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UNIVERSITY TOWN

ALL HANDS ON DECK

Students receive boating experience, time at sea thanks to UH Hilo fleet

By STEPHANIE SALMONS Hawaii Tribune-Herald

S tudents at the University of Hawaii at Hilo can take their studies to the sea with the help of the university's marine science fleet.

"We have everything from very small boats up to the large research vessel that the classes go out in, and part of that is just

giving students the real world experience that comes with small boats," said John Burns, assis-



tant professor **COLBERT** of marine

science and data science. The university's fleet comprised of several smaller boats and a larger research vessel, the Makani Aha — is used for divers going out on the reefs, student research projects and labs, and helps meet ongoing research

needs, among other uses. "The fleet kind of matches the scope and size of operations we do," Burns said.

Rigid-hull inflatables are entry-level vessels than can be used to service research buoys and even for dive projects.

"It's just the simplest way for students to actively get their hands wet," said Burns. "We get a lot of students that may have never been on a boat before ever ... so when we teach small boats you're kind of starting there, and then as the boats get more complex and larger, so do the operations." Larger boats, for exam-

ple, allow for multi-day diving operations and can



University of Hawaii at Hilo graduate student Katie Strong, left, and undergraduate marine science senior Alexia Hopkins, are deckhands and instructional/research assistants who work with the marine science boating fleet.

facilitate research for UH Hilo, UH Manoa and other agencies, he said.

"So it just gives us the flexibility to not just support students, student projects, faculty research projects, but actually be engaged in the larger research community."

The fleet's largest boat, the Makani Aha, is a "small but fully functional research platform," that also takes classes out for labs.

"We're able to get students out in classes to learn how to use the boats," said Steven Colbert, chairman of UH Hilo's marine science department. "And then from there, they're able to design their own research projects that may involve boat time, or some of us have research projects happening where students need to use the boats to go out."

For example, Colbert said he has funding from the Pacific Islands Ocean Observing System to maintain two water-quality buoys on the island, and students are hired to go out and clean the buoys and ensure the instruments are working properly.

STEPHANIE SALMONS/Tribune-Herald

"But if we didn't have the small boats, if we didn't have that kind of access, we wouldn't be able to do that," he said. "And at most other schools, these kinds Sunday, March 29, 2020 11

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Courtesy Alexia Hopkins/ Permit No. PMAL-2018-215 A whale breaches about 20 yards from the Makani Aha, a University of Hawaii at Hilo research vessel.



John Burns, assistant professor of marine science and data science, stands by one of the university's boats.

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Courtesy photo Matt Connelly and students take to the sea during an MOP field trip to learn small boat basics.



"A lot of schools, you could be doing marine science and you might never step on a boat, let alone have multiple opportunities."

> John Burns, assistant professor of marine science and data science

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of buoy projects maintenance is done at the graduate level, so it's typically graduate students doing it. So I think we're unique having undergraduates leading these kinds of projects."

Unit diving coordinator Clint Collins said the boats are an intricate part of diving operations, which allows for

greater ocean access. On the Hilo side, Collins said there are minimal access points to go shore diving, "so it's really important to have access to a boat or a

access to a boat or a COLLINS vessel because other-

wise you would pretty much not have access to a lot of those locations." Collins said the boats are heavily utilized during the classes they offer. During a summer diving course, he said the class is gener-

ally on a boat every other day. "I try to get them to experience as many different varieties, types of diving as I can, and so part of that is you usually try to do shore diving, do large boat diving, use small boats," he said. "So having all those things at the disposal is kind of intricate because by the time they get out into the field or potentially their next employer, school or whatever it may be, they've at least seen it a couple times."

Small boat training is also offered so students can be in a position to independently operate the vessels, said Burns.

Colbert said it's exciting for students that they can get these hands-on opportunities.

Burns said it's unique for students to have that kind of experience.

"A lot of schools, you could be doing marine science and you might never step on a boat, let alone have multiple opportunities," he said. "Even in the lab classes right now, they don't go out once in the semester, it's for several weeks in a row."

In another class, Burns said students are designing and executing research projects over successive trips.

"In a way, it's like taking advantage of real world lab space. We can do everything in the lab on a regular basis with typical equipment you imagine ... It's not much different out on the water, it's different equipment, but it takes time for them to just get exposed to it all."

Alexia Hopkins, an undergraduate senior studying marine science and an instructional/research assistant, said boats are necessary for those doing field work in the ocean.

"I think the biggest thing is really the experience," she said of UHtHilo's fleet. "... No other undergraduate program gets to go out. Just because we have such small class sizes that we're actually able to go out and do stuff."

Students at other schools may only get to go out once their senior year, Hopkins said, "and here I am as a senior, I've been out on the boat like million times, and this semester, even, we're doing our own projects on the boat, so it's really cool to get that head start above everyone else in the same field. That's cool. It's really fun, too."

Email Stephanie Salmons at ssalmons@hawaiitribune-herald.com.