

Applied Coastal Science and Engineering

The coast is constantly changing in many ways, including physical, geomorphological, chemical, and biological and it is crucial that we understand these changes. What happens on the coasts affects us in many ways, from how we recreate (like going to the beach and surfing) to how we get our food (like fishing and oyster farming) to how we protect ourselves (from storms and even sunny day flooding), for example. Students will conduct laboratory research to develop sensors that they will deploy in the field (the nearby intracoastal waterway and tidal creeks) via small boats and kayaks in order to study these changes. Sensor development for coastal oceanographic research requires an eagerness to learn interdisciplinary sciences and engineering disciplines in order to understand the phenomena of interest as well as the tools and techniques used to study them. We will utilize computer science and engineering, electrical, environmental, and mechanical engineering techniques to build novel technologies and determine ways to deploy them in the coastal ocean in order to capture the most interesting and important signals of change. Students will select specialties of interest to them and decide upon research questions that can be approached within the time frame of this program.

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