



ABOUT CSI

Led by East Carolina University, the Coastal Studies Institute is a multi-institutional research and educational partnership of the UNC System including North Carolina State University, UNC Chapel Hill, UNC Wilmington and Elizabeth City State University. Located on the ECU Outer Banks Campus, CSI focuses on integrated coastal research and educational programming centered around the needs, issues, and concerns of coastal North Carolinians by bringing together the various disciplines of both the natural and social sciences.

CSI's education and outreach mission is to engage students in exciting programming and inspire the next generation of scientists. CSI programs align with NC Essential Standards, focus on STEAM concepts, and tie in real-world applications through the work of CSI researchers and scientists. Turn the page to discover all CSI has to offer.

FEES & BOOKING

All classroom programs are approximately 90 minutes and cost \$12 per student. Boat-based programs are \$24 per person. Programs may also be tailored to suit specific class needs. For questions or to book a program, please contact Lauren Kerlin at kerlinl22@ecu.edu or via phone at 252-475-5451.

Electric Currents & Energizing Waves (PS.5.2, PS.6.2.4, PS.6.2.5, PS.6.3.1, PS.6.3.4, PS.7.1.1, PS.7.2.1, PS.7.2.2, ESS.8.4.1, ESS.8.4.4) demonstrates the potential sources of renewable energy in the ocean. Students will learn about basic oceanography and electricity principles before crafting their own model wave energy converter.

Fishy Findings (LS.Bio.5.1, LS.Bio.5.2, LS.Bio.10.1, ESS.EES.4.1, ESS.EES.4.4, ESS.EES.4.5, ESS.EES.5.6, ESS.EES.6.1, LS.5.2, LS.8.2.1, ESS.8.2, ESS.8.3) uses sheepshead in the Albemarle-Pamlico Estuarine System as a case study to highlight the importance of fisheries ecology studies and the insights they provide to better understand species, ecosystem interactions, population changes, and future management practices.

North Carolina Shipwrecks (I.1.7, I.1.8, I.1.7, I.1.8, 5.E.1.4, 5.H.1.4, NC. 5.G.1, NC.5.NBT.7, 7.H.1.1, 8.H.1, 8.H.2, LS.8.2, 8.G.1, LS.8.2, PS.6.3.3) focuses on our unique maritime history, the science of diving, and the role of shipwrecks as artificial reefs. Students will identify and sketch a mock shipwreck through observation, data collection, and graphing.

Ocean ROVers (PS.Phy.7.1, PS.Phy.7.3, PS.PSc.4.2, PS.PSc.5.3, PS.PSc.8, PS.5.2, PS.6.3.1, PS.6.3.3, PS.6.3.4, PS.7.1.1) highlights the technology used by CSI scientists to collect oceanographic and estuarine data in harsh, salty environments. Students will design and construct a remotely operated vehicle (ROV). Code writing and drone piloting may also be included in this program.

In **The Power of Plankton** (LS.Bio.3.2, LS.Bio.4, LS.Bio.5.2, LS.Bio.10.1, LS.Bio.10.2, ESS.EES.4.1, ESS.EES.4.4, ESS.EES.4.5, ESS.EES.5.2, ESS.EES.6.1, LS.5.2, LS.6.1.1, LS.6.2.1, LS.6.2.2, LS.7.1.2, LS.8.2, LS.8.2, ESS.8.2, ESS.8.3) students investigate the unique local estuarine ecosystem through hands-on experiences such as water and plankton sampling, seining, and/or wetland mapping.



Electric Currents & Energizing Waves (PS.PSc.6, PS.PSc.7, PS.PSc.8, ESS.EES.3.2, ESS.EES.5.4, ESS.EES.5.5, PS.Phy.4, PS.Phy.5, PS.Phy.6, PS.Phy.7) demonstrates the potential sources of renewable energy in the ocean. Students will learn about basic oceanography, wave characteristics, and electricity principles before crafting their own model wave energy converter.

Changing Shorelines (I.1.6, I.1.8, I.1.10, PS.Phy.7.1, PS.8.1, PS.PSc.5.3, PS.PSc.8.2, ESS.EES.2.4, ESS.EES.3.2, ESS.EES.4.1, ESS.EES.5.5, ESS.EES.5.6, ESS.EES.6.2, ESS.EES.6.3, LS.5.2.1, PS.6.3, ESS.6.2.3, ESS.6.3, ESS.7.2, LS.8.2.1, ESS.8.2.1, ESS.8.3.2, ESS.8.4.3) allows students to critically engage with the costs and benefits of shoreline stabilization. Students will investigate what makes certain areas more suited to certain stabilization techniques, as well as think about the potential impacts of implementation on the surrounding ecosystem.

Oyster Ecosystems (LS.Bio.4, LS.Bio.5, LS. Bio.10.2, ESS.EES.4.1, ESS.EES.4.4, ESS.EES.4.5, ESS.EES.5.2, ESS.EES.5.5, ESS.EES.6.1, LS.5.2, LS.6.2.2, LS.8.2, ESS.8.2, ESS.8.3) highlights the important role oysters play in the Albemarle-Pamlico. Students will explore an oyster clump straight from the Croatan Sound to identify microorganisms, measure oyster growth, and better understand the biological relationships on an oyster reef.

In **Sustainable Coastal Communities** (CX.2.2, ESS.ESS.4, ESS.ESS.5, ESS.ESS.6, LS.Bio.5.2, ESS.6.2, ESS.8.3, ESS.8.4, 8.E.1, CLE.1, CE.PFL1), students will design their own communities, giving attention to the importance of preserving fragile natural resources and valuable cultural heritage all while promoting economic growth on the Outer Banks.

Explore the estuary in our **On-The-Water Boat Program**. Board the USCG-certified Discovery for a 2.5 hour program in which students will learn first-hand about estuarine habitats and their importance. The trip includes a visit to a nearby island where students will collect marine organisms and explore diverse estuarine habitats while learning about water quality and ways to protect these valuable nurseries.