

# DEPARTMENT OF EARTH AND BIOLOGICAL SCIENCES

## Graduate degree programs

### Master of Science and Doctor of Philosophy

The Department of Earth and Biological Sciences (EBS) within the School of Medicine at Loma Linda University offers Master of Science degrees in biology, geology, and natural sciences; Doctor of Philosophy degrees in biology and earth science; and Bachelor of Science degrees in geology and environmental sciences.

The goal of the department is to provide students with the best possible opportunities for graduate study in these areas, with strong preparation for careers in the application of research in or teaching of biology, geology, paleontology, or earth systems science.

## Student life

Information on student life contained in this CATALOG is brief. The *Student Handbook* more comprehensively addresses University and school expectations, regulations, and policies, and is available to each registered student, who needs to be familiar with the contents of the *Student Handbook* and the School of Medicine's "Orange Book" of *Student Guidelines, Policies, and Procedures*. Additional information regarding policies specific to a particular school or program within the University is available from the respective school.

## Financial information

### Schedule of charges (2023-2024)

EBS strives to make it possible for every qualified student to successfully complete his or her degree in a timely manner. For many students, financial arrangements may be key elements in providing opportunity for timely completion. The department therefore makes available to as many qualified students as possible various forms of financial aid within the limits of the departmental budget and circumstances. Such financial aid may take the form of research assistantships (RA) and tuition waivers, or other special awards. It is hoped that these incentives will not only help make a student's graduate career possible, but will also strengthen and expand their opportunities for learning while enrolled in the University. Other financial aid, such as student loans or other scholarships, are available through the Student Financial Aid office in the Student Services building.

Every student is responsible for the enrollment fee each quarter. It is not covered by tuition waivers. If a student is awarded an RA, they will be expected to document at least 30 hours per pay period (two [2] weeks) on departmental and research-related projects. Ph.D. degree students will be expected to document at least 40 hours per pay period on their project in order to continue receiving the RA. Please note that RAs are awarded for a set amount for the year (M.S. degree—\$7,500; Ph.D. degree—\$17,000). This amount is paid out monthly after the first full month of work.

### Tuition

Tuition, fees, and other cost-of-attendance items are located on the Find a Program (<https://llu.edu/academics/programs/>) webpage.

### Special charges

\$60	Application fee
\$60	Fee for credit by examination

\$30 Per unit fee to have credit earned by examination appear on transcript

### Chair

Suzanne E. Phillips

### Primary faculty

Leonard R. Brand

Ronald L. Carter

Stephen G. Dunbar

Monte Fleming

William K. Hayes

George Jackson

Ana María Martínez Ardila

Kevin E. Nick

Torrey Nyborg

Suzanne E. Phillips

### Secondary faculty

V. Leroy Leggett

Earnie Schwab

Ryan Sinclair

Ubaldo Soto

### Adjunct faculty

Gordon J. Atkins

Stanley M. Awramik

Roberto E. Biaggi

Douglas R. Britton

Benjamin Clausen

Raul Esperante

Christine Jackson

Matthew McLain

Ronald Nalin

Ariel Roth

Timothy G. Standish

## Admissions

In addition to Loma Linda University admission requirements (<http://llu.catalog llu.edu/about-university/admission-policies-information/#admissionrequirements>), the applicant must also complete the following requirements:

### Application procedure

1. The application instructions, available on the Web at [llu.edu/central/apply](http://llu.edu/central/apply), allow students to apply

online and begin an application, as indicated in the general University section.

2. A personal interview is often desirable and is recommended by the Department of Earth and Biological Sciences. The interview should be arranged with the coordinator of either the Geology Program or the Biology Program.

### Acceptance procedure

1. When the program that the student wishes to enter has evaluated the applications and made its recommendation, the dean of the school in which the program is housed takes official action and notifies the applicant. The applicant must respond affirmatively before becoming eligible to register for programs within the Department of Earth and Biological Sciences
2. As part of registration, accepted students will be asked to file with Student Health Service a medical history with evidence of certain immunizations.
3. New students are required to pass a background check before they register for courses.

### From master's to Ph.D. degree

A graduate student at this University may proceed first to a master's degree. If at the time of application the student wishes to qualify for the Doctor of Philosophy degree, this intention should be declared—even if the first objective is a master's degree.

If after admission to the master's degree program a student wishes to go on to the doctoral degree, an abbreviated application should be completed and submitted—along with appropriate supporting documents—to the school in which the program is housed. If the master's degree is sought, the student will be expected to complete that degree before starting any doctoral activity for credit. A student who bypasses the master's degree may be permitted, on the recommendation of the guidance committee and with the consent of the dean, to transfer courses and research that have been completed in the appropriate field and are of equivalent quality and scope to their doctoral program.

### Undergraduate programs

#### Admission requirements

In addition to Loma Linda University (<http://llucatalog.llu.edu/about-university/admission-policies-information/#admissionrequirements>) admission requirements, the applicant must also complete specific program prerequisites. High school and college subject requirements for each program are outlined in the respective programs.

To be eligible for admission, applicants must have completed a minimum of 96 quarter units or 64 semester units at an accredited college or university. A minimum grade of C (2.0) is required for all transfer courses unless otherwise specified in specific program requirements; C- grades are not acceptable for transfer. An overall college G.P.A. of at least 2.5 to 3.0 is expected, depending on the program to which the student applies.

### Graduate degree requirements

#### Admission requirements

A four-year baccalaureate degree (or its equivalent) from an accredited college or university is a prerequisite for admission to graduate programs in the Department of Earth and Biological Sciences. Transcripts of the applicant's scholastic record should show appropriate preparation, in grades and content, for the curriculum chosen. Since there is some variation in the pattern of undergraduate courses prescribed by different programs, the applicant should note the specific requirements of the

chosen program. Deficiencies may be fulfilled while enrolled; and prerequisites must be completed prior to matriculation.

#### Scholarship

Applicants are expected to present an undergraduate record with a grade point average of B (3.0) or better in the overall program and in the major field. Depending on program-specific criteria, some students with an overall grade point average between 2.5 and 3.0 may be admitted provisionally to graduate standing, provided the grades during the junior and senior years are superior or there is other evidence of capability for completing the program.

#### Graduate Record Examination

Scores on the general test of the Graduate Record Examination (GRE) are required for application for admission to many degree programs. New test scores are needed if it has been more than five years since the last test was taken. Applicants are advised to request information specific to their proposed program of study.

For complete information about the GRE, please visit their website at <http://www.ets.org/gre/>; or write to Educational Testing Service, 1947 Center Street, Berkeley, CA 94701 (for the West); and P.O. Box 6000, Princeton, NJ 08541 (for the East). For GRE publications (including study materials), call 800/537-3160.

### Programs

- Biology — M.S. (<http://llucatalog.llu.edu/medicine/biology/>), Ph.D. (<http://llucatalog.llu.edu/medicine/biology/>)
- Earth Science — Ph.D. (<http://llucatalog.llu.edu/medicine/earth-science/>)
- Environmental Sciences — B.S. (<http://llucatalog.llu.edu/medicine/environmental-sciences/>)
- Geology — B.S. (<http://llucatalog.llu.edu/medicine/geology/bs/>), M.S. (<http://llucatalog.llu.edu/medicine/geology/ms/>)
- Natural Sciences — M.S. (<http://llucatalog.llu.edu/medicine/natural-sciences/>)