

REU PROGRAM HANDBOOK

June 4 – August 10, 2018

Application Deadline: mid-February, 2018

Note: 2018 Program Details and a precise application deadline will be posted online in December 2017

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ABOUT LUMCON

The Louisiana Universities Marine Consortium (LUMCON), located in Cocodrie, LA, was formed in 1979 to coordinate and stimulate Louisiana's activities in marine research and education and is situated within a dynamic coastal habitat that inspires a myriad of research questions along a freshwater to saltwater continuum. Participants in the REU program will have the opportunity to examine the impacts of environmental changes on a diversity of ecosystems first hand as a result of LUMCON's unique location: in the upper end of one of Louisiana's larger estuaries (Terrebonne-Timbalier Bay), in the heart of coastal Louisiana's expansive marshlands, close to and between two major rivers (the Mississippi and Atchafalaya) that dictate the coastal ecosystems morphology, processes and functions, north of a productive coastal ocean, and close to the remainder of the Gulf of Mexico (as the ship steams) including its deepest parts. The LUMCON Marine Center houses state-of-the-art oceanographic instrumentation and analytical facilities, a fleet of coastal and oceanographic research vessels, the leading marine science library in Louisiana, and sits within an ongoing evolution of coastal habitats, a new delta and a degrading delta, large areas of coastal erosion and wetland degradation, a hurricane-impacted landscape, opportunities and challenges for coastal restoration and flood control, a changing coastal ocean ecosystem, abundant living resources, a fishing/transportation/oil and gas production nexus, and a unique social and cultural milieu.

LUMCON faculty and their research teams focus on a variety of related research themes across these diverse habitats, including river/ocean interactions, coastal productivity, delta formation and degradation, human and environmental impacts (including the immediate and long-term impacts of the recent Deepwater Horizon Oil Spill), and

organismal ecology. LUMCON's setting combined with expertise of the faculty and mentor pool provide a unique opportunity for REU students to participate in a scientific research and professional mentoring program that interfaces fundamental research questions in dynamic coastal ecosystems to science-based policy and management activities.

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LUMCON'S REU PROGRAM

LUMCON has run our Research Experiences for Undergraduates (REU) Program on Interdisciplinary Research Experiences in Changing Coastal Environments since 2011. This program has and/or is supported by variety of sources including the National Science Foundation's REU Site Program (OCE- 1063036); federal, state, and other research grants awarded to research mentors, and direct support from LUMCON member institutions. A cohort of REU participants will spend ten weeks between early June and mid-August at LUMCON conducting independent research projects with guidance from scientific mentors/mentor teams (from a mentor pool of LUMCON faculty, post-doctoral associates, and/or visiting scientists) while interacting with peers participating in other aspects of LUMCON's summer programs. Each student is paired with (a) scientific mentor(s) based on mutual research interests. The REU program is designed to give students a meaningful, hands-on research experience that takes advantage of state-of-the-art methods and technologies available at LUMCON.

Throughout the program, students will identify a research question, develop and orally present a research proposal, conduct their proposed research project, and gain experience in science communication by presenting the results of their project in LUMCON's annual Summer Student Research Symposium during the final week of the program. In some cases, REUs will have the opportunity to further develop and refine their results into a manuscript that will form the basis for (or contribute to) a subsequent publication in the scientific literature. REU students will also participate in a series of career and skill-building workshops and activities throughout the program. REU students are immersed in the LUMCON community and will have the opportunity to participate in seminars, laboratory outreach programs, social events, and more throughout the summer.

Each summer, the LUMCON Marine Education program (through the White Boot School) offers several undergraduate/graduate level field courses. REU participants will have plenty of opportunities to interact with these other students as well as graduate students, visiting scientists in residence over the summer, K-12 students participating in a variety of camps and programs, and visitors from the general public, providing an even richer REU experience.

REU program research areas vary year to year, but include Gulf of Mexico oil spill

impacts, deep sea biology and ecology, coastal geology, microbial ecology, physiological ecology, coastal hypoxia, behavioral ecology, biogeochemistry, plant ecology, fisheries and aquaculture, ecosystem ecology, coral reef biology, and wetland science.

Stipends and Other Financial Support

Interns pay no facility fees or tuition charges and receive:

- A stipend of \$5,000 for the 10-week program (paid every 2 weeks)
- Free housing at the DeFelice Marine Center
- Funds to partially or fully cover travel costs to and from LUMCON from their home or university

Academic Credit

Students participating in REU internships are often eligible to receive academic credit from their home institutions. Program participants may be interested in exploring this possibility. A number of LUMCON REU alumni have also continued building on their projects after returning to their home institutions with many of these efforts resulting in senior or honors theses.

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ELIGIBILITY

NSF-supported REU participants must be:

1. Current undergraduate students

- An undergraduate student is defined as a student who is enrolled in a degree program (part-time or full-time) leading to a baccalaureate or associate degree.
- Students who are transferring from one college or university to another and are enrolled at neither institution during the intervening summer are eligible to apply.
- *To be eligible, you **must be returning to an undergraduate degree program in the fall** following the REU program. If you graduate in May or June in the year of the program, you are **NOT** eligible.*

2. Citizens or permanent residents of the United States or its possessions.

We make a conscious effort to promote diversity and are committed to building a diverse and inclusive community of coastal and marine scientists. Students from underrepresented groups in sciences, from small colleges, and first generation college students are encouraged to apply. Most REU students selected for the program will have completed two or three years of college because of their better course preparation but we will consider rising sophomores who have enough science and math courses and/or research experience to benefit from an early REU experience. Letters of

recommendation from individuals who can comment on continued commitment to self-motivated projects is weighted more than the GPA in the evaluation process.

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FREQUENTLY ASKED QUESTIONS

What does the program cost?

There is no cost to participate in the LUMCON REU program. All housing expenses are covered by the program. Participants also receive a \$5000 stipend and some funding support for travel to and from LUMCON.

Can I receive credit for this program?

Students participating in REU internships are often eligible to receive academic credit from their home institutions. Program participants may be interested in exploring this possibility.

Can I be a senior and participate in the program?

Yes, as long as you have not graduated and will be returning to an undergraduate program after the summer.

I'm a sophomore. What are my chances of getting a fellowship?

LUMCON looks to provide REU fellowships to undergraduate students with the experience and background likely to ensure success. This generally results in a preference for rising juniors and seniors in the selection process but we have had made successful REU interns over the years that have been rising sophomores.

I live in the United States however I'm not a US citizen. Can I still apply?

NSF regulations require that all students receiving a NSF-funded REU fellowship position with LUMCON be U.S. citizens or permanent residents of the U.S. However, if the funding for a position comes from different sources it is possible.

I've already had an REU Fellowship. Can I still apply for your fellowship?

In general, NSF has a "no repeat" guideline which means a student who has already had an REU Fellowship will not be considered for another one. There are exceptions to this rule and each decision will be evaluated on a case-by-case basis.

When might I expect to hear about a fellowship offer from LUMCON and how much time do I have to decide?

Applications are usually due in mid-February. We anticipate interviewing candidates in late February and early March. After being offered a LUMCON REU Fellowship, you may have up to 5 days to decide whether to accept it. Our program schedule targets late-March for notification to applicants regarding their

final status. If you have questions or concerns regarding your status, please contact [Dr. Brian Roberts](mailto:broberts@lumcon.edu) (broberts@lumcon.edu).

How do you select mentors?

Students are encouraged to look at the list of mentors and research projects conducted by former REU students before applying. Particular topic areas or specific mentors that may match an applicant's interest should be stated in the personal statement. Primarily, the selection committee matches students and mentors based on their mutual interests.

If I am offered a fellowship and accept, what kind of workload can I expect? Will I have to work weekends?

You are expected to work at least 40 hours/week. You will be spending the summer at a marine lab where the atmosphere is serious but relaxed, where scientists work hard but enjoy flexible schedules. For example, some days you may be expected to work long hours in the field, running a particular laboratory experiment, or preparing a report. Alternatively, other days you may find yourself with a free afternoon due to the particulars of your experiment schedule. You are expected to be responsible for your time, meeting the minimum 40 hour/week requirement, while setting a schedule that is compatible with the lab you are working in and the research you are doing.

Will I see other REU students during the summer?

All REU students will live in residence at LUMCON and participate in orientation activities as well as workshops and other program activities together. REUs will also have the opportunity to interact with other undergraduate and graduate students enrolled in courses offered as part of the LUMCON Summer Program.

What if I want to accept a fellowship but my school is on the quarter system and I'm not able to come to LUMCON until after the program starts. Can I still participate in the program and miss the orientation and first week of the fellowship?

Sometimes students are able to work out arrangements with their professors to take exams early, or to take them while they are LUMCON. There is, however, a tight schedule of orientation, research design, proposal writing, and data collection. Students are expected to be at LUMCON for the entire ten week program. Details should be discussed with the program director, [Dr. Brian Roberts](mailto:broberts@lumcon.edu) (broberts@lumcon.edu).

Where will we live?

Participants live in dormitories on site at the LUMCON DeFelice Marine Center. LUMCON has two dormitory wings (one guy wing and one girl wing). In each wing, eight 2-4 bunk rooms with two desks and closets accommodate overnight and long-term visitors. Every two adjacent rooms share a Jack-and-Jill style

bathroom. There is also a common area for visitors, the student lounge, which is equipped with a refrigerator/freezer, stove, cooking utensils and television. For recreation, visitors can play basketball, volleyball, or ping-pong and even go fishing (with a State of LA basic and saltwater fishing license).

What about laundry facilities?

LUMCON provides washers and dryers. You'll need to provide your own laundry detergent.

Are linens supplied?

The DeFelice Marine Center provides bed linens and towels. The AC can make the rooms cold, so additional blankets/sleeping bags are advised.

Where will we eat?

The DeFelice Marine Center has a cafeteria located between the dormitory/apartment and the scientific wings of the building. Breakfast, lunch, and dinner will be available Monday – Friday and brunch and dinner on the weekends. You are responsible for covering the costs of food. There is a full kitchen with fridge/freezers available for your use in the lounge area.

Do I need a car?

You may bring a car, but it is not required as housing is located on site. LUMCON is located in the tiny village of Cocodrie, LA so access to a vehicle may be desirable for making excursions up to Houma (~30 miles) or New Orleans (~80 miles). LUMCON can help coordinate transportation to and from the New Orleans airport, if necessary.

What is the area near LUMCON like?

LUMCON is located in a coastal saltmarsh that is accessible by driving south on Highway 56. The facility is about a quarter mile from the end of a long stretch of road in the saltmarsh mainly lined with weekend and summer fishing camps. Three charter fishing businesses with seafood restaurants are within 3 miles of LUMCON. The nearest grocery store is about 15 miles north of LUMCON. Thirty miles north of LUMCON is Houma, LA, the nearest urban area. There is a movie theater, bowling alleys, putt putt golf, a Laser tag facility, a shopping mall, and many restaurants.

How often do we get paid?

Students are paid every two weeks. Your first check will be paid on the second Friday of the program so make sure to bring enough money to get you through the first two weeks. Paychecks are picked up on Fridays. There is no direct deposit available.

Do I need to bring my own computer?

In most situations, it is highly beneficial to REUs to have their own computers. LUMCON provides Wi-Fi throughout the building including the dormitories. LUMCON also has a several computers available for use and printing in a shared computer lab.

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