

**Ocean Studies Institute
California State Universities**

SCIENTIFIC DIVING PROGRAM

The Ocean Studies Institute (OSI) dive program is open to all members of the consortium that need to engage in technical, academic diving. Anyone who is engaged in diving as part of their research must be an active member of an academic scientific diving program or be subject to US Federal OSHA standards for diving. The OSI diving program exists for this reason. If you are presently an experienced diver, with a minimum of 50 logged dives, you may qualify to go directly into this program.

Please provide OSI with the following:

Copy of your C card, highest level obtained, and any specialty certifications
Scientific diving program application (attached)
Signed liability waver (attached)
Current medical results (attached three forms: #1 for the doctor; return #2 & #3 to OSI)
(Personally pick up form #1 from your doctor to insure it does not get lost)
Copy of current CPR card
Copy of current First Aid card
Current emergency oxygen provider certification
Proof of regulator and BC service or purchase within 12 months
Proof of scientific diver certification or equivalent experience
If possible, a letter of reciprocity from an AAUS organizational member
Recent dive history

A visual inspection of your dive equipment will be required

Please mail the above information to, or contact:

James Cvitanovich
OSI Diving Safety Officer
820 South Seaside Avenue
Terminal Island, CA 90731
Email: james.cvitanovich@csulb.edu
Cell: (562) 252-2282
SCMI: (310) 519-3172 ext 975

Information and forms are also available on our web site. Visit us at:
<http://www.scmi.net> and click on “Research Diving” icon

AAUS Research Diving Course

California State University - Ocean Studies Institute

Instructors: James Cvitanovich (OSI)

Locations: CSULB, SCMI, Local Waters

PRE-REQUISITES

All students enrolling in the course must have the following:

1. Certification as an open water scuba diver, issued by a nationally recognized certification agency (NAUI, PADI, YMCA, SSI, etc.)
2. Advanced level diver certification, or equivalent, from a nationally recognized training agency, OR a minimum of 12 logged scuba dives. The 12 logged dives must have been made SINCE entry level training was completed (*entry level training dives do not count toward this number*).
3. A minimum of 4 logged dives within the past year, 2 of which are within the last six months.
4. Scuba regulator service, by an authorized technician, within one year (or new within one year).
5. Course application. *
6. Research Diving Application. *
7. Signed waiver. *
8. Current Medical Examination for Scuba Diving; must be within one year (two forms). *

* **Forms are available on the OSI Diving Program Web Site, or contact OSI**

CPR, First Aid and O₂ training will be available as part of the course. If current certifications are held, it is recommended you participate, but is not required.

A visual inspection of all dive equipment will be conducted on the first day. *Equipment deemed “unsafe” or NOT in good working order, will not be allowed for use in the course.*

Questions should be directed to **James Cvitanovich**, OSI Diving Safety Officer, 820 South Seaside Avenue, Terminal Island, CA 90731. SCMI: (310) 519-3172 ext 975.
Email: james.cvitanovich@csulb.edu

SWIM TEST REQUIREMENTS

There will be a swim evaluation at the beginning of this course. This evaluation will include:

- 400 meter swim, within 12 minutes
- Tread water continuously for 10 minutes, or 2 minutes without the use of hands.
- Underwater swim for a distance of 25 meters, without surfacing
- Surface dive to 10' to recover a swimmer on the bottom, and transport on the surface 25 meters.

*****IMPORTANT:** ANYONE WHO DOES NOT **100% SUCCESSFULLY COMPLETE THE SWIM TEST WILL NOT BE PERMITTED TO PARTICIPATE IN SCIENTIFIC DIVING BEYOND THE DIVER IN TRAINING LEVEL.**

REQUIRED EQUIPMENT LIST

- ___ Swimsuit and towel for swim test & pool scuba check-out
- ___ Pen, paper, etc. for taking notes
- ___ Mask, fins, snorkel
- ___ Booties
- ___ Wetsuit (6-7mm or 1/4", with hood, is recommended), or dry suit.
- ___ Gloves
- ___ Weight belt, and/or integrated weights
- ___ Regulator
- ___ Tank and Backpack, and Buoyancy Control Device
- ___ A second Tank is advisable and could be rented for specific days
- ___ Submersible Air-Pressure Gauge (tank pressure)
- ___ Depth Gauge or computer
- ___ Timing Device (Dive Watch, Computer, etc.)
- ___ Dive Knife or other cutting device (e.g., scissors)
- ___ Underwater Compass
- ___ Underwater Slate
- ___ U/W "goodie" bag
- ___ Dive Log
- ___ Dive Tables (whichever you are used to using)
- ___ Gear Bag (for carrying dive gear to and from sites, and possible storage at Catalina)

DIVING WEB PAGE: <http://www.scmi.net>

Ocean Studies Institute (OSI)
Research Diving Course Application
At CSULB, SCMI, Local waters
Instructor: James Cvitanovich

PLEASE PRINT CLEARLY!!

Name: _____ Date: _____

Student ID #: _____ CSU Campus: _____

Mailing Address: _____
Street City

State Zip Email: _____

Telephone (Day): _____ (Night): _____

Faculty Referral: _____

You are responsible for your own medical coverage. In addition, most health insurance policies do not cover SCUBA diving. **We now require you to carry Diver's Insurance. A list of providers is posted on the OSI dive website at: <http://www.scmi.net>**

DIVING HISTORY

Diving certification(s) held:

<u>Agency (NAUI, PADI, etc.)</u>	<u>Level of Certification</u>	<u>Date Completed (Mo/Yr)</u>
_____	_____	_____
_____	_____	_____

Total # of dives made since initial certification: _____ Date of LAST dive: _____

Number of open water dives made in the past 12 months (*SINCE initial certification*): _____

Geographical area(s) of diving experience: _____

I HAVE EXPERIENCE IN THE FOLLOWING (Check **ALL** that apply):

<input type="checkbox"/> warm water	<input type="checkbox"/> surf	<input type="checkbox"/> wetsuit	<input type="checkbox"/> night	<input type="checkbox"/> NITROX
<input type="checkbox"/> cold water	<input type="checkbox"/> boat	<input type="checkbox"/> drysuit	<input type="checkbox"/> wreck	<input type="checkbox"/> from beach/shore
<input type="checkbox"/> blue water	<input type="checkbox"/> cave/cavern	<input type="checkbox"/> kelp	<input type="checkbox"/> currents	<input type="checkbox"/> limited visibility
<input type="checkbox"/> Other (specify): _____				

Send this completed application with a check in the amount of \$500 for OSI divers (\$600 for non-OSI divers). Space in the course is granted upon receipt of payment. Make checks payable to "USC/SCMI" and send to:

Ocean Studies Institute
AAUS Research Dive Course
820 South Seaside Ave.
Terminal Island, CA 90731
Attn: James Cvitanovich

In order to participate in the course the following forms must be submitted:

- 1 Course Application (this form)**
- 2 Research Diving Application**
- 3 Signed Waiver**
- 4 Medical forms (3 forms total)**

All OSI Diving forms can be downloaded at: <http://www.scmi.net> and click on "Research Diving"

For questions or more information contact Jim Cvitanovich
via email: james.cvitanovich@csulb.edu
cell: (562) 252-2282
or leave a message at SCMI: (310) 519-3172 ext. 975

**RESEARCH DIVING APPLICATION
CALIFORNIA STATE UNIVERSITY
OCEAN STUDIES INSTITUTE**

NAME _____ DATE _____

DATE OF BIRTH: ____/____/____

ADDRESS: _____

TELEPHONE:
SCHOOL _____ HOME _____ WORK _____

EMAIL: _____ CAMPUS AFFILIATION/POSITION _____

EMERGENCY CONTACT INFORMATION:

NAME: _____ RELATIONSHIP _____

HOME ADDRESS _____

WORK ADDRESS _____

TELEPHONE : HOME _____ WORK _____

You are responsible for your own **MEDICAL COVERAGE**. In addition, most health insurance policies do not cover SCUBA diving. **We require that you obtain DIVE INSURANCE**, such as that provided by DAN (Divers Alert Network): \$35 to join DAN + \$30-\$40 for the DAN Master Plan insurance [call DAN at 800-446-2671, or contact OSI for an application]. Contact your local dive shop to get information on other companies that provide dive insurance.

DIVE HISTORY

DIVE CERTIFICATION: AGENCY _____ LEVEL _____ REGISTRATION# _____

MEDICAL DATE ____/____/____ CPR DATE ____/____/____ OXYGEN ____/____/____

TOTAL NUMBER OF DIVES LOGGED: _____

NUMBER OF DIVES IN THE LAST 12 MONTHS: _____ DATE OF LAST DIVE: _____

EXPERINCE: (# logged dives in each category)

KELP ____ NIGHT ____ BOAT ____ DRY SUIT ____ BLUEWATER ____ SURF ____

I understand to stay current in the **OSI Diving Program** that I must maintain current CPR and Oxygen provider, certifications, dive physical examination, and log at least 12 dives per year (including one to my certification depth every six months). I will abide by all CSU regulations governing diving.

DIVERS SIGNATURE

____/____/____
DATE

**Ocean Studies Institute
California State Universities**

GENERAL RELEASE OF ALL CLAIMS

In consideration of my participation in the voluntary, extracurricular activity described below, I hereby agree to assume all risk of any kind of injury or damage I may receive or sustain as a result of my participation, including property damage, personal injury or death. Accordingly by signing below, I hereby completely release and hold harmless and forever discharge the State of California; the Trustees of the California State University; California State University, Long Beach; the Ocean Studies Institute and the Southern California Marine Institute; and each and every officer, agent, volunteer and employee of each of them, from liability or responsibility for any and all claims, damages, injuries, losses or causes of action that may result from or arise out of my participation in the described activities. I also understand and agree that this release shall be binding as against my heirs and assigns.

I hereby apply for permission to engage in scuba diving at the California State University, Ocean Studies Institute and or OSI sponsored diving operations at other locations. I acknowledge that in the event such permission is granted it will be granted to me as a voluntary diver. I am fully aware of the risks inherent in scuba diving and choose to voluntarily participate (including travel to and from the site of such diving). I hereby acknowledge and affirm that I am not required to participate in scuba diving as a condition to obtaining any academic degree. I further acknowledge that I am not to be considered an employee of OSI and that no benefits customarily afforded to employees will be extended to me by virtue of participating in scuba diving. (As an individual who actually IS employed by OSI in a capacity unrelated to scuba diving, I acknowledge that participating in scuba diving is not a condition of my employment).

I CERTIFY THAT I HAVE READ, FULLY UNDERSTAND, AND AGREE TO ABIDE BY THE DIVING REGULATIONS OF THE CALIFORNIA STATE UNIVERSITY SCUBA DIVING CERTIFICATION AND OPERATIONS OF SCUBA DIVING PROGRAMS MANUAL.

I do not intend by this instrument to waive or relinquish any claim against any individual arising out of his/her intentional act or willful negligence but in the event such individual is determined to be an agent of the California State University System, I do hereby waive and relinquish any claim against the university as a principal.

NOTE: This instrument is a waiver of your legal right to collect damages in the event of your injury or death and in the event of damage or destruction of your personal property. If you do not understand this instrument you are advised to consult an attorney.

Types of Risks Involved with the Activity: **Personal injury or death. Personal property damage. Personal property loss.**

PARTICIPANT NAME (Please Print): _____

Participant signature: _____ Date _____

Participant Address: _____

WITNESSED By (Please Print) _____

Signature: _____ Date _____

Address: _____

Name of PARENT or LEGAL GUARDIAN (if applicable): _____

Signature of Parent or legal guardian (if applicable): _____ Date _____

Address: _____

APPENDIX 3 DIVING MEDICAL HISTORY FORM

(To Be Completed By Applicant-Diver)

Name _____ Sex ____ Age ____ Wt. ____ Ht. ____

Sponsor _____ Date ____/____/____
(Dept./Project/Program/School, etc.) (Mo/Day/Yr)

TO THE APPLICANT:

Scuba diving places considerable physical and mental demands on the diver. Certain medical and physical requirements must be met before beginning a diving or training program. Your accurate answers to the questions are more important, in many instances, in determining your fitness to dive than what the physician may see, hear or feel as part of the diving medical certification procedure.

This form shall be kept confidential by the examining physician. If you believe any question amounts to invasion of your privacy, you may elect to omit an answer, provided that you shall subsequently discuss that matter with your own physician who must then indicate, in writing, that you have done so and that no health hazard exists.

Should your answers indicate a condition, which might make diving hazardous, you will be asked to review the matter with your physician. In such instances, their written authorization will be required in order for further consideration to be given to your application. If your physician concludes that diving would involve undue risk for you, remember that they are concerned only with your well-being and safety.

	Yes	No	Please indicate whether or not the following apply to you	Comments
1			Convulsions, seizures, or epilepsy	
2			Fainting spells or dizziness	
3			Been addicted to drugs	
4			Diabetes	
5			Motion sickness or sea/air sickness	
6			Claustrophobia	
7			Mental disorder or nervous breakdown	
8			Are you pregnant?	
9			Do you suffer from menstrual problems?	
10			Anxiety spells or hyperventilation	
11			Frequent sour stomachs, nervous stomachs or vomiting spells	
12			Had a major operation	
13			Presently being treated by a physician	
14			Taking any medication regularly (even non-prescription)	
15			Been rejected or restricted from sports	
16			Headaches (frequent and severe)	
17			Wear dental plates	

	Yes	No	Please indicate whether or not the following apply to you	Comments
18			Wear glasses or contact lenses	
19			Bleeding disorders	
20			Alcoholism	
21			Any problems related to diving	
22			Nervous tension or emotional problems	
23			Take tranquilizers	
24			Perforated ear drums	
25			Hay fever	
26			Frequent sinus trouble, frequent drainage from the nose, post-nasal drip, or stuffy nose	
27			Frequent earaches	
28			Drainage from the ears	
29			Difficulty with your ears in airplanes or on mountains	
30			Ear surgery	
31			Ringing in your ears	
32			Frequent dizzy spells	
33			Hearing problems	
34			Trouble equalizing pressure in your ears	
35			Asthma	
36			Wheezing attacks	
37			Cough (chronic or recurrent)	
38			Frequently raise sputum	
39			Pleurisy	
40			Collapsed lung (pneumothorax)	
41			Lung cysts	
42			Pneumonia	
43			Tuberculosis	

	Yes	No	Please indicate whether or not the following apply to you	Comments
44			Shortness of breath	
45			Lung problem or abnormality	
46			Spit blood	
47			Breathing difficulty after eating particular foods, after exposure to particular pollens or animals	
48			Are you subject to bronchitis	
49			Subcutaneous emphysema (air under the skin)	
50			Air embolism after diving	
51			Decompression sickness	
52			Rheumatic fever	
53			Scarlet fever	
54			Heart murmur	
55			Large heart	
56			High blood pressure	
57			Angina (heart pains or pressure in the chest)	
58			Heart attack	
59			Low blood pressure	
60			Recurrent or persistent swelling of the legs	
61			Pounding, rapid heartbeat or palpitations	
62			Easily fatigued or short of breath	
63			Abnormal EKG	
64			Joint problems, dislocations or arthritis	
65			Back trouble or back injuries	
66			Ruptured or slipped disk	
67			Limiting physical handicaps	
68			Muscle cramps	
69			Varicose veins	

	Yes	No	Please indicate whether or not the following apply to you	Comments
70			Amputations	
71			Head injury causing unconsciousness	
72			Paralysis	
73			Have you ever had an adverse reaction to medication?	
74			Do you smoke?	
75			Have you ever had any other medical problems not listed? If so, please list or describe below;	
76			Is there a family history of high cholesterol?	
77			Is there a family history of heart disease or stroke?	
78			Is there a family history of diabetes?	
79			Is there a family history of asthma?	
80			Date of last tetanus shot? Vaccination dates?	

Please explain any "yes" answers to the above questions.

I certify that the above answers and information represent an accurate and complete description of my medical history.

Signature

Date

APPENDIX 2
AAUS MEDICAL EVALUATION OF FITNESS FOR SCUBA DIVING REPORT

Name of Applicant (Print or Type)

Date of Medical Evaluation
(Month/Day/Year)

To The Examining Physician: Scientific divers require periodic scuba diving medical examinations to assess their fitness to engage in diving with self-contained underwater breathing apparatus (scuba). Their answers on the Diving Medical History Form may indicate potential health or safety risks as noted. Scuba diving is an activity that puts unusual stress on the individual in several ways. Your evaluation is requested on this Medical Evaluation form. Your opinion on the applicant's medical fitness is requested. Scuba diving requires heavy exertion. The diver must be free of cardiovascular and respiratory disease (see references, following page). An absolute requirement is the ability of the lungs, middle ears and sinuses to equalize pressure. Any condition that risks the loss of consciousness should disqualify the applicant. Please proceed in accordance with the AAUS Medical Standards (Sec. 6.00). If you have questions about diving medicine, please consult with the Undersea Hyperbaric Medical Society or Divers Alert Network.

TESTS: THE FOLLOWING TESTS ARE REQUIRED:

DURING ALL INITIAL AND PERIODIC RE-EXAMS (UNDER AGE 40):

- Medical history
- Complete physical exam, with emphasis on neurological and otological components
- Urinalysis
- Any further tests deemed necessary by the physician

ADDITIONAL TESTS DURING FIRST EXAM OVER AGE 40 AND PERIODIC RE-EXAMS (OVER AGE 40):

- Chest x-ray (Required only during first exam over age 40)
- Resting EKG
- Assessment of coronary artery disease using Multiple-Risk-Factor Assessment¹
(age, lipid profile, blood pressure, diabetic screening, smoking)
Note: Exercise stress testing may be indicated based on Multiple-Risk-Factor Assessment²

PHYSICIAN'S STATEMENT:

_____ 01 Diver **IS** medically qualified to dive for: _____ 2 years (over age 60)
_____ 3 years (age 40-59)
_____ 5 years (under age 40)

_____ 02 Diver **IS NOT** medically qualified to dive: _____ Permanently _____ Temporarily.

I have evaluated the abovementioned individual according to the American Academy of Underwater Sciences medical standards and required tests for scientific diving (Sec. 6.00 and Appendix 1) and, in my opinion, find no medical conditions that may be disqualifying for participation in scuba diving. I have discussed with the patient any medical condition(s) that would not disqualify him/her from diving but which may seriously compromise subsequent health. The patient understands the nature of the hazards and the risks involved in diving with these conditions.

Signature _____ MD or DO _____
Date

Name (Print or Type)

Address

Telephone Number

E-Mail Address

My familiarity with applicant is: _____ This exam only _____ Regular physician for _____ years

My familiarity with diving medicine is:

APPENDIX 2b
AAUS MEDICAL EVALUATION OF FITNESS FOR SCUBA DIVING REPORT
APPLICANT'S RELEASE OF MEDICAL INFORMATION FORM

Name of Applicant (Print or Type) _____

I authorize the release of this information and all medical information subsequently acquired in association with my diving to the _____ Diving Safety Officer and Diving Control Board or their designee at (place) _____ on (date) _____

Signature of Applicant _____

Date _____

REFERENCES

¹ Grundy, S.M., Pasternak, R., Greenland, P., Smith, S., and Fuster, V. 1999. Assessment of Cardiovascular Risk by Use of Multiple-Risk-Factor Assessment Equations. AHA/ACC Scientific Statement. *Journal of the American College of Cardiology*, 34: 1348-1359.
<http://content.onlinejacc.org/cgi/content/short/34/4/1348>

**OCEAN STUDIES INSTITUTE
(Med. 1)
DIVING MEDICAL EXAM OVERVIEW FOR THE EXAMINING PHYSICIAN**

TO THE EXAMINING PHYSICIAN:

This person, _____, requires a medical examination to assess his/her fitness
Applicant for Training
for certification as a Diver for the _____. His /her answers on the
University

Diving Medical History Form (attached) may indicate potential health or safety risks as noted. Your evaluation is requested on the attached scuba Diving Fitness Medical Evaluation Report. If you have questions about diving medicine, you may wish to consult one of the references on the attached list or contact one of the physicians with expertise in diving medicine whose names and phone numbers appear on an attached list. Please contact the undersigned Diving Safety Officer if you have any questions or concerns about diving medicine or the

_____ diving medical standards. Thank you for your assistance.
CSU Campus

Signature of Diving Safety Officer

Date

James Cvitanovich
Diving Safety Officer, Ocean Studies Institute

(310) 519-3172
Phone Number

Scuba and other modes of compressed-gas diving can be strenuous and hazardous. A special risk is present if the middle ear, sinuses or lung segments do not readily equalize air pressure changes. The most common cause of distress is eustachian insufficiency. Most fatalities involve deficiencies in prudence, judgement, emotional stability or physical fitness. Please consult the following list of conditions which usually restrict candidates from diving.

(Adapted from Davis, Jefferson (Ed.) 1986. Medical Examination of Sport Scuba Divers”, Best Publishing Co., Flagstaff, AZ; bracketed numbers are pages in Davis)

1. Tympanic membrane perforation or aeration tube [7]
2. Inability to auto-inflate the middle ears [6,7,8]
3. External ear exostoses or osteomas adequate to prevent external ear canal pressure equilibration [4]
4. Meniere's Disease or other chronic vertiginous conditions, status post-surgery, such as subarachnoid endolymphatic shunt for Meniere's Disease [11]
5. Stapedectomy and middle ear prosthesis [9]
6. Chronic mastoiditis or mastoid fistula [5]
7. Any oral or maxillofacial deformity that interferes with the retention of the regulator mouthpiece [43]
8. Corrected near visual acuity not adequate to see tank pressure gauge, watch, decompression tables, and compass underwater. Uncorrected visual acuity not adequate to see the diving buddy or locate the boat in case corrective lenses are lost underwater [13]
9. Radial keratotomy or other recent ocular surgery [14]
10. Claustrophobia of a degree to predispose to panic [15,16]
11. Suicidal ideation [16]
12. Significant anxiety states [16]
13. Psychosis [18]
14. Severe depression [16]
15. Manic states [16]

16. Alcoholism [19,20]
17. Mood-altering drug use [19,20]
18. Improper motivation for diving [16,17,18]
19. Episodic loss of consciousness [1,22]
20. History of seizure. History of seizure in early childhood must be evaluated individually [21]
21. Migraine [20]
22. History of cerebrovascular accident or transient ischemic attack [23]
23. History of spinal cord trauma with neurologic deficit - whether fully recovered or not. [23]
24. Any degenerative or demyelinating CNS process [25]
25. Brain tumor with or without surgery [24]
26. Intracranial aneurysm or other vascular malformation [24]
27. History of neurological decompression sickness with residual deficit [23,24]
28. Head injury with sequelae [21]
29. History of intracranial surgery [24]
30. Sickle cell disease [34]
31. Polycythemia or leukemia [34]
32. Unexplained anemia [34]
33. History of myocardial infarction [28,29,20]
34. Angina or other evidence of coronary artery disease [29]
35. Unrepaired cardiac septal defects [32]
36. Aortic stenosis or mitral stenosis [32]
37. Complete heart block [31]
38. Fixed second-degree heart block [31]
39. Exercised-induced tachyarrhythmias [31,32]
40. Wolf-Parkinson-White (WPW) Syndrome with paroxysmal atrial tachycardia or syncope [31]
41. Fixed-rate pacemakers [33]
42. Any drugs which inhibit the normal cardiovascular response to exercise tolerance [31]
43. Peripheral vascular disease, arterial or venous, severe enough to limit exercise tolerance [33,41]
44. Hypertension with end-organ finding - retinal, cardiac, renal or vascular [30]
45. History of spontaneous pneumothorax [36]
46. Bronchial asthma. History of childhood asthma requires special studies [7,35]
47. Exercise or cold air-induced asthma [36,37]
48. X-ray evidence of pulmonary blebs, bullae, or cysts [36,37]
49. Chronic obstructive pulmonary disease [37]
50. Insulin-dependent diabetes mellitus. Diet or oral medication-controlled diabetes mellitus if there is a history of hypoglycemic episodes [38]
51. Any abdominal wall hernia with potential for gas-trapping until surgically corrected [41]
52. Paraesophageal or incarcerated sliding hiatal hernia [39]
53. Sliding hiatus hernia if symptomatic due to reflux esophagitis [39]
54. Pregnancy [1,45]
55. Osteonecrosis. A history consistent with a high risk of dysbaric osteonecrosis
56. Any condition requiring ingestion of the following medication: antihistamines, bronchodilators, steroids, barbiturates, phenytoin, mood-altering drugs, insulin

Attachments: Medical Evaluation of Fitness for Scuba Diving Report (Med. 2)
Diving Medical History Form (Med.3)