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# REU PROGRAM HANDBOOK





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## REU PROGRAM HANDBOOK

10 weeks from June – August each summer

Application Deadline: mid-February to early March of each year (check our website for specific dates)

Note: Program Details and a precise application deadline will be posted online in December of the preceding year. The following topics are covered in this handbook.

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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.

## 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 \$6,000 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.

## 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.

LUMCON makes 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.



## 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 \$6000 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 ([broberts@lumcon.edu](mailto: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.

## FAQs CONTINUED

- **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 (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 a 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.



## FAQs CONTINUED

- **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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### UNIVERSITY GROUP RULES:

- Wear shoes inside and outside (not necessary in your dorm room). Vessel and field excursions require closed-toe shoes, no exceptions.
- Do not apply insect repellent or spray-on sunscreen indoors. The volatile compounds enter the air exchange system and can damage laboratory cultures.
- There is a security guard on duty all night. They will be patrolling the marine center and grounds through the night. There are security cameras recording video of each hallway in all areas of the marine center (not in the dorm rooms) and the property around the Marine Center.
- You are responsible for the condition of your room and the guest lounge when you leave it. It should be reasonably clean and intact. Please do not move furniture or place mattresses on the floor or balconies. You will be charged if extra cleaning or repairs are required to your room or the student lounge.
- Lost keys result in a \$10 fine.
- Quiet hours are from 10pm to 6am. Please be reasonably quiet in dorms during working hours, or when scientists, graduate students and/or other groups may be sleeping. The only door to the Marine Center that is opened after 6pm is the door between the dorm and cafeteria.
- No one is allowed in the research areas after quiet hours unless you have permission to be there. If you are going to be using research areas after 10pm please notify the security guard of what space(s) you are going to be using.
- Smoking is not allowed anywhere but in designated areas outside the building on the ground level.
- Do not leave equipment or personal items in areas other than your group's designated space. Pickup after yourselves and leave spaces cleaner than you found them.
- No one is allowed to use a kayak without first obtaining permission from the education staff. A float plan must be completed. You must check in with the guard or front desk upon return. No boat should be out after sunset or before sunrise! Fees may apply for each vessel used.
- In the event of a fire, the muster point for all visitors is along the main drive near the front pond.
- Alcoholic beverages are not allowed outside of your dorm rooms. If your group requires extended privileges, prior consent from the Executive Director must be obtained.
- There is no fishing allowed anywhere but at the back dock. If fishing after 10pm please notify the security guard that you will be out at the dock.
- Do NOT eat any food found in the lounge unless it belongs to you! Food for staff and graduate students is stored there.

## **Directions to The DeFelice Marine Center**

### **From New Orleans Airport (2 hours)**

- Exit the airport and turn right on US 61.
- Travel 3 miles to I-310 South to Houma.
- Drive 9 miles to US 90 West and exit right.
- Drive 24 miles.
- Take **exit 210** to **HOUMA** (LA 182).
- Turn left and drive to the first traffic light to LA 3087.
- Follow LA 3087 through one signal light and across the Intracoastal Canal bridge.
- Go through two signal lights; turn left onto LA 24.
- Continue straight on HWY 24 until HWY 56. HWY 24 turns to the left to Presque Isle, Bourg, and Montegut.
- HWY 56 heads straight and south.
- Continue straight on HWY 56 south to Chauvin and Cocodrie (approximately 18 miles).

### **From New Orleans and points east (2 hours)**

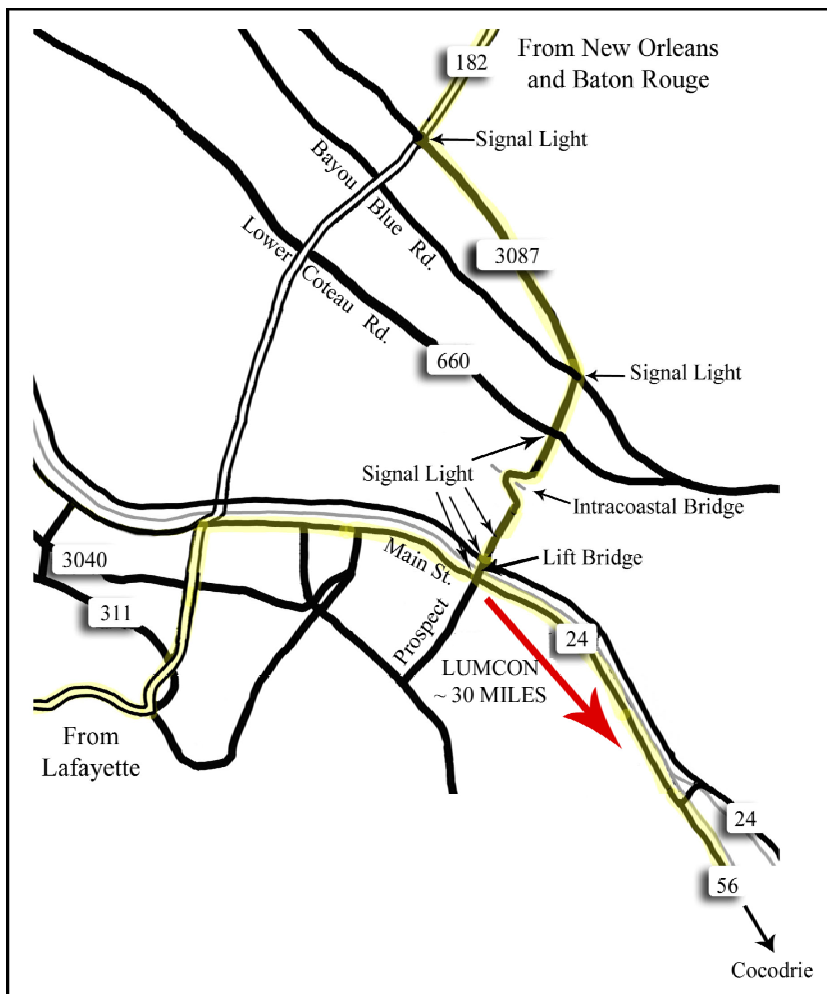
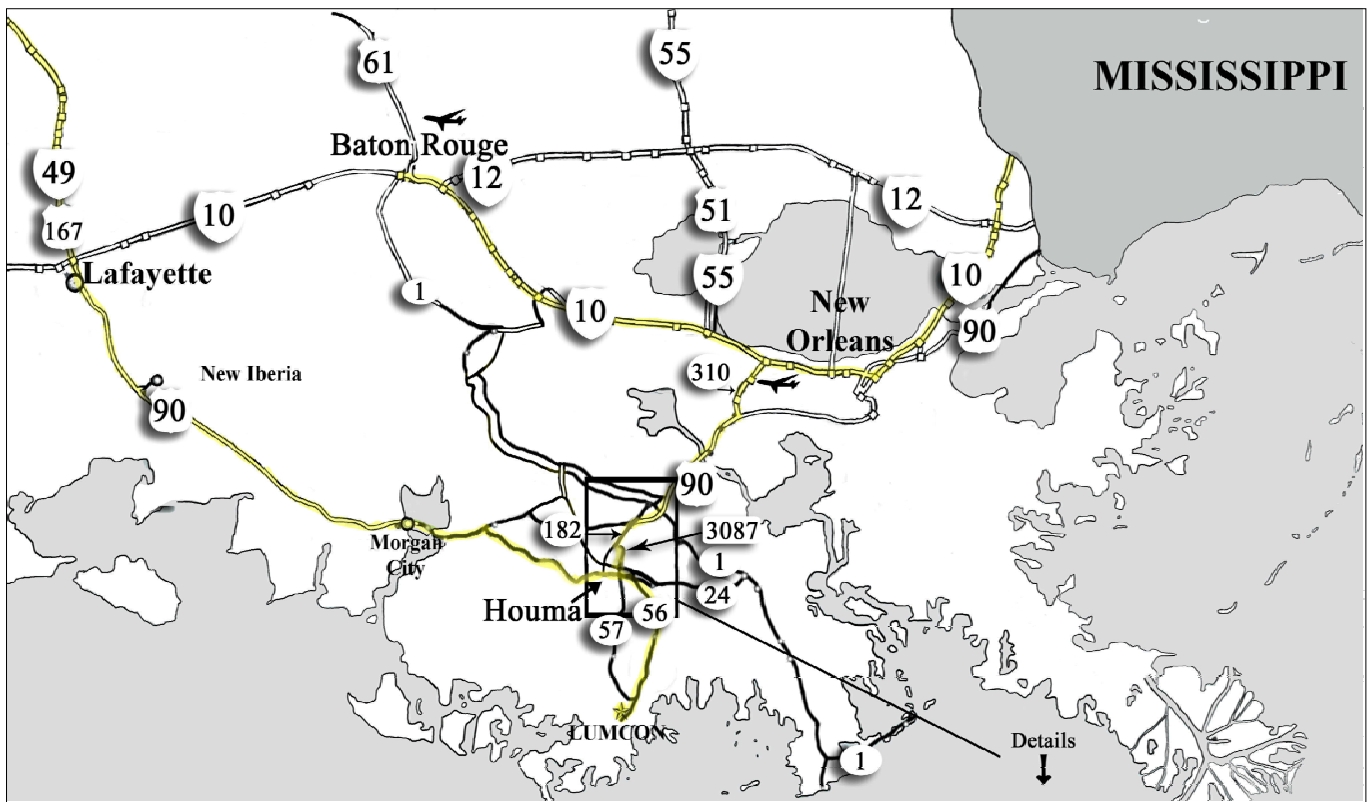
- I-10 to I-310 South to Houma.
- Drive approximately 11 miles to US 90 West and exit right.
- Drive 24 miles.
- Take exit 210 to **HOUMA** (LA 182).
- Turn left and drive to the first traffic light to LA 3087 (this is a new construction four-lane road).
- Follow LA 3087 through one signal light and across the Intracoastal Canal bridge.
- Go through two signal lights; cross the bayou at the third light, turn left onto LA 24.
- Continue straight on HWY 24 until it becomes HWY 56. HWY 24 turns to the left to Presque Isle, Bourg, and Montegut. HWY 56 heads straight and south
- Continue straight on HWY 56 south to Chauvin and Cocodrie (approximately 18 miles).

### **From Lafayette and points west (3 hours)**

- I-10, exit south on HWY 167 to HWY 90 to Morgan City.
- Stay on HWY 90 through Morgan City into Houma.
- Take HOUMA exit (HWY 24).
- Stay on HWY 24 until it becomes HWY 56. HWY 24 turns to the left to Presque Isle, Bourg, and Montegut. HWY 56 heads straight and south.
- Continue straight on HWY 56 south to Chauvin and Cocodrie (approximately 18 miles).

### **From Baton Rouge and points north (3 hours)**

- I-10 to Donaldsonville, Sorrento, and Sunshine Bridge exit to HWY 22.
- Follow to Spur 70 to Napoleonville, Thibodaux.
- Head south on HWY 1 or HWY 308 (both parallel Bayou Lafourche) to Thibodaux.
- In Thibodaux, switch to HWY 24 and follow it into and through Houma.
- Stay on HWY 24 until it intersects with HWY 56. HWY 24 turns left to Presque Isle, Bourg, and Montegut. HWY 56 heads straight and south.
- Continue straight on HWY 56 south to Chauvin and Cocodrie (approximately 18 miles).





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## What to bring to LUMCON

*...besides interest, enthusiasm and eagerness to learn about Louisiana's coastal environment*

### Clothing

- Layers appropriate for different temperatures/insect conditions (it may be cold and wet so bring enough clothes so you have something dry to put on)
- Rain gear
- Closed-toe shoes that can get wet and muddy like rubber boots or old sneakers
  - ♦ NO sandals, crocs or flip-flops in the field, please feel free to bring them to wear in the shower or dorms.

### Protection

- Long sleeves
- Sunscreen
- Insect repellent (Do not apply in the building; it gets into the air exchange system)
- Hat
- Sunglasses
- Water Bottle
- Comfort items
- Extra towel (some are provided but you may want extra)
- Blanket (bed linens are provided but bring an extra blanket or sleeping bag it can get cold in the dorm rooms)
- ***LUMCON supplies linens, 2 bath towels, 2 face towels, and 2 light blankets, and a pillow to each guest. Bring extra to make yourself comfortable if you feel the need.***

### Toiletries/necessities

- Alarm Clock
- Don't forget your toothbrush or toothpaste; shampoo, soap, etc.
- Whatever prescription and over the counter medications you use

### Equipment

- Laptop
- Notebook
- Recreational items (music instruments, cards, smaller workout gear, etc.)