**Majors:**
- Applied Mathematics, B.S.
- Applied Physics, B.S.
- Chemical Physics, B.S.
- Chemistry, A.B., B.S.
- Computer Science, B.S.
- Geology, A.B., B.S.
- Mathematical and Scientific Computation, B.S.
- Mathematics, A.B., B.S.
- Natural Sciences, B.S.
- Pharmaceutical Chemistry, B.S.
- Physics, A.B., B.S.
- Statistics, A.B., B.S.

**Minors:**
- Chemistry
- Computer Science
- Environmental Geology
- Geology
- Geophysics
- Mathematics
- Oceanography
- Physics
- Statistics

**Division of Social Sciences**

These majors focus largely on issues and problems that characterize social, cultural, political and economic life across human societies. They provide students the opportunity to explore the relationships between people and the groups and organizations of which they are a part, the antecedents of individual behavior, the development of political and economic systems, the social forces that have shaped the contemporary world and the foundations of language, thought, knowledge and perception. Students interested in studying these types of issues may select from 15 dozen different majors.

**Majors:**
- Anthropology, A.B., B.S.
- Communication, A.B.
- East Asian Studies, A.B.
- Economics, A.B.
- History, A.B.
- International Relations, A.B.
- Linguistics, A.B.
- Middle East/South Asia Studies, A.B.
- Philosophy, A.B.
- Political Science, A.B.
- Political Science–Public Service, A.B.
- Psychology, A.B., B.S.
- Science and Technology Studies, A.B.

- Sociology, A.B.
- Sociology–Organizational Studies, A.B.

**Minors:**
- Anthropology
- Communication
- East Asian Studies
- Economics
- History
- History and Philosophy of Science
- Jewish Studies
- Latin American and Hemispheric Studies
- Linguistics
- Linguistics for Language Teachers
- Middle East/South Asia Studies
- Philosophy
- Political Science
- Psychology
- Sociology
- War-Peace Studies

**Collegewide Program**

Students whose academic interests cannot be satisfactorily met through the completion of an established major have the opportunity to develop an individual major. Individual majors may reflect the most recent trends in scholarship and research and are typically interdisciplinary in nature. The major proposal is developed in close and active consultation with two faculty advisers from the academic disciplines most closely related to the subject matter of the individual major. Careful faculty guidance and review assure that individual majors are comparable in academic rigor and intellectual coherence to those regularly available through the departments and programs of the college.

**Major:**
- Individual Major, A.B., B.S.

**BACHELOR’S DEGREE REQUIREMENTS**

You must satisfy four groups of requirements before you can become eligible for candidacy for the bachelor’s degree; see Bachelor’s Degree Requirements, below. The four groups are:
- University requirements, which apply to all colleges;
- General Education requirement, which applies to all colleges;
- College requirements; and
- Major requirements.

Every student is responsible for seeing that all of their degree requirements are fulfilled.

Detailed information on university requirements, the General Education requirement and college requirements can be found in this chapter.
UNIVERSITY REQUIREMENTS

All students must fulfill the following University of California requirements.

Entry Level Writing Requirement

The university requires every undergraduate student to demonstrate college-level proficiency in English composition. Satisfaction of the Entry Level Writing Requirement is a prerequisite to all other undergraduate courses in English.

The requirement, as determined by Undergraduate Admissions, may be met in one of the following ways:

• By earning a score of 680 or higher on the Writing section of the new SAT Reasoning Examination, or on the old SAT-II Writing Test.

• By earning a score of 3, 4 or 5 on either College Board Advanced Placement Examination in English.

• By earning a score of 30 or higher on the Combined English/ Writing section of the ACT Assessment.

• By earning a score of 5 or above on the International Baccalaureate's Higher Level English A Examination.

• By earning a score of 6 or above on the International Baccalaureate's Standard Level English A Examination.

• By entering the university with credentials showing the completion of an acceptable 3 semester-unit or 4 quarter-unit college-level course in English composition with a grade of C or higher.

• By writing a passing essay on the Analytical Writing Placement Examination. This examination may be taken only once prior to enrollment. It is offered in the spring at local sites throughout California; a student admitted for fall quarter who has not already satisfied the Entry Level Writing Requirement must take this examination. Out-of-state students or any California freshmen admitted after mid-April will take another form of the Analytical Writing Placement Examination, which will be offered on the UC Davis campus at the beginning of each quarter. For the time and location, consult the Registration Guide, published before the beginning of each quarter.

If you have not satisfied the requirement in one of the ways described above, you must enroll in Workload 57 during your first quarter of residence at the university, or as soon thereafter as space is available in the course. Workload 57, offered by Sacramento City College on the UC Davis campus, counts as 4.5 units on your study list and toward minimum progress but carries no units toward graduation.

To satisfy the requirement, students must earn a course grade of C or higher. Students who receive a grade lower than C must repeat Workload 57. If the requirement has not been satisfied by the end of your third quarter, and you were not required to take courses for non-native speakers of English in the Linguistics program, you may be disenrolled from the University.

Students whose native or school language is not English, and some students whose schooling combines work in the United States and in another country, must demonstrate proficiency in English. The level of proficiency must meet the standards of both the Linguistics and the Entry Level Writing programs. The results of the Analytical Writing Placement Examination administered at the beginning of each quarter determine whether a student has met the Entry Level Writing Requirement or must take specific course work in the Linguistics program. Students held for Linguistics course work have three quarters to meet the Entry Level Writing Requirement plus the number of quarters required in Linguistics.

American History and Institutions

The American History and Institutions requirement ensures that every graduating student will have at least a minimum knowledge of the background of this country’s development and an understanding of the political, economic and social interrelationships of its way of life.
You may meet this requirement in any of these ways:

- Complete one high school unit in American history, or 1/2 high school unit in American History and 1/2 high school unit in civics or American government, with a grade of C or better in each course.
- Complete any one of the following courses:
  - African American and African Studies 10, 100, 120, 121
  - Asian American Studies 1, 2
  - Economics 111A, 111B
  - Native American Studies 1, 10, 55, 116, 130A, 130B, 130C
  - Political Science 1, 5, 100, 101, 102, 103, 104, 105, 106, 108, 109, 113, 130, 131, 160, 163

Students electing to complete one of the above courses in order to meet this requirement are subject to the rules for prerequisites and majors.

- Present evidence that the requirement has been accepted as satisfied at another campus of the university.
- Present evidence that the requirement has been satisfied through courses in the area of American History and Institutions at another collegiate institution whose credits are acceptable for transfer to UC Davis.
- Successful completion of the Advanced Placement (AP) Examination in American History or American Government and Politics with a score of 3 or higher.
- Successful completion of the International Baccalaureate (IB) Examination in History of the Americas Higher Level (HL) with a score of 5, 6, or 7.
- Successful completion of the SAT Subject Examination in U.S. History with a score of 550 or higher.

International students, regardless of the type of visa they hold, must meet the university’s American History and Institutions requirement for graduation.

**Unit Requirements**

A minimum of 180 quarter units is required for graduation. These must be distributed according to the minimum requirements set forth by the faculty of your college.

A maximum of 12 units of Internship Courses (92, 192, or a combination) may be counted toward the 180-unit bachelor’s degree requirement.

The acceptability of transfer courses for unit credit is determined by Undergraduate Admissions. The acceptability of such courses toward specific requirements is determined by the individual college or school.

Students should refer to the Advanced Placement Examination chart and their transcripts to eliminate the possibility of duplication of credit.

**Residence Requirements**

The minimum residence requirement for a bachelor's degree at the University of California is one academic year (three quarters). Thirty-five of the final 45 quarter units completed by each candidate must be earned while in residence on the UC Davis campus.

Each summer session in which a student completes a course of at least 2 quarter units may be counted as half a quarter's residence. Not more than 18 of these 35 quarter units may be completed in summer session courses at UC Davis.

Regularly approved courses (laboratory, field, or other individual work) done outside of a regular session but under the direction of a department of instruction may be accepted upon the recommendation of the department in partial fulfillment of the residence requirement for the bachelor’s degree. Registration is with the consent of the instructor only.

UC Davis Extension courses are not accepted as part of the university residence requirement.

There are additional residence requirements for students enrolled in the Colleges of Letters and Science and Engineering. If you are planning to study abroad during your senior year, you should consult your college dean’s office.

With the approval of the dean of a student's college or school, a candidate for the bachelor's degree who was in active service in the armed forces of the United States in the year preceding the awarding of the degree may be recommended for the degree after only one quarter of university residence in which the candidate completes at least 16 units or passes a comprehensive examination in the major or field of concentration.

**Scholarship Requirement**

To receive a bachelor's degree, you must obtain twice as many grade points as units (a 2.000 GPA) for all courses you have attempted in the university. An exception to this rule is made for those students undertaking certain honors courses. For specific college requirements consult the college sections following.

**GENERAL EDUCATION REQUIREMENT**

The General Education (GE) requirement promotes the intellectual growth of all undergraduates by ensuring that they acquire a breadth of knowledge that will enlarge their perspectives beyond the focus of a major and serve them well as participants in a knowledge-based society. It seeks to stimulate continued intellectual growth by providing students with knowledge not only of the content but also of the methodologies of different academic disciplines. It involves students in the learning process by its expectation of considerable writing and class participation. It encourages students to consider the relationships between disciplines.

**New General Education (GE) Requirement; Fall 2011 and On**

The following section pertains to students who matriculated to UC Davis for the first time in Fall 2011 or later. Students who matriculated prior to Fall 2011 should refer to the Former General Education (GE) Requirement; Pre-Fall 2011, on page 99.

The GE requirement has two components, **Topical Breadth** and Core Literacies, and is defined in terms of units, not courses.

**Topical Breadth Component .................. 52 units**

A GE course in topical breadth addresses broad subject areas that are important to the student’s general knowledge. The units of most undergraduate courses at UC Davis are assigned to one of the three Topical Breadth Areas.
Note: In the case of a course that has been certified in more than one Topical Breadth Area, a student may count the units of the course in only one of the areas in which it has been certified.

- **Arts and Humanities** .................................................. 12-20 units  
  Courses in this area provide students with knowledge of significant intellectual traditions, cultural achievements and historical processes.

- **Science and Engineering** ............................................. 12-20 units  
  Courses in this area provide students with knowledge of major scientific ideas and applications. They seek to communicate the scope, power, limitations and appeal of science.

- **Social Sciences** ......................................................... 12-20 units  
  Courses in this area provide students with knowledge of the individual, social, political and economic activities of people.

**Core Literacies Component** ........................................... 35 units

The literacies are crucial both for success in one's profession and also for a thoughtful engaged citizenship in the community, nation and world.

Note: In the case of a course that has been certified in more than one Core Literacy Area, a student may count the units of the course in only one of the core literacy areas in which it has been certified. Additionally, GE credit for a core literacy course a student completes before it was an approved GE literacy course is subject to the college dean's office approval.

1. **Literacy with Words and Images** ........ at least 20 unit

The objective of this core literacy is to help students communicate their ideas effectively in written, oral and visual forms. The requirement also seeks to enhance students' critical judgment of oral, written, and visual messages created by others.

Note: A student must have completed the Entry Level Writing Requirement (formerly known as the Subject A requirement) before receiving General Education credit for coursework satisfying requirements a, b, and Writing Experience coursework satisfying requirement c, below.

- **a. English Composition** .............................. 8 units  
  (as described by College of A&ES, College of L&S, College of Biological Sciences, or College of Engineering)

- **b. Writing Experience** coursework in the student's major or in other departments ........... at least 6 units

Courses in writing experience provide students instruction on how to communicate ideas in the subject matter of the course. The opportunity to improve writing after having received careful commentary is crucial to this requirement.

- **c. Oral Skills** coursework or additional writing experience coursework ................... at least 3 units

Courses in oral literacy involve effective communication of ideas through oral presentation and build on and strengthen the critical thinking skills exercised through writing. As an alternative to developing oral communication skills, the student may take additional coursework certified as writing experience (see requirement b, above).

- **d. Visual Literacy** coursework ..................... at least 3 units

Courses in visual literacy provide students with the analytical skills they need to understand how still and moving images, art and architecture, illustrations accompanying written text, graphs and charts, and other visual embodiments of ideas inform and persuade people. Coursework may stress the skills needed to communicate through visual means as well as the analytical skills needed to be a thoughtful consumer of visual messages.

2. **Civic and Cultural Literacy** ...................... at least 9 units

The objective of this core literacy is to prepare students for thoughtful, active participation in civic society. Students will learn to think analytically about American institutions and social relations, understand the diversity of American cultures, and see the relationships between national and local cultures and the world.

- **a. American Cultures, Governance, and History** .............................. at least 6 units;  
  of which at least 3 units must be in coursework certified as focusing on issues of domestic diversity.

Courses in American Cultures, Governance, and History provide students with an understanding and appreciation of the social and cultural diversity of the United States and of the relationships between these diverse cultures and larger patterns of national history and institutions.

- **b. World Cultures** .............................................. at least 3 units

Courses in World Cultures provide students with a global perspective in a world where communication technologies, economic relationships, and the flow of people across national borders increasingly challenge national identities and create transnational cultures. Students can satisfy this requirement through coursework or through certified study abroad.

3. **Quantitative Literacy** ................................. at least 3 units

The objective of this core literacy is to provide students with an understanding of quantitative reasoning and skills for evaluating claims and knowledge generated through quantitative methods.

4. **Scientific Literacy** ................................. at least 3 units

The objective of this core literacy is to provide students with an understanding of the fundamental ways scientists approach problems and generate new knowledge, and an understanding of how scientific findings relate to other disciplines and to public policy.

**Additional Conditions**

**Meeting Total Units Requirement.** With the exception of units used to satisfy the English Composition element, units approved for a Core Literacy will be accepted toward satisfaction of the appropriate Topical Breadth component. Course units that satisfy requirements in the candidate's major or majors may also be counted toward satisfaction of General Education requirements.
Grading. Students may take courses P/NP to fulfill their General Education requirements, up to the limits set by college and campus regulations.

Advanced Placement and International Baccalaureate. Students may not present Advanced Placement or International Baccalaureate credit in satisfaction of GE requirements, except insofar as it may be applied to the English Composition component of the Literacy with Words and Images requirement.

Transfer Students who have successfully completed the Intersegmental General Education Transfer Curriculum (IGETC) lower division course work are exempt from all General Education requirements that may be met with lower-division courses. Transfer students who have not completed the IGETC, and who are not entitled to graduate under the provisions of a General Catalog issued prior to Fall 2011 as permitted by the applicable college policy on degree requirement changes, are required to satisfy all General Education components under the revised requirement but may offer previously completed coursework toward their satisfaction.

Approved Revised General Education Courses

See New General Education Courses; Fall 2011 and On, on page 538, for a list of the courses that provide General Education credit. Please note that you cannot claim GE credit for a course you completed before it was an approved GE course.

Former General Education (GE) Requirement; Pre-Fall 2011

The following section pertains to students who matriculated to UC Davis prior to Fall 2011. Students who matriculated for the first time in Fall 2011 or later should refer to the New General Education (GE) Requirement; Fall 2011 and On, on page 97.

The GE requirement has three components: Topical Breadth, Social-Cultural Diversity and Writing Experience.

Topical Breadth Component ............................ 6 courses

Topical breadth courses are grouped into three broad subject areas of knowledge:

1. Arts and Humanities. Courses in this area provide students with knowledge of significant intellectual traditions, cultural achievements and historical processes.

2. Science and Engineering. Courses in this area provide students with knowledge of major scientific ideas and applications. They seek to communicate the scope, power, limitations and appeal of science.

3. Social Sciences. Courses in this area provide students with knowledge of the individual, social, political and economic activities of people.

To fulfill the topical breadth component of the General Education requirement you must successfully complete three approved courses in each of the two subject areas of topical breadth other than the one that includes your major. To identify the area of topical breadth to which your major belongs, see Topical Breadth Assigned Subject Areas for Majors and Minors; Pre-Fall 2011, on page 569. Each academic major has been assigned to one of the three subject areas of GE topical breadth. If you have any questions concerning the subject area to which your major is assigned, consult your college dean’s office.

A course approved in more than one topical breadth subject area may only be offered in satisfaction of only one of those subject areas.

• Double majors will satisfy the topical breadth subject areas to which they are assigned. You will still be responsible for completing any topical breadth subject area in which you do not have a major. If, for example, two majors are assigned to the same subject area, you will need to complete the topical breadth component in each of the other two other subject areas. If, on the other hand, you complete two majors that have been assigned to two different areas of topical breadth then you will be responsible for completing the topical breadth component in only the remaining subject area.

• Individual majors are assigned to an area of topical breadth at the time they are approved by your college.

• Each minor has also been assigned to one of the three subject areas of topical breadth. A minor assigned to a subject area other than the area of your major will satisfy the GE course requirement for topical breadth in that subject area.

• Courses in your major may count toward the topical breadth component when those courses are also assigned to subject areas other than the area of your major.

Social-Cultural Diversity .................................. 1 course

Courses in social-cultural diversity teach students the significance of the many patterned differences that characterize human populations—particularly differences of gender, race, ethnicity, sexuality, religion or social class.

To fulfill the social-cultural diversity component of the GE requirement, you must successfully complete one course from the approved list; see Former General Education Courses; Pre-Fall 2011, on page 560.

Writing Experience ...................................... 3 courses

Courses in writing experience improve student writing through instruction and practice. Writing assignments are designed to encourage students to think critically and communicate effectively. Courses require one extended writing assignment (five pages or more) or multiple short assignments. Writing is evaluated not only for content, but also for organization, style, use of language, and logical coherence.

To fulfill the writing experience component of the GE requirement, you must successfully complete three courses from the approved list at the back of this catalog.

Note: You must satisfy the university Entry Level Writing Requirement (formerly Subject A) before you take any writing experience course for GE credit. If you take an approved writing experience course, but have not yet satisfied the Entry Level Writing Requirement, you will not receive GE writing experience credit for that course.

Additional Conditions

Letter Grading. All courses taken to fulfill the GE requirement must be taken for a letter grade. No GE credit will be awarded for a course that you take on a Passed/Not Passed basis.
College and University Composition Requirements. The following GE courses may not be used to satisfy university or college requirements in composition and GE writing experience simultaneously:

- Communication 1
- Comparative Literature 1, 2, 3, 4
- English 3
- Evolution and Ecology 12
- Native American Studies 5
- University Writing Program 1, 18, 19, 101, 102 series, and 104 series

Courses Approved for Multiple GE Components. Courses approved for more than one component of the GE requirement (topical breadth, writing experience and social-cultural diversity) will be accepted toward satisfaction of all components for which the course has been approved.

College of Engineering. Students seeking a degree in a College of Engineering major must complete 24 units of general education coursework (33 units are required for Computer Science and Engineering majors) and two upper division courses from the campus approved list of approved courses in Arts and Humanities or Social Science. The list of approved courses appears at the back of this catalog.

Transfer Student Exemption for IGETC, TCC and UC Reciprocity. You are exempt from the UC Davis GE requirement if you come from a California community college and are certified as having successfully completed the “Interssegmental General Education Transfer Curriculum” (IGETC) or “Transfer Core Curriculum” (TCC), or if you come from another UC campus and are certified as having successfully completed the lower division breadth or General Education requirements of that UC campus (UC reciprocity).

If you are in the College of Engineering and have satisfied IGETC or TCC, you are still required to complete two upper-division General Education courses at UC Davis to satisfy College of Engineering requirements.

If you are a Transfer student who has not completed TCC or IGETC prior to attending UC Davis, transfer work comparable to approved UC Davis GE courses may be used to satisfy the GE requirement, as determined by the college dean's office.

Approved Former General Education Courses

See Former General Education Courses; Pre-Fall 2011, on page 560, for a list of the courses that provide General Education credit. Please note that you cannot claim GE credit for a course you completed before it was an approved GE course.

General Education Theme Options

The following section pertains to students who matriculated to UC Davis prior to Fall 2011.

General Education theme options are sets of GE courses sharing a common intellectual theme. Faculty from the College of Agricultural and Environmental Sciences has worked collaboratively to develop sets of complementary courses in several areas of interest. These GE theme options are not a separate element of the GE requirement, but a way of selecting your GE courses so that you may benefit from a coherent focus of study while completing the GE requirement.

Completion of a theme satisfies the GE requirement for students with majors assigned to the GE topical breadth area of Arts and Humanities. Students with majors assigned to the topical breadth area of either Science and Engineering or Social Science will need to complete additional GE courses in Arts and Humanities to satisfy the campus GE requirement.

Beginning a theme option does not prevent you from later choosing to take other approved GE courses to fulfill the GE requirement. If you choose to mix courses from a theme option and the broader GE course lists, you will need to make sure that the combination of courses you select will complete the campus GE requirement.

COLLEGE REQUIREMENTS FOR THE BACHELOR’S DEGREE

College of Agricultural and Environmental Sciences

Unit Requirements

Of the required 180 units counted toward a degree, 54 units must be upper division work.

Unit Credit Limitations

In addition, the following unit limitations apply to all majors:

- Not more than 6 units can be Physical Education 1 and 6
- Not more than 20 units can be courses numbered 90X, 92, 97T, 97TC, 99, 190C, 190X, 192, 197T, 197TC, or 199
- Not more than 12 units can be courses numbered 92 and/or 192 (credit will not be given for 192s or 199s taken before the completion of 84 units)
- Not more than 5 units per quarter of Special Study courses (99, 194H, 199)
- Not more than 9 units of professional courses (numbers 300–499) may be used toward the 54 upper division units

Limitation on Credit for Units Graded P. The Academic Senate limits the total number of courses graded P; including units earned in courses graded “P/NP only,” to one third of the units completed on the UC Davis campus. The P/NP option is to be used only for elective courses and should not be used for major requirements.

Credit for Open Campus (Concurrent) Courses. Students may apply credit for courses taken in the Open Campus (Concurrent) Program through UC Davis Extension towards the 180-unit undergraduate degree requirement. The grade points earned when enrolled in Open Campus courses will count toward the calculation of a student’s UC GPA upon his/her admission or readmission to regular student status at UC Davis. Students registered at UC Davis may not enroll in Open Campus courses.

Credit for UC Davis Extension Courses. Registered UC Davis students who plan to use academic credit earned in a UC Davis Extension course other than Open Campus (Concurrent) towards their UC Davis degree must obtain prior written approval from their College before registering in the UC Davis Extension. Upon approval students may apply a limited number of credits towards the 180-unit undergraduate degree requirements. Courses completed in UC Davis Extension will not count toward the calculation of a student’s UC GPA.
Registration Beyond the 225-Unit Limit. Students may not exceed 225 units; registration for enrollment when the limit has been reached may only be approved by the Dean. A petition to complete excess units may be picked up in the Dean's office or in your major department.

Residence Requirement
Thirty-five of the final 45 quarter units completed by each candidate must be earned while in residence on the UC Davis campus.

Scholarship Requirement
Students in the College are required to attain a minimum grade point average of 2.000 for all courses specified as depth subject matter in their major. Options, specializations and emphases may be included. Consult your major adviser. Only grades earned in courses taken at UC Davis are included in the grade point calculation. Each candidate must complete a program of study either as prescribed in (a) a major approved by the Undergraduate Majors and Courses Standing committee and printed in this catalog, or (b) an individual major approved by the Individual Major Standing committee.

English Composition Requirement
Once the Entry-Level Writing requirement has been satisfied, you may begin taking courses to meet the College's English composition requirement.

The English Composition requirement may be met in one of three ways:

1. Either two courses emphasizing written expression or one course emphasizing written expression and one course emphasizing oral expression, with a grade of C- (or P) or better. The following UC Davis courses satisfy this requirement:
   (a) one course must be selected from English 3, University Writing Program 1, 18, 19, 101, 102A, 102B, 102C, 102D, 102E, 102F, 102G, 102H, 102J, 102K, 104A, 104B, 104C, 104D, 104E, 104F, 104G, or Nematology 150 (courses with primary emphasis in writing skills);
   (b) one course selected from the courses not selected above, or from Communication 1, Comparative Literature 1, 2, 3, 4, or Native American Studies 5 (courses emphasizing either writing or speaking skills);

2. Advanced Placement English score of 4 or 5 PLUS any course listed in 1(a) or 1(b) above EXCEPT University Writing Program 1 or English 3

OR

3. By passing the English Composition Examination administered by the College of Letters and Science upon completion of 70 units of degree credit (the examination does not yield credit).

English Composition Examination. The no-fee, no-unit examination is typically offered on a Saturday in October, January and April; for specific dates see the Registration Guide or see http://writing.ucdavis.edu/compexam/.

If students choose to take this challenge exam, they are strongly advised to do so in their junior year. Register for the English Composition Examination at http://writing.ucdavis.edu/compexam/ from the Monday before the exam date until Friday at noon or until no spaces remain. The AWPE/Upper-Division Composition Examination form, available at the UC Davis Bookstore, is required. It is recommended that students with disabilities contact the Student Disability Center at (530) 752-3184 and the University Writing Program at (530) 752-0450 at least two weeks prior to the exam date to arrange accommodations. No examinations are given during the summer.

General Education
You should consult your Dean's Office or department adviser in advance to determine exactly how your General Education courses will apply toward your major.

You can choose one of four General Education theme options to help plan your GE courses. The themes, Global Population and Environmental Issues; Biodiversity and Cultural Diversity; Food and Fiber; and Changing Agriculture are described in more detail in General Education Theme Options, on page 570.

Study Plan Approval
A Study Plan provides for attainment of specific long-term goals and should allow for the acquisition of prerequisite knowledge for courses to be taken in subsequent quarters; the fulfillment of College and major requirements; a proper balance between the demands of the courses and your ability to master the subject matter; and meeting the minimum progress requirements; see Course Load, on page 74.

In conjunction with a faculty adviser and/or staff adviser, you must plan and prepare a program that specifies your goals and shows how the graduation requirements will be met. It is a regulation that a written “study plan” be filed with your faculty adviser or staff adviser by the end of the second quarter of the junior year (having completed not more than 120 units either in residence and/or by transfer).

You may be denied registration for future quarters if you do not comply with this regulation. However, filing this study plan does not preclude a change of major or program modifications.

Major Degree Certification
A Major Certification is completed during the quarter you plan to graduate. At that time, you and your faculty adviser and/or staff adviser check to see that all major requirements have been completed. The Dean's Office completes the degree certification by verifying that all college and university requirements have been satisfied.

Degree Requirement Changes
On occasion, the faculty make changes in the requirements that students must satisfy to obtain the baccalaureate degree. So that you will not be penalized by changes that may work to your disadvantage and so that you will benefit by changes that assist you in completing your degree requirements, it is college policy that you may choose to fulfill the university, college and major requirements in effect at the time you were registered at UC Davis. If you have transferred to UC Davis from a community college, state college, or another university, you may follow the requirements as stated in any UC Davis General Catalog in effect either during the three years immediately preceding your transfer to UC Davis or at the time you first registered at that institution, whichever is most recent. Once you have chosen the year of the General Catalog under which you wish to be governed, you must satisfy all of the university, college and major requirements specified in that catalog.
College of Biological Sciences

All students in the College of Biological Sciences must satisfy the following college requirements in addition to satisfying the University Requirements, on page 96 and General Education Requirement, on page 97.

Unit Requirements

Total Units. Complete no less than 180 units allowing for the unit credit limitations listed below. No student may exceed 225 units in their academic career without approval of the Dean. Units earned in Advanced Placement and International Baccalaureate exams are not counted toward this 225-unit limit. Upon reaching 200 units, a student must submit a quarter-by-quarter graduation plan to the Dean's Office or a hold will be placed on his/her registration.

Upper Division Units. Complete 64 upper division units.

Unit Credit Limitations

• Passed/Not Passed Units. All courses used to satisfy major requirements must be taken on a letter-graded basis, unless courses are only offered on a Passed/Not Passed basis.

The Academic Senate limits the total number of courses graded P, including units earned in courses graded “P/NP only,” to one third of the units completed on the UC Davis campus.

• Physical Education. Maximum of 6 units of Physical Education 1, 6 and similar physical activity courses including transfer work.

• Transfer work. Maximum of 105 units of credit earned at two-year institutions (community college).

• Graduate Courses. Courses numbered 200-299 may not be applied toward the 64-unit upper division requirement.

• Professional and teaching courses. Maximum of 9 units in courses numbered 300-399 and 400-499. These units may not be applied toward the 64-unit upper division requirement.

• Upper division standing. Must complete 84 units before enrolling in 192, 194H and 199 to receive degree and upper division credit.

• Special Study. Not more than 5 units per quarter of Special Study courses (99, 194H, 199).

• Nonstandard Courses. Maximum of 20 units of nonstandard courses including transfer work.

Nonstandard courses are defined here as tutoring, internship, research, research conference, honors research and similar course activities. Some examples of these courses are, but are not limited to, courses numbered 90C, 92, 92C, 97T, 97TC, 99, 189, 190C, 191, 192, 192C, 193, 194H, 197T, 197TC, 199, etc. Courses numbered 98 or 198 are not included in this 20-unit limitation.

There are additional unit credit limitations on tutoring and internship units.

• Tutoring. Maximum of 3 tutoring units including but not limited to 97T, 197T, 97TC and 197TC.

• Internship. A maximum of 6 internship units including but not limited to 92, 192, 92C, 192C.

*Specific exceptions to these limits may be granted by the Committee on Undergraduate Petitions based on the uniqueness of the experiences and their concordance with the petitioner’s educational objectives.

Credit for Open Campus (Concurrent) Courses. Students may apply credit for courses taken in the Open Campus (Concurrent) Program through UC Davis Extension towards the 180-unit undergraduate degree requirement. The grade points earned when enrolled in Open Campus courses will count toward the calculation of a student’s UC GPA upon his/her admission or readmission to regular student status at UC Davis. However, the units earned do not satisfy the university residence requirement. Students registered at UC Davis may not enroll in Open Campus courses.

Residence Requirement

Meet university residence requirement. No additional college residence requirements.

Scholarship Requirement

Students must attain at least a 2.000 GPA for all courses required in their major. Students must also attain a 2.000 GPA in all Depth Subject Matter courses required in their major. Students who fail to maintain a 2.000 GPA in courses required for their major over two consecutive quarters may be required to withdraw from the major.

• Repeating Courses. Students may once repeat courses in which they received a grade of D+ or less. To repeat a course more than once, students must petition the Dean for approval prior to enrolling in the course.

• Passed/Not Passed Grading Option. All courses used to satisfy major requirements must be taken on a letter-graded basis, unless courses are only offered on a Passed/Not Passed basis.

English Composition Requirement

The English Composition requirement may be satisfied in one of two ways:

1. Completing 8 units, to include 4 upper division units, in English composition courses with at least a C- or Passed grade from the following list: Comparative Literature 1, 2, 3, 4, English 3, Native American Studies 5, University Writing Program 1, 18, 19, 101, 102A, 102B, 102C, 102D, 102E, 102F, 102G, 102H, 102I, 102J, 102K, 102L, 104A, 104B, 104C, 104D, 104E, 104F, 104I.

OR

2. Passing the English Composition Examination, administered by the Entry Level Writing program, upon completion of 70 units of degree credit. This examination does not yield credit. Students interested in entering the health science field should check with the Health Sciences Advising Office or the Dean’s Office before choosing this option.

English Composition Examination. The no-fee, no-unit examination is typically offered on a Saturday in October, January, and April; for specific dates see the Registration Guide or see http://writing.ucdavis.edu/compexam/.

If students choose to take this challenge exam, they are strongly advised to do so in their junior year. Register for the English Composition Examination at http://writing.ucdavis.edu/compexam/ from the Monday before the exam date until Friday at noon or until no spaces remain. The AWPE/Upper-Division Composition Examination form, available at the UC Davis Bookstore, is required. It is recommended that students with disabilities contact the Student Disability Center (530) 752-3184 and the University Writing Pro-
gram (530) 752-6283 at least two weeks prior to the exam date to arrange accommodations. No examinations are given during the summer.

**Additional Bachelor of Arts Requirements**

Bachelor of Arts degrees are available in Biological Sciences; Evolution, Ecology and Biodiversity; Exercise Biology; Microbiology; and Plant Biology. These degrees offer students an opportunity to broaden their education while pursuing a rigorous life science major.

Candidates for the Bachelor of Arts degrees must complete two additional requirements.

1. **Foreign Language.** The requirement can be met in one of three ways:
   - Complete with passing grades 15 quarter units of college level course work, or the equivalent thereof, in a single language.
   - Attain a minimal score prescribed by the Committee on Undergraduate Curriculum and Educational Policy, in the College Entrance Examination Board Achievement Test in Foreign Language, which may be taken at any time during the student’s high school career, or any other achievement test approved by the Committee on Undergraduate Curriculum and Educational Policy.
   - Placement beyond the 15-unit level on a placement/proficiency examination offered by one of the foreign language departments of the University.

2. **Breadth Requirements.** Complete one of the following options:
   - At least three upper division courses in a single program in the humanities or social sciences, which are not offered in satisfaction of major, college English composition or General Education requirements. Each course must be at least three units and may not include internship, research, tutoring, other non-standard courses or directed group study courses.
   - At least three lower or upper division courses in the fine arts, which are not offered in satisfaction of major, college English composition or General Education requirements. Each course must be at least three units and may not include internship, research, tutoring, other non-standard courses or directed group study courses.
   - A certified minor or an additional major in the humanities, social sciences, or fine arts from any UC Davis college or program. Minors and all majors must be completed before accumulating 225 total units.

**Declaration of Major/Undeclared—Life Sciences**

Students must declare a major by 90 units. A hold will be placed on a student’s registration if he/she is still undeclared after completing 90 units.

All changes of major and college must be completed before the beginning of the student’s quarter of graduation.

Students with Biological Sciences majors and students who are Undeclared—Life Sciences use the College of Biological Sciences Dean’s Office for advising on their program. All other students who are enrolled in a major administered by the College of Biological Sciences should see the master or staff adviser in the department office that houses their major, as listed in the catalog. All students, regardless of their college affiliation, working on a major administered by the College of Biological Sciences should obtain university, general education, college and other non-major academic advising from the College of Biological Sciences Dean’s Office.

**Degree Check**

Students are encouraged to meet with their academic adviser at least once a year to ensure timely graduation. Students are required to consult an academic adviser at two points in their academic careers:

- Before accumulating 90 units.
- Before accumulating 135 units.

In addition, if you are taking courses which, if passed, will cause your unit total to exceed 200 units and you intend to register for the next quarter, you must file a plan with your adviser that leads to graduation within 225 units. If the plan anticipates registering after you have accumulated 225 units, the plan must be submitted to the Dean for approval.

If you do not meet any of these advising requirements, a hold may be placed on your registration.

**Degree Requirement Changes or Catalog Rights**

On occasion, the faculty makes changes in the requirements that students must satisfy to obtain the baccalaureate degree. So that you will not be penalized by changes that may work to your disadvantage and so that you will benefit by changes that assist you in completing your degree requirements, it is college policy that you may choose to fulfill the university and college requirements (see General Education Requirement, on page 97 for an exception) as stated in any UC Davis General Catalog in effect at the time you were registered at UC Davis. If you have transferred to UC Davis from a community college, state college, or another university, you may follow the requirements as stated in any UC Davis General Catalog in effect either during the three years immediately preceding your transfer to UC Davis or at the time you first registered at that institution, whichever is most recent. Once you have chosen the year of the General Catalog under which you wish to be governed, you must satisfy all of the university and college requirements specified in that catalog.

With respect to the completion of your major requirements, most of the majors in the College of Biological Sciences require completion of the major degree requirements in effect at the time you officially declared your major. However, because departments differ in how they handle these matters, check with the department or major program office if you have any questions about which requirements apply to you.
College of Engineering

Prerequisite Requirements

Engineering is a discipline that requires mastery of prerequisite coursework prior to moving forward in the curriculum. Students should plan to repeat any engineering requirement in which a grade of C- or better is not earned. Students are encouraged to carefully adhere to all prerequisite requirements. The instructor is authorized to drop students from a course for which stated prerequisites have not been completed.

Current Curriculum Requirement

Because Engineering is a rapidly developing profession, the things an engineer needs to know change on an almost daily basis. To respond to this, the faculty make changes to the curriculum on a regular basis. In order to ensure that students graduate with the most current engineering knowledge, College of Engineering students must complete the degree requirements in effect in the academic year of graduation or in the immediately preceding academic year. Students in the class of 2014 will need to complete the degree requirements for the 2012-2013 or 2013-2014 academic year. The College of Engineering Bulletin is published every year with current degree requirements. The Bulletin is available at http://engineering.ucdavis.edu/pages/current_students/advising/index.html.

When degree requirements change, a transition plan is developed to ensure that students who are getting regular advising and following recommended course sequences will be able to graduate within four years. Contact your departmental adviser or the Undergraduate Advising Office for more specific information or questions. The list of advisers can be found at http://engineering.ucdavis.edu/undergraduate/advising/index.html.

Unit Requirements

Each candidate for the degree of Bachelor of Science in Engineering must satisfactorily complete an approved curriculum in engineering. No unit of coursework you complete may be used to satisfy two different degree requirements, except under the following conditions:

- College of Engineering students may use course units to satisfy both Revised General Education requirements and course requirements for their major.
- In cases where the catalog specifically states that course units may be used to satisfy two different degree requirements.

Detailed requirements for the approved curricula are given in the Programs and Courses chapter of this catalog; to see the courses required in your major, consult this section. The minimum number of required units varies with the curriculum, from 180 to 198. You are responsible for planning your program and satisfactorily completing all degree requirements.

You may, for good cause, request a modification of particular degree requirements by submitting a student petition. These petitions, which are available from your departmental adviser or in the Undergraduate Advising Office, can be a valuable aid in resolving individual program conflicts or other special problems. Such petitions are subject to approval by the Undergraduate Educational Policy Committee, composed of one faculty representative from each department and non-voting staff advisers and student representatives. The Associate Dean for Undergraduate Studies serves as ex-officio member of this committee. A negative decision by the committee may be appealed to the College Executive Committee.

Transfer students. To be eligible for transfer into the College of Engineering you must have at least ninety transferable quarter units (sixty semester units) from another institution. To be a competitive applicant, you must have a minimum overall GPA of 3.100.

Highest priority for transfer admission is given to California community college transfer applicants who have completed two transferable English composition courses and all of the required lower division engineering coursework offered at the community college they attended.

We give lower priority for admission to community college applicants who are missing one or two of the required lower division courses. Community college applicants will be denied admission if they are missing three or more of the required lower-division courses.

Priority is next given to junior-level transfers from other UC campuses and other four-year institutions in and out of state. These students must also have completed all of the required lower-division coursework.

Successful applicants are admitted to a specific major. You may be limited in your ability to change majors within the college after you are admitted.

Transfer students. To be eligible for transfer into the College of Engineering you must have at least ninety transferable quarter units (sixty semester units) from another institution. To be a competitive applicant, you must have a minimum overall GPA of 3.100.

Highest priority for transfer admission is given to California community college transfer applicants who have completed two transferable English composition courses and all of the required lower division engineering coursework offered at the community college they attended.

We give lower priority for admission to community college applicants who are missing one or two of the required lower division courses. Community college applicants will be denied admission if they are missing three or more of the required lower-division courses.

Priority is next given to junior-level transfers from other UC campuses and other four-year institutions in and out of state. These students must also have completed all of the required lower-division coursework.

Successful applicants are admitted to a specific major. You may be limited in your ability to change majors within the college after you are admitted.

Transfer advising and information. For more specific advice on lower-division requirements for community college students, meet with the transfer counselor at your institution or see the Assist website at http://www.assist.org. Transfer credit agreements are available on the College of Engineering website at http://engineering.ucdavis.edu/undergraduate/transfers/agreements.html. You may also contact the College of Engineering Undergraduate Advising Office (530) 752-1979.
California Community college students should consider a Transfer Admission Guarantee (TAG), which is a formal written agreement specifying the courses you need to complete and the grade point average you need to earn to be admitted. A signed agreement guarantees that you will be admitted to UC Davis in the major you want and for the term you have chosen—provided that you complete the agreement and apply for admission during the open filing period. If you would like more information on the TAG program, see your community college counselor or see http://engineering.ucdavis.edu/undergraduate/transfers/aag.html.

We also participate in the Transfer Opportunity Program, which encourages community college students to transfer to UC Davis and provides them with services to ease the transition. You can use the Transfer Opportunity Program to get information about admission and transfer requirements, academic programs, financial aid, housing, tutoring, campus life and other services.

Upon admission, transfer students are classified as having upper division status, but are obligated to complete all lower division course requirements for the major before your lower division requirements are considered complete. You may, however, start your upper division coursework while completing your lower division requirements provided you meet all prerequisites for the upper division courses.

Credit for Open Campus (Concurrent) Courses. Students may apply a maximum of 16 units of credit for courses taken in the Open Campus (Concurrent) Program through UC Davis Extension towards the 180-unit undergraduate degree requirement. The grade points earned when enrolled in Open Campus courses will count toward the calculation of a student's UC GPA upon his/her admission or readmission to regular student status at UC Davis. Students registered at UC Davis may not enroll in Open Campus courses. Open Campus is not available to students that have been enrolled at UC Davis within the last 12 months and have not graduated, unless an exception letter is provided to Extension by the Associate Dean for Undergraduate Studies of the College of Engineering.

Residence Requirement
Meet university residence requirement. No additional college residence requirements.

Scholarship Requirement
In addition to meeting the university scholarship requirement, you are required to maintain a 2.00 grade point average for all course work within Engineering.

English Composition Requirement; Upper Division
The ability to write well and communicate effectively is cited as one of the most desirable traits sought by prospective engineering employers. Because engineers must be able to explain complex ideas, it is critical that students pay close attention to the development of writing and communication skills. All students admitted to the University must complete the Entry Level Writing Requirement (see page 96) before credit for any composition course or general education writing experience course will be granted.

Once the Entry Level Writing Requirement has been satisfied, there are two distinct composition requirements for engineering students:

- **Lower-division composition.** Can be satisfied by completion of an Advanced Placement English exam with a score of 4 or 5;
- **Upper division composition.** Requirements vary by major. Please see your departmental adviser to determine the coursework that has been approved for your major.

Please note that when coursework is used to satisfy either of the composition requirements, a grade of C- or better must be earned.

Engineering Design Requirement
Engineering design is the process of devising a system, component, or process to meet certain needs. Design involves a decision-making process (often iterative), in which the basic sciences, mathematics and engineering sciences are applied to convert resources optimally to meet a stated objective. Among the fundamental elements of the design process are the establishment of objectives and criteria, synthesis, analysis, construction, testing and evaluation. You must take an appropriate amount of design course work through a combination of required and restricted elective courses. Specific comments about design are included in individual curricula descriptions. You should also review the design content of your individual program with your adviser in the course of completing the upper division advising worksheet.

Electives
In general, there are three kinds of elective courses in the engineering curricula: General Education, Technical and Unrestricted.

General Education Electives. Because, as an engineer, you will be a significant participant in the human setting, you will need to have a breadth of education that will allow you to deal with contemporary social issues and to understand the impact of engineering solutions in the global and societal context. To these ends, you must complete you must complete the UC Davis General Education requirement details; see page 97.

Since all engineering programs are in the Science and Engineering GE topical breadth area, you will fulfill the campus GE requirements by taking courses in the Arts and Humanities and Social Sciences areas.

In satisfying the GE requirement note that (a) you must take GE courses for a letter grade, and (b) you must satisfy the Entry-Level Writing requirement before you can receive writing experience credit for any course.

In consultation with your academic adviser, you should attempt to design a coherent approach to contemporary issues by using your GE elective.

Unrestricted electives. If your curriculum allows for unrestricted electives, you may count any course for which university credit is allowed as an unrestricted elective in the engineering curricula.

Degree Check
Use a Degree Requirement Check sheet for your major to monitor your progress toward completing degree requirements. These check sheets are available in the Undergraduate Advising Office in 1050 Kemper Hall and from your major adviser. The University holds students responsible for knowing and completing all degree requirements. Degree checks are performed as a courtesy to help students make accurate progress toward fulfilling all major, college, and university requirements. Students should request a preliminary degree check three quarters prior to graduation and a
follow-up degree check prior to the beginning of a student's final quarter. Requests can be submitted to the Undergraduate Advising Office in 1050 Kemper Hall.

**College of Letters and Science**

**Unit Requirements**

A minimum of 180 units is required for the bachelor's degree. Of these units, 64 must be earned in upper division courses.

**Registration Beyond the 225-unit Limit.** You are expected to fulfill all degree requirements within the 180- to 225-unit range. Once 225 units have been completed (excluding units awarded for College Board Advanced Placement Examinations or International Baccalaureate Examinations), you may register only with the permission of the dean. Such permission is rarely granted and then typically only to allow completion of minimum degree requirements. You will be expected to adhere to a program of courses agreed upon and to meet other conditions that may have been set. Approval must be obtained before you will be permitted to register for courses for the quarter following completion of 225 or more units.

If you are in good standing, you will be able to complete 12 quarters or the equivalent (e.g., four years) of college work even if you have earned more than 225 units before you finish your fourth year. You must petition for continuation, however, and file the quarter-by-quarter course program you have planned.

**Unit Credit Limitations**

For certain courses, limits have been established on the number of units that can be counted towards the 180-unit minimum required for the degree. To avoid discovering just before graduation that you are short units, keep track of the number of units you have taken in each of the following categories.

**Limitation on Credit for Graduate and Professional Courses.** Undergraduates may enroll in graduate and professional courses in the 200, 300, and 400 series subject to the restrictions described in Academic Information, on page 72, in this catalog. Graduate and professional courses that have been completed will be listed on the student's transcript in the usual manner. However, the units earned may be counted toward degree requirements only under the conditions listed below.

Within the limitations A, B and C given below, undergraduate students in the College may count an unlimited number of units in graduate 200 series courses and up to a combined total of 9 units in 300 and 400 series professional courses toward degree requirements. These units, however, are not counted as upper division units. These units, however, are not counted as upper division units. All graduate courses 200–298, whether offered by a department or program outside of or within the College of Letters and Science

All professional courses 300–398 for teachers offered outside of the College of Letters and Science

All postgraduate professional courses 400–498 offered outside of the College of Letters and Science

- All variable unit courses 300–398 and 400–498 offered within the College of Letters and Science

**B. The minimum eligibility conditions for an undergraduate student in the College to petition for degree credit for a 200, 300, or 400 series course are a UC grade point average of 3.300 and completion of 18 upper division units basic to the subject matter of the course. These eligibility conditions may be waived, however, upon the recommendation of the course instructor and concurrence of the department chairperson if the student's preparation warrants exception.**

**C. Undergraduates in the College cannot receive degree credit for special study courses 299, 399, or 499.**

**Limitation on Credit for Units Graded P.** Excluding courses that are graded on a Passed/Not Passed (P/NP) basis only, the number of units graded P that may be accepted towards a degree in the College of Letters and Science is limited to not more than one fourth of the units completed in residence on the UC Davis campus.

The Academic Senate limits the total number of courses graded P, including units earned in courses graded "P/NP only," to one third of the units completed on the UC Davis campus. This limitation applies to all UC Davis undergraduates, including Letters and Science students.

**Limitation on Credit for UC Davis Extension Courses.**

A. UC Davis Extension courses with a designator of “X.” Students may apply credit earned through lower division and upper division UC Davis Extension “X” courses towards the 180-unit requirement only with written approval from the dean prior to registration. The degree credit allowed by the dean for such courses is usually less than the unit value listed in the course description. Additional limitations on UC Davis Extension “X” courses include: a maximum of 9 units may be offered for elective credit only and may not be applied towards fulfillment of the Area, Foreign Language, Upper Division, or Residence requirements of the College.

B. UC Davis Extension courses with a designator of “XD.” Students may apply credit earned through lower division and upper division UC Davis Extension “XD” courses towards the 180-unit requirement. Additionally, credit from such courses may be applied toward fulfillment of all university, campus, college and major unit and subject matter requirements—including the Area, Foreign Language, Upper Division and Residence requirements of the College—in the same manner that the corresponding regular UC Davis course is so accepted.

C. UC Davis Extension courses with a designator of “XDC” (Open Campus (Concurrent) Program). Subject to the following conditions, students may apply credit earned through lower division and upper division UC Davis Extension Open Campus (Concurrent) courses-i.e., those bearing the “XDC” designator—towards university unit and subject requirements, and, effective Fall 2003, the calculation of the student’s UC GPA, upon admission or readmission to regular student status at UC Davis.

Students on leave of absence and regular status students when matriculated, or regular status students for a period of one calendar year following the last term of regular enrollment at UC Davis, may not enroll in Open Campus (Concurrent) courses. Exceptions to this policy for undergraduate students may be made only under extraordinary circumstances by petition with prior approval by the dean and the Dean of UC Davis Extension.
• Concurrent (“XDC”) courses do not count toward satisfaction of the University residence requirement or the residence requirements of the campus or the college.

• Concurrent (“XDC”) courses may constitute at most half of the units offered in satisfaction of the upper division requirements of the major.

• In the event that the faculty of the college imposes further restrictions on the number of units of UC Davis Extension Open Campus (Concurrent) course work that may be applied to undergraduate degree programs, the allowable number of units of course work will be determined chronologically, starting with the course completed first. Grade point credit for such courses will be determined in the same manner.

Other Unit Credit Limitations. The following are additional courses that have limits on the number of units that can be counted toward your degree.

• Internship courses (numbers 92, 192): 12 units maximum including internship units taken at other institutions; see Nonstandard courses
• Music 130, 131, 140, 141, 142, 143, 144, 145, 146, 147, 154 (combined): 19 units maximum
• Nonstandard courses (92, 97T, 97TC, 99, 192, 194H, 197T, 197TC, 199 and similar courses): 30 units maximum or one-sixth of the units taken at UC Davis, whichever is the smaller; note the separate unit limits on internship, special study and tutoring courses; and major limitations
• Physical Education 1 and 6 (combined): 6 units maximum
• Special Study courses (99, 194H, 199): 5 units maximum in any one quarter; see Nonstandard courses
• Tutoring courses (97T, 97TC, 197T, 197TC): 10 units maximum; see Nonstandard courses, above

Residence Requirement

While registered in the College of Letters and Science, a minimum of 27 upper division units, including 18 upper division units in the major, must be completed on the UC Davis campus; work completed while registered in the UC Education Abroad Program or the UC Davis Extension Open Campus Program does not satisfy campus or College Residence requirements.

Scholarship Requirement

The minimum grade point average to satisfy the scholarship requirement is 2.000 for all courses counted toward the major and for all upper division courses used to satisfy major requirements. Only grades earned in courses taken at UC Davis will be included in the grade point computations. To obtain these minimum averages in the major, you may repeat courses that are graded D or F. If you have to repeat a course more than once, you need the dean’s prior approval.

English Composition Requirement

The English Composition requirement can be met in one of two ways:

1. By passing the English Composition Examination upon completion of 70 units of degree credit (the examination does not yield credit);

OR

2. By completing with a grade of C– (or P) or better

a. One course from English 3, Comparative Literature 1, 2, 3, 4, Native American Studies 5, or University Writing Program 1, 18, 19;

and

b. One course from University Writing Program 101, 102 series, or 104 series, which must be taken after 84 units have been completed.

Transfer Courses in English Composition. Transfer courses considered by the Dean to be equivalent or comparable to English 3, Comparative Literature 1, 2, 3, 4, Native American Studies 5, or University Writing Program 1, 18, 19, 101, or 104 series, will be accepted toward satisfaction of the English Composition requirement. Note that University Writing Program 101 and 104 series courses or the equivalent must be taken after you have completed 84 units of transferable degree credit.

If your transfer work does not include an acceptable English composition course taken after you had completed or accumulated 84 units, you may fulfill the requirement by examination (see below) or take one course from University Writing Program 101, 102 series, or 104 series at UC Davis.

English Composition Examination. The no-fee examination is typically offered on a Saturday morning in October, January and April. No examinations are given during the summer.

For specific examination dates, instructions, and to sign up to take an examination, see the University Writing Program-Upper Division Composition Exam Information webpage at http://writing.ucdavis.edu/programs-and-services/upper-division-composition-exam-information/upper-division-composition-exam-information. It is recommended that students with disabilities contact the Student Disability Center at (530) 752-3184 and the Entry Level Writing Program Office (530) 752-0450 at least two weeks prior to the exam date to arrange accommodations.

Area (Breadth) Requirement

The College Breadth Requirement promotes the intellectual growth of students by asking them to acquire a broader background of knowledge than is provided by the usual major. The Breadth requirement also guides students in exploring the interdependence of knowledge.

A.B. Degree. Satisfaction of the campus General Education requirement:

With the exception of the “Literacy with Words and Images: College English Composition requirement” portion of the campus General Education requirement, courses used to satisfy the English Composition and Foreign Language requirements may not be counted toward the Area requirement.

The Letters and Science faculty believes that the completion of a certified minor is often the best way for a student to obtain structure and coherence in pursuit of intellectual breadth.

B.S. Degree. A total of 90 units in natural sciences/mathematics; and satisfaction of the General Education requirement.

Courses numbered 92, 97T, 97TC, 98, 192, 197T, 197TC, 198 and from 200 through 499 cannot be counted toward satisfaction of the natural sciences/mathematics Area requirement. A maximum of 10 units in special study courses (99, 194H, 199) may be counted toward that portion of the Area requirement. With the
exception of the “Literacy with Words and Images: College English Composition requirement” portion of the campus General Education requirement, courses used to satisfy the English Composition and Foreign Language requirements may not be counted toward the Area requirement. Subject to the restrictions just listed, courses acceptable for fulfilling the 90-unit natural sciences/mathematics Area requirement are:

**Natural Sciences and Mathematics**

- Anatomy, Physiology and Cell Biology 100
- Anthropology 1, 5, 15, 151, 152, 153, 154A, 154BN, 156A, 156B, 157, 158
- Astronomy
- Avian Sciences 13
- Biological Sciences
- Cell Biology and Human Anatomy 101, 101L
- Chemistry
- Engineering 6, 10, 35, 102
- Engineering: Biomedical 126
- Engineering: Electrical and Computer 70, 170, 173A
- Entomology 10, 100, 153
- Environmental and Resource Sciences 30, 131
- Environmental Science and Policy 30, 100, 121
- Environmental Toxicology 101
- Evolution and Ecology
- Fiber and Polymer Science 110
- Food Science and Technology 100A, 100B, 101A, 101B
- Geology
- Integrated Studies 8A
- Mathematics
- Microbiology
- Molecular and Cellular Biology
- Neurobiology, Physiology, and Behavior
- Nutrition 10, 111AV, 111B
- Pathology, Microbiology, and Immunology 126
- Physical Education 133, 135
- Physics
- Plant Biology
- Psychology 41, 100, 101, 103A, 103B, 104, 113, 121, 122, 123, 124, 126, 127, 129, 130, 131, 135, 145, 146, 1480B
- Statistics
- Wildlife, Fish, and Conservation Biology 10

**Foreign Language Requirement; A.B. and B.A.S. Degrees**

The College of Letters and Science encourages its students to acquire functional proficiency in at least one language other than English before graduating. Generally speaking, the language programs at UC Davis promote proficiency in each of the “four skills”: listening, speaking, reading, and writing. Language learning is a key component of a liberal education. It enables students to communicate effectively in an increasingly internationalized world, enhances their ability to understand ways of thinking different from their own, gives them direct access to cultural production from another time and place, awakens in them an awareness of the conditioned nature of their assumptions about the world, and trains them to cope more effectively with intellectual and practical problems they may face in their future careers. At a minimum, the College requires A.B. candidates to complete three sequenced quarters (15 units) of courses in one foreign language or its equivalent. B.S. candidates, only as required in the major program.

The Foreign Language requirement may be satisfied in any language offered at UC Davis (including ancient languages), or for which transfer credit is allowed from another academic institution (including American Sign Language).

You may also satisfy this requirement by examination in a language not offered on the UC Davis campus. In this case, the Dean’s Office will refer you to the appropriate campus unit which will assist you in making arrangements to take an examination on another University of California campus, with a faculty member who teaches the language in question.

**Satisfaction of the Requirement.** If you plan to apply for a study abroad program with a language prerequisite, you should plan on completing the Foreign Language requirement by the end of your second or third year, depending on the program. The requirement may also be completed through course work in certain study abroad programs that do not have a language prerequisite. The Foreign Language requirement may be satisfied by examination or completion of language courses as follows:

1. **Foreign Language Placement Test.** This test does not yield unit credit—it only determines whether the Foreign Language requirement has been met, or at which point in the language sequence you should enroll. Students must follow the language program’s placement policy if they decide to study the language at UC Davis.

   You may validate your knowledge of a language acquired by any means before matriculating at UC Davis by taking this test (or another form of evaluation, if available in the relevant language department). A test may not be taken, however, in a language for which you have already received degree credit. If you are a transfer student, consult your Graduation Requirement Degree Check, which is issued by the Dean’s Office within a quarter after first enrollment at UC Davis. If you want to continue to study the language at UC Davis, you must consult the relevant language coordinator.

2. **College Board Subject Test.** Earning a qualifying score of at least 550 on a College Board Foreign Language Subject Test satisfies the requirement. This test may be taken at any time during your high school career. Once your score is on file at Undergraduate Admissions, notify the Letters and Science Dean’s Office so that satisfaction of the College requirement can be noted on your record.

3. **College Board Advanced Placement Examination.** A score of 5, 4, or 3 on any foreign language College Board Advanced Placement Examination, with the exception of Latin, taken in high school will satisfy the Foreign Language requirement.

4. **International Baccalaureate Higher Level Examination.** A score of 7, 6, or 5 on the French A1, A2 or B Examination, the Italian A1 Examination, the Latin A1 Examination, or the Spanish A1 Examination taken in high school will satisfy the Foreign Language requirement.

5. **Intersegmental General Education Transfer Curriculum (IGETC).** IGETC is a series of courses prospective transfer students attending California community colleges may complete to satisfy the lower division breadth/general education requirements at the University of California. Students may satisfy the
Foreign Language requirement by attaining certification of IGETC completion.

6. Course Completion in College; or the equivalent. A.B. and B.A.S. degrees—equivalent of 15-unit level of proficiency in one language at UC Davis (e.g., Spanish 3 or Japanese 3). B.S degree—none, but as is required in the major program.

If you have successfully completed the second or third year of a language in the tenth or higher grade in high school you may receive unit credit for course 1 of that language when taken at UC Davis, but the grading mode will be P/NP only. Although a Passed or Not Passed grade will be charged to your P/NP option, no petition is required; see Passed/Not Passed (P/NP) Grading in the Academic Information chapter.

7. Proficiency Examination. If you have not completed the required level language course, but assume you have attained equivalent knowledge, you may satisfy the language requirement by passing a proficiency examination. For more information, consult the appropriate foreign language department.

Major Degree Certification

Requirements for major programs are described in the Undergraduate Courses chapter of this catalog. These requirements are fulfilled by completing a major program offered by a teaching department or program committee in the College of Letters and Science (see the list of majors) or an individual major program approved by the College's Committee on Individual Majors.

No more than six units in internship courses (numbered 92, 192, or similar internship courses) may be accepted in satisfaction of the requirements of major programs. Courses numbered 97T, 97TC, 197T and 197TC do not satisfy unit or course requirements in the major.

Degree Check

Before the beginning of your senior year, take some time to consider your goals and to plan the academic program for your final year as an undergraduate. To plan properly and to ensure that you get the most out of your remaining education and complete all graduation requirements as well, you should know what requirements remain unsatisfied. To help you in these efforts, the Undergraduate Education and Advising Office provides on its website informational materials and instructions on how to evaluate your progress on college and university requirements; see http://www.ls.ucdavis.edu/students. Many departments provide similar information regarding your major requirements.

Once you have completed 135 units of degree credit, you should contact your departmental adviser for a check of your major requirements. At approximately this point, you also should request an official degree check summarizing your progress in fulfilling college and university requirements from the Undergraduate Education and Advising Office; see http://www.ls.ucdavis.edu/students for additional information.

Degree Requirement Changes

On occasion, the faculty makes changes in the requirements that students must satisfy to obtain the baccalaureate degree. So that you will not be penalized by changes that may work to your disadvantage and so that you will benefit by changes that assist you in completing your degree requirements, it is College policy that, unless otherwise specified by the Davis Division of the Academic Senate, you may choose to fulfill the university and College requirements as stated in any UC Davis General Catalog in effect at any time you were registered as a full-time student at a postsecondary institution of higher education; e.g., community college, college or university.

Once you have chosen the year of the General Catalog under which you wish to be governed, you must satisfy all of the university and college requirements specified in that catalog. With respect to the completion of your major requirements, most of the majors in the College of Letters and Science require completion of the major degree requirements in effect at the time you officially declared your major. However, because departments differ in how they handle these matters, check with the department or major program office if you have any questions about which requirements apply to you.