



## Ocean Futures: A New Paradigm and Teaching in the Age of Ocean Change

Susanne Neuer<sup>1</sup>, Stephanie Pfirman<sup>1</sup>, Roberta Martin<sup>2</sup>, Katie Kamelamela<sup>2</sup>, Amy Maas<sup>3</sup>, and Nick Bates<sup>3</sup>

<sup>1</sup>School of Ocean Futures, Arizona State University, Tempe, United States of America (susanne.neuer@asu.edu, spfirman@asu.edu)

<sup>2</sup>Center for Global Discovery and Conservation Science and School of Ocean Futures, Arizona State University, Hilo, United States of America (Roberta.Martin@asu.edu, kkamelam@asu.edu)

<sup>3</sup>Bermuda Institute of Ocean Sciences and School of Ocean Futures, Arizona State University, St. George's, Bermuda (Amy.Maas@asu.edu, Nick.Bates@bios.asu.edu)

The new School of Ocean Futures (oceans.asu.edu) at Arizona State University (Tempe, AZ, USA) has embarked on a novel way of teaching ocean science with a forward-looking philosophy that centers on the current and future states of the ocean. While situated in Arizona State University's main campus, it leverages the location of its two offshore campuses, the Center of Global Discovery and Conservation Science in Hilo, Hawaii, and the Bermuda Institute of Ocean Sciences (BIOS) in Bermuda. The Ocean Futures programs combine aspects of traditional ocean science teaching with ocean stewardship, partnerships, and Indigenous knowledge, and focus on the communities that live with the ocean and are affected by its rapid change. In this presentation we will introduce the curriculum of the new degree, as well as the challenges encountered, and best practices learned. Novel courses include "Introduction to Ocean Futures", a capture course that aims at increasing the interdisciplinary knowledge of oceans, while actively seeking to increase diversity and retention in the field via inclusive pedagogical practices, the historical context of oceanography and an emphasis on developing a mindset of empowerment for change. It is followed by "Ocean Communities", a course that immerses students through an ethnobotanical lens in global mountain to ocean cultural connections, while elaborating on how various human communities engage, exchange, and build relationships with regional resources. The students will receive hands-on aquatic knowledge through field courses at BIOS, the Sea of Cortez, Hawaii, and Antarctica. The curriculum culminates with an ocean workshop and capstone course that will allow the students to work directly with partners to address real-world challenges facing coastal communities and marine systems.