of development and disease, sources of phenotypes, and the role of evolution in shaping across the domains of life. Prerequisites: BIS 140.

BIS 142: Comparative Genomics [4] Introduction to the concepts behind comparative genomics and a detailed overview of the many tools and data bases used in comparative genomics. Specific topics include comparative approaches to the identification of genes and regulatory regions in Drosophila sequences, the use of phylogenetic analyses to understand gene function and evolution, and methods for analysis of the organization and evolution of large genomes. Prerequisites: BIS 140.


BIS 151: Molecular Immunology [4] Principles of immunology, including the genetic basis of susceptibility to infectious disease and the mechanisms by which the immune system protects the body against pathogens. Prerequisite: BIS 120.

BIS 152: Cancer Genetics and Tumor Regulation [4] Advanced topics in cancer biology, including genetic and biochemical features of infectious agents, including identification and characterization of pathogens and the epidemiology of infectious diseases. Prerequisite: BIS 120.


BIS 170: Neurobiology [4] Examination of the general operations of the central and peripheral nervous system. Cellular neuroscience, including the molecular basis of excitation, synaptic transmission and neuronal signal transmission, as well as the organization and functions of the major neural systems with an emphasis on sensation, locomotion and higher brain function. Prerequisites: BIS 110.

BIS 170 L: Neurobiology Laboratory [1] Laboratory experiments demonstrating and reinforcing topics covered in BIS 170. Prerequisite: BIS 170 must be taken concurrently.

BIS 175: Biostatistics [4] Advanced statistical techniques to investigate experimental data generated in molecular, cellular and evolutionary biology, and health sciences research. Prerequisites: MATH 10, ICP 2 or MATH 22.

BIS 180: Introduction to Scientific Computing [1-4] Introduction to basic modeling and data-analy- sis skills for life science students through hands-on introductory computational laboratories. Emphasis on the use of computational tools in the analysis of biological data to formulate hypothesis and develop models. Data reduction, model fitting and data visualization; standard software pack- ages and programming languages. Prerequisite: BIS 5.

BIS 181: Survey of Computational Biology [1-4] Introduction to the principles and application of computational simulations and modeling in biological systems, including the study of computer models and computer platforms. Prerequisites: BIS 180.

BIS 195: Research Projects in Biological Sciences [1 - 5] Directed study in the biological sciences, including independent research projects. Prerequisites: Upper division standing and consent of instructor.

BIS 195 L: Research Projects in Biological Sciences Laboratory [1 - 5] Directed study in the biological sciences, including independent research projects. Prerequisites: Upper division standing and consent of instructor.

BIS 198: Directed Group Study in Biological Sciences [1 - 6] Open to any faculty member. Prerequisite: Upper division standing and consent of instructor.

BIS 199: Directed Independent Study in Biological Sciences [1 - 5] Open to any faculty member. Prerequisite: Upper division standing and consent of instructor.

CHEM 1: Introductory Chemistry [4] Introduction to the concepts of chemistry for students who lack adequate preparation. Prerequisites: CHEM 2. Covers atoms, molecules and stoichiometry, periodic properties of the elements; properties of gases, liquids, and solids; types of chemical reactions; writing and balancing chemical equations; relating mass and molar quantities.

CHEM 2: Organic Chemistry [4] Chemistry of the classes of molecules that are found in living systems. Prerequisites: CHEM 1.
CHEM 2: General Chemistry [4]
Atoms and other basic chemistry, periodic properties, chemical equations; concepts of chemical bonding; Lewis structures; bond energy; atomic and molecular orbitals; solutions and measurements of concentration; acid-base and solubility equilibria; thermodynamics; oxidation-reduction chemistry; general group descriptive chemistry. Laboratories emphasize “green chemistry” concepts, using environmentally benign reagents and minimizing waste. Required. Passing score on chem. 101 placement exam required.

Molecular shapes and charge distributions; resorcinol, electron delocalization; organic structures, nomenclature, and isomerism; stereochemistry, optical activity; organic reactions: combinational synthesis, spectroscopy, and the synthesis of biologically active compounds. Laboratory emphasis on “green chemistry” concepts, using environmentally benign reagents and minimizing waste. Required. CHEM 2

Gas properties, Prigogine, free energy, chemical kinetics; rates, laws, temperature dependence, catalysis, reaction mechanisms, diffusion and transport, nuclear chemistry; quantum mechanics; molecular collision and radiation interactions; electronic and vibrational spectroscopy, coordination compounds; solids and liquids, salts, and semiconductors; mass spectrometry; diffusion, radiation, electronic spectroscopy. Laboratories emphasize “green chemistry” concepts, using environmentally benign reagents and minimizing waste. Required. CHEM 2

CHEM 90X: Freshman Seminar [1]
Prerequisites: CHEM 115 or may be taken concurrently. Cross-listed with CHEM 100. P/NP grading

CHEM 110: Biochemistry I [4]
Introduction to the chemical processes underlying life, covering the structure and properties of biological macromolecules, metabolism, regulation and energy transduction. Prerequisites: CHEM 8, 85, 1 or equivalent. Cross-listed with 85 101. P/NP grading

CHEM 111: Biochemistry II [4]
Advanced course on enzyme mechanisms and regulation. Prerequisite: CHEM 110 or 85 101. Cross-listed with 85 101. P/NP grading

CHEM 111L: Biochemistry Lab [1]
Laboratory experiments demonstrating and reinforcing topics covered in CHEM 111. Prerequisite: CHEM 111 or 85 101 [must be taken concurrently]. Cross-listed with 85 101. P/NP grading

CHEM 112: Quantum Chemistry and Spectroscopy [3]
Theory and practical application of molecular quantum mechanics. Schrödinger equation and matrix representations of quantum mechanics; simple exactly solvable model problems; calculation of observable properties, vibrational and electronic wave functions; approximation methods; quantum mechanics of polarons. Prerequisites: CHEM 10, MATH 25, PHYS 25 or equivalent.

CHEM 113: Chemical Thermodynamics and Kinetics [3]
Thermodynamic properties, thermodynamics and chemical kinetics, taught from a perspective that develops the behavior of bulk molecules. Prerequisite: CHEM 112

CHEM 134L: Physical Chemistry and Instrumental Analysis Laboratory [2]
Laboratory experiments in spectroscopy, electrochemistry, separations and kinetics, including biochemical and biophysical applications. Prerequisite: CHEM 115 [may be taken concurrently]

Applications of quantum mechanical concepts and methods to understanding chemical structures and reactivities. Computational modeling methods, especially quantum chemistry, applied to chemical calculations. Prerequisite: CHEM 100

CHEM 131: Molecular Spectroscopy [3]
Time-dependent quantum mechanics; interaction of radiation with matter; electronic spectra of atoms and molecules; vibrational, rotational, and Raman spectra; magnetic resonance spectroscopy. Prerequisite: CHEM 112

CHEM 132: Biophysical Chemistry [3]
Introduction to the use of solution thermodynamics of biochemical systems, multiple equilibria, hydrosolventics, energy levels, spectroscopy, and thermal stability determinations. The dimensional structure of proteins, forces that stabilize protein structures, protein folding, prediction of protein structures from sequence. Three-dimensional structure of DNA and RNA, sequence-specific recognition of proteins, how genes interact at the transcriptional level. Prerequisites: CHEM 111 or CHEM 105

CHEM 133: Biophysical Chemistry II [3]
Special topics, taught from a perspective that considers the regulation, including perception, memory, language, learning, problem solving, spatial cognition, attention and Mid-level analysis of complex processes. Prerequisite: CHEM 132

An introduction to the properties of matter on size scales intermediate between atoms or molecules and bulk matter, with emphasis on metallic and semiconductor nanoparticles. Synthesis, characterization, principles of interaction and chemical properties, and applications of these materials. Prerequisites: CHEM 100, 113, 120 [all may be taken concurrently]

CHEM 140: Nanoscience and Materials Chemistry [3]
An introduction to the properties of matter on size scales intermediate between atoms or molecules and bulk matter, with emphasis on metallic and semiconductor nanoparticles. Synthesis, characterization, principles of interaction and chemical properties, and applications of these materials. Prerequisites: CHEM 100, 113, 120 [all may be taken concurrently]

CHEM 141: Organic Spectroscopy [3]
Application and interpretation of spectroscopic methods to problems in chemical structure and analysis, with particular emphases on biomolecular topics. Topics include UV-visible absorption, fluorescence, infrared absorption, Raman scattering, nuclear magnetic resonance, electron spin resonance, circular dichroism, mass spectrometry, microspectroscopy and single-molecule techniques. Prerequisite: CHEM 115

CHEM 133: Biophysical Chemistry II [3]
Introduction to the interdisciplinary field of cognitive science and its relation to cognition, including perception, memory, language, learning, problem solving, spatial cognition, attention and Mid-level analysis of complex processes. Prerequisite: CHEM 132

An introduction to the properties of matter on size scales intermediate between atoms or molecules and bulk matter, with emphasis on metallic and semiconductor nanoparticles. Synthesis, characterization, principles of interaction and chemical properties, and applications of these materials. Prerequisites: CHEM 100, 113, 120 [all may be taken concurrently]

CHEM 140: Nanoscience and Materials Chemistry [3]
An introduction to the properties of matter on size scales intermediate between atoms or molecules and bulk matter, with emphasis on metallic and semiconductor nanoparticles. Synthesis, characterization, principles of interaction and chemical properties, and applications of these materials. Prerequisites: CHEM 100, 113, 120 [all may be taken concurrently]

CHEM 133: Biophysical Chemistry II [3]
Introduction to the interdisciplinary field of cognitive science and its relation to cognition, including perception, memory, language, learning, problem solving, spatial cognition, attention and Mid-level analysis of complex processes. Prerequisite: CHEM 132

CHEM 140: Nanoscience and Materials Chemistry [3]
An introduction to the properties of matter on size scales intermediate between atoms or molecules and bulk matter, with emphasis on metallic and semiconductor nanoparticles. Synthesis, characterization, principles of interaction and chemical properties, and applications of these materials. Prerequisites: CHEM 100, 113, 120 [all may be taken concurrently]

Application and interpretation of spectroscopic methods to problems in chemical structure and analysis, with particular emphases on biomolecular topics. Topics include UV-visible absorption, fluorescence, infrared absorption, Raman scattering, magnetic resonance, electron spin resonance, circular dichroism, mass spectrometry, microspectroscopy and single-molecule techniques. Prerequisite: CHEM 115

Examination of the role that language plays in human cognition, from the microscopic level of the brain to the macroscopic level of society. Prerequisites: CHEM 105, 115; or consent of instructor. Cross-listed with Cogn. 110

COURSE DESCRIPTIONS
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CSE 2: Programming II [3]
Intermediate programming (including, among others) concepts of recursion, functional and object-oriented programming. Classes and objects, abstraction, inheritance, operator overloading and data localization. Prerequisite: CSE 1

CSE 20: Introduction to Computing [2-3]
Introduction to the basic tools for using computers to enhance personal productivity. Course will emphasize techniques for effectively using and customizing computing environments, including scripting and programming.

CSE 21: Introduction to Computing II [2-3]
Covers computational techniques for gathering, organizing and presenting data. Basics of identification and design, programming, and networking. Prerequisite: CSE 20

CSE 30: Introduction to Computer Science and Engineering I [3]
Overview of the diverse field of computer science and engineering. In-depth analysis of several key inventions in the field that have been instrumental in advancing CSE and driving worldwide technological growth. Prerequisite: CSE 30

CSE 90X: Freshman Seminar [1]
Introduction to a topic in computer science and engineering

CSE 95: Lower Division Undergraduate Research [1-5]
Supervised research. Permission of instructor required.

CSE 98: Lower Division Directed Group Study [1-5]
Permission of instructor required. P/NP grading only.

CSE 99: Lower Division Individual Study [1-5]
Permission of instructor required. P/NP grading only.

Upper Division Courses

CSE 100: Algorithm Design and Analysis [4]
Introduction to the design and analysis of computer algorithms. Theoretical models of computation, concepts of algorithm correctness, complexity, and NP-completeness. Major algorithms and data structures for searching, sorting, parsing and memory management. Prerequisite: CSE 2

Principles of database design and operation. Major types of databases, including flat-file, hierarchical, relational and object-oriented. Database-querying languages, database security and special issues related to the web-based database systems. Prerequisite: CSE 110

Modern engineering techniques for developing reliable, efficient, reusable and maintainable computer software. Primary software design models, including functional, structured and object-oriented programming. Software validation, revision control, project management and documentation. Prerequisite: CSE 100

Fundamental concepts of digital computer design, including instruction sets, memory systems and registers, logic and mathematics units, and off-chip communication and control. Diversity of contemporary computer designs. Prerequisites: CSE 20

Concepts of computer operating systems including memory management, file systems, multitasking, performance analysis and security. Prerequisite: CSE 2

CSE 160: Networking [4]
Design concepts and implementation features of computer networks. Network robustness, scalability, addressing, routing and confidentiality. Several contemporary networking protocols will be analyzed. Prerequisite: CSE 150

CSE 165: Upper Division Undergraduate Research [1-5]
Supervised research. Permission of instructor required.

CSE 199: Upper Division Directed Group Study [1-5]
Permission of instructor required. P/NP grading only.

CSE 199: Upper Division Individual Study [1-5]
Permission of instructor required. P/NP grading only.

EARTH SYSTEMS SCIENCE

Lower Division Courses

An introduction to basic principles of earth systems for non-science majors and prospective majors. A multidisciplinary approach that draws from geology, chemistry, physics and biology to understand how the earth functions as a complex system, and the role and impact of human beings on Earth systems.

An introduction to basic principles of coupled biological and earth systems for non-science majors and prospective majors. An interdisciplinary approach that combines concepts from biology, geology and Earth science to understand how the earth functions as a biological incubator, the origin and evolution of molecular life, the role of the biosphere in maintaining ecological earth systems, human impacts and the sustainable Earth.

Fundamentals of Earth science with focus on terrestrial, marine and atmospheric systems; through time; surface geological processes; plate tectonics; lithosphere, atmosphere, weather, erosion, sedimentation, landform and soil formation; material and heat transport in the atmosphere-ocean-lithosphere systems; paleo-climate and paleoenvironmental dynamics and their relation to tectonic processes. Prerequisites: ESS 1 or ESS 5 or BST 1; CSE 21; ICP 1 or equivalent

ESS 25: Introduction to Ecosystem Science [4]
Fundamentals of ecosystem science; organization, function and development of ecological systems; energy and mass flow; biogeochemical cycling; biodiversity, population dynamics, and sustainability. Prerequisite: ESS 1 or ESS 5 or BST 1; ICP 1 or equivalent.

ESS 90X: Freshman Seminar [1]
Examination of a topic in earth systems science.

ESS 95: Lower Division Undergraduate Research [1-5]
Supervised research. Permission of instructor required.

ESS 100: Upper Division Directed Group Study [1-5]
Permission of instructor required. P/NP grading only.

ESS 100: Upper Division Individual Study [1-5]
Permission of instructor required. P/NP grading only.

Upper Division Courses

ESS 100: Environmental Chemistry [4]
Chemical processes in ecosystems focusing on environmental processes in water, soil and air. Emphasis on acid-base chemistry and the effect of elevated CO2 on solubility, oxidation and reduction, and isotopes. Prerequisites: CHEM 8, ICP 2; Cross-listed with ECON 100

ESS 102: Chemistry and Mineralogy of Soils [3]
Thermodynamics and kinetics of chemical process in soil systems. Topics include the formation and identification of common minerals, adsorption/desorption, precipitation/dissolution and electrochemical reactions in soils. Prerequisites: ENS 100, ENS 105

ESS 103: Geomorphology of Earth Systems [3]
Quantitative analysis of Earth systems using principles of mathematics and statistics. Topics include: geomorphic concepts, kinetic trajectories in idealized physical oceanic and atmospheric systems, human impacts and the sustainable Earth.

Basic laws of meteorology and the global climate system. Fundamentals of surface water hydrology, hydrometeorology, evaporation, precipitation, statistical and probabilistic methods, unit hydrograph and flood routing. Prerequisite: ENS 100 or ENS 105. Cross-listed with ENS 101

ESS 112: Geomicrobiology [4]
Fundamentals of microbiology related to earth systems, including biogeochemical cycling, microbial metabolism and biodiversity, soil food webs, and genomics. Prerequisites: CHEM 8, ICP 2

Ecology and ecological principles; organization, dynamics and mathematical models of population and ecosystem structure and function in terrestrial, marine and aquatic ecosystems. Prerequisite: CHEM 8, ICP 2

ESS 125: Microbial Ecology [4]
Advanced course in microbial systems and techniques. Prerequisite: ENS 120

ESS 126: Environmental Genomics [4]
Introduction to the principles and methods of genomics as applied to the understanding of ecosystems. Population genetics, adaptation to environmental change and genomic analysis of environmental microbial communities; experimental and computational methods relevant to environmental genomics. Prerequisite: ENS 145 or ENS 140

ESS 127: Ecological Modeling [3]
Advanced course on modeling population dynamics and the flow of energy and matter in terrestrial, marine and human impacted ecosystems. Prerequisite: ENS 110

Field techniques in chemistry, hydrology, geology, ecology and microbiology, emphasizing principles of measurement, observation and interpretation; integration of diverse data sets. Prerequisites: CHEM 8, ICP 2

ESS 190: Undergraduate Seminar [1-5]
Weekly seminar of current topics in earth and environmental systems. Prerequisite: Upper division standing.

ESS 195: Undergraduate Research [1-5]
Supervised research. Permission of instructor required.

ESS 199: Upper Division Directed Group Study [1-5]
Permission of instructor required. P/NP grading only.

ESS 199: Upper Division Individual Study [1-5]
Permission of instructor required. P/NP grading only.

ECONOMICs

Lower Division Courses

ECON 1: Introduction to Economics [4]
Introduction to economics principles and methods, including microeconomics (operation of the economy at the individual and firm level) and macroeconomics (natures and functions of the national economy in a global context).

ECON 10: Analysis of Economic Data [4]
Introduction to observation, estimation and hypothesis testing in economics; use of linear and other statistical analysis methods.

The survey of the theories of major economists from Adam Smith to Keynes. Prerequisite: ECON 10

ECON 90X: Freshman Seminar [1]
Examination of a topic in economics.

ECON 95: Lower Division Undergraduate Research [1-5]
Supervised research. Permission of instructor required.

ECON 98: Lower Division Directed Group Study [1-5]
Permission of instructor required. P/NP grading only.

ECON 99: Lower Division Individual Study [1-5]
Permission of instructor required. P/NP grading only.

Upper Division Courses

ECON 100: Intermediate Microeconomic Theory [4]
Analysis of output, employment, interest rates and the price level. Effects of these changes in monetary and fiscal variables. Prerequisites: ECON 1, MAC 21 or equivalent, or consent of instructor

Analysis of output, employment, interest rates and the price level. Effects of these changes in monetary and fiscal variables. Prerequisites: ECON 1, MAC 21 or equivalent or consent of instructor

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ECON 111: American Economic History [4]
A survey of trends in the American economy, emphasis on factors explaining economic growth and understanding distribution of the gains and losses associated with growth. Prerequisite: ECON 100.

ECON 115: Economics of Industrial Organization [4]
The organization and structure of industrial production in the United States economy. Prerequisite: ECON 100.

ECON 120: Economics of the Environment [4]
Analysis of public policy measures that pertain to human environments. Prerequisite: ECON 100.

ECON 130: Econometrics [4]
Introduction of problems of estimation, estimation and hypothesis testing in economics through the study of the theory and application of linear regression models, critical evaluation of selected examples of empirical research, and exercises in applied econometrics. Prerequisites: ECON 10, MATH 21 or equivalent.

ECON 140: Labor Economics [4]
Analysis of the economic forces that shape labor markets, institutions and performance in the United States and other countries, with special attention to trade unions, legal and social conventions. Prerequisites: ECON 100.

An economic analysis of policies and institutions in the U.S. health care sector: supply and demand for health services, concepts and policy issues relating to health insurance, and economic analysis of efficient regulatory policies toward the health care sector. Prerequisite: ECON 100.

Problems of underdevelopment and poverty, policy issues and development strategy. Prerequisite: ECON 100.

ECON 151: Public Economics [4]
The organization and structure of industrial production in the United States economy. Prerequisite: ECON 100.

ECON 155: Political Economics [4]

ECON 160: International Microeconomics [4]
International trade theory: Impact of trade on the domestic and world economies; public policy toward external trade. Prerequisite: ECON 100.

ECON 161: International Macroeconomics [4]
Macroeconomic theory of an open economy: balance of payments adjustment mechanism, international monetary economics issues, international financial institutions and their policies. Prerequisite: ECON 101.

ECON 190: Topics in Economics [4]
Intensive treatment of a special topic or problem in economics. May be repeated for credit in different subject areas. Prerequisites: ECON 1; junior or senior standing; major in ECON in the economics track or consent of instructor.

ECON 191: Fieldwork in Economics [1-3]
Supervised field studies in economics. Prerequisites: ECON 1; junior or senior standing; major in ECON in the economics track or consent of instructor.

ECON 195: Upper Division Undergraduate Research [1-5]
Supervised research. Permission of instructor required. Prerequisite: ECON 100.

ECON 198: Upper Division Directed Group Study [1-5]
Permission of instructor required. Prerequisite: ECON 100.

Relationships of the structure, processing, properties and performance of materials.
Application of physical and chemical principles: the context of engineering materials: atomic bonding, crystal structure, defects, thermodynamics and kinematics. Prerequisites: ICP 2, CHEM 2 or consent of instructor.

ENGR 50: Statics and Dynamics [4]
Fundamental concepts of mechanics, including statics, dynamics and kinematics of particles and rigid bodies. Prerequisites: ICP 2.

Stresses and strains; elastic and plastic theories; stress in pressure vessels and rotating shafts. Strength and failure, plastic deformation, fatigue and elastic instability. Prerequisites: ICP 2.

Basic tools needed for the design and analysis of engineering systems, including data collection, basic algorithm design, implementation and testing, and systems simulation. Prerequisite: ECON 10, MATH 110.

ENGR 53: Materials and the Environment [4]
Prerequisites: ICP 1, CHEM 2 or consent of instructor.

Microeconomic principles and methods. Time value of money, interest and equivalence, analysis of economic policy. Analysis of cost, inflation and taxes, estimates of demand, cost and risk, decision theory. Prerequisite: MATH 110.

ENGR 90X: Freshman Seminar [1]
Introduction of a topic in engineering. Prerequisite: ECON 100.

ENGR 95: Lower Division Undergraduate Research [1-5]
Supervised research. Permission of instructor required. Prerequisite: ECON 100.

ENGR 99: Lower Division Directed Group Study [1-5]
Permission of instructor required. Prerequisite: ECON 100.

ENGR 120: Fluid Mechanics [4]
Introduction to and application of principles of fluid mechanics to flow of compressible and incompressible fluids. Prerequisites: ICP 2.

ENGR 130: Thermodynamics [4]
Fundamentals of equilibrium, temperature, energy and entropy. Equations of state and thermodynamic properties, with engineering applications. Prerequisites: ICP 2, CHEM 2.

ENGR 135: Introduction to Engineering Projects [1-5]
Study of design, conception and construction relating to water projects with applications to engineering problems. Prerequisite: ENGR 100.

ENGR 140: Introduction to Object Oriented Programming [4]
Object and database principles, including data models, access control, database systems architecture, functional data manipulation, database organizational design, indexing and performance analysis. Prerequisites: CSE 1, MATH 100.

Combinatorics, graph theory, cryptography, discrete optimization, mathematical programing, coding theory, non-linear game theory, principles of computer science, including algorithms, complexity and performance modeling.
Prerequisites: CSE 1, MATH 110.

ENGR 170: Introduction to Electron Microscopy [3]
Principles and techniques of electron microscopy used in the study of materials. Emphasis upon practical applications. Prerequisites: ICP 2 or PHYS 9, introductory level knowledge of computer science. Concurrent enrollment in ENGR 170 is strongly encouraged.

ENGR 170L: Introduction to Electron Microscopy – Laboratory [1]
Laboratory for principles and techniques of electron microscopy used in the study of mate- rials. Prerequisites: ICP 2 or PHYS 9, introductory level knowledge of crystallography. Concurrent enrollment in ENGR 270 is strongly encouraged. Cross-listed with ENGR 170.

ENGR 295: Graduate Research [1-6]
Supervised research in engineering. Prerequisites: Graduate standing and consent instructor SAI only.

ENGR 298: Directed Group Study [1-6]
Group project under faculty supervision. Prerequisites: Graduate standing and consent instructor SAI only.

ENGR 299: Directed Independent Study [1-6]
Directed independent project under faculty supervision. Prerequisites: Graduate standing and consent instructor SAI only.

ENVIRONMENTAL ENGINEERING
Lower Division Courses
ENVE 10: Environment in Crisis [4]
Human impacts on Earth’s ecosystems, air and water. Social and technological solutions to interacting pressures from environmental pollution, biodiversity loss, water pollution, climate warming and feeding Earth’s population.
Prerequisites: CSE 1, MATH 110, chemistry or equivalent.

ENVE 20: Introduction to Environmental Science and Technology [4]
Introduction to historical and current issues in the diverse field of environmental engineering. Principles of mass and energy balance. In-depth analysis of several key introductions from the field that have been instrumental in advancing the field. Design project. Prerequisites: CSE 21, PHYS 9, ICP 1 [may be taken concurrently]. CHEM 2, ICP 1 or equivalent.

ENVE 90X: Freshman Seminar [1]
Introduction to a topic in environmental engineering.

ENVE 95: Lower Division Undergraduate Research [1-5]
Supervised research. Permission of instructor required. Prerequisite: ENGR 100.

ENVE 99: Lower Division Directed Group Study [1-5]
Permission of instructor required. Prerequisite: ENGR 100.

ENGR 10: Design for Electronic Applications [3-5]
Principles of electronic design including digital logic. Laboratory for principles and techniques of electron microscopy used in the study of mate- rials. Prerequisites: ICP 2 or PHYS 9, introductory level knowledge of crystallography. Concurrent enrollment in ENGR 270 is strongly encouraged. Cross-listed with ENGR 170.
ENV 197: Water and Wastewater Treatment [3]
Water treatment, use, reclamation and reuse. Introduction to modeling and designing treatment systems; both conventional and advanced technology. Use of mass balances for system evaluation and design. Project. Prerequisites: ENVE 20, ENVE 100, ENVE 176. S/U option.

ENV 198: Field Methods in Surface Hydrology [1-3]
Measurement and interpretation of data, stream gauging, hydrology and limnology analysis, statistical, environmental, hydrologic and ecological methods and discharge measurement; runoff mapping; separation of hydraulic field work. Prerequisites: ENVE 110 S/U option.

ENV 199: Upper Division Individual Study [1-5]
Prerequisite of instructor required. MPH grading only.

ENVIRONMENTAL SYSTEMS

Graduate Courses

ES 101: Chemistry and Mineralogy of Soils [3]
Thermodynamics and kinetics of chemical processes in soil systems. Formation and identification of common minerals, adsorption-desorption, precipitation-decomposition, electrochemical equilibria in soils. Graduate requirements include individual additional exercises and preparation of a research paper. Prerequisite: Graduate standing. S/U option.

ES 203: Geochemistry of Earth Systems [3]
Quality assurance, analysis of Earth systems using principles of thermodynamics, kinetics and isotopes. Focus on surface-mineral equilibria and phase relations; equilibria and reactive transport approaches towards modeling geochemical processes at elevated and elevated. Graduate requirements include individual student projects. Prerequisite: Graduate standing. S/U option.

ES 204: Organic Geochemistry [3]
Focus on organic chemical reactions in soils and sediments. Formation, weathering and natural organic matter and reactivity of natural organic matter with pollutants. Graduate requirements include individual additional exercises and preparation of a research paper. Prerequisite: Graduate standing. S/U option.

ES 205: Watershed Biogeochemistry [3]
Movement, storage and transformations involving water, nutrients and solutes in natural and human impacted watersheds; biological and chemical processes; modeling of biogeochemical processes. Introduction to watershed management and development. Graduate requirements include in-depth investigation of one or more topics and preparation of a research paper. Prerequisite: Graduate standing. S/U option.

ES 206: Spectroscopic and Microscopic Methods [3]
Application of advanced spectroscopic and microscopic methods to the study of earth materials, aqueous systems and aerosol-liquid interfaces. Graduate requirements include individual additional exercises and preparation of a research paper. Prerequisite: Graduate standing. S/U option.

ES 208: Surface and Colloid Chemistry of Artifacts [1-5]
Surface, colloidal and interfacial chemistry related to soil, environmental and microbial activities, properties, reactivities of surfaces and interfaces of earth materials; the role of mineral surfaces in promoting and catalyzing chemical phenomena at phase interfaces. Graduate requirements include individual additional exercises and preparation of a research paper. Prerequisite: Graduate standing. S/U option.

Hydrologic and geologic factors controlling the occurrence and use of groundwater on regional and local scales. Physical, mathematical, engineering and geological factors and risk assessment to subsurface hydrologic processes. Introduction to groundwater and transport modeling, with emphasis on model construction and simulation. Graduate requirements include completion of a research project, analysis of problem sets, compilation of a term paper or project, and development of project management skills in the course design project. Prerequisite: Graduate standing. S/U option.

ES 214: Mountain Hydrology of the Western United States [4]
Principles of snow formation, occurrence and measurement; concepts of evapotranspiration, runoff generation; geomorphology; water resource systems; water resource assessments; and resource management. Focus on California and the southwestern U.S. Design project. Prerequisites: Graduate standing. Graduate requirements include additional exercises and preparation of a research paper. Prerequisite: Graduate standing. S/U option.

Study of conduction, convection and radiation heat transfer, with applications to engineering problems. Graduate requirements include individual additional exercises and preparation of a research paper. Prerequisite: Graduate standing. S/U option.

ES 240: Water Resources Planning and Management [3]
Basic concepts of and issues in water resources planning and management. Focus on water and other resource planning and management. Quantitative analytical methods in water resources planning and management; applied to water resource systems analysis, multi-objective planning and risk assessment. Design project. Graduate requirements include preparation of a detailed case analysis. Prerequisite: Graduate standing. S/U option.

Fundamentals of electromagnetic remote sensing, concepts of information extraction and application. Prerequisites: CHEM and/or engineering and Earth science systems. Emphasis on water and other resource management topics. Graduate requirements include in-depth investigation of one or more remote sensing applications and preparation of a research paper. Prerequisite: Graduate standing. S/U option.
COURSE DESCRIPTIONS

Kathleen L. Middlebrook  
Energy systems, energy use.  
Energy systems, energy use.

Concepts and applications of solar thermal processes; applications of solar collectors for water heating, active and passive building heating and cooling; fundamentals and design of wind and small-scale hydro systems; economics of solar energy.  
Graduate-level requirements include preparation of a detailed case analysis.  
Prerequisite: Graduate standing.  
S/U option.

ES 270: Contaminant Fate and Transport [3]  
Properties and behavior of organic and metal contaminants, in soils, groundwater, surface waters and air.  
Emphasis on phase transfer and transport for organic compounds; completion and surface processes for metals.  
Modeling of environmentally important compounds, photochemical reactions, natural organic matter, sorption phenomena.  
Graduate-level requirements include preparation of a detailed case analysis.  
Prerequisite: Graduate Standing.  
S/U option.

ES 291: Environmental Systems Seminar [1-5]  
Seminar on advanced engineering and science topics, environmental systems research, and relevant case studies.  
Prerequisite: Graduate standing.  
S/U only.

ES 295: Graduate Research [1-5]  
Supervised research.  
Prerequisites: Graduate standing and consent of instructor.  
S/U only.

ES 298: Directed Group Study [1-5]  
Group project under faculty supervision.  
Prerequisites: Graduate standing and consent of instructor.  
S/U only.

ES 299: Directed Independent Study [1-6]  
independent project under faculty supervision.  
Prerequisites: Graduate standing and consent of instructor.  
P/NP grading only.

HISTORY

Lower Division Courses

World history from the 14th century to the mid-1800s.  
Growth of human populations, rise of nation states and impact of industrialization upon the natural world.

World history from the mid-19th century to the close of the 20th century.  
Colonization, rise and fall of empires, globalization.

The history of the United States from colonial roots to the beginnings of great-power status.  
Reformation, Industrial Age, impact and aftermath of the Civil War.

HST 17: Twentieth-Century America [4]  
Social, cultural, and political history of the United States from 1930 to the Clinton presidency.  
The U.S. in two world wars, the Great Depression, the Cold War at home and abroad.

Focus on the age of discovery, the idea of the frontier and the impact of westward expansion upon the indigenous peoples of the West.

Major topics will include the settlement, expansion and promise of the West, from Gold Rush-era California to the present day.

HST 90X: Freshman Seminar [1]  
Introduction to a topic in history.

HST 95: Lower Division Undergraduate Research [1-5]  
Supervised research.  
Permission of instructor required.

HST 98: Lower Division Directed Group Study [1-5]  
Permission of instructor required.  
P/NP grading only.

HST 99: Lower Division Individual Study [1-5]  
Permission of instructor required.  
P/NP grading only.

Upper Division Courses

HST 100: The Historian’s Craft [3]  
The techniques of research and writing used by historians from Thucydides to the so-called revisionists of today’s “cultural war.”  
Focus on the historian’s role as professional together with the tools of the trade.

HST 130: Topics in World History [4]  
In-depth study of a particular topic in world history.  
Possible topics include the impact of industrialization on the natural world, the age of exploration and discovery, colonization, the advent of the age of economic globalization.

HST 131: Topics in National History [4]  
In-depth study of a particular topic in the history of a nation.  
Possible topics include the social, cultural, or political history of that nation.

HST 133: Topics in the History of Science and Technology [1-2]  
The techniques of research and writing used by historians from Thucydides to the so-called revisionists of today’s “cultural war.”  
Focus on the historian’s role as professional together with the tools of the trade.

The political, cultural and intellectual history of America’s confrontation with Communism at home and abroad, from U.S. entry into the second world war to the collapse of the Soviet Union.

HST 155: Upper Division Undergraduate Research [1-5]  
Supervised research.  
Permission of instructor required.

HST 188: Upper Division Directed Group Study [1-5]  
Permission of instructor required.  
P/NP grading only.

HST 199: Upper Division Individual Study [1-5]  
Permission of instructor required.  
P/NP grading only.

HUMAN BIOLOGY

Upper Division Courses

HBO 190: Research Seminar [1]  
Student led seminar on human biology, including independent research presentations.  
Prerequisites: Upper division standing and consent of instructor.

HBO 195: Research Projects in Human Biology [1-12]  
Group or individual research projects in human biology under the direction of a BS faculty member and a faculty member from the School of Social Sciences, Humanities and Arts.  
Prerequisites: Upper division standing and consent of instructor.

LITERATURE

Lower Division Courses

LIT 110: Introduction to World Culture and Literature I [4]  
Introduction to the connections between language, literature and culture over time and across national traditions through a variety of literary genres.  
Master works of world literature in their cultural contexts, through comparative analysis.

LIT 21: Introduction to World Culture and Literature II [4]  
Introduction to the connections between language, literature and culture over time and across national traditions through a variety of literary genres.  
Master works of world literature in their cultural contexts, through comparative analysis.

LIT 30: Introduction to American Literature I [4]  
Introduction to the history and major works of literature of the United States from colonial times to the present, with a special emphasis on the range of American cultural traditions in a comparative context.

LIT 31: Introduction to American Literature II [4]  
Introduction to the history and major works of literature of the United States from colonial times to the present, with a special emphasis on the range of American cultural traditions in a comparative context.  
Prerequisite: LIT 30

LIT 40: Introduction to British Literature I [4]  
Survey of the history and major works of the literature of the British Isles from the Middle Ages to the present.

LIT 41: Introduction to British Literature II [4]  
Survey of the history and major works of the literature of the British Isles from the Middle Ages to the present.  
Prerequisite: LIT 40

LIT 50: Introduction to Hispanic Literature I [4]  
Survey of the history and major works of the literature of the Spanish- and Portuguese-speaking world.  
Prerequisite: LIT 40

LIT 51: Introduction to Hispanic Literature II [4]  
Survey of the history and major works of the literature of the Spanish- and Portuguese-speaking world.  
Prerequisite: LIT 40

LIT 90X: Freshman Seminar [1]  
Examination of a topic in literature.
COURSE DESCRIPTIONS

LIT 95: Lower Division Undergraduate Research [1-5]
Supervised research. Permission of instructor required.

LIT 98: Lower Division Directed Group Study [1-5]
Permission of instructor required. P/NP grading only.

LIT 99: Lower Division Individual Study [1-5]
Permission of instructor required. P/NP grading only.

Upper Division Courses

LIT 100: Engaging Texts: Introduction to Critical Practice [3]
Possible topics include Africana approaches in literary theory and criticism, with an emphasis on applications of methods to selected literary texts. Prerequisite: Junior standing in the major. Required of all Literature Emphasis stu-
dents.

LIT 110: Topics in World Literature [4]
Topics may include literature of one country or region of the world or comparisons of multiple literatures. Prerequisites: LIT 20 and 21 and the equivalent of a two-semester lower division literature survey, and LIT 100 [may be taken concurrently], or permission of the instructor. May be repeated for credit up to three times with different topics.

LIT 120: Topics in the Literature of Difference [4]
In-depth study of a literature of difference. Possible topics include African-American literature, Asian-American literature, Chicano/Latina literature, Native American literature, women's literature. Prerequisites: LIT 20 and 21, LIT 30 and 31, LIT 40 and 41, or LIT 50 and 51 or the equivalent of a two-semester lower division literature survey, and LIT 100 [may be taken concurrently], or permission of the instructor. May be repeated for credit up to three times with different topics.

LIT 130: Topics in American Literature [4]
In-depth study of a period, theme, etc. in American literature. Prerequisites: LIT 20 and 21, LIT 30 and 31, LIT 40 and 41, or LIT 50 and 51 or the equivalent of a two-semester lower division literature survey; and LIT 100 [may be taken concurrently], or permission of the instructor. May be repeated for credit up to three times with different topics.

LIT 140: Topics in British Literature [4]
In-depth study of a period, theme, etc. in British literature. Prerequisites: LIT 20 and 21, LIT 30 and 31, LIT 40 and 41, or LIT 50 and 51 or the equivalent of a two-semester lower division literature survey; and LIT 100 [may be taken concurrently], or permission of the instructor. May be repeated for credit up to three times with different topics.

LIT 150: Topics in Hispanic Literature [4]
In-depth study of Spanish literature of a single country, or more countries in a compara-
tive context, a period, etc. Prerequisites: LIT 20 and 21, LIT 30 and 31, LIT 40 and 41, or LIT 50 and 51 or the equivalent of a two-semester lower division literature survey; and LIT 100 [may be taken concurrently], or permission of the instructor. May be repeated for credit up to three times with different topics.

LIT 165: Great Writers [4]
In-depth examination of the works of a single writer, read in the original language of that writer. Prerequisites: LIT 20 and 21, LIT 30 and 31, LIT 40 and 41, or LIT 50 and 51 or the equivalent of a two-semester lower division literature survey; and LIT 100 [may be taken concurrently], or permission of the instructor. May be repeated for credit up to three times with different topics.

LIT 170: Topics in Language and Linguistics [4]
Topics may include linguistic theories, history of the English language. Prerequisites: LIT 20 and 21, LIT 30 and 31, LIT 40 and 41, or LIT 50 and 51 or the equivalent of a two-semester lower division literature survey; and LIT 100 [may be taken concurrently], or permission of the instructor. May be repeated for credit up to three times with different topics.

LIT 159: Upper Division Undergraduate Research [1-5]
Supervised research. Permission of instructor required.

LIT 198: Upper Division Directed Group Study [1-5]
Permission of instructor required. P/NP grading only.

LIT 199: Upper Division Individual Study [1-5]
Permission of instructor required. P/NP grading only.

An introduction to differential and integral calculus of functions of one variable. Elementary functions such as the exponential and natural logarithms, limits and continuity, derivatives, implicit differentiation, related rates, the mean value theorem, and optimization. Prerequisites: LIT 20 and 21, LIT 30 and 31, LIT 40 and 41, or LIT 50 and 51 or the equivalent of a two-semester lower division literature survey; and LIT 100 [may be taken concurrently], or permission of the instructor. May be repeated for credit up to three times with different topics.

Linear ordinary differential equations and basic linear algebra. Linear systems, matrix determi-
nants, linear transformations, eigenvalue prob-
llems, stability, phase plane analysis and nonlinear systems, numerical methods. Prerequisites: MATH 23 or MATH 25.

MATH 30: Mathematical Biology [4]
Calculus and physics fundamentals synthesized and extended to solve problems in biology and medicine. Population models, predator-prey and competition systems, epidemic models, applications to sexually transmitted dis-
esases, dynamic diseases, enzyme kinetics, bio-
logical oscillators and switches. Prerequisites: MATH 25.

MATH 60X: Freshman Seminar [1]
Introduction to a topic in mathematics.

MATH 95: Lower Division Undergraduate Research [1-5]
Supervised research. Permission of instructor required.

MATH 98: Upper Division Directed Group Study [1-5]
Supervised research. Permission of instructor required.

MATH 99: Lower Division Individual Study [1-5]
Permission of instructor required. P/NP grading only.

MATH 100: Engaging Texts: Introduction to Critical Practice [3]
Possible topics include Africana approaches in literary theory and criticism, with an emphasis on applications of methods to selected literary texts. Prerequisite: Junior standing in the major. Required of all Literature Emphasis stu-
dents.

MATH 110: Topics in World Literature [4]
Topics may include literature of one country or region of the world or comparisons of multiple literatures. Prerequisites: LIT 20 and 21 and the equivalent of a two-semester lower division literature survey, and LIT 100 [may be taken concurrently], or permission of the instructor. May be repeated for credit up to three times with different topics.

MATH 120: Topics in the Literature of Difference [4]
In-depth study of a literature of difference. Possible topics include Africana approaches in literary theory and criticism, with an emphasis on applications of methods to selected literary texts. Prerequisite: Junior standing in the major. Required of all Literature Emphasis stu-
dents.

MATH 130: Topics in American Literature [4]
In-depth study of a period, theme, etc. in American literature. Prerequisites: LIT 20 and 21, LIT 30 and 31, LIT 40 and 41, or LIT 50 and 51 or the equivalent of a two-semester lower division literature survey; and LIT 100 [may be taken concurrently], or permission of the instructor. May be repeated for credit up to three times with different topics.

MATH 150: Topics in Hispanic Literature [4]
In-depth study of Spanish literature of a single country, or more countries in a compara-
tive context, a period, etc. Prerequisites: LIT 20 and 21, LIT 30 and 31, LIT 40 and 41, or LIT 50 and 51 or the equivalent of a two-semester lower division literature survey; and LIT 100 [may be taken concurrently], or permission of the instructor. May be repeated for credit up to three times with different topics.

MATH 165: Great Writers [4]
In-depth examination of the works of a single writer, read in the original language of that writer. Prerequisites: LIT 20 and 21, LIT 30 and 31, LIT 40 and 41, or LIT 50 and 51 or the equivalent of a two-semester lower division literature survey; and LIT 100 [may be taken concurrently], or permission of the instructor. May be repeated for credit up to three times with different topics.

MATH 170: Topics in Language and Linguistics [4]
Topics may include linguistic theories, history of the English language. Prerequisites: LIT 20 and 21, LIT 30 and 31, LIT 40 and 41, or LIT 50 and 51 or the equivalent of a two-semester lower division literature survey; and LIT 100 [may be taken concurrently], or permission of the instructor. May be repeated for credit up to three times with different topics.

MATH 159: Upper Division Undergraduate Research [1-5]
Supervised research. Permission of instructor required.

MATH 198: Upper Division Directed Group Study [1-5]
Supervised research. Permission of instructor required.

MATH 199: Upper Division Individual Study [1-5]
Permission of instructor required. P/NP grading only.

MATH 133: Numerical Methods [3]
Numerical methods for computational mathemati-
cs. Round-off error, truncation error, numerical linear algebra, approximation and numerical quadrature and the solution of ordinary differential equations. Prerequisites: MATH 23 or MATH 25.

MATH 200: Mathematical Methods for Optimization [3]
Linear programming and a selection of topics from among the following: matrix games, inter-
ner programming, semidefinite programming, nonlinear programming, convex analysis and geometry, polyhedral geometry, the calculus of variations and control theory. Prerequisites: MATH 23 or MATH 25.

MATH 90X: Freshman Seminar [1]
Introduction to a topic in mathematics.

COURSE DESCRIPTIONS

UNIVERSITY OF CALIFORNIA, MERCED – INAUGURAL CATALOG
MSE 299: Directed Independent Study

Science and Engineering problems and techniques in molecular and material science, structure, shape and arrangement of molecules.

MSE 250: Material Characterization

Techniques and Properties of Materials. Introduction to classic and contemporary sources in the field of solid state science and engineering. Group project on material properties and techniques. Introduction to the selection of techniques best suited to control of these properties by the environment. Modern experimental and theoretical methods in spectroscopy, X-ray, neutron, and electron diffraction; scattering, thermal analysis, diffraction and spectroscopy; X-ray, neutron and electron diffraction.

PHYS 97: Introductory Physics I [4]

Prerequisites: None. Graduate standing or equivalent cross-listed with PHIL 95. Consideration of central themes in philosophy using classic and contemporary sources. Relevance of recent research in philosophy, such as computer science, including the Chinese Room, functionalism, materialism, functionalism, and the nature of morality. Introduction to formal and informal logic. Soundness vs. validity, inductive vs. deductive reasoning, truth tables, proof techniques in calculus.

PHYS 8: Introductory Physics I [4]

Prerequisite: MATH 25. Basic concepts of physics. Specific topics include the mind-body problem, the nature of psychological knowledge. One course in philosophy or consent of instructor required.

PHYS 98: Lower Division Directed Group Study [1-5]

Supervised research. Permission of instructor required. May be repeated twice for credit.

PHYS 99: Lower Division Individual Group Study [1-5]

Examination of a topic in physics. Permission of instructor required. May be repeated twice for credit.


Prerequisite: PHYS 137 or equivalent (overview), grand unified theories. Elements of general relativity. Physics of pulsars, cosmic rays, black holes. The cosmological system (the Constitution, political culture, and development of US federal government). The hydrogen atom, scattering and applications. Introduction to formal and informal logic. Soundness vs. validity, inductive vs. deductive reasoning, truth tables, proof techniques in calculus. Modern experimental and theoretical methods in spectroscopy, X-ray, neutron, and electron diffraction. Introduction to the selection of techniques best suited to control of these properties by the environment. Modern experimental and theoretical methods in spectroscopy, X-ray, neutron, and electron diffraction.
POLI 195: Upper Division Undergraduate Research [1-5]
Supervised research. Permission of instructor required.

POLI 198: Upper Division Directed Group Study [1-5]
Permission of instructor required. P/NP grading only.

POLI 199: Upper Division Individual Study [1-5]
Permission of instructor required. P/NP grading only.

PSYCHOLOGY Lower Division Courses

PSY 1: Introduction to Psychology [4]
Introduction to psychology as a science of behavior and mental processes, including biological bases of behavior, cognition, personality, social behavior, psychological disorders, techniques of therapy and applied science.

PSY 10: Analysis of Psychological Data [4]
Design and analysis of psychological research including experimental design, correlational research, and descriptive and inferential statistics. Students in the psychology emphasis must take this course before taking any upper division psychology courses. Prerequisite: PSY 1.

PSY 90X: Freshman Seminar [1]
Examination of a topic in psychology

PSY 95: Lower Division Undergraduate Research [1-5]
Supervised research. Permission of instructor required.

PSY 98: Lower Division Directed Group Study [1-5]
Permission of instructor required. P/NP grading only.

PSY 99: Lower Division Individual Study [1-5]
Permission of instructor required. P/NP grading only.

Upper Division Courses

Survey of common methodological approaches in psychological research. Prerequisite: PSY 10.

Development of the scientific study of human and animal behavior, with both current subject areas and in general. Prerequisite: PSY 1.

PSY 120: Physiological Psychology [4]
Relationship of brain structure and function to behavior, motivation, emotion, language and learning in humans and other animals. Review of research methods used in physiological psychology and neuroscience. Prerequisite: PSY 1.

PSY 121: Cognitive Psychology [4]
Introduction to human information processing, mental representation and transformation, memory, attention, memory, language processing, concept formation, problem solving and computer simulation. Prerequisite: PSY 1.

PSY 130: Developmental Psychology [4]
Ontogenetic account of human behavior from conception through adolescence with focus on motor skills, mental abilities, motivation and social interaction. Prerequisite: PSY 1.

Behavior of the individual in social situations, surveying problems of social cognition, social interaction, group tensions, norm development, attitudes, values, public opinion, status. Prerequisite: PSY 1.

PSY 132: Personality [4]
Theories of Freud, Erikson and other major contemporary approaches to personality. Prerequisite: PSY 1.

PSY 133: Abnormal Psychology [4]
Descriptive and functional account of behavioral disorders, with primary consideration given to neuropsychic and psychotic behavior. Prerequisite: PSY 1.

PSY 140: Clinical Psychology [4]
Major historical approaches to clinical psychology, including psychoanalysis, existentialism, humanism, systems theory and behavioral approaches. A review of what clinical psychologists do, including assessment methods, professional roles, and approaches to treatment. Prerequisite: PSY 1.

PSY 141: Industrial and Organizational Psychology [4]
Survey of interrelationships among psychological processes, interpersonal dynamics, and organizational forms. Topics include motivation, communication, decision making, leadership, personnel selection and training, stress and conflict, career development, organizational development and organization-community relations. Prerequisite: PSY 1.

Survey of existing knowledge of human sexual behavior; physiological, anatomical, psychological and cultural components; normative sexual functioning. Such topics as sexual deviation, sexual dysfunctions and types of treatment are also considered. Prerequisite: PSY 1.

PSY 146: Alcohol, Drugs and Behavior [4]
Survey of major drugs of abuse, their mode of action and their behavioral effects, both acute and chronic; etiology and maintenance of drug abuse; review of prominent strategies for prevention, intervention and treatment. Prerequisite: PSY 1.

Prerequisite: PSY 1. Issues that bear upon race, ethnicity and culture, such as the cultural dimensions of psycho- logical theories, cultural influences on child development, ethnic identity, psychological issues in immigration, ethnic and racial prejudice, and assessment and interventions with culturally diverse and ethnic minority populations. Prerequisite: PSY 1.

PSY 150: Topics in Psychology [4]
Intensive treatment of a special topic or problem of psychological interest. May be repeated for credit in different subject area. Prerequisites: PSY 1, junior or senior standing; major in psychology or permission of the psychology emphasis or consent of instructor.

PSY 151: Fieldwork in Psychology [1-3]
Supervised research in concrete settings: in community and institutional settings. Prerequisites: PSY 1, junior or senior standing; major in SBCS in the psychology emphasis or consent of instructor.

PSY 155: Upper Division Undergraduate Research [1-5]
Supervised research. Permission of instructor required.

PSY 158: Upper Division Directed Group Study [1-5]
Permission of instructor required. P/NP grading only.

PSY 159: Upper Division Individual Study [1-5]
Permission of instructor required. P/NP grading only.

QUANTITATIVE AND SYSTEMS BIOLOGY Graduate Courses

QSBI 212: Advanced Signal Transduction and Growth Control [4]
Signal transduction in mammalian cells with emphasis on molecular and genetic regulation of these processes and their role in cell function. Graduate requirement includes an advanced discussion section involving research methodology and data interpretation led by the instructor. Prerequisites: BIB 100, BIB 110 or equivalent, or consent of instructor.

Comprehensive introduction to the language of genes and genomes, including genotyping, gene regulation of development and disease, sources of phenotypic variation and organization of genomes across the scale of life. Graduate requirements include advanced discussion section led by instructor and genome informatics project. Prerequisites: Graduate standing and consent of instructor.

QSBI 281: Advanced Computational Biology [4]
Introduction to the principles and application of computational research on expression of the genome, finding the function of genes and genomes, including genotype to phenotype translation and reverse engineering of complex biological systems. Prerequisites: PSY 1, ECON 1, STAT 1.

QSBI 145: Second Language Learning and Bilingualism [4]
Prerequisites: PSY 1, major in SBCS, or senior standing in major in SBCS or consent of instructor.

QSBI 195: Upper Division Directed Undergraduate Research [1-5]
Supervised research. Permission of instructor required.

QSBI 251: Directed Independent Study II [1-5]
Graduate project under faculty supervision. Prerequisites: Graduate standing and consent of instructor. SU grading only.

QSBI 259: Directed Independent Study I [1-5]
Undergraduate student project under faculty supervision. Prerequisites: Graduate standing and consent of instructor. SU grading only.

QSBI 90X: Freshman Seminar [1]
Examination of a topic in the social, behavioral, and cognitive sciences.

SOCIAL, BEHAVIORAL AND COGNITIVE SCIENCE Lower Division Courses

SOC 90X: Freshman Seminar [1]
Examination of a topic in sociology.

SOC 95: Lower Division Undergraduate Research [1-5]
Supervised research. Permission of instructor required.

SOC 98: Lower Division Directed Group Study [1-5]
Permission of instructor required. P/NP grading only.

SOC 99: Lower Division Individual Study [1-5]
Permission of instructor required. P/NP grading only.

Upper Division Courses

A review of psychological and economic research on decision-making from perfect rationality, self-interest and other classical assumptions of economic behavior. The implications of these new findings for classical economics will be explored. Prerequisites: PSY 1, ECON 1.

SOC 145: Second Language Learning and Bilingualism [4]
Examination of second language acquisition, including processing of linguistic information by bilinguals, cognitive processes in bilingual discourse, child bilingualism, language maintenance or shift, with particular focus on the North American context. Prerequisite: PSY 1.

SOC 152: Integrative Topics [4]
Special topics that integrate theory or research from more than one discipline in the social and behavioral sciences. Prerequisites: PSY 1, ECON 1, SOC 1, or PSJ 1. Permission of the instructor may be repeated for credit with a different title.

SOC 195: Upper Division Undergraduate Research [1-5]
Supervised research. Permission of instructor required.

SPANISH LOWER DIVISION COURSES

SPAN 1: Elementary Spanish [1-4]
Introduction to speaking, reading, writing and understanding Spanish. Classes conducted in Spanish.
SPAN: Elementary Spanish II [4] Introduction to speaking, reading, writing, and understanding Spanish. Classes conducted in Spanish. Prerequisites: SPAN 1 or appropriate score on Spanish placement exam.

SPAN: Intermediate Spanish I [4] Review of Spanish grammar with emphasis on building speaking and writing skills and on readings to build cultural understanding. Classes conducted in Spanish. Prerequisites: SPAN 1 or appropriate score on Spanish placement exam.

SPAN: Intermediate Spanish II [4] Review of Spanish grammar with emphasis on building speaking and writing skills and on readings to build cultural understanding. Classes conducted in Spanish. Prerequisites: SPAN 1 or appropriate score on Spanish placement exam.

SPAN: Upper Division Directed Group Study [2-4] Directed group study and research under the direction of WCH faculty. Open to students who have completed at least 12 upper division units in WCH. Prerequisites: Permission of instructor and instructor and school required. May be repeated with different topics up to three times.

WRI: College Reading and Composition [4] Development of college-level skills in effective use of language, analysis and argumentation, organization, and strategies for creation, revision, and editing.

WCH: Public Research Project in World Cultures and History [1-3] Directed individual or group project designed around need of an external agency for research and public communication on an issue of vital public interest. End product may be in the form of a written report, interpretive text for the public, Web site, etc. Extensive writing will be required. Required of all World Cultures and History majors. Students may petition to complete this requirement through alternative activities, subject to review and approval by the dean.

COURSE DESCRIPTIONS
SPAN 2: Elementary Spanish II [4]  
Introduction to speaking, reading, writing, and understanding Spanish. Classes conducted in Spanish. Prerequisites: SPAN 1 or appropriate score on Spanish placement exam.

Review of Spanish grammar with emphasis on building speaking and writing skills and on readings to build cultural understanding. Classes conducted in Spanish. Prerequisites: SPAN 2 or appropriate score on Spanish placement exam.

Review of Spanish grammar with emphasis on building speaking and writing skills and on readings to build cultural understanding. Classes conducted in Spanish. Prerequisites: SPAN 3 or appropriate score on Spanish placement exam.

SPAN 10: Spanish for Heritage Speakers I [4]  
For native speakers with limited experience in grammar and composition. Emphasis on formal language study and writing. Classes conducted in Spanish. Prerequisites: native speaker proficiency, appropriate score on Spanish placement exam.

SPAN 11: Spanish for Heritage Speakers II [4]  
For native speakers with limited experience in grammar and composition. Emphasis on formal language study and writing. Classes conducted in Spanish. Prerequisites: SPAN 10 or appropriate score on Spanish placement exam.

SPAN 90X: Freshman Seminar [1]  
Examination of a topic in Spanish.

SPAN 95: Lower Division  
Undergraduate Research [1-5]  
Supervised research. Permission of instructor required.

SPAN 98: Lower Division Directed Group Study [1-5]  
Permission of instructor required. F/NP grading only.

WORLD CULTURES AND HISTORY  
Upper Division Courses

SPAN 100: Advanced Spanish I [4]  
Emphasis on composition and conversation to expand oral and written proficiency. Introduction to literary and other cultural texts. Focus on conversational classes in Spanish. Prerequisites: SPAN 4 or equivalent or appropriate score on Spanish placement exam.

SPAN 101: Advanced Spanish II [4]  
Emphasis on composition and conversation to expand oral and written proficiency. Introduction to literary and other cultural texts. Focus on composition. Classes conducted in Spanish. Prerequisites: SPAN 100 or equivalent or appropriate score on Spanish placement exam.

SPAN 195: Upper Division  
Undergraduate Research [1-5]  
Supervised research. Permission of instructor required.

SPAN 198: Upper Division Directed Group Study [1-5]  
Permission of instructor required. F/NP grading only.

SPAN 199: Upper Division Individual Study [1-5]  
Permission of instructor required. F/NP grading only.

Upper Division Courses

WCH 100: Topics in Area Studies [4]  
In-depth study of the History and cultural, political and economic systems of a region. Prerequisites: Completion of lower division requirements for either World Cultures and History or Social, Behavioral and Cognitive Sciences, or permission of instructor. May be repeated for credit up to three times with different topics.

WCH 190: World Cultures and History Proseminar: Research [3]  
Captive course for majors. Students conduct research under faculty supervision to culminate in a senior thesis. Required of all World Cultures and History majors. Prerequisite: senior standing in WCH major.

WCH 191: World Cultures and History Proseminar: Senior Thesis [3]  
Captive course for majors. Completion of a senior thesis, extensive written research required. Required of all World Cultures and History majors. Prerequisites: WCH 190 and senior standing in WCH major.

WCH 192: Public Research Project in World Cultures and History [1-3]  
Directed individual or group project designed around need of an external agency for research and public communication on an issue of vital public interest. End product may be in the form of a written report, interpretive text for the public, Web site, etc. Extensive writing will be required. Required of all World Cultures and History majors. Students may petition to complete this requirement through alternative activities, subject to review and approval by the dean.

WCH 198: Upper Division Directed Group Study [2-4]  
Directed group study and research under the direction of WCH faculty. Open to students who have completed at least 12 upper division units in WCH. Prerequisites: Permission of instructor and school required. May be repeated with different topics up to three times.

WCH 199: Upper Division Individual Study [1-4]  
Directed individual study and research, under the direction of WCH faculty, in an area not normally covered in the WCH curriculum. Open to students who have completed at least 12 upper division units in WCH. Permission of instructor and school required.

WRITING  
Lower Division Courses

WRI 1: College Reading and Composition [4]  
Development of college-level skills in effective use of language, analysis and argumentation, organization, and strategies for creation, revision, and editing.

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Developmental psychology, development of cognitive potential

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ANTHONY W.H. VAN BUUREN, Associate Adjunct Professor, School of Natural Sciences B.Sc., Simon Fraser University, M.S., Ph.D., University of British Columbia Synthetic and electronic structure of nanomaterials

JEFFREY YOSHIMI, Assistant Professor, School of Social Sciences; Humanities and Arts B.A., University of California Berkeley, M.A., Ph.D., University of California, Irvine Philosophy of mind, philosophy of cognitive science, phenomenology (especially Husserl) and neural networks

ADJUNCT PROFESSORS AND PROFESSIONAL RESEARCHERS

INAHI CHOI, Assistant Researcher, School of Natural Sciences B.S., University of California, Los Angeles; Ph.D., University of Southern California Hepatitis C virus (HCV) and the mechanism of synthesis and function of type II HCV glycoproteins that are produced by programmed translation- frame-shifting, as well as how HCV replication might be regulated by endogenous and exogenous agents including ribavirin, cytokines, alcohol, and reactive oxygen species

PHILIP B. DUFFY, Associate Adjunct Professor, School of Natural Sciences A.B., Harvard University, M.S., Ph.D., Stanford University Nanomaterials, single molecule imaging and measurements

WILLEM J.M. VAN BREUGEL, Adjunct Professor, School of Natural Sciences Ingenieur degrees, Eindhoven University, Doctoral degree, Ph.D., Leiden University Distant massive galaxies, the effects of their central super-massive black holes on the galaxy-formation process, and the formation and evolution of the largest structures known in the Universe; clusters of galaxies

ANTHONY W.H. VAN BUUREN, Associate Adjunct Professor, School of Natural Sciences B.Sc., Simon Fraser University, M.Sc., Ph.D., University of British Columbia Synthetic and electronic structure of nanomaterials

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Endowed chairs and professorships are critical to the successful development of the University of California, Merced. Hiring the very finest scholars ensures that UC Merced will continue the University of California’s tradition of excellence in teaching and research, and endowments are pivotal in attracting educators and researchers of the highest quality.

At the time of publication, UC Merced is fortunate to have received commitments for 15 chairs in disciplines ranging from the arts to the sciences.

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ACCRREDITATION

The University of California, Merced is in the eligibility phase of its fifth reaccreditation by the Accrediting Commission for Senior and Associate Colleges and Schools of the Western Association of Schools and Colleges (WASC). 985 Atlantic Avenue, Suite 100, Alameda, CA 94501.

UNIVERSITY POLICY ON NONDISCRIMINATION, SEXUAL HARASSMENT, STUDENT RECORDS AND PRIVACY

Nondiscrimination: The University of California, in accordance with applicable federal and state laws and University policy, does not discriminate on the basis of race, color, national origin, religion, sex, disability, age, medical condition (cancer, genetic information, mental or physical), marital status, citizenship, sexual orientation, or status as a Vietnam-era veteran or special disabled veteran. The University also prohibits sexual harassment. This nondiscrimination policy covers admission, access and treatment in University programs and activities.

Inquiries regarding the University’s student-related nondiscrimination policies may be directed to Student Judicial Affairs.

Sexual Harassment: Sexual harassment of all persons who participate in University programs and activities is prohibited by law and by University regulation (Policy 380-12). Sexual harassment is unacceptable and will not be condoned on the UC Merced campus.

Disclosures from Student Records: In accordance with the Federal Family Educational Rights and Privacy Act of 1974 and campus procedures implementing the University of California Policies Applying to the Disclosure of Information from Student Records, students at the UC Merced campus of the University have the following rights:

- The right to inspect and review their own student records within 45 days of the date the University receives a written request for access.
- Students should submit their requests in writing to the University registrar, dean, or other appropriate campus official for the office having custody of the requested record. The request must identify the record(s) they wish to inspect and review. The campus official will make arrangements for access and notify the student of the time and place where the records may be inspected.
- If the records are not maintained by the campus official, the student shall be directed to the person or office that has control over the records. The student shall be advised of the name and address of the person or office to which the request should be directed.
- The right to request the amendment of their own student records if a student believes that the records are inaccurate or misleading. Students should submit a written request to amend a record that they believe is inaccurate or misleading to the campus official responsible for the record, clearly identifying the portion of the record they want changed, and specifying why it is believed to be inaccurate or misleading. If the University determines that the record should not be amended, a notation regarding the student’s request will be included in the record.

Inquiries regarding the University’s student-related nondiscrimination policies may be directed to Student Judicial Affairs.

For additional information regarding the sexual harassment policies, please visit the Office of the Registrar at the UC Merced campus.

Questions about these rights should be referred to the Registrar at UC Merced.

Students who may request in writing by the tenth day of instruction that their addresses, including e-mail addresses, and telephone listings or all personally identifiable information from their records not be released as public information. Students who desire to withhold their addresses and telephone numbers and thereby prevent the release of such information may file a written request with the Registrar.

Students who desire to withhold their addresses and telephone numbers and thereby prevent the release of such information may file a written request with the Registrar.
under Art. IX, Sec. 9, of the California
January 1, 1975 pursuant to the authority of
ber is used to verify personal identity in the UC
The Regents of the University of California.
and implemented by the Standing Orders of
purposes at the University of California are
fee in addition to all other fees. The residence
Tuition Fee for Nonresident Students
are available at the Office of the Registrar.
standing goals of engendering leadership and
forms available to all enrolled students. This
a California Resident
Establishing Intent to Become
Your residence cannot be derived from your
state law, regardless of the length of your stay.
Physical presence within the state solely
extended until you have demonstrated both
continuous presence and intent for one full
year. Physical presence within the state solely for
educational purposes does not constitute the
establishment of California residence under
state law, regardless of the length of your stay.
Your residence cannot be derived from your
parents, since you are an adult, from your
parents.


Tuition Fee for Nonresident Students
If you have not been living in California with
intent to make it your permanent home for
more than one year immediately before the
residence determination date for each semes-
ter in which you propose to attend the University
of California, you must pay the nonresident
fee in addition to all other fees. The residence
determination date is the instruction date
begins at the University of California, Merced.

Law Governing Residence
The rules regarding legal residence for tuition
purposes at the University of California are
governed by the California Education Code and
implemented by the Standing Orders of
The Regents of the University of California.
Under these rules, adult citizens or certain

class of citizens can establish residence for
purposes of tuition. There are also particular
rules that apply to the residence classification
of minors (see below).

Who is a California Resident?
If you are an adult who is not an alien present
in the U.S. in a nonimmigrant status which
precludes you from establishing domicile in the U.S.,
(i.e., e, B, F-H, H, or I visa) and you want to
be classified as a resident for tuition purposes,
you must have established your con-
tinuous presence in California more than one
year immediately preceding the residence
determination date for the semester during
which you propose to attend the University,
and you must have given up any previous resi-
dence you must also present objective evi-
dence that you intend to make California your
permanent home. Evidence of intent must be
dated one year before the term for which you
seek resident classification. If these steps
are delayed, the one-year duration period will
be extended until you have demonstrated both
continuous presence and intent for one full
year. Physical presence within the state solely
for educational purposes does not constitute the
establishment of California residence under
state law, regardless of the length of your stay.
Your residence cannot be derived from your
parents, since you are an adult, from your
parents.

Establishing Intent to Become
a California Resident
Intention of your intent to make California your
permanent residence can include register-
ning to vote and voting in California elections;
designing California as your permanent
address on all school and employment records,
including military records if you are in the mili-
tary service; obtaining a California driver's
license or, if you never had a driver's license
from any state, a California Identification Card,
obtaining California vehicle registration; paying
California income taxes as a resident, including
taxes on income earned outside California
from the date you establish residence; estab-
lishing a California residence in which you
keep your permanent belongings; licensing for
professional practice in California; and the
absence of these indications in states other
than California during any period for which you
claim California residence. Documentary evidence
is required. All relevant indicators will be consid-
eterm for which you are requesting resident clas-
tification; or (6) you are a single undergraduate stu-
dent at least 18 years of age and have been
resident classification if you remain in
California after your parent departs, enroll in a
California public postsecondary institution
within one year of your parent's departure,
and, once enrolled, attend continuously until
you turn 18.

Self-Support
If you are a U.S. citizen or eligible alien and
are either a minor or age 18 and can prove that
you lived in California for the entire year
immediately preceding the residence deter-
mination date, that you have been self-supporting
for that year, and that you intend to make
California your permanent home, you may
be eligible for resident classification and
may retain this exemption under the conditions
listed above. (See also: Military Waiver of Nonresident Tuition

4. Two-Year Care and Control
If you are a U.S. citizen or eligible alien and you
lived continuously for at least two years before
your classification date with an adult who
was not your parent but was responsible for
your care and control, and who, during the
one year immediately preceding
the residence determination date was a
resident of California, you are entitled to resi-
dent status. This exemption continues until
you turn 18 and have resided in the state long
enough to become a resident, as long as you
continue to attend a California State University.

Exemption from Nonresident Tuition
(Proof of Eligibility is Required)
1. Member of the Military
If you are a member of the U.S. military sta-
tioned in California on active duty, unless you
are assigned for educational purposes to a
state-supported institution of higher educa-
tion, you may not be charged for nonresident
fee in addition to all other fees. The employment
status of your parent or spouse with the
University must be ascertainable each semester.

5. Child of Deceased Public Law Enforcement or Fire Suppression Employee
If you are a child of a public law enforcement
or fire suppression employee who was a
California resident and was killed in the line
of duty and either your parent or the line of
duties, you may be entitled to a waiver of the
nonresident tuition fee.

6. Dependent Child of a California Resident Parent
If you have not been an adult resident of
California for more than one year and you are
a dependent child of a California resident par-
ent who has been a resident for more than
one year immediately before the residence

Exemptions from Nonresident Tuition
(Proof of Eligibility is Required)
1. Member of the Military
If you are a member of the U.S. military sta-
tioned in California on active duty, unless you
are assigned for educational purposes to a
state-supported institution of higher educa-
tion, you may not be charged for nonresident
fee in addition to all other fees. The employment
status of your parent or the line of
duties, you may be entitled to a waiver of the
nonresident tuition fee.

6. Dependent Child of a California Resident Parent
If you have not been an adult resident of
California for more than one year and you are
a dependent child of a California resident par-
ent who has been a resident for more than
one year immediately before the residence

Exemptions from Nonresident Tuition
(Proof of Eligibility is Required)
1. Member of the Military
If you are a member of the U.S. military sta-
tioned in California on active duty, unless you
are assigned for educational purposes to a
state-supported institution of higher educa-
tion, you may not be charged for nonresident
fee in addition to all other fees. The employment
status of your parent or the line of
duties, you may be entitled to a waiver of the
nonresident tuition fee.

6. Dependent Child of a California Resident Parent
If you have not been an adult resident of
California for more than one year and you are
a dependent child of a California resident par-
ent who has been a resident for more than
one year immediately before the residence

Exemptions from Nonresident Tuition
(Proof of Eligibility is Required)
1. Member of the Military
If you are a member of the U.S. military sta-
tioned in California on active duty, unless you
are assigned for educational purposes to a
state-supported institution of higher educa-
tion, you may not be charged for nonresident
fee in addition to all other fees. The employment
status of your parent or the line of
duties, you may be entitled to a waiver of the
nonresident tuition fee.

6. Dependent Child of a California Resident Parent
If you have not been an adult resident of
California for more than one year and you are
a dependent child of a California resident par-
ent who has been a resident for more than
one year immediately before the residence

Exemptions from Nonresident Tuition
(Proof of Eligibility is Required)
1. Member of the Military
If you are a member of the U.S. military sta-
tioned in California on active duty, unless you
are assigned for educational purposes to a
state-supported institution of higher educa-
tion, you may not be charged for nonresident
fee in addition to all other fees. The employment
status of your parent or the line of
duties, you may be entitled to a waiver of the
nonresident tuition fee.
Maintain a California driver’s license and vehi-
cle registration. If it is necessary to change your
license or registration while temporarily
residing in another state, the license MUST be
changed back to California within 10 days of
the date of return to the state and the vehicle
registration must be changed within 20 days
of the date of return.
Return to California during your vacation
periods.

Petitioning for Resident Classification (for
continuing students)
If you are a continuing student who is classi-
cied as a nonresident for tuition purposes and
you believe you will be eligible for resident sta-
tus, you must file a petition with the University
Register. The deadline to file the petition is
the last working day before the first day of
instruction for the term for which you are
seeking resident status.

Time Limitation on Providing
Documentation
If additional documentation is required for a
residence classification but is not readily acces-
sible, you will be allowed until the end of the
applicable semester to provide it.

Incorrect Classification
If you were incorrectly classified as a resident,
you are subject to reclassification and to pay-
ment of all nonresident tuition fees paid. If
you concealed information or furnished false
information and were classified incorrectly as a
result, you are also subject to University disci-
pline. Resident students who become nonresi-
dents must immediately notify the campus resi-
dence deputy.

Inquiries and Appeals
Inquiries regarding residence requirements,
determination, and/or recognized exceptions
should be directed to the University Registrar
at UC Merced or the Legal Analyst-Residence
Matters, 1111 Franklin Street, 8th Floor,
Oakland, CA 94607-5200. No other University
personnel are authorized to supply information
relative to residence requirements for tuition
purposes.
Any student, following a final decision on resi-
dence classification, may appeal in writing to
the legal analyst within 45 days of notification
of the residence deputy’s final decision.

Privacy Notice
All information requested on the Statement of
Legal Residence form is required by the author-
ity of Standing Order 110.2 (a)-(d) of the
Regents of the University of California for
determining whether you are a legal resident
for tuition purposes. Registration cannot be
processed without this information. The Office
of the University Registrar maintains the
requested information. You have the right to
inspect university records containing the resi-
dence information requested on the form.

DISABILITY SERVICES
UC Merced’s Office of Disability Services pro-
vides services to students with disabilities
who are eligible for reasonable accommodations
under Section 504 of the Rehabilitation Act, the
Americans with Disabilities Act or state law.
For further information on the Office of Disability
Services, please contact (209) 724-4482.

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Temporary Absences
If you are a nonresident student who is in the
process of establishing California residency for
tuition purposes and you leave California
during nonacademic periods (for example, to
return to your former or parent’s home state),
your presence in California will be presumed to
be solely for educational purposes, and only
convincing evidence to the contrary will rebut
this presumption. Students who are in the state
solely for educational purposes will NOT be
classified as residents for tuition purposes,
regardless of the length of stay.
If you are a student who has been classified as
a resident for tuition purposes and you leave
the state temporarily, your absence could result in
the loss of your California residence. Again,
only strong evidence will rebut the presump-
tion that you withdrew in California solely for
educational purposes. The burden of proof will
be on you to verify that you did nothing incon-
sistent with your claim of a continuing
California residence during your entire
absence.
If you are a minor student, your residence is
determined by the residence of the parent(s) with
whom you live or last lived. You would not lose
that residence unless you perform acts
inconsistent with a claim of permanent
California residence.
Some steps that you (or your parent(s) if you are
a minor student) should take to retain resi-
dent status for tuition purposes are:

1. Policy
Satisfy California resident income tax obliga-
tions. It should be noted that individuals claim-
ing permanent California residence are liable
for payment of income taxes on their TOTAL
income, including income earned outside the
state or abroad or in another state).
Continue to use a California permanent
address ON ALL RECORDS (educational,
employment, military, etc.).

2. Attend an out-of-state public institution as
a nonresident for the entire period of enroll-
ment there.
Retain your California voter’s registration and
vote by absentee ballot.
privacy notice
All information requested on the Statement of Legal Residence form is required by the authority of Standing Order 110.2 (a)-(d) of the Regents of the University of California for determining whether you are a legal resident for tuition purposes. Registration cannot be processed without this information. The Office of the University Registrar maintains the requested information. You have the right to inspect university records containing the residence information requested on the form.

Disability Services
UC Merced’s Office of Disability Services provides services to students with disabilities who are eligible for reasonable accommodations under section 504 of the Rehabilitation Act, the Americans with Disabilities Act or state law. For further information on the Office of Disability Services, please contact (209) 724-4482.

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If you are a student who has been classified as a resident for tuition purposes and you leave the state temporarily, your absence could result in the loss of your California residency. Again, only strong evidence will rebut the presumption that you were in California solely for educational purposes. The burden of proof will be on you to verify that you did nothing inconsistent with your claim of a continuing California residence during your entire absence.
If you are a minor student, your residence is determined by the residence of the parent(s) with whom you live or last lived. You would not lose that residence unless you perform acts inconsistent with a claim of permanent California residence. Some steps that you (or your parent(s) if you are a minor student) should take to retain resident status for tuition purposes are:
Policy
Satisfy California resident income tax obligations. It should be noted that individuals claiming permanent California residence are liable for payment of income taxes on their TOTAL income, including income earned outside the state and or in another state.
Continue to use a California permanent address on ALL RECORDS (educational, employment, military, etc.).
Attend an out-of-state public institution as a nonresident for the entire period of enrollment.
Return to California during your vacation periods.
Petitioning for Resident Classification (for continuing students) If you are a continuing student who is classified as a nonresident for tuition purposes and you believe you will be eligible for resident status, you must file a petition with the University Registrar. The deadline to file the petition is the last working day before the first day of instruction for the term for which you are seeking resident status.
Time Limitation on Providing Documentation If additional documentation is required for a residence classification but is not readily accessible, you will be allowed until the end of the applicable semester to provide it. Incorrect Classification If you were incorrectly classified as a resident, you are subject to recalcification and to payment of all nonresident tuition fees not paid. If you concealed information or furnished false information and were classified incorrectly as a result, you are also subject to University discipline. Resident students who become nonresidents must immediately notify the campus residence deputy.
Inquiries and Appeals Inquiries regarding residence requirements, determination, and/or recognized exceptions should be directed to the University Registrar at UC Merced or the Legal Analyst-Residence Matters, 111 Franklin Street, 8th Floor, Oakland, CA 94607-5200. No other University personnel are authorized to supply information relative to residence requirements for tuition purposes.
Any student, following a final decision on residence classification, may appeal in writing to the legal analyst within 45 days of notification of the residence deputy’s final decision.
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