

# UCSC Scientific Diving Methods and Certification

## BIO 75 Spring 2022

### Course Information

This page covers the **Spring 2022** UCSC Scientific Diving class. It lists the requirements, costs, scheduling, and alternatives. This is a three-unit course and the class code will be given out at the first lecture. As you read this, remember that everything is subject to change.

**Applications** for the course will be reviewed and spots will be assigned as to the need of each student relative to the other applicants. Priority is given to those that need scientific certification to pursue their research or to complete their degree. Typically, faculty and graduate students have highest priority followed by undergraduates and staff. Non-students will only be allowed in the class if there is space and they have enrolled through concurrent enrollment. Applications are available online at <http://www2.ucsc.edu/sci-diving> and are due along with the Equipment List (also available online) by **March 1, 2022** – you can drop them off at Long Marine Lab, Ocean Health building, room 203. If you have questions, please contact Steve Clabuesch at 831-459-4286 or by email ([srclabue@ucsc.edu](mailto:srclabue@ucsc.edu)).

**The Lab fee** is \$500 and will automatically post to your account once you are enrolled. This fee includes a NAUI Master Diver (not Divemaster) card, AAUS scientific diver card, dive slate, transportation to dive sites, air fills, cylinders, and sampling gear use. NAUI Nitrox certification will be given to those that want it for an additional \$65 to be paid on the first day of class.

**Course prerequisites** include Advanced and Rescue Diver certifications, copies of your last 12 dive logs, evidence of diving experience within the last 6 months (preferably in temperate ocean conditions), a "UCSC Scientific diving physical", current CPR/AED/First Aid certification, Oxygen Administration certification, evidence of medical insurance that covers diving injuries, DAN membership, your own equipment (details below), and passing the pool tests (swimming, skin, and scuba diving skills) and the AAUS scientific diver exam (this will be done prior to class and is online). The scientific diving class will be limited to 12 students to maintain a high quality training experience.

**The Scientific Diving Physical** must be completed before the class begins. A physical could take up to a month to complete, so have the physical done as soon as possible. You must get the medical forms from the UCSC Diving Safety website before going to see the physician. There are two medical packets 1) UCSC Physical and 2) NOAA Physical. All you need for this class is the UCSC Physical. But we encourage you to get the NOAA Physical so that you may dive on NOAA projects and vessels. However, a UCSC Physical can be upgraded to a NOAA Physical at anytime. Physicians may require additional tests and exams so give yourself plenty of time to complete this. Please check with the Health Center for current costs. If you have your exam done by your private physician there will be a charge (~\$20) to have the exam reviewed by the Health Center. Generally, this physical is good for 5 years.

**Equipment:** You must provide all your own equipment for the class. Your BC (must have a whistle on it), regulator and gauges (compass, pressure gauge, depth gauge or dive computer) must be inspected by the Diving Safety Program prior to use in the class. If you are using a dive computer, we also need to see your dive computer manual. Gear must be turned in for inspection by **March 15, 2022** You can do this by putting your gear in a clearly labeled (name and email) bag or action packer and dropping it off at the front desk of the Ocean Health Building (OHB), M-F, 9a-4p. Cylinders will be provided by us for the duration of the class. Required equipment includes thermal protection appropriate for 45-50F water, web weight belt (for pool work) as well as any other weighting system you may be using plus weights, mask, fins, snorkel, gloves, dive log, cutting device, compass, submersible pressure gauge, timing device & depth gauge (or dive computer), regulator with "alternate air source", BCD, dive light, save-a-dive kit, gear bag ("Action Packer" recommended), and a large mesh bag to transport and manage gear on small boats. NAUI 2019 dive tables will be supplied for use on class dives. See Rodale's Scuba Diving web page for suggestions on gear: <http://www.scubadiving.com> as well as our suggestions listed on the DSP website (Equipment Hints).

## CLASS ORGANIZATION

### Pool Sessions

There will be 5 pool sessions during the quarter, see the calendar for specific dates. You must attend pool sessions to be considered for the class. The first two pool sessions will be dedicated to testing and gear familiarization. Pool tests will include but not be limited to:

Swim Tests	Skin Diving Tests
450 yard swim under 12 minutes	Skin ditch and recovery – mask, snorkel, fins
25 yard swim underwater on one breath	Weight belt ditch and recovery – 10' depth
Tread water for 10 minutes	50 yards underwater on three breaths
Transport another person 25 yards	Rescue of skin diver
	900 yard skin swim under 20 minutes

### Scuba Tests

- CESA (25 yd horizontal)
- U/W gear exchange with buddy
- Buddy breathe 25 yd. without mask as donor and recipient
- Complete scuba rescue
- Alternate air source (octopus) 25 yd without mask as donor and recipient
- Scuba Ditch and Recovery
- Bailout (enter water with all gear in hand, turn on air and put on all gear)
- BC oral inflate, remove and replace power inflator

All pool tests must be passed to continue in this course. It is recommended that you practice these skills before the actual pool tests.

### Ocean Sessions

There will be all day, local ocean sessions during the quarter. And at the end of the quarter there will be the field practical portion of the course (see calendar for dive dates).

### Lectures

Friday, Saturday in OHB 118 (see the calendar for dates).

### Texts

The primary source of information will be the online AAUS scientific diving course.

### Alternatives to the Spring Class

1. Moss Landing Marine Laboratory offers a scientific diving course in August - contact Diana Steller at <dsteller@mlml.calstate.edu> - as does UC Davis at Bodega Marine Lab – contact Jason Herum <jsherum@ucdavis.edu> - as does University of Washington at Friday Harbor Marine Lab – contact Pema Kitaeff <pema@uw.edu> for more information.
2. There will be a UCSC Fall scientific diving course which usually occurs during the first three weeks of September, contact us for more information.