

2023 UCLA NEW STUDENT ACADEMIC PROGRAMS - FRESHMAN

DEPARTMENT OF ECOLOGY AND EVOLUTIONARY BIOLOGY

DEPARTMENT OF ECOLOGY AND EVOLUTIONARY BIOLOGY (<https://www.eeb.ucla.edu/undergraduate/>)

Biology Major • Ecology, Behavior, and Evolution Major • Marine Biology Major

Conservation Biology Minor • Evolutionary Medicine Minor

Undergraduate Counselors: Jessica Angus, Wendy Ramos

101 Hershey Hall, (310) 825-1680

How to contact us? Go to **Message Center** on MyUCLA.



Ecology and Evolutionary Biology Undergraduate BruinLearn Page

Students are highly encouraged to subscribe to the EEB Undergraduate BruinLearn list serv. Below are examples of information posted on the list serv:

- Office Hours for the EEB Undergraduate Office
- Department events
- New classes or seats being opened during enrollment
- Field Biology Quarter, Field Marine Biology Quarter, and Marine Biology Quarter application cycles
- Programs related to graduate schools and professional schools
- Opportunities for research, leadership, internships, employment, scholarships, volunteering, and study abroad

To subscribe to the EEB Undergraduate BruinLearn list serv, join the course at this link: <https://bruinlearn.ucla.edu/enroll/8ANPYB>.



DEPARTMENTAL ADVISORS answer questions about your *major and minor requirements*:

- Lower Division major requirements
- Upper Division major requirements
- Minor requirements (as applicable)
- Course substitutions for the Major or Minor
- Global GPA – encompasses Upper Division major requirements only
- Academic questions about applying to graduate or professional school

CONTACTING YOUR ADVISOR

Your **DEPARTMENTAL ADVISOR** can assist you with the following:

- ❖ Enrollment into classes offered by their department
- ❖ Class planning

NOTE: Departmental Advisors CANNOT enroll you into classes offered by a different department.

When you contact any COUNSELOR (College, Departmental, etc.), always include the following information in all correspondence:

- Your full name
- Your 9-digit student ID number (UID)
- Your specific question(s)

If you are inquiring about enrollment into a class, always include the following in your correspondence in addition to the above information:

- The Department and Course Number AND the discussion section(s) of the class you are interested in (e.g., EE BIOL 100, DIS 1A, etc.)
- The 9-digit Student Records System (SRS) number for at least two (2) discussion/lab sections that will work in your schedule, listed in order of preference.

Please be aware that the advisors in the EEB Undergraduate Office do not check their e-mail or Message Center messages outside of regular office hours, e.g., after 5:00PM or on weekends or holidays.



UCLA STUDENT GROUPS

There are numerous student groups on campus in which you can get involved based on your interests. A comprehensive list of student groups may be found here: <http://www.studentgroups.ucla.edu/home/>

Department of Ecology and Evolutionary Biology Undergraduate Association:

<https://www.facebook.com/EEBUndergradStudentAssociation>



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EEB MAJORS

There are three (3) majors offered by the Department of Ecology and Evolutionary Biology (EEB):

- BIOLOGY
 - ECOLOGY, BEHAVIOR, and EVOLUTION
 - MARINE BIOLOGY
- ❖ All departmental majors have the same major prep.
 - ❖ Marine Biology has one (1) additional course in the prep: EPS SCI 15 or A&O SCI 1.
 - ❖ For the Upper Division (UD) major requirements, a course must have a minimum unit value of four (4) units on its own in order to apply towards the UD major requirement.
 - ❖ If a course appears under more than one (1) of the UD major requirement areas, the course may only apply to ONE UD major requirement, and not all of the areas listed.
 - ❖ There are certain courses that cannot be taken if one is taken prior to the other due to course content overlap. These courses include:
 - EE BIOL 120 and EE BIOL 185
 - EE BIOL 170 and PHYSICI 166
 - ❖ There are two (2) CAPSTONE majors offered by EE BIOL: EBE and Marine Biology. A capstone major is one that has a culminating activity as part of its UD major curriculum. The culminating activity is the field quarter: Field Biology Quarter (FBQ); Field Marine Biology Quarter (FMBQ); Marine Biology Quarter (MBQ); or other approved equivalents.
 - ❖ For the **BIOLOGY** major, in order for a 4-unit lab course to apply towards the lab requirement, the complementary lecture course must also be taken. The courses do not have to be taken concurrently. This applies to the following courses:
 - EE BIOL 100 and EE BIOL 100L
 - EE BIOL 109 and EE BIOL 109L
 - EE BIOL 113A and EE BIOL 113AL
 - EE BIOL 144 and EE BIOL 144L
 - EE BIOL 150 and EE BIOL 150L
 - EE BIOL 161 and EE BIO 161L
 - EE BIOL 162 and EE BIOL 162L

BIOLOGY

- Select two (2) courses from each CORE PRINCIPLE for a total of 10 requirements.
- Of the 10, five (5) of the courses must be from our department (EE BIOL).
- Of the 10, two (2) must be laboratory courses, of which one (1) must be from the department (EE BIOL).

CORE PRINCIPLE 1: Evolution and Genetics

CORE PRINCIPLE 2: Information Flow

CORE PRINCIPLE 3: Structure Function

CORE PRINCIPLE 4: Transformation of Energy and Matter

CORE PRINCIPLE 5: Systems

ECOLOGY, BEHAVIOR, AND EVOLUTION (EBE)

- Select course(s) as indicated from each CATEGORY.
- CAPSTONE-FIELD QUARTER – application period is usually one (1) year prior, e.g., Spring 2024 field quarter applications available in Spring 2023.
- Most popular major for PRE-VET.

CATEGORY 1: Morphology/Systematics – select one (1) course

CATEGORY 2: Physiology – select one (1) course

CATEGORY 3: Ecology, Behavior, and Evolution – select three (3) courses

CATEGORY 4: Capstone-Field Quarter – must be minimum 12 units

CATEGORY 5: Science Electives – select two (2) courses

MARINE BIOLOGY

- Select course(s) as indicated from each CATEGORY.
- CAPSTONE-FIELD QUARTER – application period is usually one (1) year prior, e.g., Spring 2024 field quarter applications available in Spring 2023.

CATEGORY 1: Core – EE BIOL 109 and EE BIOL 109L

CATEGORY 2: Laboratory – select one (1) course

CATEGORY 3: Marine Organismic Biology or Physiology – select one (1) course

CATEGORY 4: Ecology and Behavior – select one (1) course

CATEGORY 5: Evolution – select one (1) course

CATEGORY 6: Capstone-Field Quarter – must be minimum 12 units

CATEGORY 7: Additional physical, chemical, or geological oceanography course – select one (1) course

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CHEMISTRY (Choose one series.)

	Course	Title	Co-/Pre-Requisite(s)	Units
*	14A OR 14AE	(14A) Atomic and Molecular Structure, Equilibria, Acids, and Bases (14AE) General Chemistry for Life Sciences I - Enhanced	Prep: HS chem and 3 ½ years HS math; Enforced co-req: LS 30A or Math 3A/31A or score of 48 or better on Math Diagnostics Test.	4
*	14B OR 14BE	(14B) Thermodynamics, Electrochemistry, Kinetics, and Organic Chemistry (14BE) General Chemistry for Life Sciences II - Enhanced	Enforced co-reqs: 14A with min. grade of C-; LS 30B or Math 3B/31B with min. grade of C-	4
*	14BL	General and Organic Chemistry Laboratory I	Enforced req: 14A with min. grade of C-; Enforced co-req: 14B	3
*	14C	Structure of Organic Molecules	Enforced requisite: 14B with min. grade of C-	4
*	14D	Organic Reactions and Pharmaceuticals	Enforced requisite: 14C with min. grade of C-	4
*	14CL	General and Organic Chemistry Laboratory II <i>-not required for the major but needed for pre-health</i>	Enforced requisites: 14B and 14BL with min. grade of C-	4
	Course	Title	Co-/Pre-Requisite(s)	Units
	20A	Chemical Structure	Preparation: HS chem and 3 ½ years HS math Enforced co-requisite: Math 31A	4
	20B	Chemical Energetics and Change	Enforced requisites: 20A and Math 31A with min. grade of C-	4
	20L	General Chemistry Laboratory	Enforced requisite: 20A with min. grade of C- Enforced co-requisite: 20B	3
	30A	Organic Chemistry I: Structure and Reactivity	Enforced requisite: 20B with min. grade of C-	4
	30AL	General Chemistry Laboratory II	Enforced requisites: 20B, 20L and 30A with min. grade of C-	4
	30B	Organic Chemistry II: Reactivity, Synthesis, and Spectroscopy	Enforced requisite: 30A with min. grade of C-	4
	30BL	Organic Chemistry Laboratory I	Enforced requisite: 30A or 30AH with min. grade of C-	

MATHEMATICS & STATISTICS (Choose one series.) *NOTE: Not all Life Sciences majors require statistics.*

	Course	Title	Co-/Pre-Requisite(s)	Units
*	LS 30A	Mathematics for Life Scientists	Preparation: 3 years of HS math (to algebra II), basic familiarity with computers	5
*	LS 30B	Mathematics for Life Scientists	Enforced requisite: 30A	5
*	LS 40 OR Stats 13	Statistics of Biological Systems Introduction to Statistical Methods for Life & Health Sciences	(LS 40) Enforced requisite: 30A N/A	5 5
	Course	Title	Co-/Pre-Requisite(s)	Units
	Math 3A	Calculus for Life Sciences Students	Preparation: 3 ½ years HS math Enforced requisite: score of 48 or better on Math Diagnostics Test or Math 1 with min. grade of C-	4
	3B	Calculus for Life Sciences Students	Requisite: 3A with min. grade of C-	4
	3C	Ordinary Differential Equations with Linear Algebra for Life Sciences Students	Requisite: 3B with min. grade of C-	4
*	LS 40 OR Stats 13	Statistics of Biological Systems Introduction to Statistical Methods for Life & Health Sciences	(LS 40) Enforced requisite: 30A N/A	5 5
	Course	Title	Co-/Pre-Requisite(s)	Units
	Math 31A OR Math 31AL	(31A) Differential and Integral Calculus (31AL) Differential and Integral Calculus Laboratory	Preparation: 3 ½ years HS math (including some coordinate geometry and trigonometry) Enforced requisite: successful completion of Math Diagnostics Test or Math 1 with min. grade of C- (31AL) Cannot take both 31A and 31AL.	4 (31A) 5 (31AL)
	31B	Integration and Infinite Series	Requisite: 31A with min. grade of C- Cannot take both 31B and 3B	4
	32A	Calculus of Several Variables	Enforced requisite: 31A with min. grade of C-	4
*	LS 40 OR Stats 13	Statistics of Biological Systems Introduction to Statistical Methods for Life & Health Sciences	(LS 40) Enforced requisite: 30A N/A	5 5

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PHYSICS (Choose one series.)

Course	Title	Co-/Pre-Requisite(s)	Units
* 5A	Physics for Life Sciences Majors: Mechanics & Energy	Enforced reqs: Math 3A, 3B, 3C (may be taken concurrently) or LS 30A, 30B	5
* 5B	Physics for Life Sciences Majors: Thermodynamics, Fluids, Waves, Light, and Optics	Enforced req: 5A	5
* 5C	Physics for Life Sciences Majors: Electricity, Magnetism, and Modern Physics	Enforced req: 5A	5
Course	Title	Co-/Pre-Requisite(s)	Units
1A	Physics for Scientists & Engineers: Mechanics	Enforced req: Math 31A, 31B; Enforced co-req: 32A	5
1B	Physics for Scientists & Engineers: Oscillations, Waves, Electric and Magnetic Fields	Enforced reqs: 1A; Math 31A, 32A; Enforced co-req: 32B	5
1C	Physics for Scientists & Engineers: Electrodynamics, Optics, and Special Relativity	Enforced reqs: 1A, 1B; Math 32A, 32B; Enforced co-req: 33A	5
4AL	Physics Lab for Scientists & Engineers: Mechanics	Enforced requisite: 1A; Enforced co-requisite: 1B	2
4BL	Physics Lab for Scientists & Engineers: Electricity and Magnetism	Enforced requisites: 1A, 1B; Enforced co-requisite: 1C	2

FOR ENROLLMENT ASSISTANCE with MAJOR PREP COURSES: Contact the department that is offering the course (see contact information above). It is recommended that you e-mail the appropriate department with your enrollment request **once your enrollment pass time has started**. **In your message or e-mail, include your name and UCLA ID with the class you want to add with the 9-digit SRS number of the class section(s), listed in priority order.**

Departments can only add you to your requested class once your enrollment pass begins **and** IF there is still space in the class. Moreover, the departments are not able to assist you with your request outside of normal business hours. Please be aware that you cannot be added to a class for which you have not completed the pre-requisites. **We advise you to read the "Course Notes" section in the "Crs Info" link in the Schedule of Classes.**

IMPORTANT DEADLINES:

Please consult the "CALENDARS" tab on the Registrar's webpage <https://www.registrar.ucla.edu/Term-Calendar>

OTHER ENROLLMENT ISSUES:

During the **FIRST ENROLLMENT PASS**, some departments place an enrollment restriction on some of their upper division courses (courses numbered 100-199) to ensure that officially declared majors/minors in their department are able to enroll in the department's classes. Usually the enrollment restriction is lifted once the **SECOND ENROLLMENT PASS** begins. However, a department may designate a specific date when enrollment is open to non-majors/minors. **We highly recommend that you read the "Class Notes" that are in the "Crs Info" link on the class listing on the online Schedule of Classes (<https://sa.ucla.edu/ro/public/soc>).**

Please be aware that departmental advisors can only assist you with enrollment into classes offered by their department, e.g., EEB counselors can only enroll you into EEB classes, the Phy Sci counselor can only enroll you into Phy Sci classes, etc.

Regarding General Education Requirements:

As a major in the Life Sciences, you should NOT take any GE courses in the Foundations of Scientific Inquiry category. The courses within the Life Science Core Curriculum will satisfy this area. However, you should check with your College Counseling Unit to verify any outstanding GE course requirements.

OTHER COURSE PLANNING TIPS:

- ❖ If possible, avoid taking two (2) lab courses in the same quarter.
- ❖ If possible, save some of your GE classes for later quarters in order to balance your schedule.
- ❖ Check the Final Exam schedule when choosing classes. Most students prefer not having more than one final on the same day. Your instructor will not change the date of the final exam for your convenience.
- ❖ If you have questions about your schedule, please consult your departmental counselor.
- ❖ If possible, make sure that at least two (2) of your GE courses are Upper Division (UD) courses, e.g., Visual & Performing Arts GE = THEATER 107. **UD = course numbers 100-199**
- ❖ Always have a PLAN B, PLAN C, etc.



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PRE-HEALTH RESOURCES & UCLA CAREER CENTER

UCLA Pre-Health website:
<https://prehealth.ucla.edu/>

UCLA Career Center
UNDERGRADUATE: <https://career.ucla.edu/undergrad>
HANDSHAKE: <https://ucla.joinhandshake.com/login>
– connects Bruins with internships, job, and career opportunities

VOLUNTEER OPPORTUNITIES ON CAMPUS – Many programs may still be on hold due to COVID-19

UCLA Volunteer Center (<https://volunteer.ucla.edu/>)
UCLA Health Volunteer Program (<https://www.uclahealth.org/volunteer/>)
UCLA Health Volunteer Services (<https://www.uclahealth.org/Volunteer/our-programs>)
Care Extenders (<https://www.uclahealth.org/careextender/>)
Administrative Intern (<https://www.uclahealth.org/Volunteer/intern-program>)
Nursing Volunteer (<https://www.uclahealth.org/Volunteer/nursing-volunteer-program>)
MAPS Volunteer (<https://www.uclahealth.org/Volunteer/maps-volunteer-program>)
People Animal Connection-PAC (<https://www.uclahealth.org/pac/>)
Clinical UCLA Health Sciences Volunteer Program
(<https://www.uclahealth.org/Volunteer/clinical-ucla-health-sciences-volunteer-program>)
Non-Clinical UCLA Health Sciences Volunteer Program
(<https://www.uclahealth.org/Volunteer/non-clinical-ucla-health-sciences-volunteer-program>)



OPPORTUNITIES IN FIELD BIOLOGY/MARINE BIOLOGY

[Innovation in Environmental Biology Education](#)
[Conservation Biology & Wildlife Directory of Internships](#)
[Smithsonian Office of Internship Programs: Ecology, Evolution, & Biology](#)
[Boyce Thompson Institute](#)
[U.S. Field & Wildlife Service](#)



RESEARCH OPPORTUNITIES & RESOURCES

UNDERGRADUATE RESEARCH CENTER (URC): <http://sciences.ugresearch.ucla.edu/>
Provides information and opportunities for undergraduates to engage in research and creative activities at all levels.
Life and Physical Sciences: 2121 Life Sciences, (310) 794-4227, E-mail: urcsciences@college.ucla.edu

Students should also check with their individual departments about other opportunities and additional information.

Before engaging in any research activities, it is recommended that you attend an introductory workshop:
ENTERING STEM RESEARCH & SRP-99 WORKSHOPS
<http://sciences.ugresearch.ucla.edu/getting-started/workshops/>

RESEARCH CONTRACT COURSES (99, 198ABCD, 199)

Each department has different policies and different submission deadlines for your research contracts. You are responsible for being aware of these deadlines.



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How to get a full year (three quarters) of math for professional school

Mathematics

(8 unit max for both exams)

- Calculus AB/
AB subscore of BC exam 3-4 MATH Calculus 4.0 QR
5 MATH 31A 4.0 QR
- Calculus BC 3 MATH Calculus 8.0 QR
4 MATH 31A / Calculus 8.0 QR
5 MATH 31A and 31B 8.0 QR

IF YOU HAVE:

Credit for Math 31A and 31B at admission due to AP Calculus score:	Credit for Math 31A at admission due to AP Calculus score:	Credit for "Calculus" (no specific course due to AP Calculus score):
<i>Option 1</i>	<i>Option 1</i>	<i>Option 1</i>
Complete LS 30A, 30B, and LS 40 or Stats 13	Complete LS 30A, LS 30B, and LS 40 or Stats 13	Complete LS 30A, LS 30B, and LS 40 or Stats 13
<i>Option 2</i>	<i>Option 2</i>	<i>Option 2</i>
Complete Math 3C, Stats 13 or LS 40, one additional math course (upper or lower division)	Complete Math 3B, Math 3C, Stats 13 or LS 40	Complete Math 3A, Math 3B, Math 3C and Stats 13 or LS 40
<i>Option 3</i>	<i>Option 3</i>	<i>Option 3</i>
Complete Math 32A, Stats 13 or LS 40, one additional math course (upper or lower division)	Complete Math 32A, Stats 13 or LS 40, one additional math course (upper or lower division)	Complete Math 31A/31AL, Math 31B, Math 32A, and Stats 13 or LS 40

All students may choose to complete LS 30A, 30B and LS 40 or Stats 13, regardless of their AP Calculus score.

NOTES:

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HOW TO FULFILL PRE-HEALTH PRE-REQUISITES WITH UPPER DIVISION (UD) MAJOR REQUIREMENTS

- **Common Pre-Requisites (lower division):** Most fulfilled upon completion of lower division major prep, e.g., LS 7ABC, Chem, etc.
- **Common Upper Division required for pre-health pre-requisites**

MEDICAL	DENTAL	PHARMACY	OPTOMETRY
<p>Lower Division:</p> <ul style="list-style-type: none"> • All major prep • Possible additional chemistry lab (CHEM 14CL/30BL) <p>UPPER DIVISION:</p> <ul style="list-style-type: none"> • CHEM 153A • LS 107 or EE BIOL 150 • MIMG 101 or MIMG C185A • MCD BIO 138, MCD BIO 165A, etc. 	<p>Lower Division:</p> <ul style="list-style-type: none"> • All major prep • Possible additional chemistry lab (CHEM 14CL/30BL) <p>UPPER DIVISION:</p> <ul style="list-style-type: none"> • CHEM 153A • LS 107 or EE BIOL 150 • MIMG 101 & MIMG 100L (lab may be optional, check program) • MIMG C185A • MCD BIO 138, MCD BIO 165A, etc. 	<p>Lower Division:</p> <ul style="list-style-type: none"> • All major prep & additional chemistry lab (CHEM 14CL/30BL) • May also require CHEM 30C and/or 30CL • PHYSICI 3 • PHYSICI 13 <p>UPPER DIVISION:</p> <ul style="list-style-type: none"> • CHEM 153A • CHEM 153L • MCD BIO 138, 165A 	<p>Lower Division:</p> <ul style="list-style-type: none"> • All major prep • Possible additional chemistry lab (CHEM 14CL/30BL) • PHYSICI 3 • PHYSICI 13 <p>UPPER DIVISION:</p> <ul style="list-style-type: none"> • CHEM 153A • MIMG 101 & MIMG 100L (lab may be optional, check program)

VETERINARY	NURSING	PODIATRY
<p>Lower Division:</p> <ul style="list-style-type: none"> • All major prep • Possible additional chemistry lab (CHEM 14CL/30BL) <p>UPPER DIVISION:</p> <ul style="list-style-type: none"> • CHEM 153A • EE BIOL 110, 111, 113AL, 114A, 115, 129 • MIMG 101 & MIMG 100L (lab may be optional, check program) • PHYSICI 166 or PHYSICI 165 (166 usually preferred; 165 does not have a lab) 	<p>Lower Division:</p> <ul style="list-style-type: none"> • All major prep • Possible additional chemistry lab (CHEM 14CL/30BL) • PHYSICI 3 – Human Physiology w/ Lab • PHYSICI 13 – Human Anatomy w/ Lab <p>UPPER DIVISION:</p> <ul style="list-style-type: none"> • MIMG 101 & MIMG 100L (lab may be optional, check program) • PHYSICI 167 	<p>Lower Division:</p> <ul style="list-style-type: none"> • All major prep • Possible additional chemistry lab (CHEM14CL/30BL) • PHYSICI 3 – Human Physiology w/ Lab • PHYSICI 13 – Human Anatomy w/ Lab <p>UPPER DIVISION:</p> <ul style="list-style-type: none"> • CHEM 153A • MIMG 101 & MIMG 100L (lab may be optional, check program)

PHYSICIAN ASSISTANT	PHYSICAL THERAPY	OCCUPATIONAL THERAPY
<p>Lower Division:</p> <ul style="list-style-type: none"> • All major prep • Possible additional chemistry lab (CHEM 14CL/30BL) • PHYSICI 3 – Human Physiology w/ Lab • PHYSICI 13 – Human Anatomy w/ Lab • CLASSIC 47 – Medical Terminology <p>UPPER DIVISION:</p> <ul style="list-style-type: none"> • LS 107 or EE BIOL 150 • MIMG 101 & MIMG 100L (lab may be optional, check program) 	<p>Lower Division:</p> <ul style="list-style-type: none"> • All major prep • Possible additional chemistry lab (CHEM 14CL/ 30BL) • PHYSICI 3 – Human Physiology w/ Lab • PHYSICI 13 – Human Anatomy w/ Lab 	<p>Lower Division:</p> <ul style="list-style-type: none"> • All major prep • PHYSICI 3 • PHYSICI 13 <p>Other:</p> <ul style="list-style-type: none"> • Medical Terminology • Psychology courses, including: Abnormal Psychology, Lifespan