# Signature Academy of Coastal Studies



The Academy of Coastal Studies provides five pathways for students to empower themselves with the knowledge and skills needed to protect and preserve the environment and the livelihood of the beautiful Gulf Coast. Students may choose from Coastal Environmental Studies, Environmental Management – Plant Systems, Fisheries Management & Aquaculture, Maritime & Industrial Technologies, and Recreation, Travel, & Tourism, and given the close connection between the pathways, students will be given the option to enroll in courses in multiple pathways. These five pathways are designed to provide a platform for collegiate and/or career opportunities.

### Pathway Overview:

**Coastal Environmental Sciences** 





Offering courses such as Marine 11, Biology 1 and Environmental Science, and Geology, the Coastal Environmental Sciences pathway provides students an opportunity to focus on the coastal environment surrounding them. Through classroom and hands-on learning experiences, will study the students various aquatic ecosystems within the marine environment. They will clarify their understanding of the water planet and the dynamic processes that have shaped and continue to shape the Earth, and they will study the impact of man's interaction with the environment. Students will also be exposed to a wide variety of career opportunities for varying post-secondary plans.

## **Course Sequence**

10th Grade	11th Grade	12th Grade
Marine Biology I	Marine Biology II	Environmental Science (AP/Reg) or Geology CP

#### Marine Biology I (Regular/Honors)

This course is intended to provide students with advanced studies in biology within the context of the marine environment. While emphasis is primarily on living systems, oceanography and aspects of marine water chemistry are important components of the course. Also studied are the anatomy and physiology of saltwater organisms' classification, biodiversity, interdependence within marine biomes, and human and natural impacts on marine systems.

#### Marine Biology II

This course is designed to introduce and apply recent scientific research in Marine Sciences, with an emphasis on marine and estuarine flora and fauna endemic to the north central Gulf of Mexico and adjacent waters. Local organisms will be collected in the field and analyzed anatomically and ecologically for comparative analysis of the Mobile Delta, Mobile Bay and Gulf of Mexico ecosystems. In addition, students will prepare a touch lab and present it to visit various elementary and middle schools within the high school's vicinity to educate students about marine life.

#### Environmental Science (Regular/AP)

This course provides students with a study of man's interaction with the coastal environment. The content includes but is not limited to forms of pollution, conservation, and environmental planning and policy.

#### **Geology CP**

This course helps students clarify their understanding of the Earth and the dynamic processes that have shaped and continue to shape it. The topics to be covered include plate tectonics, the Earth's materials, geologic dating, internal and external geological processes, and hydrology. Students conduct field and laboratory investigations, use scientific methods during investigations, and make informed decisions based on critical thinking and problem solving.