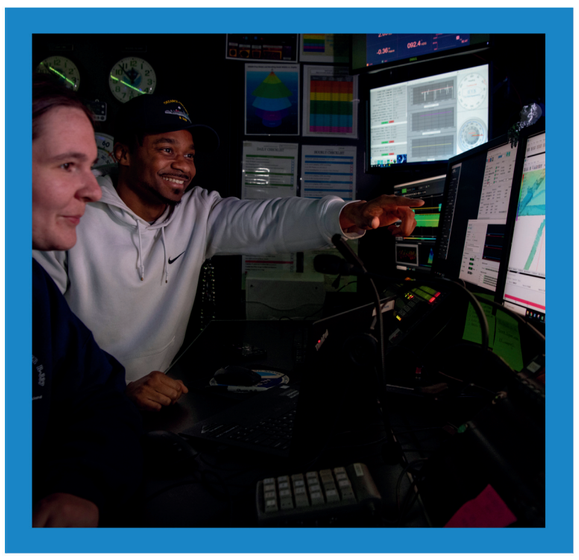
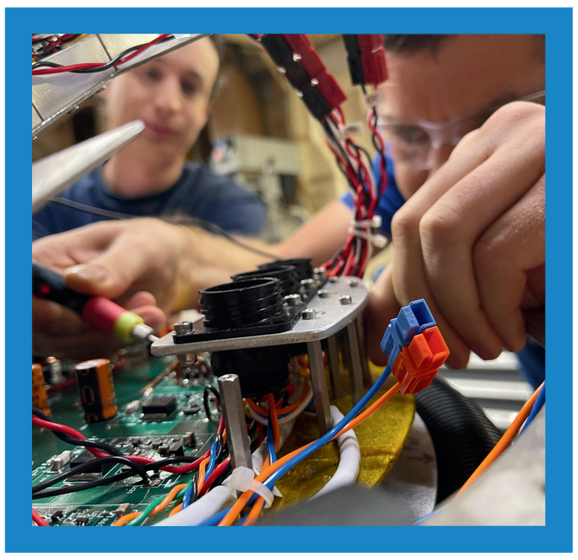
# A Sea of Possibilities

## SEE YOURSELF AS AN **OCEAN EXPLORER**

The ocean is a big place. It's also a place that is largely unexplored and poorly understood, and increasing our understanding of it requires a wide range of interests and expertise. All of these factors mean there are many different ocean exploration career options—below we've highlighted just a few of them.




"My love for science inspired me to have a career where I get to explore the world and everything that's in it."

**Dr. Kimberly Galvez, Expedition Chief Scientist, Viking Cruises**

**Marine Geologist**

"As ROV engineers we get to explore parts of the deep ocean that no person has ever seen before!"

**Chris Ritter, ROV Engineer and Pilot, The Global Foundation for Ocean Exploration**

**Remotely Operated Vehicle Pilot**

"Since I was really young, having a camera in hand to document life around me was just part of living for me."

**Alex DeDiccio, Media and Production Specialist, University of Rhode Island Inner Space Center**

**Documentarian or Media Specialist**


"My work involves explaining scientific information in a way that inspires people."

**Shellby Johnson, Outreach Specialist and Coordinator, NOAA Ocean Exploration**

**Science Communicator**

**Deep Sea Biologist**

"As a deep-sea biologist, I get to be an explorer."

**Dr. Diva Amon, Science Advisor, Benioff Ocean Initiative, University of California, Santa Barbara**

**Computer Scientist or Technologist**

"As a technologist, I build the tools that allow scientists to do their work and report their findings to the world."

**Patrick Cooper, Artificial Intelligence and Machine Learning Architect, NOAA Ocean Exploration**




"What I enjoy most about being a seafloor mapper is providing the "where are we in the world" for all of the exciting things that we discover."

**Shannon Hoy, Lead Expedition Coordinator, NOAA Ocean Exploration**

**Hydrographer (seafloor mapper)**

"A combined love for our oceans and history led me to maritime archaeology."

**Phil Hartmeyer, Maritime Archaeologist, NOAA Ocean Exploration**

**Maritime Archaeologist**

"I chose to become an ocean educator, because I am able to use my expertise to share my passion for our living waters."

**Suraida Nanez-James, Education Specialist, NOAA Ocean Exploration**

**Ocean Educator**

Visit **oceanexplorer.noaa.gov** to learn more about careers in ocean exploration.

NOAA OCEAN EXPLORATION

# How Will You Explore?

*From describing new species to designing cutting-edge technologies, the ocean is full of opportunity. As explorers, we meet the challenges and demands of the deep with excitement, not just for the discoveries to be made but for what we will learn along the way. With the deepest depths of the ocean remaining largely unseen, we need future explorers like you to aid in our understanding of our home planet. What will we discover next?* ***Well, that's up for you to explore.*** *A few career paths for you to consider...*

**Maritime archaeologists** investigate sites, objects, and remains in the ocean that have a connection to human society such as shipwrecks, sunken airplanes, or flooded coastal landscapes. Many maritime archaeologists hold undergraduate and postgraduate degrees in history, maritime studies, anthropology, or a natural science like geology or biology.

**Physical oceanographers** use ocean observations and datasets to study ocean conditions and processes, like currents, air-sea interactions, waves, and tides. They typically have undergraduate and postgraduate degrees in physics, marine or environmental science, oceanography, biology, geology, or chemistry.

**Marine biologists** study life in the ocean, providing information that deepens our understanding of ecosystem functionality so we can be better caretakers of the ocean's living resources. These explorers usually hold undergraduate and postgraduate degrees in ecology, environmental or marine science, marine biology, general biology, fisheries, or other natural sciences.

**Marine biochemists** study the chemistry of living organisms, while marine chemists focus on the chemical composition, processes, and conditions of the ocean that these organisms call home. Marine chemists or biochemists often hold undergraduate and postgraduate degrees in chemistry, biochemistry, biology, or marine science.

**Marine geologists** study seafloor structure, sample and age rocks and sediments, and map seafloor features. Marine geologists usually have undergraduate and postgraduate degrees in geology, earth science, geological oceanography, geography, or marine science.

**Hydrographers** who work in ocean exploration are often involved with mapping the bathymetry (depth) of the seafloor and discerning what lies underneath it. Most hydrographers have undergraduate and/or postgraduate degrees in geography, geospatial information systems, geology, marine science, or oceanography.

**Science communicators** share scientific findings with different audiences, bridging gaps in knowledge between scientists, policymakers, and the general public using writing, storytelling, and public speaking. They often hold undergraduate and/or postgraduate degrees in natural science, communications, English or creative writing, or sometimes even social science.

**Visual and creative artists** such as filmmakers, photographers, or graphic designers apply skills to visually display scientific findings and discoveries and share the wonders and importance of the ocean in engaging ways. They often have undergraduate and/or postgraduate degrees in fine arts, communications, media and design, or natural science.

**Ocean engineers** apply their knowledge of technology, software development, and physics to advance exploration operations and achieve scientific goals, adapting technology to the dynamic and extreme marine environment. Many hold undergraduate and/or postgraduate degrees in engineering including mechanical, electrical, computer, aerospace, chemical, and, of course, ocean engineering!

**Ocean educators** teach the next generation of explorers by laying the foundations for scientific investigation, inspiration, and ocean stewardship. From classroom teachers to education staff at aquaria, science centers, and even the government, educators support all types of ocean learning. They hold undergraduate and/or postgraduate degrees in education or natural science.

**Ship personnel** can include officers, engineers, deckhands, chefs, technicians, and more. Their roles are key in ensuring ship safety and operations, which allows for mission personnel to successfully conduct exploration, mapping, and research activities. Oftentimes, these explorers hold certifications or other qualifications to safely operate research vessels. Many hold undergraduate and/or postgraduate degrees in engineering or one of the natural sciences.

**Computer and data scientists** study and use computing systems to apply data, information systems, and artificial intelligence to increase our understanding of the ocean. They typically have undergraduate and/or postgraduate degrees in computer science, data analytics or data science, computer or software engineering, or mathematics.