

Oceanography

Oceanography is an interdisciplinary science that incorporates biology, chemistry, geology, physics, geophysics, mathematics, botany, zoology, meteorology, and geography to increase our understanding of the ocean environments. Research in oceanography includes the study of waves, tides, coastal processes, planktonic and benthic organisms, sea-level and climate changes, and ocean circulation.

Undergraduate: Students pursuing an undergraduate program in oceanography may receive a Bachelor of Arts (BA) or Science (BS) in Oceanography. Both the BA and BS degrees provide well-rounded academic programs, including general education course requirements in social science and humanities for the BA degree and hard or natural sciences for the BS degree. Coursework at the undergraduate level combines classroom and lab teaching in subjects such as Biology; Chemistry; Mathematics; Physics; Humanities; Marine Resources Management; Environmental Studies; Biological, Chemical, or Physical Oceanography; and Marine Field Projects.

Graduate: Students pursuing a graduate program in oceanography may earn a Master of Arts (MA) or Science (MS) in Oceanography or Doctor of Oceanography (PhD). While both the MA and MS degrees include a mixture of research-based and applied experience, the MA requires more practical experience such as internships and the MS requires more research-based projects such as a thesis. Graduate students usually will choose among a variety of degree concentrations in the field of oceanography such as Marine Sciences, Coastal Studies, Ocean Studies, Coastal Zone Management, Marine Biology, Ocean Engineering, Marine Engineering, Naval Architecture, Fish/Game Management, and Fishing and Fisheries Sciences. A sample of courses available at the graduate level include Biological Oceanography, Geological Oceanography, Chemical Oceanography, Physical Oceanography, Coastal Zone Management, Principles of Biological Oceanography, Marine and Environmental Chemistry, Principles of Physical Oceanography, Urban Planning, Principles of Geological Oceanography, and Coastal Systems Planning.

Occupations in Oceanography:

With a degree in oceanography, consider your professional opportunities in offshore drilling, marine metals & corrosion, environmental protection, global climate change monitoring, renewable energy, remote sensing, marine transportation, artificial reefs, habitat restoration, ocean physics, oceanographic administration, and atmospheric administration.

Choosing an Oceanography Program:

If you are considering continuing your education in this field, you should become familiar with academic trends and current developments. Utilize current literature and consider the existing research of professors in matching your academic and career goals with the right institutions for you. EducationUSA Centers provide advising services and a diverse collection of materials to assist students searching for schools and financial aid program. To find the nearest EducationUSA Advising Center, visit www.educationusa.info/centers.php.

In addition to researching regionally accredited colleges and universities which offer study in oceanography, prospective students, particularly for graduate-level study, can also identify academic programs with professional accreditation. Although there is no accrediting body for the field of oceanography, be sure to research all recognized regionally accredited programs at www.chea.org.



Associations and Organizations Affiliated with the Study of Oceanography:

- International Association for Biological Oceanography, www.iabo.org
- International Association for the Physical Sciences of the Oceans, <http://iapso.sweweb.net>
- American Meteorological Society, www.ametsoc.org
- Global Ocean Observing System, www.ioc-goos.org
- Intergovernmental Oceanographic Commission, www.ioc-unesco.org
- Oceanography Society, www.tos.org

Scholarly Journals Related to the Study of Oceanography: Journal of Marine Research Atmospheric Research, Aquatic Conservation: Marine & Fresh Water, Journal of Physical Oceanography, Marine Biology, and Botanic Marina.

Undergraduate Program Search Print and Online Resources:

- College Board, www.collegeboard.com
- Search for schools with Collegeboard's online, "College Matchmaker."
- Read about specific majors and careers using the "Major and Career Profiles" search www.collegeboard.com/csearch/majors_careers/profiles/
- Peterson's Education for the Earth: The College Guide for Careers in the Environment
- Island Press' The Complete Guide to Environmental Careers in the 21st Century

Graduate Program Search Print and Online Resources:

- Peterson's, www.petersons.com
- Peterson's Graduate Programs in the Physical Sciences, Mathematics, Agricultural Sciences, the Environment & Natural Resources; Book 4
- Island Press' Environmental Careers in the 21st Century
- National Accrediting Agency for Clinical Laboratory Sciences, www.naacls.org

Scholarships to Study Oceanography

- EducationUSA Financial Aid links, www.educationusa.info/pages/students/finance.php
- Funding U.S. Study, www.fundingusstudy.org
- Peterson's Scholarship Directory, www.petersons.com
- The Fulbright Program, <http://fulbright.state.gov/>
- NGWREF Len Assante Scholarship Fund, www.ngwa.org/ngwref/assante
- Thomas M. Stetson Scholarship, www.agwt.org/scholarships.htm
- Oceanography Scholarship Listing, <http://tinyurl.com/oceanscholarshiplist>
- Exploration Fund Grant, www.explorers.org
- Association for Women in Science, www.awis.org

If you are interested in pursuing higher education in the U.S. and would like further guidance please contact your local EducationUSA Advising Center