

MARINE SCIENCE EDUCATOR: CAREER DEVELOPMENT OPTIONS

Abstract

Marine science educators work in a variety of venues, including pre-college schools, colleges, museums, parks, and environmental education centers. Several career development pathways exist to enter and advance in the field of marine science education. This information has been collated into a series of web pages located at: www.desolve.org/amanda/careers.htm. Included is comparative information on a variety of graduate programs, i.e., the Master of Science, the Master of Arts in Teaching, the Master of Education and the Ph.D. in Science Education and Marine Science/Oceanography Education. Information on acquisition of teaching certification credentials includes undergraduate course recommendations for Praxis exam preparation, special programs for emergency certification, and national board certification requirements. Interviews with prominent marine educators from the National Marine Education Association and the South Carolina Center for Ocean Sciences Education Excellence are featured. Links to other sites including lists of job advertisements are also provided as are innovative programs geared at involving pre-college teachers in marine science research. Readers can also access information through a list of *Frequently Asked Questions*. Avenues for career advancement in educational administration are also provided to enable potential educators to envision long-term career options in management such as directors of marine education programs, and school principals.



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Frequently Asked Questions

What is the best possible route that I should take in order to become a marine educator (Ph.D., master's, etc.)?
It depends on what you really want to do in the future. If you want to teach at the pre-college level at public schools, the best option would probably be the PACE program or the M.A.T. If you want to work for a private entity, then it is important that you research that entity before you start any route. Also, there are many factors that will affect your decision, such as cost, time for completion, and how you did/what you learned as an undergraduate. The best advice is to look at each route separately and then decide which looks best for you.

Where are schools that offer marine education at the graduate level?

The list is impressive, but it also depends on which route you take. For example Stanford University has a Ph.D. program in science education. The University of South Carolina has M.A.T., M.S., and Ph.D. programs in marine science and science education. Syracuse University/School of Education in New York has M.S. and Ph.D. programs in Science Education. There are many different institutions that offer many different programs, so each one should be researched and analyzed independently.

What courses do I need to complete now in order to be competitive and get into the programs of my choice?

See "recommended courses to take as undergraduate student" in the Praxis section of this website. These courses should enable you to gain the knowledge that you will need to pass the Praxis tests in the area of science you wish to teach. It may also be to your advantage to think about double majoring or getting a minor(s) in related areas of science. This may enable you to pass more subject areas tests and hence make you more competitive in getting accepted to a graduate institution.

What are the tests and scores that I will need in order to get into the program of my choice?

The GRE and Praxis are the two main tests that you will have to take. Score requirements differ between institutions for the GRE's. CCU for example, requires a minimum of 400 on quantitative and verbal for either the M.A.T. program or masters of science in Coastal Marine and Wetlands Studies. In general, the better your GRE scores and GPA, the more competitive you will be for assistantships. To go to specific information along with helpful advice designed to assist you in obtaining your desired scores see the GRE and Praxis pages.

What are the average GPA entrance requirements for graduate programs in marine science and education?

GPA requirements vary among universities. The University of South Carolina requires a minimum GPA of 3.15 for acceptance into their M.A.T., M.S., or Ph.D. programs. There are also many other factors that enter into the admission decision such as recommendations, essays, standardized test scores, etc., so you should consider how your entire portfolio looks. Also, some helpful advice for your current course work: learn the information now! A "C" in your core major classes may not be sufficient in helping you pass the Praxis or GREs or working independently as a graduate student. So it pays to really learn the most you can and not just worry about the grades.

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See laptop below to view all web pages for this project.



A Career in Marine Education

Introduction

New Trends in Marine Science Education

Training Routes

Masters Programs

M.S.

M.A.T.

M.Ed.

Ph.D. Programs

Marine Science

Science Education

Certification Pathways

Teaching Certification

South Carolina PACE program

National Board Certification

Educational Administration

Ph.D. in Administration

M.Ed. in Administration

Ed.S. in Administration

Additional Information

FAQ

Marine Educator Interviews

Resource Links

Internship and Job Information

Test Tips

GRE

Praxis

A Masters of Science in Your Field

Description

Usually a M.S. degree in marine science is a stepping stone to either a Ph.D. in marine science or a job as a technician or consultant. The M.S. degree can also be used to begin a career in marine education. This M.S. degree differs from a masters in education in that it usually involves writing a thesis based on original research.

Entrance Requirements

To qualify for a masters program in marine science, you must have either a B.S. or B.A. in marine science or a related field. You will also need letters of recommendations and an essay. You will probably be more competitive with a double major or minor in your undergraduate degree. There are also GPA requirements that vary from institution to institution, but are usually a 3.0 or "B" level grade average. Finally, you will need to have taken the graduate record exam, see the GRE page for more information, and have the scores that vary between institutions. You should try to score at the very least a 500 on the math and verbal sections for a combined score of 1000.

Estimated time for completion

Estimated time for completion is about two years usually including one additional summer.

Cost

Cost varies among institutions and also depends greatly on whether you are in-state or out-of-state resident. Assistantships are also available at institutions to help cover costs. Check out links to graduate programs at the school of your choice to see the availability of these. Also, see the Jobs links page, as many research assistantships are now advertised on job web pages. By way of example, students at CCU pay \$85 per graduate credit if they are on an assistantship. Teaching and research assistantships also typically provide about \$8,000 to \$12,000 per year to cover living costs. Some assistantships also cover all of the tuition costs. In general, the better your GRE scores and GPA, the more competitive you will be for assistantships.

Pros

Pros include that you will have a hard-core science degree. You will have more content knowledge and should be able to demand a higher salary. Estimation of increased salary can be up to \$2,000 to 3,000 annually. You will be able to teach at the college level as an instructor.

Cons

Some negatives are that you will still have to get certified to teach at the pre-college level, which will cost you more time and money. You can also earn the higher salary with a masters in education. The masters of science is probably more work and more stressful as you must generate a thesis based on original research.

Future Advancement Potential

Advancement includes the possibility of pursuing a Ph.D. in Science, Science Education, or even Administration. You will probably have an easier time in taking advantage of new trends in science education as you will have a better content background and more technical expertise.



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As an undergraduate marine science major, you may be interested in a career as a marine educator. These web pages are designed to help you understand career options in this field. As you will read, several paths exist to prepare you to compete for jobs in marine education. These web pages are also meant to help you choose the best path for you.

Marine science educators work in a variety of venues, including college and pre-college schools, museums, state and national parks, and environmental education centers. Teaching is conducted on a formal, informal, and nonformal basis. "Formal" teaching is done in the classroom setting at the K through 12 or college level. "Informal" teaching does not require a classroom setting and can be conducted in museums, parks, and other education centers with students or the general public. (The category of "students" also included future teachers and teachers looking to upgrade their skills). "Nonformal" teaching includes the media, such as radio, television, and magazines. Instructors engaged in "nonformal" teaching may work with the Discovery Channel or National Geographic as educators, photographers and more. Another example are children's book authors who write on a marine subject.

This is an especially great time to consider a career in marine education because of the national focus on improving teaching in science, mathematics and engineering. As a result, many new types of jobs are now available and many new programs designed to involve teachers and their students in hands-on marine science are now underway. Click on *New Trends in Marine Education* to read more about these new and fascinating opportunities.

The main focus of these web pages is to provide guidance in preparing you for a career in the "formal" and "informal" settings for marine education. The formal path can be separated into the following three levels of teaching:

A. College

B. Pre-College: High School, Middle, and Elementary

C. Pre-college: Administration

The third level (administration) recognizes that after a few years of teaching, you may become interested in more challenges, such as becoming the director of an educational program or center or even a school principal. You need to think about the advancement potential as you begin your career, so we have attempted to provide information on this subject.

Several career development pathways exist to enter and advance in the field of marine science education. Click on the links under *Training Routes*, *Certification Pathways* and *Educational Administration* to learn more about each of these options. These pages provide comparison of the various routes so you can select the one best for your individual interests and circumstances. Since only a few pre-college schools have formal courses in marine science, you should try to obtain as much multi-disciplinary training and certification as possible, so you can teach as many different kinds of science, and even math, classes as possible.

We've also included a page that answers [frequently asked questions](#). If you're interested in learning more from professionals already in the field, be sure to check out our [interviews](#) section. You'll find interviews from some of the top professionals in the field of Marine Education and find out what inspired and assisted them as they started their careers.

You'll also find helpful [links](#) leading to professional organizations as well as other Marine Education sites.

The [Job sites](#) page contains information about current internships and available full-time positions for those interested in Marine Education.

Our [Test Tips](#) page will help you learn the requirements for all your certifications, including GRE and Praxis. You'll find information on essays required and helpful test taking strategies. Don't miss this valuable information!

Finally, avenues for career advancement in educational administration are also provided to enable potential educators to envision long-term career options in management such as directors of marine education programs, school principals, etc.

