

MARINE ADVISORY PROGRAM

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EXPLORING OCEAN RELATED CAREERS

Fresh ocean air fills your lungs as you surface from a research dive. You store the samples you have collected from the ocean floor and head back to the lab to analyze them. Students often imagine oceanographers and marine biologists working at sea on a beautiful sunny day. Marine science can include exciting field work, but scientists also spend much of their time in a laboratory or at a computer terminal. There are few jobs in ocean sciences and they require years of math and science studies.

If you want an ocean related career, but you think that science is not for you, you're lucky to have many choices. For example, you might go into business or journalism, or represent a trade association, if you are good at writing or speaking. If you like to work outdoors, you might prefer fishing or marine contracting. International trade offers jobs in shipping, customs brokering, and seafood marketing, to name a few!

The following pages list several types of ocean related careers, both scientific and others, and gives examples of each type. You might find some good ideas for careers to explore.

You can start exploring an ocean business career by reading the yellow pages of the telephone book for a harbor area. Look at the index pages for yellow pages categories beginning with fish or fishing, marine, ship, customs brokers, and so forth.

Once you have decided on a career to explore, call one or two businesses and ask for an appointment to visit and learn about them. Use the worksheet at the end of this leaflet to plan your questions and take it with you.

When you get there, ask what the purpose of the business is, whether formal training or education is required, what talents or skills are needed, what tools or equipment are used, what a typical day is like, and what salaries are for beginners and more experienced workers. Write the answers to these and other questions in the space provided on the worksheet.

To explore an ocean science career, ask your teacher or counselor which colleges offer ocean science training, and how to get copies of their catalogs. Read the requirements for the subjects which interest you. Call or write the college to make an appointment to visit an advisor in an ocean science department. Use the worksheet provided at the end of this leaflet to plan your questions and take it with you. Write the answers on the worksheet.

Your teacher or counselor can also help you explore a career in ocean related education, journalism, arts, or government work. Make appointments to meet one or two people in this type of career and ask them the same questions that you would for a business or science career. Use the worksheet provided at the end of this leaflet to plan

your questions and take it with you.
Write the answers on the worksheet.

The California Sea Grant College Program sponsors one four-year scholarship each year for an outstanding student interested in ocean science, who has completed a science fair project. For information on this scholarship, write to: California Sea Grant College Program, A-032, University of California, La Jolla, CA 92093, or telephone (619) 534-4440.

MARINE TRANSPORTATION

Examples of Positions

Captain, Engineer, Mate, Purser, Doctor, Steward, Boatswain, Able-bodied Seaman, Engine Oiler, Engine Wiper, Ship's Cook, Signalman, Harbor Pilot, Customs Broker, Chandler, Container Crane Operator,

Examples of Industry Sectors

U.S. Merchant Marine, U.S. Navy, U.S. Coast Guard, Cruise Ships, Scripps and NOAA Research Vessels, Tug Boats, Tow Boats, Tankers, Oil Platform Transports and Exploratory Vessels, Shipyards, Shipping Company, Ship Supply Company

Training

Non-officer jobs require no formal training, but Coast Guard or Navy experience is helpful. Deck and engineering officers are trained by the U.S. Merchant Marine Academy and state maritime academies in California, Massachusetts, New York, Maine, and Texas. Maritime academy training is also useful for careers in shipping businesses or brokerages. For information contact the Director of Admissions, California Maritime Academy, P.O. Box 1392, Vallejo, CA 94590.

SEAFOOD INDUSTRY

Examples of Positions

Fishboat Captain, Deckhand, Seafood Company Owner/Manager, Sales Person, Shellfish Shucker, Fish Filleter, Forklift Operator, Refrigeration Technician, Marketing Specialist, Seafood Technologist, Seafood Home Economist, Industry Association Director, Supplies and Equipment Dealer, Insurance Agent, Mechanic, Carpenter, Fiberglasser, Woodworker

Examples of Industry Sectors

Harvesting, Processing, Wholesale Marketing, Retail Marketing, Brokerage, Import-Export, Consumer Education, Marine Engines and Hardware, Marine Insurance, Boat Building, Seafood Preservation, Storage, and New Products Research

Training

Positions in technology, management, or captain of a boat may require a college degree a license, or a technical course certificate. There are no formal training requirements for most other positions, but some deckhand training is available.

MARINE RECREATION AND TOURISM

Examples of Positions

Marine Manager, Boating and Water Sports Clothing and Equipment Sales Person, Marine Mechanic, Marine Surveyor (Boat Inspector), Charter Boat Captain, Private Fishing Guide, Marine Electronics Technician, Woodworker, Fiberglasser, Yacht and Motorboat Sales Person, Yacht Captain, Boating and Water Sports Instructor, Lifeguard, Park Ranger or Manager, Beach Patrol, Boat Bottom Cleaner, Painter, Association Representative, Bait and Tackle Sales Person, Chemist, Artist, Journalist, Engineer, Sea World

Education Specialist, Dolphin Trainer, Professional Water Skier, Cruise Ship Entertainer or Social Director

Examples of Industry Sectors

Marina Management, Boating, Water Sports, Marine Park and Beach Management, Sport Fishing, Boat Repair, Marine Engines and Hardware, New Products Research, Aquatic Park, Tourism and Promotions, Marina Design, Engineering and Maintenance

Training

Captains who take passengers for hire must have a Coast Guard certificate, technical jobs require certification and/or experience, management and education positions often require a college degree, and law enforcement positions require training and certification.

MARINE SCIENCES

Examples of Positions

Chemical Oceanographer, Physical Oceanographer, Geological Oceanographer, Biological Oceanographer, Marine Biologist, Ocean Engineer, Coastal Engineer, Marine Biotechnologist, Naval Architect, Computer Scientist, Fishery Scientist, Economist, Aquarium Curator, Marine Mammal Veterinarian, Fish Pathologist, Diving Medicine Specialist, Remotely Operated Vehicle Technician, Laboratory Assistant

Examples of Industry Sectors

University Research (Scripps Institution of Oceanography), Government Research and Management (National Marine Fisheries Service, California Department of Fish and Game, National Weather Service), Private Industry Research and Development (Oil Industry, Kelp

Processing, Aquaculture), Private Consulting Companies

Training

Bachelor's degree in mathematics, physics, chemistry, biology, engineering, computer science, or economics is required for most positions. Technical assistants need training in electronics, mechanics, computers, or specialized equipment. A Master's or Doctorate degree is held by most marine scientists.

MARINE TECHNOLOGY

Examples of Positions

Naval Architect, Carpenter, Welder, Mechanical Engineer, Civil Engineer, Commercial Diver, Geologist, Marine Contractor, Marine Surveyor (inspects vessels), Oil Platform Technician, Oil Platform Cook, Roustabout, Mechanic

Examples of Industry Sectors

Ship and Boat Building and Repair, Scientific Research, Offshore Oil Development, Coastal Engineering, Commercial Diving, Military, Marine Construction

Training

Naval Architects, Engineers, and Geologists need at least a Bachelor's degree and professional certificate. Many technicians, such as mechanics or welders need a two year Associate's degree. Experience is required for most positions.

MARINE MILITARY AND LAW ENFORCEMENT

Examples of Positions

Harbor Patrol Officer, Harbor Master, Gunnery Officer, Ship's Captain, Computer Programmer, Air

Traffic Controller, Steward,
Engineer, Mate, Communications,
Radar, or Oceanographic Technician,
Diver, Port Commander

Examples of Industry Sectors

U.S. Coast Guard, U.S. Navy, U.S.
Army Corps of Engineers, Harbor
Patrol

Training

Military officers must attend a
military academy, Officers Candidate
School, or the Reserve Officer
Training Corps (ROTC) Program
(available also at California
Maritime Academy). The military
provides training for many other
positions. Most harbor patrol
positions require police training.

MARINE EDUCATION, COMMUNICATIONS, AND ARTS

Examples of Positions

Marine Biology Teacher, Oceanography
Professor, Journalist, Sea Grant
Marine Advisor, Technical School
Instructor, Sea World Education
Specialist, Seafood Home Economics
Educator, Musician, Artist, Carver,
Water Sports Instructor

Examples of Industry Sectors

Technical and Public Schools,
Universities, Industry Newspapers
and Magazines, Radio, Industry
Promotions, Marine Parks, Consulting
Companies, Recreation, Arts

Training

Teachers, Professors, Marine
Advisors, and Home Economists need a
Bachelor's degree or more. Others
need a certificate, experience, or a
teacher.

OCEAN CAREER INTERVIEW FORM

CAREER TITLE: _____

DO YOU MAINLY:

PRODUCE OR SELL A PRODUCT _____ WHAT IS IT? _____

PROVIDE A SERVICE _____

MOST IMPORTANT (OR FREQUENT) ACTIVITIES PERFORMED AND EQUIPMENT USED:

ACTIVITIES:

EQUIPMENT:

WHICH OF THE FOLLOWING ARE NECESSARY OR HELPFUL?

TRAINING:

SKILLS:

TALENTS:

PERSONALITY TRAITS:

PHYSICAL ABILITIES:

SPECIAL RESOURCES:

WHAT DO YOU LIKE MOST ABOUT THIS CAREER? WHAT DO YOU LIKE LEAST ABOUT IT?

LIKES MOST:

LIKE LEAST:

PEOPLE IN THIS CAREER ARE MORE LIKELY TO:

_____ OWN THEIR OWN BUSINESS _____ WORK FOR THE GOVERNMENT

_____ WORK FOR A BUSINESS _____ WORK FOR A UNIVERSITY/RESEARCH INSTITUTE

WHAT IS YOUR OPINION OF JOB PROSPECTS IN THIS CAREER IN THE NEXT 5-10 YEARS?

PLEASE ESTIMATE INCOME POTENTIAL IN THIS CAREER:

STARTING: _____ AFTER 10 YEARS: _____

AFTER 5 YEARS: _____ TOP INCOME: _____

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