

**Bachelor of Science: Marine Science**

**Concentrations: Marine Biology, Oceanography**

**Minor: Marine Science**

Marine science is a multidisciplinary approach to studying the nature of the oceans. Marine scientists must be expert at biology, chemistry, geology, and physics so they can see how the living creatures are affected by the chemistry of their environment and the physics of ocean circulation. The geology of the ocean floors affects the chemistry/physics/biology of the oceans, and geological phenomena record ancient oceanic conditions. A true marine scientist can synthesize concepts from all of these disciplines with this holistic approach to science.

The Marine Science degree at Kutztown University is designed to prepare students for life as a multidisciplinary scientist. Marine scientists are also simultaneously generalists and specialists. The Marine Science degree at Kutztown University offers a choice of two specializations called tracks: Oceanography Track for students who wish to primarily explore questions about the chemistry, physics, and geology of the oceans, and Biology Track for students who want to look at how marine life interacts with its environment.

### Career types associated with Marine Science

*(Is this a good fit for you? Are you...)*

Investigative - "Thinker"

Realistic - "Doer"

Enterprising - "Leader"

### Related skills, values, and qualities

- Proficiency in reading, writing, thinking, questioning, analyzing and problem solving
- Ability to make critical observations and appropriate decisions
- Good manual dexterity and ability to operate scientific equipment
- Aptitude for accuracy and detail
- Ability to organize and maintain accurate records
- Ability to conduct and explain scientific research
- Ability to concentrate for long periods of time

### Courses Marine Science majors typically enjoy

- Biology
- Chemistry
- Environmental Science
- Geology
- Geography
- Health
- Physics
- Zoology

### Common interests of Marine Science majors

- Attending science exhibits and visiting aquariums, nature centers, zoos or museums
- Participating in science fairs and competitions
- Conducting research and presenting at conference
- Participating in science or conservation-related clubs and organizations
- Spending time near water and participating in outdoor activities
- Reading science and environmental articles, blogs, magazines and books

### For more information about the major

Contact the Physical Sciences Department 425 Boehm, 610-683-4447 or visit [www.kutztown.edu/Marine Science](http://www.kutztown.edu/MarineScience)

### KU Majors related to Marine Science

Biology, Environmental Science, Geography, Geology

Investigative students may also be interested in:

Anthropology, Biochemistry, Chemistry, Computer Science, Criminal Justice, Economics\*, German Studies, History, International Studies\*, Mathematics, Multicultural Studies\*, PA German Studies\*, Physics, Political Science, Psychology, Sec Edu- Math/Science, Sociology, Spanish, and Women's Studies\*

\* minor only

# FOUR STEPS TO SUCCESS

EXPLORE

DISCOVER

EXPERIENCE

IMPLEMENT

1<sup>ST</sup> YEAR

- Enroll in the Career Exploration Certificate.
- Attend info sessions to learn about career development and personal branding.
- Take a career assessment to identify and confirm interests.
- Get involved in campus clubs and organizations.
- Develop basic workplace skills through jobs or volunteer work.
- Talk with professors, family, and friends about career ideas.
- Conduct informational interviews with professionals working in fields of interest.
- Develop a relationship with your professors and faculty advisor.

2<sup>ND</sup> YEAR

- Meet with CDC career coach.
- Attend info sessions to learn about resume writing, and externships.
- Confirm your choice of major and consider options for double major or minor.
- Research careers of interest.
- Complete a job shadowing (externship) experience.
- Seek meaningful employment or volunteer work in a field related to your major.
- Explore options for undergraduate research and study abroad.
- Write a resume and have it reviewed by the CDC.
- Manage your online presence.

3<sup>RD</sup> YEAR

- Enroll in the Career Success Certificate.
- Complete an internship and/or undergraduate research.
- Attend info sessions about internships, interviewing, job search strategies, and grad school.
- Build a LinkedIn profile and continue to monitor your online presence.
- Complete a mock interview.
- Build skills through research projects, part-time employment, and volunteer work.
- Participate in Careers Cafe & networking programs.
- Attend internship & job fairs.
- Take on a leadership role in a student organization or work.
- Consider graduate school options and prepare for admissions tests.

4<sup>TH</sup> YEAR

- Attend your senior kick-off and other info sessions to prepare for job search/grad school.
- Update your resume and LinkedIn profile.
- Create cover letter drafts.
- Gain experience through internships and/or undergraduate research.
- Secure references for job/grad school applications.
- Create your "30 second" commercial.
- Meet with CDC to develop job search strategies.
- Research employers.
- Network with professionals through events and social media.
- Join a professional organization in your discipline.
- Attend the senior etiquette dinner.
- Participate in job fairs and on-campus interviewing.

## Sample Career Titles

Marine Science majors can be found working in a wide variety of career fields. Here are just some career titles that may be of interest. Please note that some jobs may require further education and training.

To learn more about these careers, visit <http://online.onetcenter.org> or [www.bls.gov/oco](http://www.bls.gov/oco).

- Agronomist
- Animal Scientist
- Aquaculture Farmer
- Aquaculturist
- Aquarium & Museum Worker
- Aquatic Biologist
- Barrier Beach Manager
- Bio-Engineer
- Bio-Technologist
- Botanist
- Chemical Oceanographer
- Coastal Resources Worker
- Commercial Fishing Engineer
- Coroner
- Ecologist
- Environmental Engineer
- Environmental Protection Worker
- Ergonomist
- Fish Hatchery Technician
- Fish Processor
- Fisheries Conservationist

- Forester
- Genetic Engineering
- Geographer
- Horticulturist
- Hydrographic Survey Technician
- Industrial Marine Economist
- Limnological Technician
- Marina Worker
- Marine & Coastal Consultant
- Marine Bacteriologist
- Marine Biologist
- Marine Ecologist
- Marine Engineering Technician
- Marine Geologist/Geophysicist/ Physicist
- Marine Sales
- Marine Tourist Worker
- Marine/Fisheries Worker
- Meteorologist
- Microbiologist
- Molecular Biologist
- Mycologist

- Naval Architect
- Net Designer
- Oceanographer
- Parasitologist
- Pharmaceutical Salesperson
- Port & Harbor Facilities Worker
- Science Illustrator/Writer/FilmMaker
- Science Laboratory Technician
- Science Teacher
- Seafood Processor-Researcher
- Soil Conservationist
- Test & Inspection Technician
- Toxicologist
- Underwater Technician
- Veterinarian
- Water Quality Technician
- Water Transportation Worker
- Wildlife Biologist
- Zoologist

## Common Internship Sites and Employers

Marine Science majors often find internships and employment in the following fields/industries.

- Biomedicine & Pharmaceuticals
- Business and Industry
- Colleges/Universities
- Defense Contractors
- Local/State/Federal Government
- Marine Engineering
- Non-Profit Organizations
- Park Systems/Nature Preserves
- U.S. Coast Guard
- Zoos and Aquariums



Handshake is the primary online resource for preparing and connecting students and alumni with employers.  
[www.kutztown.edu/handshake](http://www.kutztown.edu/handshake)

## Useful Websites for Marine Science Majors

Whether you are researching related career fields, applying for internships or jobs, or planning to join a professional association, these websites are for you!

### Industry Information & Job/Internship Search Sites

American Institute of Biological Sciences  
[www.aibs.org](http://www.aibs.org)

Dolphin Research Center  
[www.dolphins.org](http://www.dolphins.org)

Environmental Careers World Job Bank  
[www.environmentaljobs.com](http://www.environmentaljobs.com)

Marine Careers  
[www.marinecareers.net](http://www.marinecareers.net)

New Scientist Jobs  
[www.newscientistjobs.com](http://www.newscientistjobs.com)

Science Careers  
<http://sciencemag.org>

Association of Zoos and Aquariums  
[www.aza.org](http://www.aza.org)

American Geophysical Union  
[www.agu.org](http://www.agu.org)

LinkedIn Jobs  
[www.linkedin.com/jobs](http://www.linkedin.com/jobs)

### Professional Associations

American Society of Limnology & Oceanography  
<http://aslo.org>

Association for Environmental Studies and Sciences  
[www.aess.info](http://www.aess.info)

International Marine Animal Trainers' Association  
[www.imata.org](http://www.imata.org)

National Association of Environmental Professionals  
[www.naep.org](http://www.naep.org)

National Marine Educators Association  
[www.marine-ed.org](http://www.marine-ed.org)

National Oceanic and Atmospheric Association  
[www.noaa.gov](http://www.noaa.gov)

North American Association for Environmental Education  
[www.naaee.org](http://www.naaee.org)

The Oceanography Society  
[www.fos.org](http://www.fos.org)

The Society for Ocean Sciences  
[www.societyoceansciences.org](http://www.societyoceansciences.org)

# Building Your Resume for a Career in Marine Science

Building a strong resume for your career field starts long before you ever start your job search. Employers want to hire graduates who not only have the necessary educational background but also have experience applying that knowledge.

## Maria Marine Science

mmari000@live.kutztown.edu, 555-555-5555

### QUALIFICATIONS

- Experience with field research techniques including wildlife observation, behavior coding and excavation
- Excellent oral and written communication skills
- Strong problem solving and presentation skills
- Ability to work independently and as a cooperative team member

### EDUCATION

B.S. Kutztown University of Pennsylvania  
Major: Marine Science  
GPA: 3.76  
Dean's List

Kutztown, PA  
Dec 20xx  
Fall 20xx-Spring 20xx

Related Courses: Oceanography, Physical Oceanography, Field Methods in Oceanography, Marine Biology, Marine Ecology, Marine Mammals, Zoology, Botany, Cell Biology, Environmental Microbiology

A.A.S. Lehigh Carbon Community College  
Major: Biotechnology  
Dean's List

Schnecksville, PA  
Dec 20xx  
Fall 20xx-Spring 20xx

### INTERNSHIP EXPERIENCE

Mote Marine Laboratory Sea Turtle Conservation and Research Program  
Marine Biology Intern

- Patrolled beaches for sea turtle nesting activities
- Worked alongside research team to identify and mark turtle nests
- Excavated hatched nests and recorded contents
- Documented nesting and excavation process through video and written report

Sarasota, FL  
Summer 20xx

### RESEARCH EXPERIENCE

*Beluga Whale Behavior: A Studying of Captive Mate Relationships*  
Kutztown University, Dr. Marine

- Monitored relationships between captive male and female Belugas
- Coded and documented courtship and social behaviors
- Completed literature review on captive whale behaviors and rituals

Mystic, CT  
Summer 20xx

### HONORS & AWARDS

Dean's List  
Marine Science Scholarship  
Career Success Certificate, Kutztown University Career Development Center  
Career Exploration Certificate, Kutztown University Career Development Center

Fall 20xx-Spring 20xx  
Fall 20xx  
Spring 20xx  
Fall 20xx

### CAMPUS INVOLVEMENT

Member, Marine Science Club  
Member, Minority Achievement Coalition  
Volunteer, Kutztown University Internship & Job Fair

Spring 20xx-Present  
Fall 20xx-Present  
Fall 20xx, Spring 20xx

### WORK EXPERIENCE

Clothing Inc.  
Sales Associate

- Resolve customer issues and answer patron inquiries
- Process cash and credit transactions

Kutztown, PA  
Aug 20xx-Present

Learn more about your field and develop the necessary skills for employment by gaining hands-on experience through clinical practice.

Utilize summer breaks to acquire valuable experience via volunteer or employment opportunities related to your major.

Develop professionally through campus involvement and professional memberships. This illustrates responsibility, leadership abilities and time management skills.