

Berkeley

UNIVERSITY OF CALIFORNIA

College of
Natural Resources

2014-15 Undergraduate Student Handbook

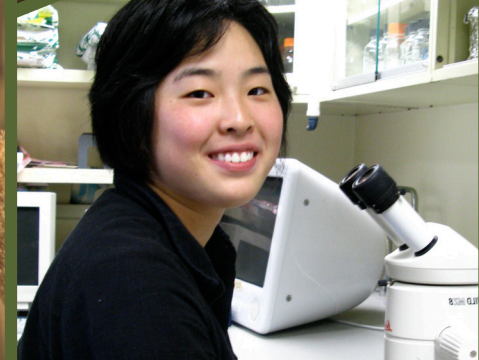


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For changes that have occurred since the publication of the
CNR Undergraduate Student Handbook,
please refer to the most updated version at
[http://cnr.berkeley.edu/site/forms/oisa/undergrad_
handbook.pdf](http://cnr.berkeley.edu/site/forms/oisa/undergrad_handbook.pdf)

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Welcome to the College of Natural Resources

“Coming in as a freshman, I really thought I wanted a big, stereotypical college experience. CNR is a great place because you get the best of both worlds. You get to go to a big university with all these great people but you also have a place that you can go to – it’s your little niche in this big university.”

--Rosie Perrot '13
Forestry & Natural
Resources



The College of Natural Resources (CNR) addresses biological, physical, chemical, social, and economic challenges associated with the world’s most critical issues. We live in an exciting and critical time to study the environment and human welfare. Our planet’s capacity to sustain itself is under continual pressure, and the need for attentive, educated citizens and broadly educated environmental scientists and problem-solvers has never been greater. The college’s academic setting, with faculty from many different disciplines focused on the environment and human welfare, is an exceptional setting for study of the dynamic interactions of the environment, health, and society; development of policies that will meet fundamental human needs; and for serving the public by transferring research findings to society. The University of California originated in our College, and CNR’s mission continues to embrace the interdisciplinary, applied approach to education that Congress mandated for land grant universities: to provide a broad segment of the population with a “liberal and practical education” relevant to the “pursuits and professions in life.”

CNR is an integral part of UC Berkeley, and our students take courses in almost every department and college on campus. But CNR remains small enough to assure individual attention for each student: faculty advising, small classes, dedicated staff, and well-supported research and community service programs are fundamental to a CNR education.



Kristina Gacutan
Assistant Dean of Instruction
& Student Affairs



Mary Firestone
Associate Dean of Instruction
& Student Affairs

Your Small College Home

You are enrolled in the College of Natural Resources (CNR). CNR has five departments offering 10 majors and is one of 14 colleges and schools at the University of California, Berkeley. We strive to be the place where lines are short and staff and faculty are readily available to work with undergraduates.

When you declare a major, you become a student in that major. You work with the academic advisor and faculty advisors for the major to plan your schedule and program. They are dedicated professionals who have had a lot of experience helping students plan their courses, and even their careers. But to earn a degree, it is ultimately your responsibility to make sure you satisfy the requirements for your major.

If you have not declared a major, you meet with an undeclared advisor who will guide you on course planning while you explore majors. Be sure that you are aware of the requirements you must fulfill while you remain undeclared, and how to take care of them. You should also visit the undergraduate advisor of any major you are interested in to find out more about it, and to talk over your options. You are expected to meet with your academic advisor at least once each semester for advice in planning your academic program.

Like all the colleges and schools at UC Berkeley, CNR has specific requirements for students in the College. You must satisfy college requirements in addition to your major requirements. To graduate, you must also satisfy university requirements. These are set by the University of California and cannot be changed by CNR.



Advising Services

The Office of Instruction and Student Affairs

The Office of Instruction and Student Affairs (OISA) is the center for all academic-related matters in the College. Professional academic advisors partner with students to identify campus and community resources to support student success. Services offered by advisors range from major exploration, short-term and long-term program planning to enrichment opportunities, career exploration and personal goals and discovery. Students are highly encouraged to actively engage their academic advisors as they are experts in College and major requirements and policies. Advisors are dedicated to meeting the needs of the students and respect

“One of the benefits of CNR is that it’s small compared to the other colleges. You don’t have to wait for appointments, there are drop-in hours, and you can access advisors pretty much anytime. They go out of their way to help you. You develop a relationship with them and it really helps you out in your academic career and your professional career after graduation.”

--Andrew Udeshi '13
Environmental
Economics & Policy

each student as a unique individual. Advisors also connect students to faculty to make the most of their undergraduate experience. All CNR students are assigned advisors based on their majors.

Although advisors are available to assist students in navigating the campus, it is the student's responsibility to understand and comply with all policies, and to complete satisfactorily all degree requirements within the allotted time frame. This includes the responsibility to track completion of major, University and Berkeley campus requirements, as well as to comply with residence, minimum progress and scholarship requirements. Students are expected to utilize the Berkeley Bulletin and CNR Undergraduate Handbook to become familiar with policies and requirements and partner with OISA to ensure academic success.

Undergraduate advisors have a special role on campus — they serve as a link between faculty and students, and students and campus. Advisors are your “tour guides” to student services and academic information across campus, and they have access to the resources you may need as a student. If problems arise, they are trained to assist you in understanding your options and campus policy. You may contact your advisor with any questions, while respecting your privacy and concerns in confidence.

Academic Dishonesty

Cheating, plagiarism, copying all or part of another person's work, using reference materials not specifically allowed, and other forms of academic dishonesty will not be tolerated. A student guilty of academic dishonesty may be assigned an F grade or a zero grade to the subject work, may be assigned an F grade in the course and may be referred to the Office of Student Conduct. Students are encouraged to carefully review the campus guide to understanding plagiarism and the Code of Conduct. If you ever have a question on whether something is allowable, check with the faculty person or GSI for the course.

NOTE: Courses for which academic dishonesty has been verified by established campus procedures may not be dropped from the record. Grades for such courses will be reinstated to the record when dishonesty is verified.

Staying Connected with CNR

CNR Student Resource Center

The Student Resource Center, located in 260 Mulford Hall, is a physical hub designed to foster academic, educational, and social activity, and to provide a supportive environment for daily student life. By providing a wide range of materials pertaining to major/minor and departmental program information, jobs and internships, and graduate programs, and also serving as a central location to hold various

programs that support CNR's standards of education, the Resource Center exists to build community for students, staff, and faculty alike

(http://cnr.berkeley.edu/site/resource_center.php).



Contact the Office of Instruction & Student Affairs:

Location:

260 Mulford Hall
Berkeley, CA 94720-3100

Office Hours:

8:00am - 12:00pm &
1:00pm - 5:00pm

Advising Hours:

9:00am - 12:00pm (M, Tu, Th, Fr) &
1:00pm - 4:00pm (M-F)
(appointments also available)

Phone: (510) 642-0542

Fax: (510) 643-3132

Email:

cnrteaching@berkeley.edu

Website:

<http://cnr.berkeley.edu>

Office of Instruction & Student Affairs Staff



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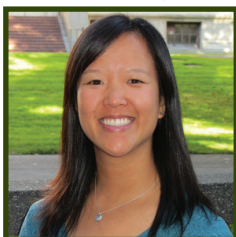
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Professor Britt Glaunsinger
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Faculty Advisors

Faculty advisors are CNR faculty assigned to advise students about a particular major or field to discuss majors, our courses, research, and other academic issues. Students are often assigned a faculty advisor when they declare a major depending on departmental requirements. Students should see their faculty advisors in order to receive guidance toward achieving academic and career goals, ask questions about the content of courses and research in their respective field, and discuss interest in graduate school. Faculty advisors are not aware of all college policy and campus requirements so you should rely on your major advisor for this sort of advising.



“We’re here to help students find their way. I joined to help others out.”

-- Kristine Cabugao '14
Peer Advisor



Peer Advising Leadership (PAL) Program

The work of peer advisors is integral to the success of their fellow CNR undergraduates. Peer advisors are trained in understanding CNR and university requirements, policies, and procedures, and they help with CNR recruitment and enrichment programs. They work at information tables in the residence halls, participate in the CNR Welcome Day Program, Cal Day, CalSO, and they assist CNR student affairs staff with various other outreach programs. They also design and manage their own college-wide advising projects. Most importantly, they introduce their fellow students to a wide variety of campus services and resources.

Students in the PAL Program are CNR students who have completed 30 or more units and have a cumulative GPA of 3.0 or higher. To become a peer advisor, visit the Office of Instruction and Student Affairs to fill out an application. The deadline to apply to the PAL Program is April 15th each spring. Positions begin at the start of each fall semester. For more information, visit <http://cnr.berkeley.edu/site/pal.php>.

Degree Requirements

All students must satisfy campus, university, and college requirements in addition to their major requirements.

Campus Requirements

American Cultures

All students must take and pass an American Cultures course to graduate. The requirement introduces students to the diverse cultures of the U.S. through a comparative framework. Courses are offered in more than 40 departments in many different disciplines. For complete details, including the most current list of approved courses, visit <http://americancultures.berkeley.edu>.

University Requirements

American History and Institutions (AH&I)

The American History and Institutions requirements are based on the principle that graduates from an American university should have an understanding of the history and governmental institutions of the United States. Students often satisfy the AH&I requirements with high school courses, e.g., U.S. History and American Government. For more information about the AH&I requirements, go to <http://registrar.berkeley.edu/?PageID=ahi.html>.

Entry-Level Writing (ELW)

Fulfillment of the University of California Entry-Level Writing requirement is a prerequisite for enrollment in all reading and composition courses. If you have not passed the Analytical Writing Placement examination (AWP —formerly known as the Subject A Examination) or otherwise satisfied the requirement by the time you enter the University, you will need to enroll in College Writing R1A during your first semester at Berkeley. It is a 6-unit course that fulfills the Entry-Level Writing requirement, as well as the first half of the Reading and Composition requirement. Further details on the AWP exam and College Writing courses can be found at <http://writing.berkeley.edu>.

Reading and Composition (R&C)

In addition to the university-wide Entry-Level Writing requirement, the University requires two semesters of lower division work in composition. All CNR undergraduates must complete the Reading and Composition (R&C) requirement by the end of their fourth term at Berkeley or the university will block your registration for the following semester. Many departments offer R&C courses – not just the English Department – so be sure to review the wide range of course choices. You must take R&C courses for a letter grade. We do not allow waivers for this requirement.

To search for all the courses that fulfill the R&C requirement, select the “Course Prefixes/Suffixes” drop-down menu, and choose the “R” prefix on <http://schedule.berkeley.edu>. Many different departments offer R&C courses, all of which fulfill the R&C requirement. Courses with numbers such as “R5A, R4B, etc.” may also be used.

If you opt to fulfill your R&C requirement by completing equivalent coursework from a California community college, please check with the Office of Instruction and Student Affairs for recommendations on courses. You may also check <http://assist.org> to check for courses that articulate as R&C at Berkeley. Newly admitted transfer students will be notified by email by the Office of Instruction and Student Affairs if their previous coursework has not satisfied the R&C requirement. Transfer work usually posts to your Berkeley transcript between August and the end of October. CNR will accept IGETC certification to satisfy the full R&C requirement, as well as any variances that have been granted by other colleges on the Berkeley campus regarding the R&C requirement.

Know the rules, regulations, and academic requirements for CNR in this handbook.

Don't find out after years of hard work that you can't graduate because you missed something.

The R&C requirement is broken down into three parts:

- UC Berkeley's Entry Level Writing Requirement (ELW)
- The first half of R&C (R1A courses)
- The second half of R&C (R1B courses)

Fulfilling the Entry Level and Reading & Composition Requirements

	ELW	R1A	R1B
SAT 1 or SAT Subject Test Writing score of 680 or above	☑		
AP English Literature	Score of 3	Score of 4 or 5	Score of 5
AP English Language	Score of 3	Score of 4 or 5	
ACT Combined English/Writing Test score of 30 or above	☑		
IB High Level English: Literature Exam with a score of 5 or higher	☑	☑	☑
IB Standard Level English Exam with a score of 6 or higher	☑		
GCE English Literature A/L with a grade of A, B or C	☑	☑	☑
Analytical Writing Placement Exam score of 8 or above	☑		
Approved California community college course with C or better (according to http://assist.org)	☑	☑	☑
College Writing R1A at Berkeley	☑	☑	



CNR Requirements

GPA Requirement

You must have at least a 2.0 cumulative UC GPA to graduate, both overall and in your upper-division courses required for your major.

Unit Requirements

- You must complete at least 120 semester units of courses.
- You must complete at least 36 upper division units, and 15 of these 36 units must be taken in the College of Natural Resources (EEP, ESPM, ERG, NST, and PMB). Note: Environmental Economics and Policy majors are not held to this requirement; consult with the EEP undergraduate major advisor.

Distribution of Units

- Only 16 units of Independent Study (97, 98, 99, 197, 198, or 199) may count toward graduation.
- No more than one third of the total units attempted at UC Berkeley may be taken Passed/Not Passed. This includes units in the Education Abroad Program and UC Intercampus Visitor or Exchange Programs.
- Only 4 units of Independent Study may be taken per semester.
- Only 4 units of Physical Education (PE) will count toward graduation.

Senior Residency

After you have completed 90 units, you must complete at least 24 of the remaining units in residence in no fewer than two semesters in the college or school at UC Berkeley in which you will take your degree. You must begin these final 24 units in the semester in which you exceed 90 units. Special provisions are made for students in the campus Education Abroad Program (EAP).

Graduating

If you know at the beginning of any given term that you will complete all graduation requirements (university, campus, college, major) by the end of that term, add yourself to the degree list via Tele-BEARS. You may check Bear Facts to check whether you are on the degree list. If you are planning to graduate at the end of the current term and you are not on the degree list, go to Cal Student Central in 120 Sproul Hall to declare your candidacy before the Friday of the 5th week of your last semester.

CNR will carry out a degree check to make sure you have satisfied all college requirements. You need to make sure that your major requirements are satisfied by working with your undergraduate major advisor. If all university, campus, college, and major requirements are satisfied, you will officially have your degree. If for any reason you do not complete all graduation requirements, you must file a new degree candidacy for the term in which you plan to finish your degree requirements.

Commencement

Participating in the commencement ceremony is not the same as graduating. CNR Commencement is held only once a year, at the end of spring semester. You do not have to be on the spring degree list to be allowed to “walk” in the commencement ceremony; you may have graduated the previous summer or fall, or be planning to graduate the next summer or fall.

“Being an Environmental Sciences major has been one of my most rewarding experiences not only in terms of academics, but also because of the relationships I built with members of the ES community. Through its interdisciplinary curriculum and senior thesis project, the program encouraged me to think critically of and engage in the world I studied.”

--Crystal Sun '13
Environmental
Sciences

Your Status as a Student

This section covers key events associated with your status as a student and possible changes in status, such as reduced study lists, withdrawal, and readmission. You'll find answers to questions about grades, honors, and academic probation.

Definitions of Status

Status by Units

Class status is defined by the number of units you have completed towards your degree.

- Freshman - under 30 units completed
- Sophomore - at least 30 units but less than 60 units completed
- Junior - at least 60 units but less than 90 units completed
- Senior - at least 90 units completed

Students who came in as freshman are expected to graduate in 8 semesters. Transfer students are expected to graduate in 4 semesters. Students completing more than one major and students who study abroad through the UC Education Abroad Program during the academic year are automatically granted an additional semester. Students are not granted additional time to complete a minor.

Full-Time, Part-Time, and Limited Status

Full-time students paying full registration fees must be enrolled in a minimum of 13 units and not exceed a maximum of 19.5 units per semester. In order to go under the minimum or exceed the maximum, you must seek special permission from the Office of Instruction and Student Affairs. Even if the College permits you to take fewer than 13 units, other departments and units on the Berkeley campus may not, such as Financial Aid. It is your responsibility to check with all campus programs pertinent to your academic and financial status.

Part-time students take fewer than 13 units per semester and pay reduced educational fees. CNR rarely allows part-time status and only in the case of occupation, family responsibility, or health. Further information is available in the Office of Instruction and Student Affairs.

Changing Your Status

Reduced Study List Due to Employment

CNR allows students who are employed for a minimum of 15 hours per week to enroll in fewer than the minimum 13 units per semester. Complete the "Employment Verification for Reduced Study List" form available at http://cnr.berkeley.edu/site/employ_verification.php and submit it for approval to the Office of Instruction and Student Affairs. The last day to submit the form is the Friday of the fifth week of instruction. We must verify your employment with your employer, and will make only two attempts to do so.

Your minimum unit load per semester depends on the number of hours you work per week. If you work 15 hours per week, you may take as few as 10 units. If you work 20-29 hours per week, you may take as few as 8 units. If you work 30 or more hours a week, you may take as few as 6 units. If your employment situation changes, please contact the Office of Instruction and Student Affairs.

Reduced Study List Due to Disability

If you have a documented and verifiable disability, you may be eligible for academic accommodations and support services (such as readers, notetakers, sign language interpreters, attendant referral, assistive technology, and housing assistance) through the Disabled Students' Program (DSP). To find out how, or if, you qualify for the services provided through DSP,

please contact them directly at (510) 642-0518 or (510) 642-6376. They are located in 260 Cesar Chavez Student Center, and their website is <http://dsp.berkeley.edu>.

If you qualify for the services provided through DSP, please bring to the Office of Instruction and Student Affairs a written document from DSP stating that fact. Failure to provide appropriate documentation of your status means, for example, we will be unable to help you drop a class if that is a course of action you need to take. We can accept only an official letter from DSP (no phone calls or emails), and your letter is valid for the current semester. You must submit a new letter for every semester you want to carry a reduced study list via DSP.

Canceling Registration/Withdrawing

We understand that students must sometimes take time off from college. It is strongly recommended that you first contact your advisor before canceling or withdrawing from the University. You may cancel your registration if you do not wish to attend the University for a semester and instruction has not yet begun. You may withdraw from the university if instruction has already begun and you find it necessary to discontinue attending classes, or prior to instruction, you are enrolled in at least one course and have paid partial fees. Whether you cancel or withdraw, any classes in which you are enrolled will be dropped from your schedule, and you will not be eligible to attend UC Berkeley until you are readmitted.

Incoming freshmen or transfer students should visit the Office of Instruction and Student Affairs or call (510) 642-0542 for advising if they are considering canceling their registration. To do so otherwise may preclude reapplying to the University.

Canceling: If you decide to cancel your registration, you must contact your advisor and cancel prior to the first day of instruction for the semester. You may cancel your registration via Tele-BEARS or by notifying the Office of the Registrar in writing prior to the first day of instruction. You may also go to the Office of Instruction and Student Affairs or Cal Student Central in 120 Sproul Hall to have your cancellation processed. There are no fees involved in canceling your registration. If you plan to register in the future (see next page), you will be required to complete and submit an “Undergraduate Application for Readmission” with the appropriate fees.

Withdrawing: Once instruction has begun, you cannot cancel your registration. You must withdraw. If you decide to withdraw, you must first meet with your advisor and then the Lead College Advisor in the Office of Instruction and Student Affairs to complete a “Notice of Withdrawal.” We will provide you with valuable information and advice regarding your withdrawal. Please be aware that your withdrawal may impact your future readmission. Any time you do not attend for a semester, and wish to return (unless you are part of the University’s Education Abroad Program), you will be required to complete an “Undergraduate Application for Readmission.”

You may withdraw from the current term any time between the first and last day of instruction. Withdrawals are considered retroactive after the last day of instruction and are rarely granted. Information regarding refunds of registration fees and financial aid implication should be directed to Cal Student Central in 120 Sproul Hall. More information can be found on the Registrar’s website: <http://registrar.berkeley.edu/Default.aspx?PageID=canwd.html>. Please note: all withdrawals processed by the College are considered personal withdrawals.

Medical: If you need to withdraw for medical reasons, you must first consult with University Health Services (UHS) in the Tang Center. We will be glad to work with you and UHS to help you with your medical withdrawal and future readmission. For more information, go to <http://uhs.berkeley.edu/students/counseling/medicalwithdrawals.shtml>.

Readmission

If you have canceled your registration, withdrawn from the university, or failed to enroll for the semester, you must apply for readmission to continue your coursework at UC Berkeley. The deadlines to apply for readmission are June 1 for the following fall semester, and November 1 for the following spring semester. It is strongly recommended that you apply for readmission as soon as you know when you'll return, and well in advance of these deadlines.

To be considered for readmission, you should consult with the Office of Instruction and Student Affairs before you apply. Then, complete the following checklist and mail all pieces to the Office of Instruction and Student Affairs:

- **Application for Readmission** from the Office of Undergraduate Admissions, available online at <http://admissions.berkeley.edu/readmission>
- **Statement of Legal Residence** (available on the same web page referenced above)
- **Program Planning Form** approved by your major advisor
- **Application for Readmission Fee** - Non-refundable, non-transferable check or money order (US Residents \$70.00, International \$80.00) payable to "UC Regents"
- **Official transcripts** from any other institution attended while away from the university

Your application will then be reviewed by CNR. If approved, you will be readmitted and may begin classes in the semester to which you applied for admission.

Distinction and Honors

Distinction in General Scholarship at Graduation

Distinction is awarded at graduation, and a notation of such will appear on your final transcript and diploma. To earn distinction, you must:

- Complete a minimum of 50 semester units at the University of California.
- Complete at least 43 of the 50 units for a letter grade.
- Complete at least 30 of the 50 units at Berkeley.
- Possess a GPA that ranks you at the top of your CNR graduating class:
 - within the top 3 percent for highest distinction,
 - within the top 7 percent for high distinction, and
 - within the top 10 percent for distinction.

CNR Dean's List

The CNR Dean's List is a mark of achievement granted at the end of each semester to students ranked in the top percentage of all CNR students by GPA. It will appear on your transcript. Please note; however, that it is not related to Distinction in General Scholarship. The qualifications for Dean's List are:

- Have completed 13 or more units for a letter grade during the previous semester.
- Possess a GPA for the semester ranking you in the top 4% of all CNR undergraduates.
- Have no Incompletes, No Report (NR), Not Passed grades, or missing grades from the previous semester.

Utilize Campus Resources

Don't be afraid to ask for help if you find yourself struggling in a course. Meet with your advisor early to seek out campus resources that are at your disposal. It can be daunting to search through the many resources on campus, so make sure to ask lots of questions to get the assistance that you need.

Honors to Date Notation

Honors to Date is a notation on your transcript that indicates you are currently on track to earn Distinction in General Scholarship. It appears after every semester's grades are reported. Should you cease to qualify, Honors to Date will not appear on the following semester's grade report, although you will still see it noted for the semesters in which you already earned it.

You will see Honors to Date if you meet the following the criteria:

- At least 12 units completed and taken for a letter grade at UC Berkeley for that semester.
- Overall GPA (all semesters cumulative) equal to or higher than the GPA needed to earn Distinction in General Scholarship.

Academic Probation

You will be placed on academic probation if your cumulative UC Berkeley GPA falls below 2.0. Should this happen, you must bring your cumulative GPA up to 2.0 within the following two semesters. If you increase your grade point deficit in the first semester after going on academic probation, you could be subject to dismissal.

You may also be placed on 1.5 "term" probation, a form of academic probation, if your GPA falls below 1.5 in any fall or spring semester ("term"). In such a case, you must bring your term GPA to 2.0 the following fall or spring semester and maintain your cumulative GPA of 2.0, or be subject to dismissal.

If you fear you may go on academic probation, meet with your undergraduate advisor immediately to determine a plan for avoiding such a condition, and also devise a plan for what you will do in case you do go on academic probation.

Dismissal

Dismissal occurs when you are no longer in good academic standing (when your academic performance fails to meet the required GPA of 2.0) for two semesters in a row. You are no longer considered a Berkeley student and should not attempt to enroll in classes. If you have been dismissed, you will have to appeal in writing to the Associate Dean of Instruction and Student Affairs for readmission.

Courses and Grades

Passed/Not Passed Grading Option

The Passed/Not Passed (P/NP) grading option is intended to encourage students to take electives without worrying about their grades. A grade of P corresponds to a C- or better. P/NP grades are not calculated into your cumulative GPA.

A maximum of one-third of your total units may be taken P/NP. If you receive more than 12 units of NP grades, your registration may be blocked. You cannot take any of your major requirements on a P/NP basis. You may change your grading option from letter grade to P/NP or P/NP to letter grade until the Friday of the tenth week of classes.

Incomplete Grades

Should circumstances beyond your control prevent you from being able to finish your work in a course, a grade of incomplete may be assigned by the instructor. Your work in the class up to that point must be at least of a 2.0 average in order to

“What I’ve liked best about Conservation & Resource Studies is that I’m able to take classes across campus – from classes in the Haas School of Business to the College of Natural Resources and the fusion between the studies has given me a greater appreciation for what an environmental major can be.”

--Nik Crain '14
Conservation &
Resource Studies and
Business
Administration

receive an I grade. If the instructor agrees to give you an I grade, you must make arrangements with the instructor for completion of the required coursework at least 30 days prior to the deadlines noted below. Faculty (or department chairs) are under no obligation to accept and grade work submitted after the deadline.

IMPORTANT: Do not re-enroll in the course in order to remove your incomplete!

All undergraduates must observe the following deadlines for replacement of an incomplete:

Incomplete Grade Received	Deadline for Replacement of Incomplete Grade
Fall Semester	First day of instruction of following fall semester
Spring Semester or Summer Session	First day of instruction of following spring semester

You are expected to meet these deadlines even if you are not enrolled in classes or if you are studying abroad. To remove your incomplete, you must complete Section I of the “Petition to Remove an Incomplete Grade” online at <http://registrar.berkeley.edu/Records/igrades.html>. When you have finished the coursework, submit the petition to the instructor, who will then submit the petition to the Office of the Registrar. Be sure to keep a copy of the petition for your own records.

If you are unable to finish a course by the deadline, you may request an extension of time from the Associate Dean of Instruction and Student Affairs by completing a general Student’s Petition, available online at http://cnr.berkeley.edu/site/req_forms.php. All requests for extension must be made prior to the deadline date (see chart on previous page), and must include a letter of support from your instructor.

If you do not meet the deadline to complete your coursework, your I grade will lapse into an F grade (or NP if the course was taken on a P/NP basis).

A student may freeze up to two I grades so that they remain permanently on the record as an Incomplete (they never lapse to an F or NP) by filing the appropriate petition (<http://registrar.berkeley.edu/DisplayMedia.aspx?ID=Perm.I.G.Pet.pdf>) by the appropriate deadline. Once an I grade has been frozen, the course or its equivalent can never be completed or repeated. Thus, a student may not freeze an I grade in a required course.

Repeating Courses

You may want to consider repeating a course if you received a deficient (NP, F, D-, D, or D+) grade in it. There are some limitations on this measure:

- The course must be the same UC Berkeley course you originally took.
- If you took the course for a letter grade the first time, you must take it for a letter grade the second time.
- If you took the course P/NP the first time, you may take it P/NP or for a letter grade the second time.
- Your new grade will replace the original grade, although the original grade will remain on your transcript. The original grade will not factor into your GPA.
- You may not take a course for a third time and receive grade points. A course repeated more than once will not be included in the grade-point average,

but a passing grade in the repeated course will be accepted in satisfaction of requirements for the degree.

- If you receive a grade of I upon repetition of a course, the grade of D+, D, D-, or F will continue to be computed in the grade-point average until the I grade is replaced.
- If you enroll in a course in which you received an I grade, the I will lapse to an F.

If you repeat more than 12 units of repeatable courses, both the new and the original grades will factor into your GPA. Keep in mind that some professional and graduate schools factor in repeated course grades when calculating undergraduate GPAs.

Transferring Coursework

Advanced Placement (AP)/International Baccalaureate (IB)/General Certificate of Education (GCE) Credit

You can translate AP, IB, and GCE test scores into units of credit at UC Berkeley; this process is handled by the Office of Undergraduate Admissions. The credit you receive from AP, IB, or GCE test scores may be applied to your degree progress, for example, if you wish to graduate early (see AP Exam and Higher Level IB Exam Equivalency Charts on page 44 and 45).

Junior Transfer Credit

UC awards graduation credit for up to 70 semester (105 quarter) units of transferable lower division (freshman/sophomore level) coursework from a community college. That means those units will be counted toward completion of your degree. Courses in excess of 70 semester (105 quarter) units will not receive unit credit but will receive subject credit and may be used to satisfy UC's subject requirements. This does not pertain to coursework taken at a four-year institution. Transfer credit is handled by the Office of Undergraduate Admissions.

Intercampus Visitor

The Intercampus Visitor Program allows undergraduates enrolled in one UC campus to apply to another as an intercampus visitor for one term. Permission to participate in this program is granted on a very limited basis and only for valid academic reasons. Apply at Cal Student Central in 120 Sproul Hall.

Concurrent Enrollment

Students may not enroll simultaneously in the College of Natural Resources at UC Berkeley and in another institution, except during the summer. If you can demonstrate unusual circumstances that may require you to undergo concurrent enrollment, meet with your advisor to request approval before enrolling in the other institution. Incoming freshmen and transfer students are not allowed to apply for concurrent enrollment their first semester. Students approved for concurrent enrollment during regular semesters must also remain enrolled in a minimum of 13 units on campus.

Cross-Registration Programs with Other Schools

Berkeley has cross-registration programs with California State University, East Bay; Mills College; San Francisco State University; Sonoma State University; Holy Names University; John F. Kennedy University; and Dominican University. With the approval of your advisor and the Office of Instruction and Student Affairs, you may register and pay your fees at UC Berkeley, and be exempt from tuition

“The classes in CNR really force you to think about not just what you’re doing as a scientist, but what you’re doing as a researcher and how that relates to society and the effects on the environment.”

--Susie Zhang '14
Molecular Toxicology

and fees at the host campus. You may enroll for only one course per semester at the host campus.

In addition to these established programs, a program created by California State Senate Bill (SB) 1914 makes it possible for any Berkeley student to attend a class each semester at any campus of the California State University or Community College systems. Under these programs, students from the other institutions can also attend classes at Berkeley. Please note that students participating in the SB 1914 exchange program may be subject to a \$10 administrative fee, depending on the institution. For more information, go to Cal Student Central in 120 Sproul Hall, or call Special Registration at (510) 642-1988.

UC Berkeley Extension Credit

UC Berkeley Extension courses with numbers below 200 and preceded by an XB (such as XB132) are equivalent to courses offered at UC Berkeley. They satisfy the same requirements and the credit is counted as equal to the same course taken at Berkeley. UC Extension courses with numbers below 200 preceded by an X alone may be considered for fulfillment of requirements on a case-by-case basis. Check with your undergraduate advisor before enrolling in such a course.

NOTE: UC Berkeley Extension Courses do not count toward residency requirements.

All UC Berkeley-matriculated undergraduate students (except those in dismissal status and those who have already completed a UC Berkeley undergraduate program) will automatically have all XB coursework included with grade points on their Berkeley campus transcript. XB coursework completed prior to fall 2005 is not eligible for the transfer of grades or grade points to the Berkeley campus transcript. Note that if you are registered exclusively at UC Extension, you are not considered a Berkeley student, even if you are applying your credit toward a Berkeley degree.

Majoring in the College of Natural Resources

CNR has developed multidisciplinary programs that encompass the natural and social sciences, with a strong commitment to undergraduate teaching. Our 10 undergraduate programs provide a foundation ranging in fields that prepare students for graduate and professional programs in biological sciences, health professions, environmental fields, policy, law, business, and economics, and include programs designed for students with interests in specific professions, such as forestry and nutrition/dietetics. Most are integrative programs that emphasize flexible, interdisciplinary approaches.

Majors in the Biological Sciences

Genetics and Plant Biology (GPB) combines traditional plant sciences (physiology, biology, anatomy) with more recent biological disciplines (genetics, molecular biology, biochemistry) to study the role of plants in the global environment. The discipline emphasizes the study of plants from the molecular/genetic levels to the organismal level, including applications to biotechnology. Electives in the major are organized into five tracks: 1) biotechnology and bioenergy, 2) plant diversity and evolution, 3) plant genetics, genomics and bioinformatics, 4) plant microbe interactions, 5) experimental plant biology. Offered by the Department of Plant and Microbial Biology (PMB).

Plan Ahead!

Work with your advisor. Don't give up on an excellent major just because it is hard and your grades are not perfect. Don't close the door to wonderful career options. The right major will pay off later.

The Departments

Agricultural and Resource Economics (ARE) provides a basic foundation in economics and policy analysis, as applied to the conservation and management of natural and environmental resources.

Energy and Resources Group (ERG) produces cutting edge research to inform scientific, policy, and business communities. ERG is an intellectual hub for research on clean energy, climate science, ecosystems and biodiversity, energy systems, international development, technology and society, and water policy.

Environmental Science, Policy, and Management (ESPM) brings diverse expertise to bear on environmental problems from molecular to global scales.

Nutritional Sciences and Toxicology (NST) focuses on research in nutrient function, metabolism, biochemistry, and molecular toxicology.

Plant and Microbial Biology (PMB) focuses on plants and microbes and their interactions, ranging from field ecology to genomic comparisons.

Microbial Biology (MB) is the study of microbes, which compose the largest majority of biomass on the planet. The major investigates interactions between microorganisms and the environment to determine the role microbes play in maintaining the health of our biosphere. This includes how microbes can help combat environmental pollutants, facilitate energy production, and influence the progress of medical research on infectious diseases. Electives in the major are organized into five tracks: 1) General Microbiology, 2) Host-Pathogen Interaction, 3) Ecology and Environmental Microbiology, 4) Evolution/Computational Genomics, and 5) Microbial Biotechnology. Offered by the Department of Plant and Microbial Biology (PMB).

Molecular Environmental Biology (MEB) introduces students to the organization and function of biological organisms at the molecular, cellular, organismal, and ecological levels. It teaches students how to apply biological principles to understand how organisms function in their environment. A classic pre-medical or pre-health science major, the discipline offers an array of six areas of concentration within biology: animal health and behavior; ecology; insect biology; microbiology; environmental and human health; and biodiversity. Offered by the Department of Environmental Science, Policy, and Management (ESPM).

The Nutritional Sciences (NS) and Toxicology Department offers three undergraduate specializations.

The Physiology & Metabolism specialization studies delivery of nutrients from foods to cells, and the many functions of nutrients, including in energy metabolism and in generating autocoids. The Dietetics specialization prepares students for careers as Registered Dietitians. The Molecular Toxicology specialization focuses on the molecular and physiological effects of natural and human-made toxicants. All three specializations relate food and/or toxicants to human health and disease risk.

Majors in Ecosystem Management and Interdisciplinary Studies

Conservation and Resource Studies (CRS) gives students the opportunity to actively design and complete an individualized environmental studies degree with an interdisciplinary area of interest. This major is designed for students interested in environmental issues and areas of interaction among natural resources, population, energy, technology, societal institutions, and cultural values. The major's orientation is toward flexibility and an individualized educational approach to understanding the structure and dynamic functions of complex environmental systems within our society and biosphere. Because CRS students draw on the course offerings of the entire campus, they have the flexibility to incorporate any combination of courses in the social sciences, biological sciences, physical sciences, or humanities to address complex environmental problems. Sample topics include environmental justice and education, sustainable development of world populations, energy and environmental policy, conservation and culture, and ecological restoration and policy, to name a few. Offered by the Department of Environmental Science, Policy, and Management (ESPM).

Environmental Sciences (ES) provides broad, comprehensive education in the fundamentals of biology, chemistry, math, physics, and social sciences. The discipline involves the study of interactions between human activities and

biological and physical environments on all scales, from the local to global. ES majors finish their degree with a year-long research project, the senior thesis. Students investigate an environmental issue, they design and execute independent research and present their results in oral and written form. Offered by the Department of Environmental Science, Policy, and Management (ESPM).

Forestry and Natural Resources (FNR) focuses on the conservation and restoration of the earth's natural resources through hands-on study of the ecology, stewardship, and management of forest, woodland, and grassland ecosystems. The program offers concentrations in forestry and natural sciences or in human dimensions of natural resources, and will qualify students for the Registered Professional Forester's licensing exam in California. Topics studied include wildlife and conservation biology, ecosystem restoration, rangeland management, water policy, fire science, GIS and remote sensing, environmental justice, and rural sociology. Students participate in an 8-week summer field program in the Sierra Nevada. Offered by the Department of Environmental Science, Policy, and Management (ESPM).

Majors in the Social Sciences

Environmental Economics and Policy (EEP) focuses on economics and the political institutions that affect the development and management of natural resources and the environment. It takes a problem-solving approach to issues involving renewable and fixed natural resources, and has a foundation in micro-economic theory and the economics of resources and the environment. The major also includes topics related to policy, domestic or international development, and law. The program is offered in both the College of Natural Resources (B.S.) and the College of Letters and Science (B.A.). Offered by the Department of Agricultural and Resource Economics (ARE).

Society and Environment (S&E) introduces students to the main approaches and theory for environmental social sciences, including how social science tools can be applied to environmental problems, and how social science theories contribute to understanding environmental problems. Students are exposed to three areas of concentration, and choose to focus on one: 1) U.S. Environmental Policy and Management, 2) Global Environmental Politics, or 3) Justice and Sustainability. Offered by the Department of Environmental Science, Policy, and Management (ESPM).

Choosing a Major

If you are a freshman, you are not required to be in a major program during your first two years in CNR. You must declare a major by the end of your fourth semester of enrollment at UC Berkeley. Failure to declare a major by the time you reach junior status will result in your registration being blocked, and you will not be able to enroll in any courses until you declare.

Your major should reflect your interests and your career goals. Both may change during your first years of college, and you need not feel locked into your initial choice of major. Many major programs have similar lower division requirements, and changing majors within CNR during the first two years generally creates no difficulties.

“The biological processes of climate change are meaningless without analyzing them in the context of the organisms and processes it affects. I found Forestry and Natural Resources to be a place where the sciences and humanities converge, allowing for a more comprehensive approach to solving real world problems. The innovations taking place in the field of forestry right now are exhilarating - I can't express how excited I am to be a part of it all.”

--Elynn Hagelshaw '16
Forestry and Natural Resources

“What I like best about CNR is the community feeling of it. How you can walk into Mulford and feel like everyone knows you there. You see a lot of familiar faces and you form study groups at tables randomly because you see people in your class who are studying for the same midterm. I don’t feel that is common in any of the other colleges.”

--Neetha Iyer '13
Molecular
Environmental
Biology/French

There is plenty of information on the undergraduate majors offered in CNR available in the Student Resource Center, and on the CNR website at http://cnr.berkeley.edu/site/choosing_major.php. You can also make an appointment with any of the academic advisors to find out more about a particular major.

Declaring a Major for CNR Students

On pages 25-26, you will find the minimum requirements needed to declare a major in CNR. Students are also expected to follow these guidelines:

- Current UC Berkeley students who entered as freshmen are expected to be able to graduate in a total of 8 semesters (summers excluded). Exceptions are rarely granted. Students should be progressing in major requirements each semester.
- All major requirements must be taken for a letter grade.
- Both halves of Reading and Composition requirement must be completed by the end of the 4th semester.
- Transfer students are declared into a major upon admission. Students wishing to change majors and/or colleges must meet with the major advisor for specific guidelines. Such requests are rarely granted as students must meet all lower division requirements and be on track to graduate in a total of 4 semesters at Berkeley. Transfer students cannot apply to transfer colleges or change majors during their first semester.

Once all requirements have been satisfied, you must complete the “Change of College, Major, or Curriculum” petition, print a copy of your unofficial transcripts, and meet with the appropriate major advisor. The petition is available at the Office of Instruction and Student Affairs, and online at http://cnr.berkeley.edu/site/req_forms.php.

Change of College and Declaring a Major for Non-CNR Students

On pages 27-28, you will find the minimum requirements needed for non-CNR students to declare a major in CNR. Students are also expected to follow these guidelines:

- Completion of at least one semester at UC Berkeley.
- A GPA of at least 3.0 overall.
- Ability to complete the degree within the semester limit (see above). Participation in UC Berkeley Extension’s Fall Program for Freshmen is considered a Berkeley semester under CNR policy.
- Satisfactory academic progress during the semesters of enrollment (e.g. completion of Entry Level Writing; Reading and Composition).
- Submitted and signed Change of College petition and signed Program Plan (by both the student and new major advisor)
- Students may not submit a Change of College petition during their last semester before graduation (i.e. if a student plans to graduate in Spring 14, they must submit and have approved their Change of College petition no later than Fall 13. Students that take a reduced study list might need to submit paperwork sooner in order to meet Senior Residency).

Once all requirements have been satisfied, you must complete the “Change of College, Major, or Curriculum” petition, print a copy of your unofficial transcripts, and meet with the appropriate major advisor. The petition is available at the Office of Instruction and Student Affairs, and online at http://cnr.berkeley.edu/site/req_forms.php.

Changing Majors

You can change majors by obtaining approval from your new undergraduate major advisor and the Office of Instruction and Student Affairs. Should you decide to declare a major in a college other than CNR, visit the website for the other college or school to find out how to consult an advisor for that program. In all cases, it is important to maintain good academic standing, which means that your grade point average should be 2.0 or higher, and you are taking courses that will enable you to complete a major in the College of Natural Resources within the normal time frame.

Double Majoring and Simultaneous Degrees

Double majoring is when you pursue two degrees in CNR; obtaining simultaneous degrees is when you pursue one major in CNR and one major in another UC Berkeley college or school. To declare either course of study, fill out a “Petition to Declare a Double Major or Simultaneous Degrees” and obtain the appropriate signatures. This form, as well as the specific steps you need to take, can be found online at http://cnr.berkeley.edu/site/double_simul.php. Students pursuing a double major or simultaneous degree are granted one additional semester to complete all degree requirements.

Declaring Simultaneous Degrees

- Completion of at least one semester at UC Berkeley.
- Students whose home college is not CNR, must meet all criteria for a Change of College (please note: students pursuing a simultaneous degree are allotted nine total semesters as incoming freshmen and five total semesters as incoming transfers).
- Students must obtain all necessary signatures from undergraduate advisors for each major on the Program Planning form. In planning simultaneous degrees, you will need to adhere to all unit and residence requirements for each college or school.
- No more than two upper division courses count towards the requirements of both majors.
- Students may not submit a Simultaneous Degree petition during their last semester before graduation (i.e. if a student plans to graduate in Spring 14, they must submit and have approved their Change of College petition no later than Fall 13. Students that take a reduced study list might need to submit paperwork sooner in order to meet Senior Residency).
- Your simultaneous degrees request will be approved only if your proposed program demonstrates that you will be able to finish all degree requirements within nine semesters if you entered as a freshman, or five semesters if you entered as a transfer student.
- To confirm your simultaneous degrees, check Bear Facts periodically after submitting your application. You will be notified by email if there is a problem with your application.

“Since CNR is one of the smaller colleges on campus it really provides an intimate atmosphere for all our students. You get to know each other on a first name basis. You get to know your advisors on a first name basis. They’re very welcoming, always accessible, and more than willing to help you out.”

--Amelia Appell ‘13
Society &
Environment

Minimum Requirements Needed to Declare for CNR Students, by Major

- Undeclared students must declare a major by the end of their 4th semester. Failure to declare a major by junior standing will result in a registration block, and you will not be able to enroll in any courses until you are declared.
- All major requirement courses must be taken for a letter grade.
- Both halves of Reading and Composition (R1A & R1B) must be completed by the end of the 4th semester.
- Transfer students are declared into a major upon admission. Students wishing to change majors and/or colleges must meet with the major advisor for specific guidelines. Such requests are rarely granted as students must meet all lower division requirements and be on track to graduate in a total of 4 semesters at UC Berkeley. Students cannot apply to transfer or change major during their first semester.

■ Indicates the minimum requirements to declare. Students with higher standing level/units are expected to be on track.

☒ Indicates strongly preferred if completed and could be requested if applying to declare in the 4th or 5th semester.

	R1A	R1B	Math 16A or 1A	Math 16B or 1B	Stats (selection program specific)	Econ EEP C1/ Econ C3 or Econ 1	ESPM Social Science Core	ESPM Env Science Core	Breadth Physical Science	Breadth Biology	Other
Conservation & Resource Studies	■	☒	■ or Stats		■ or Calculus		■	■	☒	■ Bio 1A, 1B, or 11	ESPM 90
Environmental Economics & Policy	■	☒	■	■	■	■					
Forestry & Natural Resources (FNR Concentration)	■	☒	■	☒	■	☒	☒ ESPM C11 preferred	■	☒ EPS 50, GEOG 1 or 40	■ Bio 1B	Also required: Chem 1A/1AL Preferred: ESPM 72
Forestry & Natural Resources (HDNR Concentration)	■	☒	■ or Math 32		■	☒	☒ ESPM C11 preferred	■	☒	■ Bio 1B or 11	Also preferred: ESPM 72
Society & Environment	■	☒	☒ or Stats		☒ or Calculus	☒	■	☒	☒	☒	

	R1A	R1B	Math 16A or 1A	Math 16B or 1B	Chem 1A/1AL	Chem 3A/3AL	Chem 3B/3BL	Bio 1A/1AL	Bio 1B	Physics 8A	Other
Environmental Sciences (Biological Science)	■	☒	■	☒	■	■		☒	☒		ESPM 15 preferred One semester of Biology is required in order to declare
Environmental Sciences (Physical Science)	■	☒	■ Math 1A	■ Math 1B	■	■		☒ or Bio 11	☒ or Bio 11	☒ Physics 7A	ESPM 15 preferred One semester of Biology is required in order to declare
Environmental Sciences (Social Science)	■	☒	■	☒	■	■ or Chem 1B		☒ or Bio 11	☒ or Bio 11		ESPM 15 preferred One semester of Biology is required in order to declare
Genetics & Plant Biology	■	☒	■	■	■	■	☒	☒	☒		One semester of Biology is required in order to declare
Microbial Biology	■	☒	■	■	■	■	☒	☒	☒		One semester of Biology is required in order to declare
Molecular Environmental Biology	■	☒	■	■	■	■	☒	☒	☒		Also preferred: ESPM Env Science Core One semester of Biology is required in order to declare
Nutritional Sciences (Dietetics)	■	☒	■		■	■	■	■			NST 10 (offered every semester) 3.0 GPA & separate application required
Nurtitional Sciences (Molecular Toxicology)	■	☒	■	☒	■	■	☒	☒			NST 11 (offered spring semester only)
Nutritional Sciences (Physiology & Metabolism)	■	☒	■	☒	■	■	☒	☒			NST 10 (offered every semester)

Minimum Requirements Needed to Declare for Non-CNR Students, by Major

- All major requirement courses must be taken for a letter grade. CNR majors require a minimum 3.0 cumulative GPA to transfer into CNR. Positive increase in GPA for major requirements over time will be taken into consideration for students who do not meet the 3.0 GPA mark. Students must be in good academic standing (not on academic probation, subject to dismissal, or term probation in the semester they want to declare).
- Both halves of Reading and Composition (R1A & R1B) must be completed by the end of the 4th semester.
- Current UC Berkeley students who entered as freshmen are expected to be able to graduate in a total of 8 semesters (summers excluded). Exceptions are rarely granted. Participation in FPF is considered a Berkeley semester under CNR policy. Students are not eligible to transfer in undeclared or with senior standing (non AP).
- Transfer students wishing to change colleges must meet with the major advisor for specific guidelines. Students may be eligible after completing one semester at UC Berkeley. Students must meet all lower division requirements, have a GPA above 3.0, and be on track to graduate in a total of 4 semesters at UC Berkeley.

■ Indicates the minimum requirements to declare. Students with higher standing level/units are expected to be on track.

☒ Indicates strongly preferred if completed and could be requested if core prerequisite GPA is low.

	R1A	R1B	Math 16A or 1A	Math 16B or 1B	Stats (selection program specific)	Econ EEP C1/ Econ C3 or Econ 1	ESPM Social Science Core	ESPM Env Science Core	Breadth Physical Science	Breadth Biology	Other
Conservation & Resource Studies	■	■	■ or Stats		■ or Calculus		■	■	■	■ Bio 1A/1L, 1B, or 11/11L	ESPM 90
Environmental Economics & Policy	■	■	■	■	■	■					EEP 100 or equivalent
Forestry & Natural Resources (FNR Concentration)	■	■	■	☒	■	■	■ ESPM C11 preferred	■	☒ EPS 50, GEOG 1 or 40	■ Bio 1B	Also required: Chem 1A/1AL Preferred: ESPM 72
Forestry & Natural Resources (HDNR Concentration)	■	■	■ or Math 32		■	■	■ ESPM C11 preferred	■	☒	■ Bio 1B or 11	Also preferred: ESPM 72
Society & Environment	■	■	■ or Stats		■ or Calculus	■	■	■	☒	☒	Also preferred: Intl. Studies and Social & Behavioral Science breadth

	R1A	R1B	Math 16A or 1A	Math 16B or 1B	Chem 1A/1AL	Chem 3A/3AL	Chem 3B/3BL	Bio 1A/1AL	Bio 1B	Physics 8A	Other
Environmental Sciences (Biological Science)	■	■	■	■	■	■		☒	☒		ESPM 15 preferred One semester of Biology is required in order to declare
Environmental Sciences (Physical Science)	■	■	■ Math 1A	■ Math 1B	■	■		☒ or Bio 11	☒ or Bio 11	☒ Physics 7A	ESPM 15 preferred One semester of Biology is required in order to declare
Environmental Sciences (Social Science)	■	■	■	■	■	■ or Chem 1B		☒ or Bio 11	☒ or Bio 11		ESPM 15 preferred One semester of Biology is required in order to declare
Genetics & Plant Biology	■	■	■	■	■	■	☒	☒	☒		One semester of Biology is required in order to declare
Microbial Biology	■	■	■	■	■	■	☒	☒	☒		One semester of Biology is required in order to declare
Molecular Environmental Biology	■	■	■	■	■	■	☒	☒	☒		ESPM Env Science Core is preferred One semester of Biology is required in order to declare
Nutritional Sciences (Dietetics)	■	■	■		■	■	■	■			NST 10 (offered every semester)
Nutritional Sciences (Molecular Toxicology)	■	■	■	■	■	■	■	■			NST 11 (offered spring semester only) Math 16A/16B or 1A required
Nutritional Sciences (Physiology & Metabolism)	■	■	■	■	■	■	■	■			NST 10 (offered every semester) Math 16A/16B or 1A required

Make sure your schedule is accurate each semester.

You should check your schedule periodically on Bear Facts and ensure that you are enrolled in the classes you want and have designated the correct grading option. You should print out a copy of your schedule at the end of the 2nd, 5th, and 10th week of classes and keep them for your records. You are responsible for the accuracy of your class schedule.

Minoring in the College of Natural Resources

CNR offers seven undergraduate minor programs. Students in any major with the appropriate prerequisites may pursue a minor in CNR. All courses used in satisfaction of a minor program must be taken for a letter grade, unless the course is offered only on a Pass/Fail basis. You must achieve at least a C (2.0) average in the courses taken in satisfaction of a minor program and may not overlap more than one upper division course between a major and a minor program.

Conservation and Resource Studies (CRS) is an interdisciplinary program designed for students who are interested in environmental issues both from the social science and natural science perspective. Students may study areas of interaction among natural resources, population, energy, technology, societal institutions, and cultural values. Students may elect to complete this minor through a list of pre-approved courses or develop their own interdisciplinary group of courses similar to the structure of the CRS major.

Energy and Resources Group (ERG) offers undergraduates the opportunity to develop basic knowledge and skills to help them address the complex and interdependent issues associated with the interaction of social, economic, political, technical, and environmental factors. Though it is designed primarily to complement majors in the natural sciences and engineering, students in any major with the appropriate prerequisites may pursue the ERG Minor.

Environmental Economics and Policy (EEP) offers interested students an opportunity to explore aspects of economic and political institutions that affect the development and management of natural resources and the environment.

Forestry and Natural Resources (FNR) is for students who are interested in learning about these subjects as an adjunct to their chosen fields. Students from many different majors such as integrative biology, business administration, and civil engineering find this minor complementary to their professional career goals.

Geospatial Information Science and Technology (GIST) offers undergraduates the opportunity to develop basic knowledge and technical skills in geographic information systems to help them address the ways in which spatial data and analysis can support and define environmental, urban, and natural resource sciences. The minor is designed to complement majors in the natural sciences, social sciences, and engineering.

Nutritional Sciences (NS) or **Molecular Toxicology (MT)** minors are available to students who have pursued basic coursework in the biological sciences under other majors. The research and curriculum span a breadth of topics from the delivery of nutrients to mammalian cells and their molecular functions, to the influence of genetics on diet-associated human disease.



Planning Your Program

Course Enrollment

Tele-BEARS

Tele-BEARS is UC Berkeley's course enrollment system, which students access via the internet. It runs in "real time," meaning you will always have the most up-to-date information on your course list whenever you access it. To enroll in courses each semester as a CNR undergraduate, you will need to fill out your Tele-BEARS form and use it to obtain your advisor code.

Advisor Codes

An advisor code is a four-digit number you receive from your academic advisor to give you access to Tele-BEARS. Advisor codes change each semester, therefore you must obtain a new advisor code for every semester you plan to register on the Berkeley campus.

To get your advisor code, you will be contacted each semester on how to schedule an appointment to meet with your advisor. As soon as you receive this message you should make an appointment and avoid cancellations. This will ensure that all students receive their advisor code prior to their Phase I appointment time. In order to receive your advisor code you must first fill out a Tele-BEARS form. Only lecture/primary sections need to be put on the form. Include laboratory and discussion sections only if you earn additional units for them. These forms are available in the Office of Instruction and Student Affairs, or online at http://cnr.berkeley.edu/site/enrolling_courses.php.

If you have a legitimate reason for not being able to meet with an advisor in person (e.g., you are in a study abroad program), you must fill out an "Advisor Code Release Form," and fax it along with your completed Tele-BEARS form to the Office of Instruction and Student Affairs. Forms are available in the Office of Instruction and Student Affairs, and online at http://cnr.berkeley.edu/site/enrolling_courses.php.

You are responsible for obtaining your advisor's signature in time to meet your Tele-BEARS deadlines. If you are also required to meet with your faculty advisor you must do so before your appointment with your major advisor. Waiting until the assigned date and time of your Phase I enrollment period to get your advisor code is highly discouraged.

Bear Facts

Bear Facts is a system that provides information regarding your registration, grades, financial aid, billing, class schedule, and more. You also use Bear Facts to update your mailing or email addresses and phone numbers, order transcripts, access your DARS report (Degree Audit Report), and complete/submit a "Statement of Legal Residence." Since it is not connected to Tele-BEARS, it is a day behind the most current information available.

Know the deadlines for adding and dropping courses.

Deadlines are posted every semester in the online Schedule of Classes and are also on the Office of the Registrar's website (<http://registrar.berkeley.edu/Registration/adddrop.html>).

Remove yourself from any course waitlist you are on before the end of the 5th week of classes.

If you are on a waitlist, it is still possible that you will be added to that course by the department, even if you have not attended the course, and you no longer plan to enroll in it. Check Bear Facts frequently to verify your enrollment.

Adding/Dropping Courses and Grading Options

You may add and drop courses from your schedule until the Friday of the 5th week of classes, and you have until the Friday of the 10th week of classes to change the grading option. There are fees associated with adding and dropping classes - please be aware that the earlier you make changes to your schedule, the less expensive it will be!

It is your responsibility to make and monitor your schedule. Exceptions to these deadlines are rarely made and any petitions for late or retroactive adds or drops must be accompanied by proof of the reason stated (e.g., if there has been a medical emergency with you or a relative, we would need to receive appropriate documentation).

Be sure to check Bear Facts frequently to verify your current semester enrollment. Your schedule may change as a result of instructors automatically adding you from the wait list or dropping you from a course without notifying you of the change. Do not assume that you will be automatically dropped from a class for non-attendance or added because the instructor has said so.

Requesting Consideration for an Exception

1. Submit a signed and dated explanation of your request. Limit your explanation to one typewritten page of relevant facts and dates that explain how extenuating circumstances affected your academic work.
2. Requests for course additions must be signed by the course instructor and must include the course control number. Further documentation is not required.
3. For all other requests, attach documentation of your situation, and include the Instructor's Statement Petition that must be submitted in a sealed departmental envelope. Petitions submitted without sufficient documentation will be denied.
4. Complete the Late Petition to Change Class Schedule, obtaining signatures from your academic advisor, the Faculty Athletic Representative if you are a student-athlete, and the International Advisor if you are an international student.
5. Make copies of all documents for your own records. The College is not able to make copies for you.
6. Submit your appeal to the College of Natural Resources, Office of Instruction and Student Affairs (undergraduate Dean's Office), 260 Mulford Hall, #3100, Berkeley, CA 94720-3100.



Course Planning

It is important to note that you are ultimately responsible for your educational program. It can be a bit complicated and overwhelming, so do not hesitate to seek advice from your advisor and the Office of Instruction and Student Affairs. Here are some guidelines to keep in mind:

- All courses required by the college and for your major must be taken for a letter grade.
- Course numbers 1-99 are lower division courses, and courses numbered 100-199 are upper division courses. Courses numbered 200 and above are graduate level courses.
- Pay attention to the prerequisites for all courses. The professor will expect you to have a certain level of knowledge before enrolling in his/her course. Set yourself up to be prepared rather than overwhelmed.
- Some classes are only offered in the fall semester, others only in the spring semester, and some are offered both semesters (as noted in the General Catalog). Plan accordingly.
- No more than 1/3 of the total units you take at Cal may be graded Passed/Not Passed (page 15).
- There is a maximum limit of 4 units of field/group/independent study courses (courses numbered 97, 98, 99, 197, 198, 199) per semester.
- While you are registered as a UC Berkeley student, you may not take courses at another university or college - including community colleges - during the Fall or Spring semester. In the summer, you are allowed to take courses from institutions other than Cal (page 17).
- If you are planning to go to graduate school, be aware that many academic and professional programs may have specific course requirements that you will need to build into your program with your elective units. Consult the Career Center website to find out more about graduate degree programs (<http://career.berkeley.edu>) Note: If you do use some of your elective units to satisfy a course requirement for graduate school, you should take the course for a letter grade.

Selecting Your First Math and Chemistry Course

Need to take Math and/or Chemistry for your major? Enrolling in the course that you feel best suits your academic background will help ensure your success.

Math 16A or Math 1A?

CNR recommends the 16A-16B series for almost all majors in CNR. Math 16A-16B covers many of the same basic topics as Math 1A-1B. Math 16A-16B is less theoretical and covers the level of math you need for our biology based majors. Math 1A-1B is intended for Engineering and Physical Science majors and those who intend to take higher levels of math to use in their career. It is important to note that Math 16A-16B is a terminal, one-year calculus sequence; in order to take Math 53 or 54, you must pass Math 1A-1B with a letter grade of C- or better. Students who strongly believe that they might want to take more than just a year of math should take the Math 1 series.

“One of the great things about the Forestry major is how much you get to go outside. One day you may be in the classroom learning about something and then the next day you can go and actually see and talk about it. I’m more of a conceptual learner, I learn by seeing, so for me this is really helpful.”

--Christine Stontz '13
Genetics & Plant
Biology/Forestry &
Natural Resources

Math AP Exams: What does my score mean?

AP exams may exempt a student from one or both of the calculus courses, though students are not required to skip courses based on AP scores. The Math department has found that while an AP score of 3 or 4 shows that a student is ready to take college calculus, it is not an accurate indicator of how a student will do in a college math course. High school calculus is not necessarily the same as college calculus. If your AP score allows you to enroll in Math 1B or 16B, but you feel that your math background is not as strong as you would like, then we strongly encourage you to enroll in Math 16A (or Math 1A if your major requires it). The Math department recommends that students take the online math placement exam to best determine their placement. <http://math.berkeley.edu/courses/choosing/placement-exam>

Not ready for calculus?

If you are not ready to take calculus as your first math course at Cal, then you should take Math 32 (Pre-Calculus). It is designed to prepare students for Math 1A or 16A. The prerequisite for Math 32 is three years of high school mathematics.

Chemistry

Although Chem 1A is listed as a beginning course, it is generally taught with the understanding that students have not only had high school chemistry, but that they have also retained much of the material. As a result, it is often hard for students that either don't have a strong chemistry background or just don't remember their high school chemistry to do as well in the class as they would like.

What is Chem P?

Chem P is a course taught in the Student Learning Center that is designed to prepare students to take Chem 1A the following semester. The first half of Chem P emphasizes the basics of high school chemistry that are usually covered very quickly or not at all in Chem 1A. The second half focuses on some of the more difficult topics from Chem 1A. That way, the material won't be so foreign when it's covered in more depth in 1A in the spring. Chem P is only offered in the fall semester, and CNR students will receive 2 units for taking the course.



Planning Your Freshman Year

If you have not declared your major in the College of Natural Resources, but have a potential major in mind, refer to the recommended courses listed below to help you plan your first year at UC Berkeley. Remember, all undergraduates must enroll in a minimum of 13 units per semester. Check the online schedule of classes for course descriptions and find out when courses are offered: <http://schedule.berkeley.edu>.

Conservation & Resource Studies (CRS) or Society and Environment (S&E)

Courses strongly recommended:

- Math 32*, Math 16A, or Stats 2 (*if needed, in preparation for Math 16A)
- Reading & Composition R1A or R1B
- ESPM C11, ESPM C12, ESPM 50AC or ESPM 60
- ESPM 2, ESPM 6 ESPM C10, or ESPM 15
- Freshman seminar: ESPM 24 or 39 courses, or Natural Resources 24 or 39 courses

Other courses to consider:

- American Cultures (AC)
 - Elective of interest in preparation toward the Area of Interest for CRS or Area of Concentration for S&E
 - Elective: any course numbered 99 or less if you meet the course prerequisites
-

Environmental Economics & Policy (EEP)

Courses strongly recommended:

- EEP C1/Econ C3 (after having taken first semester of Calculus)
- Math 32*, Math 16A, or Math 1A (*if needed, in preparation for Math 16A or Math 1A)
- Math 16B or Math 1B (after completion of Math 16A or 1A)
- Reading & Composition R1A or R1B
- Freshman seminar: EEP 39A, or Natural Resources 24 or 39 courses

Other courses to consider:

- American Cultures (AC): ESPM 50AC recommended, or any AC course numbered 99 or less
 - Elective: any course numbered 99 or less if you meet the course prerequisites
-

Environmental Sciences (ES)

Courses strongly recommended:

- Math 32*, Math 16A, or Math 1A (*if needed, in preparation for Math 16A or Math 1A)
- Chem 1A/1AL (or Chem P if needed in preparation for Chem 1A); Chem 3A/3AL or 1A/1AL (spring semester)
- Reading & Composition R1A or R1B
- Freshman seminar: Natural Resources 24 or 39 courses

Other courses to consider:

- ESPM 2, ESPM 6 ESPM C10, or ESPM 15
 - Elective: any course numbered 99 or less if you meet the course prerequisites
-

Forestry & Natural Resources (FNR)

Courses strongly recommended:

- Math 32*, Math 16A, or Stats 2 (*if needed, in preparation for Math 16A)
- Reading & Composition R1A or R1B
- ESPM C11
- Physical Science: Geog 1 or 40, EPS 50, or Chem 1A/1AL (or Chem P if needed in preparation for Chem 1A)
- Freshman seminar: ESPM 24 or 39 courses, or Natural Resources 24 or 39 courses

Other courses to consider:

- American Cultures (AC): ESPM 50AC recommended, or any AC course numbered 99 or less
- Elective: ESPM 2, 6, C10, C12, 15, 60, or any course numbered 99 or less if you meet the course prerequisites

Genetics & Plant Biology (GPB) / Microbial Biology (MB)

Courses strongly recommended:

- Math 32* or Math 16A (*if needed in preparation for Math 16A)
- Math 16B (after completion of Math 16A)
- Chem 1A/1AL (or Chem P if needed in preparation for Chem 1A); Chem 3A/3AL or 1A/1AL (spring semester)
- Reading & Composition R1A or R1B
- Freshman seminar: PMB 24 or 39 courses, or Natural Resources 24 or 39 courses

Other courses to consider:

- American Cultures (AC): any AC course numbered 99 or less
 - Elective: any course numbered 99 or less if you meet the course prerequisites
-

Molecular Environmental Biology (MEB)

Courses strongly recommended:

- Math 32* or Math 16A (*if needed in preparation for Math 16A)
- Math 16B (after completion of Math 16A)
- Chem 1A/1AL (or Chem P if needed in preparation for Chem 1A); Chem 3A/3AL or 1A/1AL (spring semester)
- Reading & Composition R1A or R1B
- Freshman seminar: ESPM 24 or 39 courses, or Natural Resources 24 or 39 courses

Other courses to consider:

- American Cultures (AC): ESPM 50AC recommended, or any AC course numbered 99 or less
 - Elective: ESPM 2, 6, C10, C11, C12, 15, 60, or any course numbered 99 or less if you meet the course prerequisites
-

Nutritional Sciences (NS)

Courses strongly recommended for Physiology & Metabolism specialization, Dietetics specialization, and Molecular Toxicology specialization:

- Math 32*, Math 16A & Math 16B, (*if needed in preparation for Math 16A)
- Reading & Composition R1A or R1B
- Chem 1A/1AL (or Chem P if needed in preparation for Chem 1A); Chem 3A/3AL or 1A/1AL (spring semester)
- NST 10 (Physiology & Metabolism and Dietetics specializations) or NST 11 (Molecular Toxicology specialization, offered spring only)
- Freshman seminar: NST 24 courses, or Natural Resources 24 or 39 courses

Other courses to consider for any NS specialization:

- American Cultures (AC): any AC course numbered 99 or less
- Elective: any course numbered 99 or less if you meet the course prerequisites

Program Planning Form

Major(s): _____
Minor: _____

Include campus, college, and major requirements and any study abroad or other programs in your planning worksheet

Fall _____	Units	Spring _____	Units	Summer _____	Units
Total		Total		Total	

Fall _____	Units	Spring _____	Units	Summer _____	Units
Total		Total		Total	

Fall _____	Units	Spring _____	Units	Summer _____	Units
Total		Total		Total	

Fall _____	Units	Spring _____	Units	Summer _____	Units
Total		Total		Total	

Enrichment Opportunities

Undergraduate Research

Our goal is for every undergraduate to get involved in some aspect of research before graduating from UC Berkeley. Within CNR, we offer numerous opportunities for you to design an independent research project or to contribute to an ongoing research project with our faculty. Through your research experience, you can expect to be mentored by a professor and gain the hands-on laboratory or field research skills that will complement what you are learning in the classroom. To get started, all you need is to look into the various options available to you listed below.



Independent Study Research

You can enroll in a departmental 99 or 199 independent study course to obtain academic credit for the research you complete under the guidance of a faculty sponsor.

The number of units you can earn for your 99 or 199 independent course study depends on the amount of research you conduct on a weekly basis (3 hours/week = 1 unit). The grading option is P/NP only. To receive academic credit for your research, you must first identify a CNR faculty member who will supervise you for on-campus research, and then submit a completed 99 or 199 application for independent study to the appropriate undergraduate advisor for your department.

You must submit an application for each semester that you wish to receive independent study credit. Visit the appropriate undergraduate advisor to find out about any other departmental requirements regarding independent study for your major. The application form is available online at http://cnr.berkeley.edu/site/undergraduate_research.php

Sponsored Projects for Undergraduate Research (SPUR)

The CNR Sponsored Projects for Undergraduate Research Program (SPUR) encourages faculty and undergraduate students in CNR to collaborate on research projects by providing a grant to support their joint project. The funding for this program is generously donated by CNR alumni. Participating in SPUR is an excellent way to gain experience in research and build relationships with faculty. Research opportunities are available at the beginning of each semester. Visit the Office of Instruction and Student Affairs for more information, or go to <http://cnr.berkeley.edu/site/spur.php>.

“For my SPUR research, I spent three months in Cochabamba, Bolivia working in peri-urban migrant and indigenous communities studying different forms of water access through NGOs and water cooperatives.”

--Rebecca Peters '13
Society &
Environment/
Interdisciplinary
Field Studies

Undergraduate Research Apprenticeship Program (URAP)

URAP is designed to involve UC Berkeley undergraduates more deeply in the research life of the University. The program provides opportunities for you to work with faculty. Faculty and undergraduates from all of the schools and colleges at the UC Berkeley are welcome to participate. New research opportunities are available at the beginning of each semester (<http://research.berkeley.edu/urap>).

The CNR Honors Program

The College of Natural Resources Honors Program is designed to support undergraduate students interested in developing, executing, and evaluating a year-long independent research project under the guidance of a CNR faculty mentor. Students who successfully complete the CNR Honors Program will receive a notation of honors in their major. The CNR Honors Symposium, held once each semester, gives all honors students the opportunity to present their research to fellow students, faculty, deans, staff, friends, and family. For more information, visit http://cnr.berkeley.edu/site/honors_program.php.

To qualify, you must:

- Be a declared major in the CNR department in which you are seeking honors.
- Possess an overall GPA of 3.6 or higher.
- Have no more than 2 incomplete grades on your academic record.
- Have completed a minimum of 60 semester units (attained junior or senior status).
- Junior transfer students must have completed at least one semester (generally two semesters is most appropriate) at UC Berkeley with an overall 3.6 GPA.

Requirements:

- Complete 8 units of a two-course H196 series under the guidance of a faculty sponsor. You must enroll in both H196 courses for a letter grade
- Earn grades of a B or better in each H196 course.
- Write a research paper conforming to the expectations of the relevant discipline, and submit a copy to your faculty sponsor/research mentor.
- Give an oral presentation at the CNR Honors Symposium.
- Submit a 1 page summary to the college on the date you present your research.

Applying:

- Complete the “CNR Honors Program Enrollment Form,” available in the Office of Instruction and Student Affairs, in the Student Resource Center, from your academic advisor, and at http://cnr.berkeley.edu/site/honors_program.php.
- Write a 300-word research proposal.
- Identify a research mentor, who can be any faculty member or other qualified instructor on campus. If you choose to do research with a mentor from outside the College of Natural Resources, you must also identify a faculty sponsor in CNR.
- Submit your enrollment form to your undergraduate major advisor by the Friday of the third week of the semester in which you plan to enroll in the Honors Program.

CNR highly encourages students applying to the Honors Program to apply for SPUR funding as well. SPUR (Sponsored Projects for Undergraduate Research) awards a student-faculty mentor pair a \$500 grant for their joint project. The pair may also apply for additional funding up to \$2000 for research supplies and expenses. For more information, go to: <http://cnr.berkeley.edu/site/spur.php>



CNR Undergraduate Research Poster Sessions

The Office of Instruction and Student Affairs sponsors a poster session each spring, where CNR undergraduates present their research. Poster sessions give you the opportunity to explain and showcase your independent projects to a large audience. Other benefits of participating in a poster session include gaining communication and presentation skills, and learning to summarize your research, which is an integral part of scholarship. You will receive recognition for your hard work on a research project and will have the chance to discuss your project with others who share your interests. Every participant is rewarded with a Certificate of Participation, and select presenters are also awarded prizes. The experience is one you can add to your professional resume (http://cnr.berkeley.edu/site/poster_sessions.php).

Study Abroad and Field Programs

CNR encourages students to add an international dimension to their education by participating in a study abroad program. Study abroad provides an opportunity to expand your academic and cultural experiences while staying on track to complete your major requirements. With proper academic planning, students can have the experience of a lifetime with no loss of time in completing their degrees.

Studying abroad can provide you with many unique skills and experiences that are valuable to future employers, such as:

- Language Skills
- Flexible thinking and open-mindedness
- Independence
- International and Cultural Awareness
- Self-Confidence
- Communication Skills
- Hands-on experience in an international setting (for those participating in internships or research abroad)



Study abroad programs are available at all class levels. The particular semester, summer, or year that you study abroad depends on your individual progress in your major, what coursework you plan to complete abroad, and your immediate plans after graduation. Some majors may have specific requirements that must be taken on campus, so it's important to plan ahead with your major advisor.

Transfer students are eligible to participate starting the second semester of their junior year, though most transfer students find it better to go abroad during their senior year, summer, or the fall semester following their senior year. Find more details at <http://eap.ucop.edu/eap/transfer>.

There are over 100 different program options in more than 40 different countries offered by the UC Education Abroad Program. Students may be able to count some of the courses abroad towards their major requirements. The Berkeley Study Abroad office is located in 160 Stephens Hall, has connections to programs around the world specific to the social, environmental, and biological sciences. In addition, CNR sponsors the following two off-campus programs designed for undergraduates:

“I’m involved with the Suitcase Clinic, a student-run organization aimed at helping underserved populations in Berkeley and in the Bay Area. Some of the services we offer include employment and housing assistance, as well as medical, optometry, and dental referrals.”

--Christopher Lau ‘13
Molecular
Environmental
Biology

Biology and Geomorphology of Tropical Islands

The Richard B. Gump South Pacific Research Station is located on Moorea Island in French Polynesia. Students attending classes on Moorea study subjects ranging from biology to archaeology with UC Berkeley professors. Studying for a semester at Moorea adds great field experience to your undergraduate career. This program is only offered in fall semesters. Information is available online at <http://ib.berkeley.edu/moorea>.

Forestry Summer Field Program

The UC Berkeley Forestry Summer Field Program is offered by CNR’s Department of Environmental Science, Policy, and Management, and is an eight-week summer program consisting of four courses. The camp is located in the California Sierra Nevada. The overall goal of the Summer Field Program is to provide an introduction to the scientific and professional dimensions of forest and wildland resource management. Students participating in the program learn about ecology, forest, range and wildlife management, measurements, forest operations, and products. At the end of the program, students will have a broad, working knowledge of concepts and techniques used by wildland resource managers. The experience of studying these topics in a field setting inevitably enriches students’ subsequent on-campus academic studies. Information is available online at <http://espm.berkeley.edu/summercamp>.

Student Resources

Pre-Health Resources

Being Pre-Health in CNR

Many CNR students plan to pursue an advanced degree in medicine, dentistry, public health, nursing, pharmacy, and other related health professions. Students must complete the required coursework for medical school alongside the requirements for their intended major. Although you may choose to major in any of CNR’s biological science majors, you are encouraged to select the major that interests you the most. Medical schools do not prefer one major over another, and you can choose a non-science major such as Society and Environment, but you would still need to complete the prerequisite courses for medical school.

Career Center

The Career Center has a robust Pre-Med and Pre-Health website with information on required courses, pre-med timeline, application resources, specialized workshops, and weekly pre-health CareerMails. Make an appointment to speak with one of the pre-health advisors or peer advisors to learn more about their resources (<http://career.berkeley.edu/Health/Health.stm>)

Association of American Medical Colleges (AAMC)

Helpful information if you are considering medicine, exploring the profession, getting into medical school, the cost of medical school, and enrichment programs (<http://www.aamc.org/students/considering>).

Pre-Health Student Organizations

Student organizations are excellent way to help you connect with others who share your career interests and find ways to be engaged in activities in your community. For a comprehensive list, visit <http://career.berkeley.edu/Health/CalClubs.stm>.

Typical Pre-Health Requirements

CNR students who are trying to complete the pre-health curriculum may need to take courses not required by their major as an elective. Please note that pre-health prerequisites may vary somewhat at your choice of schools. Consult with the Career Center or the schools you plan to apply to for more information.

Courses marked with a ☑ are typical of the prerequisite requirements for the professional schools listed. This chart is a generalization of all professional schools in the program areas listed, and individual programs should be consulted for their specific entry requirements.

Core Pre-Health Courses		Typical Pre-Med Requirements	Typical Pre-Pharmacy Requirements	Typical Pre Veterinary Requirements	Typical Pre Dental Requirements
General Chemistry	Chem 1A/1AL	☑	☑	☑	☑
	Chem 3A/3AL	☑	☑	☑	☑
Organic Chemistry	Chem 3B/3BL	☑	☑	☑	☑
	MCB 102 or MCB 100A & 100B	☑	Varies	☑	Varies
Physics w/ Lab	Physics 8A (or 7A)	☑	☑	☑	☑
	Physics 8B (or 7B)	☑	Some schools require two semesters of physics	☑	☑
Biology w/ Lab	Biology 1B	☑	☑	☑	☑
	Biology 1A	☑	☑	☑	☑
Math	Math 16A or 1A	☑	☑	☑	☑
	Math 16B or 1B	☑	☑	Optional	Optional
Statistics	Various	Only required by a few medical schools		☑	
English	Various	English requirements vary. Many courses that satisfy the Reading and Composition requirement are acceptable. Keep the syllabi and/or the course description.	English requirements vary. Many courses that satisfy the Reading and Composition requirement are acceptable. Keep the syllabi and/or the course description.	1 year of English or writing-intensive classes. Many courses that satisfy the Reading and Composition requirement are acceptable. Keep the syllabi and/or the course description.	1 year of English or writing-intensive classes. Many courses that satisfy the Reading and Composition requirement are acceptable. Keep the syllabi and/or the course description.
Misc.		-Psychology 1 or 2 -Sociology 1	-Anatomy -Physiology -Microbiology	-Biochemistry -Physiology -Microbiology	Encouraged but not necessarily required: -Physiology -Microbiology
Non-Sciences	Various	Various	-Humanities and social sciences, -Economics, -Speech/Public Speaking	Some schools specify a certain number of units in the humanities and social sciences.	Encouraged but not necessarily required: -Business

Getting Involved at Cal

Though academics play a leading role in the life of a student, there is a big difference between attending a university and being part of a university. Student groups and organizations help you enhance your educational experience by implementing and furthering the skills that you learn in the classroom. How else can you benefit from the hundreds of student organizations that UC Berkeley has to offer? Joining one can help you with social networking, professional experience and development, leadership skills, and much more!

The listings that follow are only an introduction to the wonderful opportunities that await you. Pick a few that look fun and get involved. If you can't find one that appeals to your interests, start your own! To search through a complete list of student groups, visit <http://campuslife.berkeley.edu/orgs>.

CNR Student Groups

Berkeley Environmental Economics and Policy (BEEPS)

Berkeley Environmental Economics and Policy Students (BEEPS) is a student organization for students of the EEP major or minor to network, socialize, and prepare for post-graduation (<https://www.facebook.com/calbeeps>).

Cal Forestry Club

The Forestry Club is a social and academic community open to anyone at Berkeley with an interest in forestry. The Forestry Club participates in Society of American Forester events, holds an annual Christmas tree cut and sale, sponsors "Bean Feed" dinners, competes in logging sports, and works in community outreach (<http://cnr.berkeley.edu/forestryclub>).

Conservation & Resource Studies Student Organization (CRSSO)

CRSSO exists to facilitate a community among CRS majors and supplement educational activities. Some of CRSSO's major activities include sponsoring a mentor system for ESPM 90 and holding monthly potlucks (<http://goo.gl/xbDKe>).

Environmental Sciences Student Association (ESSA)

ESSA is a group for students interested in environmental sciences. ESSA's main goal is to bring students with interests in the environment together in a fun, academic, and social atmosphere. Membership is open to all UC Berkeley students (<http://cnr.berkeley.edu/envsci/essa.html>).

The Global Environment Theme House (GETH)

GETH brings together students and faculty to explore issues around environmental change, natural resources, sustainable environments, and environmental leadership. The Green Suite and Green Room demonstration areas display some of the newest green technology and ideas in consumer sustainability (<http://themeprogams.berkeley.edu/geth.html>).

Plant and Microbial Biology Association (PAMBA)

PAMBA is focused on providing students with an insight to research being conducted in the areas of plant and microbial biology. PAMBA provides students the opportunity to network with graduate students and postdoctoral researchers, as well as conduct experiments in a classroom setting and attend seminars and events relevant to the club's interests. Contact ucbpamba@gmail.com for more information.



Student Dietetics Association (SDA)

SDA provides support to undergraduate students and the greater Berkeley campus, as well as helps students network with faculty. SDA promotes and supports National Nutrition Month, attends dietetic events, and participates in volunteer programs (http://cnr.berkeley.edu/site/student_groups.php).

Student Environmental Resource Center (SERC)

The mission of the Student Environmental Resource Center is to strengthen the collective effectiveness and durability of campus sustainability efforts by providing information, opportunities, and services to students and student groups with an interest in sustainability (<http://serc.berkeley.edu/>)

Toxicology Student Association (ToxSA)

ToxSA supports students in the Molecular Toxicology major and non-majors interested in toxicology by providing advising, career preparation, and community service opportunities, as well as exploring past and current issues in toxicology (<http://tinyurl.com/ToxSA>).

Pre-Health Organizations

American Medical Student Association Premedical Chapter (AMSA-BPC)

AMSA-BPC is devoted to exposing its members to diverse issues in medicine and public health; involving them in academic, professional, service, and social activities; and fostering an atmosphere of camaraderie amongst pre-health students (<http://amsa.berkeley.edu>).

Cal Pre-Vet Club

The Pre-Vet Club prepares students interested in the field of veterinary medicine by inviting speakers, touring Vet schools, and providing information on admissions and prerequisites (<http://www.ocf.berkeley.edu/~pvc/>).

Cal Undergraduate Public Health Coalition (Cal UPHC)

Cal UPHC helps students gain R.E.A.L. experience in the field of public health through Research, Education, Action, and Leadership. Cal UPHC strives to give students the skills, experience, opportunities, and support necessary to excel in the field of public health (<http://site.google.com/site/caluphcsite>).

Foresight Pre-Optometry

Foresight unites students who are interested in pursuing a career in optometry by educating members on current issues facing the growing field of optometry (<https://sites.google.com/site/ucberkeleyforesightclub>).

Pre-Nursing Society (PNS)

PNS provides solutions to pre-nursing challenges through social support and educational interaction. The goal of PNS is to raise student awareness and establish nursing as a critical and rewarding occupation in health care (<http://prenursingsociety.wordpress.com>).

Pre-Pharmacy Informational Learning & Leadership Society (PILLS)

Established as the primary pre-pharmacy organization on campus, PILLS provides students with resources and support to pursue pharmacy as a career (<http://www.ocf.berkeley.edu/~pills>).

Cal Pre-Dental Society (Cal PDS)

Cal PDS is dedicated to improving the oral health of surrounding communities while providing professional development to members through initiatives in education, advocacy, and ethical professional standards (<http://pds.berkeley.edu>).

Environmental Organizations

ASUC Sustainability Team (STeam)

STeam creates and implements projects that help establish sustainable practices and promote environmental awareness on campus (<http://sustainability.asuc.org>).

Bay Area Environmentally Aware Consulting Network (BEACN)

BEACN is a non-profit student organization that specializes in sustainable business consulting in the Bay Area (<http://beacn.berkeley.edu>).

Berkeley Energy and Resources Collaborative (BERC)

BERC is an interdisciplinary network of graduate and undergraduate students passionate about clean energy and its implications on natural resource issues (<http://berc.berkeley.edu>). To get involved, email berc.undergrad@gmail.com.

Berkeley Student Food Collective (BSFC)

BSFC works to provide fresh, local, healthy, environmentally sustainable, and ethically produced food at affordable prices to the Berkeley campus and greater community (<http://berkeleystudentfoodcollective.org>).

Building Sustainability @ Cal (BS@C)

BS@C trains students to help reduce the environmental footprint of campus buildings by educating building inhabitants and identifying structural and operational changes that can be made to buildings and campus as a whole (<http://buildingsustainability.berkeley.edu>).

Compost Alliance

The Compost Alliance actively promotes sustainability by diverting compostable waste from landfills (<http://recycle.berkeley.edu/compost>).

Green Campus

A student-run internship program that works to increase campus sustainability, especially focusing on energy and water (<http://greencampus.berkeley.edu>).

Greening the Greeks

Greening the Greeks is a student organization consisting of Cal Greek members that promotes environmental awareness and sustainability within the fraternity and sorority community, especially in housing facilities and Greek sponsored events (<http://www.facebook.com/greeningthegreeks>).

Online Materials Exchange

This program facilitates the exchange of gently used items between members of the campus community in order to divert reusable materials going to the landfill (<http://exchange.berkeley.edu>).

Strawberry Creek Restoration

This program works to restore natural diversity to our campus natural areas while creating an atmosphere of environmental stewardship throughout our local communities (<http://strawberrycreek.berkeley.edu>).

Take Back the Tap

Take Back the Tap is working to end the sale of single-use, disposable water bottles at UC Berkeley by 2014 by educating the student body on the positives of tap water as an alternative to bottled water (<http://goo.gl/mBLV8>).

Campus Resources

- ▶ **Bear Facts** – Review grades, registration status, class schedule, and financial aid - <https://bearfacts.berkeley.edu>
- ▶ **Berkeley International Office (BIO)** - Advising, immigration services, advocacy, and programming for international students - <http://internationaloffice.berkeley.edu>
- ▶ **Bioscience & Natural Resources Library** – Printed and electronic resources in the Bioscience and Natural Resources fields - <http://lib.berkeley.edu/BIOS>
- ▶ **Cal Student Central** – One central location for key university business related to financial aid, fees and billing, payments, disbursements, registration and enrollment - <https://studentcentral.berkeley.edu>
- ▶ **Cal Corps Public Service Center** –Connections to service, leadership and volunteer opportunities throughout the Bay Area - <http://publicservice.berkeley.edu>
- ▶ **Career Center** – Information on career events/workshops, counseling, internships, jobs, and graduate/professional schools - <http://career.berkeley.edu>
- ▶ **College Writing Office** – Resource on writing and writing instruction - <http://writing.berkeley.edu>
- ▶ **DeCal** (Democratic Education at Cal) – Information on all DeCals offered during the semester as well as information on how to create your own DeCal - <http://www.decal.org>
- ▶ **Disabled Students Program (DSP)** –Services and programs for students with disabilities - <http://dsp.berkeley.edu>
- ▶ **Education Abroad Program (EAP)** – Program opportunities and services to study abroad - <http://studyabroad.berkeley.edu>
- ▶ **Educational Opportunity Program (EOP)** – Services for low income, 1st generation, undocumented, and underrepresented students. Academic counseling, Summer Bridge, achievement awards, and grad school resources - <http://eop.berkeley.edu>
- ▶ **Freshman & Sophomore Seminars (FSS)** – Small, interactive courses for freshman and sophomores - <http://fss.berkeley.edu>
- ▶ **General Catalog** - Complete catalog of courses offered on the Berkeley campus with course descriptions and prerequisites - <http://catalog.berkeley.edu>
- ▶ **New Student Services (NSS)** – Information on Welcome events, Convocation, Calapalooza, move-in tips and more for new students and parents - <http://nss.berkeley.edu>
- ▶ **Online Schedule of Classes** - Search current and future semester course offerings, review course enrollment information (including open seats and wait lists), view final exam calendar and responsibilities - <http://schedule.berkeley.edu>
- ▶ **Residential & Student Services Programs** – Housing, dining, and residential student services, as well as the Cal 1 Card program - <http://housing.berkeley.edu>
- ▶ **Scholarship Connection** – Information on scholarship opportunities funded by sources outside of Berkeley - <http://scholarships.berkeley.edu>
- ▶ **Student Learning Center (SLC)** – Primary academic support service for Berkeley students. Tutoring, workshops, networking, pre-professional teaching experience, etc. - <http://slc.berkeley.edu/general/index.htm>
- ▶ **Tele-BEARS** – Primary source for course registration - <https://telebears.berkeley.edu>
- ▶ **Transfer, Re-Entry and Student Parent Center (TRSP)** –Services for new & continuing students. Courses, workshops, opportunities for mentorships/internships, scholarships, and community center - <https://transfer.berkeley.edu>
- ▶ **Undergraduate Research Programs @ Berkeley** – Listing of research opportunities, weekly workshops, and scholarship opportunities - <http://research.berkeley.edu>
- ▶ **University Health Services (Tang Center)** – Counseling and medical services. Health promotion, health resources, insurance, etc. - <http://uhs.berkeley.edu>
- ▶ **UC Berkeley Biology Major programs** –Resources for listings and information on opportunities in the field of Biology - <http://biology.berkeley.edu>

AP Exam Equivalency Chart

Your AP credits must appear on your UC Berkeley transcript before they can be used to meet major requirements. While your major may accept AP exams to satisfy a major requirement, consult with your major advisor to discuss what impact this may have on you. Remember that substitution is optional and students more often struggle with the subsequent biology, chemistry, physics, and math courses if they don't take the introductory courses at UC Berkeley. Pre-Med students: Please note that most medical and pre-health graduate programs do not accept AP units for pre-med requirements.

Requirements			Majors									
UCB Course	AP Exam Subject	Score	EEP	ES	CRS	FNR	GPB	MEB	MB	MT	NS	S&E
Biology 1A, 1B or 11	Biology	4, 5		✓	✓	✓		✓				
Math 1A or 16A	Calculus AB or BC	3, 4, 5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Math 1B or 16B	Calculus BC	5	✓	✓		✓	✓	✓	✓			
Chemistry 1A	Chemistry	4, 5		✓	✓	✓	✓*	✓	✓*	✓	✓	
Economics 1	Economics (Macro and Micro)	4, 5	✓							✓*	✓*	✓
Environmental Economics & Policy C1	Economics (Micro)	4, 5	✓	✓	✓	✓						✓
ESPM 15 or ESPM C10	Environmental Science	4, 5		✓	✓	✓		✓				✓
Statistics 2	Statistics	3, 4, 5			✓	✓	✓	✓	✓	✓	✓	✓
Physics 8A	Physics	3, 4, 5					✓		✓			
Humanities & Social Science Breadth	Varies	3, 4, 5					✓		✓	✓	✓	

*A score of 3 is also acceptable for these majors

Higher Level IB Exam Equivalency Chart

Your IB credits must appear on your UC Berkeley transcript before they can be used to meet major requirements. While the major may accept IB exams to satisfy a major requirement, consult with your major advisor to discuss what impact this may have on you. Remember that substitution is optional and students more often struggle with the subsequent biology and chemistry courses if they don't take the introductory courses at UC Berkeley. Pre-Med students: Please note that most medical and pre-health graduate programs do not accept IB units toward admission requirements.

Requirements			Majors									
UCB Course	IB Higher Level Exam	Score	EEP	ES	CRS	FNR	GPB	MEB	MB	MT	NS	S&E
Reading and Composition	English 1A	5, 6, 7	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
American History and Institutions	History of the Americas	5, 6, 7	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Biology 1B	Biology	5, 6, 7		✓**	✓	✓		✓				
Chemistry 1A, 1AL	Chemistry	5, 6, 7		✓	✓	✓	✓	✓	✓	✓	✓	
Economics 1	Economics	5, 6, 7	✓	✓		✓				✓	✓	✓
Foreign Language*	Foreign Language	5, 6, 7	✓									
Quantitative Reasoning*	Mathematics or Computer Science	5, 6, 7	✓									

* These requirements only exist for the Environmental Economics and Policy (EEP) major

** May be used for Biology 1B **or** Biology 1A/1AL