Orrin Pilkey Marine Science & Conservation Genetics Center

Project Scope:
Constructed a new 12,300 gsf building featuring a molecular biology research laboratory with flexible space for up to four faculty, with multiple technical spaces for specialized research equipment. It also includes a teaching lab designed for molecular-based coursework, as well as office space and meeting areas for faculty, students, research associates and visiting scientists. The new building is model for environmentally sustainable development, designed with sensitivity to the changing coastal environment.

Program Statement:
This program will provide interdisciplinary educational and research opportunities addressing the quality of the Earth's environment and the sustainable use of its natural resources. Duke faculty and students apply the latest genetic methods as they work together collaboratively toward understanding marine systems and identifying solutions to problems in the marine environment. The Duke Marine Laboratory has shown remarkable growth in the area of marine genetics, despite the fact that most of the research and education facilities have remained largely unchanged for more than three decades.

Architecture and Engineering:

The design address functional needs which results in a building that visually communicates the mission of Duke University Marine Lab, in particular the focus on marine conservation and restoration. The concept of sea level rise guided the space program organization. All spaces with highly-sensitive and expensive equipment such as the research lab and lab equipment rooms are located on the second floor, with less equipment-intensive spaces such as offices located on the first floor. The team has agreed upon the measure for sea level rise as survey EL +10.0 in the year 2100 (which is 3’-0” above current high tide). Top of first floor slab is above that at El. +10.5’. The desire to engage with the outdoors also influenced the building massing. The second floor is a rectangular “bar” that sits upon a first floor splayed form. This results in two types of outdoor spaces. One is a communal roof deck accessed from the second floor with expansive views towards the water. The other is a series of covered porches on the first floor that are shielded from the wind by the building.

Location:
Pivers Island, Beaufort, NC

Sustainability:
The Pilkey Laboratory has been designed to target the United States Green Building Council (USGBC) ‘Gold’ standards in the ‘Leadership in Energy and Environment Design’ (LEED) rating system.