The Setting
The Grice Marine Lab is located at Fort Johnson, just across Charleston harbor from the city of Charleston, SC. Fort Johnson is an historic landmark that was the site of both Revolutionary and Civil War activities. The site is now home to the Marine Resources Center (MRC), a campus that houses a consortium of five state and federal institutions that focus collaboratively on diverse aspects of marine science and support undergraduate, graduate, and internship programs. The site provides access to a number of coastal habitats, marine organisms and communities, natural resources, and their user populations.

Program Details
Each intern receives a summer stipend and food allowance, a supplies budget, a travel allowance, and housing in the Grice Marine Lab dorm. Applications are due in mid-February, and the program runs for 10 weeks starting in late May. Students from underrepresented minority groups are especially encouraged to apply.

For information about eligibility, dates, and application materials: http://reu.cofc.edu

Marine Organism Health: Resilience and Response to Environmental Change

College of Charleston
Grice Marine Lab
REU Program

Summer 2015
Charleston, SC
About Our REU Program
The Fort Johnson Summer Undergraduate Research Program offers a 10-week experience of independent research, science communication, and career-development activities focused on the multidisciplinary theme of Marine Organism Health: Resilience and Response to Environmental Change. Through mentored research projects, interns will investigate impacts of anthropogenic and natural environmental perturbations on marine organisms, at levels of biological organization from molecular to ecosystem, using a variety of lab and field techniques. Up to 10 interns are supported each year, with opportunities to work at one of the five partner institutions that comprise the Fort Johnson campus. The program is supported by the National Science Foundation and the College of Charleston.

Contributing Partners
Mentors and instructors are drawn from more than 100 Ph.D. scientists among five partner institutions on a common campus devoted to marine science. The Ft. Johnson partners are:
- Grice Marine Laboratory, College of Charleston (COFC)
- Marine Biomedical and Environmental Sciences Program, Medical University of South Carolina (MUSC)
- National Institute of Standards and Technology (NIST)
- Marine Resources Research Institute, South Carolina Department of Natural Resources (SCDNR)

2014 Independent Research Projects
Population Genetic Health of the Horseshoe Crab Limulus polyphemus at Harvested and Unharvested Beaches (Rachel Walsh, Minnesota State University Moorhead)
Genetic Variation for Resistance to the Effects of Seawater Acidification on Skeletal Development of Sea Urchin Larvae (Emily Hall, SUNY-ESF)
Effects of Hypoxia on Structural Properties of Hemocyanin in the Atlantic Mud Crab, Panopeus herbstii (Bernard Akem, Northern Illinois University)
Drugged Wildlife: The Potential Impact of Environmental Endocrine Disruptors on Reproductive Development (Melissa Kramer, Yeshiva University).
Perfluorinated Compound Levels in the Plasma of Crocodiles of South Africa and Alligators of the Southeastern United States (Ian Christie, Lewis & Clark College)
Sex Differences in Habitat Use: Understanding Monogamy in the Snapping Shrimp Alpheus angulosus (Stephanie Carrera, Swarthmore College)
Comparative Toxicity of Two Oil Spill Dispersants to the Sheepshead Minnow, Cyprinodon variegatus (McCall Calvert, Beloit College)
Adaptation to environmental conditions in the invasive seaweed Gracilaria vermiculophylla (Connon Thomas, SUNY-ESF)
An evolutionary study of anatomical variation in Sphyridae, Hammerhead sharks, using 3-D modeling (Jasmin Graham, Coll. of Charleston)
Prevalence of Infection of Annelids by Parasites in Intertidal and Subtidal Habitats (Dakeishla Diaz, University of Puerto Rico, Rio Piedras Campus)

Science Communication Workshop Series (SCICOM)
The SCICOM series, led in 2014 by science writer and environmentalist Carolyn Solka, engages interns in a set of workshops to gain new skills for communicating their science to professional, peer, and public audiences. Through these workshops, interns learn how to better relate their research to societal issues and to take advantage of opportunities to publicize their work, using both traditional media and the rapidly evolving tools of social media including elevator pitches, press releases, tweeting and blogging.

Career Development
REU interns take part in workshops to develop professional skills in scientific writing, research proposal preparation, oral presentation, and research ethics. They also participate in field experiences including a benthic trawl in Charleston Harbor, a behind the scenes tour of the SC Aquarium, and an overnight ethics retreat to the ACE Basin. Through these experiences and other social events, interns have numerous opportunities to network with other Ft. Johnson scientists, graduate and undergraduate students, and interns from other summer programs.