

2015

Halmos College of Natural Sciences and Oceanography Graduate Program Catalog

Nova Southeastern University

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**Halmos College of Natural Sciences and Oceanography
Graduate Program Catalog
2015 - 2016**

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1.0 Halmos College of Natural Sciences and Oceanography Overview

1.1. Nova Southeastern University

The Halmos College of Natural Sciences and Oceanography (HCNSO) is a graduate school within Nova Southeastern University (NSU): a not-for-profit, fully accredited, coeducational and Carnegie-classified as both a “high research activity” and a “community engaged” university. It is one of 284 colleges and universities statewide, and one of 119 independent four-year institutions in Florida.

NSU was founded in 1964 as Nova University of Advanced Technology. In 1974, the board of trustees changed the university’s name to Nova University. In 1994, Nova University merged with Southeastern University of the Health Sciences to form Nova Southeastern University.

NSU is well known for innovation and quality in both traditional and distance education. The university serves large numbers of adult students and a strong population of traditional undergraduates. To date, the institution has produced more than 150,000 alumni.

Using 2010 fall-term enrollment as a measure, Nova Southeastern University is the largest private institution of higher education in the Southeast and the eighth largest not-for-profit, private institution nationally. Further, NSU is ranked the sixth largest four-year, not-for-profit, private Carnegie research university in the United States.

The university awards associate’s, bachelor’s, master’s, specialist, doctoral, and first-professional degrees in a wide range of fields, including the humanities, biological and environmental science, business, counseling, computer and information sciences, conflict resolution, education, family therapy, medicine, dentistry, various health professions, law, marine sciences, performing and visual arts, psychology, and other social sciences. Nova Southeastern University has the only college of optometry in Florida, and one of only two colleges of pharmacy in South Florida. The institution also enjoys an excellent reputation for its programs for families offered through the Mailman Segal Center for Human Development and the University School. These include innovative parenting, preschool, primary, and secondary education programs, and programs across the life span for people with autism.

The university’s programs are administered through colleges and schools that offer courses at the Fort Lauderdale campuses as well as at locations throughout Florida, across the nation, and in 12 countries. Despite the geographic diversity of sites where classes are offered, 90 percent of the student body attends classes in Florida.

Eighty-three percent of all students enrolled attend classes in the tricounty area (i.e., Miami-Dade, Broward, and Palm Beach counties). Nova Southeastern University is a major provider of educational programs for Florida residents. Through its undergraduate, graduate, and professional degree programs, NSU educated approximately 25,000 Florida students in calendar year 2011. With an annual budget of \$600 million, Nova Southeastern University also has a significant economic impact on the surrounding community. A recent NSU study revealed that the

university and its students and employees contributed approximately \$2.6 billion to the Florida economy during fiscal year 2011.

1.1.1. University Facilities

The university offers degree programs and continuing education opportunities on four campuses in the Miami-Fort Lauderdale metropolitan statistical area (MSA).

The Fort Lauderdale/Davie Campus

The Fort Lauderdale/Davie campus in Davie, Florida, consists of 314 acres with general-purpose athletic fields and NCAA Division II-qualifying soccer and baseball fields. Facilities house the central administration offices; the Health Professions Division; the Graduate School of Humanities and Social Sciences; the Graduate School of Computer and Information Sciences; the Shepard Broad Law Center; the Center for Psychological Studies; the H. Wayne Huizenga School of Business and Entrepreneurship; the Mailman Segal Center for Human Development; the University School (grades pre-k–12); the Alvin Sherman Library, Research, and Information Technology Center; the Miami Dolphins Training Facility; the Don Taft University Center; and University Park Plaza.

The state-of-the-art, 366,000-square-foot University Center features three NCAA competition courts in the main arena, as well as two intramural courts, group fitness and instruction rooms, cardio and weight training areas, squash courts, a rock climbing wall, and The Flight Deck.

The Performing and Visual Arts Wing of the Don Taft University Center is managed by the College of Arts, Humanities and Social Sciences. It houses the college's Division of Performing and Visual Arts and includes state-of-the-art classrooms and facilities that support the division's art, dance, music, and theatre majors. The Performing and Visual Arts Wing features

- a 230-seat performance theater with full staging capacity for recitals, concerts, plays, films, and lectures
- a 100-seat black box theater with flexible seating arrangements for multiple staging options
- academic support facilities for the performing arts, including professional-caliber scene and costume shops; a scenic design lab; dance studios; choral
- and instrumental rehearsal rooms; music practice studios; and acoustic, percussion, and keyboard technology labs
- visual arts classrooms that support painting, drawing, ceramics, and graphic design
- a gallery for the display of private art collections, photography, and student artwork
- There is also a new outdoor aquatic center with an Olympic-sized swimming pool and integrated dive well.

In addition, seven residence halls on the Ft. Lauderdale/Davie campus serve undergraduate, graduate, health professions, and law students, with a capacity for housing nearly 1,500 students in approximately 207,000 square feet of living space. The Commons, a 525-bed residence hall, opened its doors to students in August 2007.

There are also housing facilities specifically for graduate students. The Rolling Hills Graduate Apartment Complex can accommodate up to 373 graduate students in fully furnished, single and

quad rooms. On the Fort Lauderdale/Davie campus, the Cultural Living Center has 135 furnished single and double apartments for upper-level undergraduate and graduate students.

University Park Plaza, just to the south of the Health Professions Division (HPD) complex, has 173,000 square feet of space with 60,000 square feet devoted to university office and classroom space.

This includes the Lifelong Learning Institute, the Institute for Neuro-Immune Medicine, a 100-station microcomputer laboratory, a videoconferencing room, and the NSU Bookstore.

NSU's Health Professions Division complex is located at the northwest corner of the Ft. Lauderdale/Davie campus. The complex includes eight buildings totaling more than 540,000 square feet of space for administrative offices, classrooms, laboratories, the Health Professions Division Library, and a patient-services clinic. Also, there is a 600,000-square-foot parking structure with space for 2,000 vehicles.

In addition to the Fort Lauderdale/Davie campus, the university has permanent facilities in Fort Lauderdale, Hollywood-Dania Beach, and North Miami Beach. These locations are all within 20 miles of the Fort Lauderdale/Davie campus.

East Campus

The east campus is located in Fort Lauderdale, six miles from the Ft. Lauderdale/Davie campus. The campus is located on 10 acres and has 8 buildings that provide 104,000 square feet of office and classroom space. Facilities house the university's financial operations, the student educational center administration, human resources, the university call center, the Transitional Use Program, and Alumni Hall.

North Miami Beach Campus

The 18-acre North Miami Beach campus is home to the Abraham S. Fischler School of Education; dental medicine, family medicine, and optometry clinics operated by the Health Professions Division; the Teacher Imaginarium, a free store for teachers; the South Florida School Choice Resource Center; and the Center for Assessment and Intervention. Overall, the facility includes four buildings totaling 266,500 square feet.

Museum of Art | Fort Lauderdale

The Museum of Art | Fort Lauderdale was founded in 1958, and has been housed since 1986 in a distinguished modernist building designed by Edward Larrabee Barnes. The museum building encompasses 94,500 square feet on three levels, of which 35,000 square feet is exhibition space used for the display of art. The adjacent Horvitz auditorium, which contains 256 seats, is used for a variety of presentations and performances, including lectures, films, concerts, and theatrical events.

The AutoNation Academy of Art and Design of the Museum of Art | Fort Lauderdale underwent a major expansion during 2011. The facility provides studio space for a curriculum that includes classes in painting, drawing, sculpture, photography, ceramics, design, and computer arts. Classes are geared to adults as well as to elementary and secondary school children. NSU also

maintains space in the Museum Tower. The Museum Tower is the new home of the Office of Advancement and University Relations as well as a satellite office for the president.

Technology Facilities

The university maintains an extensive information technology network for teaching and learning, research, and administrative computing. Comprehensive fiber-optic and wireless networks provide connectivity for user access. A dedicated wide area network (WAN) supports high-speed access to central computing resources from all campuses. NSU WINGS, the university's wireless networking system, provides students with mobile network connectivity in more than 45 buildings and four exterior locations covering all of the university's campuses and student educational centers throughout Florida. High-speed Internet access is provided to both on-campus and remote sites.

NSU is an equity member of the Florida LambdaRail (FLR), a not-for-profit, limited liability corporation currently composed of 12 public and private, not-for-profit Florida universities. The FLR operates a statewide, high-performance, fiber-optic network infrastructure that utilizes next-generation network technologies, protocols, and services. The FLR provides NSU with high-speed commercial Internet services and connectivity to advanced regional and national networks, such as the National LambdaRail (NLR) and the Abilene Internet2 backbone. The FLR has significantly enhanced university research and distance-education capabilities and allows NSU faculty and staff members, researchers, and students to collaborate with colleagues around the world on leading-edge research projects.

Students, faculty and staff members, and administrators have access to university computing resources from desktop and laptop computers, while numerous microcomputer labs are conveniently located throughout university facilities for student use. Administrative computing resources consist of multiple Oracle Enterprise servers and numerous other application-specific Linux and Microsoft Systems. The university's administrative operations are supported by the Ellucian Banner system. Additional administrative systems include imaging systems; campus card systems; facilities systems; procurement systems; time/effort; and medical, dental, optometry, and mental health clinic systems. Multiple Oracle servers support academic applications and World Wide Web-based tools. Microsoft Exchange email systems support all faculty and staff member email services, while Microsoft Live@edu provides email services to NSU students. Synchronous and asynchronous Web tools are used for the delivery of distance education. Electronic classrooms and microcomputer labs provide hands-on technology support for students and faculty members. Multimedia technology training labs support technology-training opportunities for faculty and staff members.

1.2. Location

The Oceanographic Campus occupies 10 acres adjacent to John U. Lloyd State Park at Port Everglades in Dania Beach, Florida. The center's facilities are composed of three original buildings and a modular encompassing 27,000 square feet and a new, state-of-the-art, 86,000-square-foot research facility. Space exists for offices, classrooms, a library, and research laboratories. The center's proximity to the ocean is ideal for field studies.

Partially funded by a \$15-million grant from the National Institute of Standards and Technology, the new Guy Harvey Oceanographic Center Building is the only facility in the country dedicated to the study, research, and preservation of coral reefs. It was completed in September 2012.

1.3. Department of Marine and Environmental Sciences Mission Statement

The Mission of the Department of Marine and Environmental Sciences is to carry out innovative, basic and applied research and to provide high-quality graduate and undergraduate education in a broad range of marine and environmental sciences and related disciplines. The Department also serves as a community resource for information, research and education on oceanographic and environmental issues.

1.4. Research Activities

The Halmos College of Natural Sciences and Oceanography, has under its former name “Oceanographic Center” a forty-nine year history of research excellence. Faculty and students pursue studies and investigations in experimental, observational and theoretical oceanography. Research interests include biological and chemical oceanography; coral reef ecology, assessment, restoration, and monitoring; Pleistocene and Holocene sea level changes; benthic ecology; marine plankton; invertebrate systematics and phylogeny; calcification of invertebrates; cell ultrastructure; marine fisheries; anatomy and physiology of marine vertebrates; molecular ecology and evolution; wetlands ecology; marine mammals; modeling of large-scale ocean circulation; coastal dynamics; ocean-atmosphere coupling, and surface gravity waves. Regions of interest include not only Florida’s coastal waters and the continental shelf/slope waters of the southeastern United States, but also the waters of the Caribbean Sea, the Gulf of Mexico, and the Atlantic, Indian, and Pacific Oceans. In particular the Environmental Sciences study program focusses heavily on Florida ecosystems, such as the Everglades.

1.5. Facilities

1.5.1. Laboratories and Offices

The Oceanographic Campus is a multi-disciplinary facility, located between the Atlantic Ocean and Port Everglades. Its proximity to the ocean is ideal for field studies.

The current campus boasts multiple conference and class rooms, an electron microscopy laboratory, a machine shop, an electronics laboratory, a coral workshop, filtered seawater facilities, graduate student center, working biology laboratories, a marine science library, an 85-seat auditorium, and offices for faculty and staff members, all connected with wired and wireless networks. The campus has an on-site one-acre marina and several research vessels and dive boats with a SCUBA fill station, space for research collaboration, training, and fieldwork staging. The campus design promotes research by current and new faculty, researchers, visiting scientists, post-doctoral fellows, and graduate students.

1.5.2. Library Resources

The William S. Richardson Library at Nova Southeastern University's Oceanographic Campus in the new Guy Harvey Oceanographic Center building, is a research-oriented library for all the disciplines of marine and aquatic science. Located at the entrance of Port Everglades, its primary use is for faculty research and for Master's students in Marine Biology (OCMB), Coastal Zone Management (CZMT) and/or Marine Environmental Sciences (MEVS), as well as Ph.D. students in Oceanography/Marine Biology.

The Oceanography library has 25 current subscriptions to print journals and over 320 current subscriptions to e-journals with archival rights. The library also has over 16,000 volumes of books, monographs, and bound journals that can be found in the Online NovaCat Catalog. Databases include ASFA (Aquatic Sciences and Fisheries Abstracts), Science Direct (full-text Elsevier Journals), Web of Knowledge/Science, Wiley, Taylor & Francis, BioOne, and GeoRef, among many others. These databases can be accessed through the NSU Libraries' Electronic Library. Other NSU libraries offer access to other on-line databases and print resources, along with an Interlibrary loan (ILL) service that is available for receiving books and/or copies of journal articles from other libraries around the country.

The librarians are members of the International Association of Aquatic and Marine Science Libraries and Information Centers (IAMSLIC), and SAIL, its regional branch. Link to Oceanography library resources: <http://nova.campusguides.com/oclibrary>.

1.5.3. Computer Resources

For faculty and student computing, the Department of Marine and Environmental Sciences has approximately 150 PC's on a LAN connected to Ft. Lauderdale/Davie campus and the Internet. The student computer lab has 20 individual computer stations with networked Intel dual-core or higher computers connected to a HP LaserJet printer. Various peripherals throughout the Center include an HP 5200z large format poster printer, a high-resolution color flatbed scanner, and assorted imaging software and hardware.

The Oceanographic Campus is linked to the Internet and NSU Ft. Lauderdale/Davie campus via a 1GB/sec network link. A wireless network allows indoor and outdoor access to the Internet from any location at the campus. A GUEST wireless network is also available to visiting students and researchers.

The center's Web site is located at www.nova.edu/ocean.

1.6. Institutes

1.6.1. National Coral Reef Institute

The National Coral Reef Institute (NCRI) was established by Congressional mandate in 1998. The Institute's primary objective is the assessment, monitoring, and restoration of coral reefs through basic and applied research and through training and education. NCRI operates at Nova Southeastern University's Department of Marine and Environmental Sciences near Fort Lauderdale, Florida.

Mission

NCRI's mission is to identify gaps and constraints in scientific knowledge of reef structure and function as it relates to issues of assessment, monitoring, and restoration. Through active research and collaborative funding, NCRI undertakes and facilitates hypothesis-based scientific research in emerging reef issues and technologies. NCRI provides scientific synthesis and evaluation criteria of existing programs for use by the research and management community. These include the study of minimally impacted, stressed, and imminently threatened and endangered reefs. Assessing and monitoring biodiversity is a priority, especially as it affects and interacts with ecological processes, overall reef function, reef recovery, and restoration. NCRI's primary capability is that of offering a strong scientific focus as well as innovative approaches to relevant scientific issues in all aspects of coral reef biology.

More information about NCRI can be found at <http://www.nova.edu/ocean/ncri>.

1.6.2. Guy Harvey Research Institute

The Guy Harvey Research Institute (GHRI) is a scientific research organization based at the Oceanographic Campus. GHRI was established in 1999 through collaboration between the renowned marine artist Dr. Guy Harvey and NSU's then Oceanographic Center. The Institute is one of only a handful of private organizations dedicated exclusively to expanding the scientific knowledge base for effective conservation of fish populations and maintenance of fish biodiversity.

Mission

The Guy Harvey Research Institute (GHRI) conducts high quality, solution-oriented, basic and applied scientific research needed for effective conservation, biodiversity maintenance, restoration, and understanding of the world's wild fishes. The GHRI also provides advanced scientific training to U.S. and international students who will serve as future stewards of the health of our oceans.

More information about GHRI can be found at <http://www.nova.edu/ocean/ghri>.

1.7 Faculty and Staff

Information about the faculty including their background, the courses they teach, and their research interests, as well as links to their specific web sites, can be found at <http://cnso.nova.edu/overview/faculty-staff-profiles/index.html>. Information about staff and their positions is also located there.

2.0. Academic Programs

The academic arm of the Department of Marine and Environmental Sciences is headed by the department Chair who is responsible for the academic programs. All certificate and degree programs offered by the Department are detailed in this catalog.

Mission

The Academic Programs of the Department of Marine and Environmental Sciences provide high-quality graduate education in a broad range of marine-science and related disciplines with the goal to prepare graduates with the knowledge and skills to enter the workforce or academia.

2.1. Programs and Majors

The Halmos College of Natural Sciences and Oceanography (HCNSO) offers a doctorate degree (PhD) in Oceanography (with emphasis on Marine Biology or Physical Oceanography) and master's (MS) degrees in Biological Sciences, Marine Biology, Coastal Zone Management (online or onsite), Marine Environmental Sciences, and (MA) Marine and Coastal Studies. Joint MS degrees can be obtained in Marine Biology and Coastal Zone Management; Marine Biology and Marine Environmental Sciences; Marine Biology and Physical Oceanography; and Coastal Zone Management and Marine Environmental Sciences. Two Graduate Certificates are offered: one in Coastal Studies and another in Marine and Coastal Climate Change. More information about the certificates can be found in [section 3.8 of this catalog](#).

This catalog provides guidelines and rules to assist the student in fulfilling the academic requirements of the MA, MS, and PhD degrees. The marine science MS majors and the PhD course of study contain a common core of five courses (Physical Oceanography, Marine Ecosystems, Marine Geology, Marine Chemistry, and Biostatistics) that provides an overview and foundation in the ocean sciences. The Biological Sciences requires five core courses (Marine Genomics, Scientific Communication, Biodiversity, Biostatistics, and Scientific Method and Experimental Design). Likewise the MA requires five cores (Anthropological Marine and Coastal Influences I: Historical, Anthropological Marine and Coastal Influences II: Futures, Effective Environmental Communication, Introduction to Marine and Coastal Processes: Essential Principles and Fundamental Concepts, and Marine and Coastal Flora and Fauna). Specialty and tutorial courses provide depth in each program. The HCNSO operates on a trimester system. The Fall and Winter semesters are split into 12- and 4-week sessions. The summer semester is 12-weeks in length.

For graduation, students must fulfill the curriculum and course-load requirements of the catalog in effect at their initial registration or that of any later-edition catalog. Other than curriculum and course-load, graduate students are responsible for requirements set forth in the most recent edition of this catalog, unless exceptions are specifically (and individually) approved by the program administration. Updates may be issued at the HCNSO between catalog publications. Copies of the catalog and updates are located on the Center's website (<http://cnsn.nova.edu/academics/course-catalog/>)

For the 12-week sessions each class meets typically one evening per week in a three-hour session. However, in the 4-week sessions, some courses are offered in day, weekend,

compressed, and online formats. Thesis and non-thesis (capstone review) tracks are offered in all MS majors. The MA students present a final portfolio in lieu of a capstone or thesis.

For completion of the MS degree, students must submit either a capstone review paper or a research thesis. A capstone review paper is a scholarly manuscript, based upon a comprehensive literature search and communication with researchers actively involved in the chosen topic. A thesis is an original contribution to knowledge resulting from the systematic study of a significant problem or issue. All entering students are automatically accepted in the capstone track option. Carrying out either a thesis or capstone track is possible only after agreement with a major professor, and completion of an approved proposal. This proposal must be approved by the student's committee and the Associate Dean of Academic Programs, and be submitted to the Departmental Administrator in the Program Office before the student can register for thesis or capstone credits. For further details, students are referred to section [3.7 of this catalog](#) and to the online guidelines for the capstone or thesis track found on the HCNSO Student Information page at: <http://cnso.nova.edu/tools-resources/students.html>.

The capstone track requires a minimum of 45 credits, including five 3-credit core classes, eight 3-credit specialty courses and a 6-credit capstone review paper consisting of an extended literature review of an approved subject. Once a student starts registering for capstone credits, they cannot stop registering for credits until the capstone is completed and defended. The completed capstone paper is presented in an open defense that includes the student's advisory committee.

The thesis track requires a minimum of 39 credits, including five 3-credit core classes, five 3-credit specialty courses and at least nine credits of master's thesis research. The number of thesis research credits above the minimum is dependent upon the length of time needed to complete the thesis research, which is typically more than the minimum three terms. The final thesis is formally defended in an open defense that includes the student's advisory committee.

Students in the single major track are allowed to take up to two elective courses outside their degree orientation and have them count towards their final credit count.

The joint specialization MS degrees require a minimum of 57 course credits (19 courses) or 51 course credits (17 courses) (for capstone review or thesis paper respectively) including a minimum of nine credits of thesis research or six credits for the capstone review paper. For the joint programs, students take approximately equal numbers of courses within each of the two specialties. The final thesis is formally defended in an open defense that includes the student's committee.

For both the capstone and the thesis degree tracks, once the proposal has been accepted, enrollment in the chosen track must continue until completion of the degree.

The MA requires the successful completion of 5 core courses and 7 elective courses (36 credits). Graduating students need to achieve a grade point average of 3.0 or higher from course grades earned throughout the program. Students present a final portfolio consisting of rigorous scaffolded written work compiled from core courses throughout the program.

The PhD degree requires a minimum of 90 credits beyond the baccalaureate. At least 42 credits must consist of upper-level course work. At least 24 credits must consist of dissertation research. The student may not register for research credits (DIS) until after successfully defending the

research proposal. After faculty acceptance of the research proposal the student must register for a minimum of 3 research credits per session until completion of the degree.

As part of the core curriculum, all MA, MS, and PhD students must also complete a 0-credit/0-cost seminar series to graduate and are required to attend a minimum of 8 seminars. Distance students can fulfill this requirement through online conferencing tools (e.g., Elluminate, Wimba, compressed video).

Although not required, it is highly recommended that all students take one or more field courses at the first available opportunity. This provides the student a bonding experience with peers and a heightened sense of community that, in turn, enhances the entire educational experience.

2.1.1. MS Marine Biology (OCMB)

This course of study is designed to equip students with a substantial understanding of the nature and ecology of marine life and provide grounding in other overlapping areas of marine science. Program flexibility provides preparation for further graduate study, secondary education career enhancement, or employment in technical research institutions, government agencies, or environmental consulting firms. Applicants should hold a bachelor's degree in biology, oceanography, or a closely related field.

Expected program outcomes are:

- Students will achieve and maintain a high cumulative grade point average (GPA \geq 3.0) from course grades earned throughout the program.
- The combination of courses comprising the degree ensures that students acquire and demonstrate
 1. Effective communication skills
 2. A full understanding of the scientific method
 3. Competency in geological and chemical concepts as they relate to marine biota
 4. An understanding of the taxonomy, natural history, and ecology of marine organisms
 5. In-depth knowledge of a specific aspect of marine biology
- Completion of the degree is expected to lead to: placements in the chosen field, in a position requiring graduate training; career advancement in the case of working professionals; and/or advanced graduate training (PhD).
- Students are expected to complete the degree within 2 years of full-time study, and within 5 years of part-time study.

2.1.2. MS Coastal Zone Management (CZMT)

This program leads to a multidisciplinary professional MS degree, intended for employees of government and industry seeking career enhancement as well as for recent college graduates seeking careers in planning and management with governmental agencies, industries, and other activities depending on or affecting the coastal zone or its resources. The program also can be of value for enhancement of careers in education. It focuses on contemporary problems and conflicts arising from increased use of coastal areas, and emphasizes the evaluation of alternative policy management solutions. Coastal studies combine elements of ecology, geology, physics, engineering, economics, law, the social sciences, and management. Because of this

diversity, applicants with any undergraduate major will be considered for admission. However, a science major is most useful. Some science background including general biology, chemistry, and organic chemistry is essential. The MS in Coastal Zone Management is offered in both in-house and distance study format.

Expected program outcomes are:

- Students will achieve and maintain a high cumulative grade point average (GPA \geq 3.0) from course grades earned throughout the program.
- The combination of courses comprising the degree ensures that students acquire and demonstrate
 1. Effective communication skills
 2. A full understanding of the scientific method
 3. competency in ecological, geological, chemical and biological concepts, as they relate to resource management in the coastal zone
 4. An understanding of coastal zone processes
 5. Familiarity with current management problems and approaches to their solution
 6. In-depth knowledge of a specific aspect of coastal zone management
- Completion of the degree is expected to lead to: placements in the chosen field, in a position requiring graduate training; career advancement in the case of working professionals; and/or advanced graduate training (PhD).
- Students are expected to complete the degree within 2 years of full-time study, and within 5 years of part-time study.

2.1.3. MS Marine Environmental Sciences (MEVS)

This master's degree program resulted from the need to educate professionals beyond the bachelor's degree in a synthesis of diverse disciplines, each of which views the marine environment in disparate ways. The Marine Environmental Sciences MS Program differs from the Coastal Zone Management MS Program. The MEVS is a more broadly based degree without the in-depth management emphasis of CZMT. The MEVS is not designed as an intermediate degree for the PhD, although some MEVS graduates will be well prepared for, and may later apply to, a PhD program either at the Halmos College of Natural Sciences and Oceanography (HCNSO) or elsewhere. Students who complete the MEVS Program typically directly enter, or re-enter, the work force. Graduates can find employment in environmentally oriented agencies/organizations and the program is of value for prospective or actual employees of government and industry seeking to advance careers in marine-related areas. Because of this diversity, applicants with any undergraduate major will be considered for admission. However, a science major is most useful.

Expected program outcomes are:

- Students will achieve and maintain a high cumulative grade point average (GPA \geq 3.0) from course grades earned throughout the program.
- The combination of courses comprising the degree ensures that students acquire and demonstrate
 1. effective communication skills
 2. a full understanding of the scientific method
 3. a generalized knowledge in ecological, geological, chemical and biological concepts as they relate to the marine environment

4. a generalized knowledge of the natural and human-driven problems currently impacting, and anticipated to impact, the marine environment
 5. in-depth knowledge of a specific aspect of marine environmental sciences
- Completion of the degree is expected to lead to: placements in the chosen field, in a position requiring graduate training; or to career advancement in the case of working professionals.
 - Students are expected to complete the degree within 2 years of full-time study, and within 5 years of part-time study.

2.1.5. Joint MS Degrees

The joint MS degrees are combinations of essential elements of the separate majors: Marine Biology/Coastal Zone Management, Marine Biology/Marine Environmental Sciences, or Coastal Zone Management/Marine Environmental Sciences. These options give students a broader training in marine science. They do, however, require that students take additional courses past the single MS program's curriculum to satisfy requirements of a joint MS degree. Students are expected to complete the degrees within 3 years of full-time study, and within 6 years in the case of part-time students.

2.1.6 MS Biological Sciences (MsBSc)

The MSBSc provides both a traditional biological curricula and innovative approaches to instruction with a specialization in molecular biology. The students take core and required courses spanning a wide range of disciplines, from molecular, through organismal, to ecosystem-level biology. This rigorous curriculum provides a practical foundation that can be applied as an entry point or terminal degree to professional careers in biomedicine, biotechnology and environmental biology.

The MSBSc is not a lock-step program and offers both thesis and capstone (non-thesis) tracks. The capstone (non-theses) track is the default option and will require 45 credit hours (24 hours of core/required courses, 15 hours of electives, and 6 hours of capstone). The theses track will require 39 credit hours for completion (24 hours of core/required courses, 9 hours of electives, and 6 hours of theses) and also the approval of a Halmos College of Natural Sciences and Oceanography (HCNSO) faculty member to advise and support a specific research project.

2.1.7. MA Marine and Coastal Studies (MAMC)

This program is designed to provide students with an orientation towards the marine-related social sciences with a broadened, in-depth, scholarly perspective on marine and coastal issues, from the depths of the deep sea to the heights of atmospheric climate change. The MA is designed for a broad range of students and working professionals with an interest in the marine and coastal zone that may not have an academic background in science. Students come from a range of sectors; e.g. administration, teaching, government and policy, urban planning, environmental journalism and film media, tourism, and business.

There is no minimum time limitation for completion of the MA. Like many other Master's programs, including those at NSUOC, the program can be completed in less than 2 years but it is anticipated full-time students will complete in 24 to 30 months.

Expected program outcomes are:

- Students will achieve and maintain a high cumulative grade point average (GPA \geq 3.0) from course grades earned throughout the program.
- The combination of courses comprising the degree ensures that students acquire and demonstrate
 1. Effective communication skills
 2. The ability to explain, assess and predict historic, current and anticipated societal, technological, and ecological impacts related to the marine and coastal environment.
 3. The ability to identify and analyze national and international marine and coastal issues and approaches to their solutions.

2.1.8. Graduate Certificates

The Halmos College of Natural Sciences and Oceanography (HCNSO) offers three Graduate Certificates: one in Coastal Studies, one in Computational Molecular Biology, and one in Marine and Coastal Climate Change. These are awarded upon successful completion (defined as a course grade of C or better) of any four HCNSO courses at the graduate level. Courses do not have to be taken within any one term, or consecutively, but the Certificate must be completed within 5 years of admission. Successful completion of the Graduate Certificate will award the equivalent of 12 graduate credits. The flexible online format of the Graduate Certificate makes it ideal for working professionals and college graduates in a variety of related fields.

The goal of the Graduate Certificate is to provide:

- A scientifically-based, credible, holistic and timely introduction and knowledge of key ecological and socio-environmental issues related to the oceans and coastal zone.
- A forum for sharing national and international perspectives, information and case studies concerning the coastal and marine environment.
- A stand-alone credible Graduate Certificate for working professionals and college graduates in a variety of related fields, and a basis for potential further graduate study towards a full Master's degree.

2.1.9. PhD in Oceanography/Marine Biology

The PhD degree consists of a program of upper-level course work and original research on a selected topic of importance in the ocean sciences. Courses consist of required general core courses as well as tutorial studies with the major professor. PhD programs are informally divided into physical oceanography and marine biology.

A successful recipient of the PhD degree in Oceanography/Marine Biology is expected to:

- Understand basic marine biological, chemical, geological, and physical processes to a level sufficient to communicate and collaborate with experts in those sub-disciplines; and to be able to apply this knowledge to issues in research and resource management

- Apply the scientific method to define, investigate, and evaluate hypotheses in at least one of these sub-disciplines
- Conduct (as guided by, and to the satisfaction of, the doctoral committee and HCNSO faculty) advanced, original, and independent research that adds to the body of oceanographic knowledge in one or more of the sub-discipline areas
- Communicate scientific results and conclusions clearly and logically in a written dissertation and in scientific presentations and publications
- Students are expected to complete degrees within 5 years of full-time study, and within 9 years in the case of part-time students. A minimum of 3 years enrollment in the PhD program is required.

2.1.10. Assessments of Learning Outcomes

Prior to graduation all Masters' students must take a pass/fail test on the learning outcomes of their program (i.e. MB, CZM, MES, MA). Students failing the test will be required to retake it prior to graduation; the test may be retaken multiple times. After finishing all coursework and prior to the oral defense of thesis or capstone the student will take a closed-book written test. Students may schedule the exam online at <http://nsuoc.wufoo.com/forms/rubric-schedule-request>. Once information is submitted the student will receive a confirmation email with a link to the calendar of available times for the rubric exam.

The questions will concern general knowledge (specifically, the material learned in all 5 CORE courses and 5 of the 7 electives) and will be directed at the learning outcomes of the individual courses.

3.0. Graduate Educational Programs

3.1. Admission

3.1.1. Application

Prospective students may apply at any time during the year and, if accepted, may begin at any term during the year of acceptance or the following year.

- Applications must be submitted online at <http://www.webstar.nova.edu/>.
- For online directions please visit <http://cnso.nova.edu/academics/index.html>
- Prospective distance students are encouraged to visit the link at:
<http://cnso.nova.edu/admissions/international-students.html>

The \$50 application fee can be paid online via credit/debit card or e-check. Any additional application materials must be completed and mailed to the following address:

GRADUATE PROGRAM OFFICE
Nova Southeastern University
Halmos College of Natural Sciences and Oceanography
8000 North Ocean Drive
Dania Beach, FL 33004

It is the responsibility of the applicant to obtain the supporting documents required for application.

For international students wishing to come to the Halmos College of Natural Sciences and Oceanography (HCNSO) for study, the student I-20 visa may be issued only upon completion of all admission requirements. Therefore, international students are urged to be sensitive to requirements prior to applying to the program.

The Office of International Students and Scholars (OISS) provides complete support and advisory services. The HCNSO Admissions Office notifies OISS when an applicant has been fully admitted and requires an I-20.

Nova Southeastern University
Attn: Office of International Students and Scholars
3301 College Avenue
Fort Lauderdale, Florida 33314
<http://www.nova.edu/internationalstudents/>
Phone: (954)262-7241 or 1-800-541-6682 x27241 (long distance)
Email: intl@nova.edu

3.1.1.1 Application Requirements

To complete the Center's application, prospective students must provide the following documents:

For Non-degree seeking students:

- Application (<http://cnso.nova.edu/admissions/non-degree-seeking.html>)
- \$50 Application fee
- Official undergraduate transcript

For the Graduate Certificates:

- Application (<http://cnso.nova.edu/admissions/graduate-certificate.html>)
- \$50 Application fee
- Official transcript showing baccalaureate

For MS or MA degrees:

- Application (<http://cnso.nova.edu/admissions/masters.html>)
- \$50 Application fee
- Statement of career goals
- Official transcripts of all post-secondary schooling
- Three letters of recommendation (on letterhead sent directly to the Center)
- GRE scores (general only)

For PhD degree, all of the above plus:

- Statement of support from the prospective advisor
- Curriculum Vitae (C.V.)
- General Research Topic

3.1.2. Acceptance Status

If accepted, students are accepted in one of three classifications: full, with academic requirement, and special status.

- Full acceptance is awarded to students satisfying all acceptance criteria (stated below).
- Acceptance with academic requirement is provided to students who have not satisfied all of the criteria, but who have given evidence that they may succeed in the degree program. A 'B' grade or better in the first four courses is required before a student can be converted to Full Acceptance status.
- Special acceptance is reserved for non-degree-seeking students. This status does not preclude applying for full acceptance in any Halmos College of Natural Sciences and Oceanography (HCNSO) Program. *Enrollment in, or satisfactory completion of, courses while in non-degree seeking student status does not guarantee admission to any program.* Although there are no specific admission criteria, non-degree admittance will only be awarded to students that have demonstrated the ability to successfully complete a graduate course. Non-degree seeking students are limited to a total of 2 courses.

When application is complete, students will be notified of the status under which they may register.

3.1.3. Acceptance Criteria

3.1.3.1. MS acceptance

The MS degrees in Biological Sciences and Marine Biology require a baccalaureate degree in biology or a closely related field. The MS degrees in Coastal Zone Management and Marine Environmental Sciences require a bachelor's degree or strong background in a natural sciences field. The Master of Arts in Marine and Coastal Studies does not require a science background.

To qualify for Full Acceptance, applicants must submit a transcript for a bachelor's degree with a major GPA of at least 3.0 and a cumulative GPA of 2.9.

The Graduate Record Examination (GRE) requirements are scores of 50% on the verbal portion, 50% on the quantitative portion, and 4.0 on the analytical writing portion for Full Acceptance, and scores of 40% on the verbal portion, 40% on the quantitative portion, and 3.5 on the analytical writing portion for Acceptance with Academic Requirements. A student with lower GRE scores may be accepted if there is evidence they may be able to successfully complete the program (GPA, letters of recommendation, etc.)

3.1.3.2. PhD acceptance

For PhD applicants, previous degree(s) should be in the area of mathematics (for Physical Oceanography) or an appropriate area of the natural sciences (for Marine Biology). A Master's degree in Biological Oceanography, Biology, Marine Biology, or a related science is preferred, especially for the Marine Biology PhD.

To qualify for acceptance, applicants must submit a transcript for a master's degree with a cumulative GPA of at least 3.0, and bachelor's degree with a major GPA of at least 3.0 and a cumulative GPA of 3.0.

The Graduate Record Examination (GRE) requirements for acceptance into the PhD program are scores of 55% on the verbal portion, 55% on the quantitative portion, and 4.0 on the analytical writing portion for acceptance.

PhD applicants need to obtain a written agreement from a prospective faculty member who will serve as Major Professor and submit it with an overview of proposed research. Students are not admitted without prior agreement on a research topic and a Major Professor. Furthermore, the Major Professor will need to state in writing that she/he has or will be able to acquire sufficient funds to cover the PhD student's research expenses for the duration of the student's course of study at the HCNSO. The OC will not be responsible for covering research expenses in the event of funding loss by the Major Professor.

The application process should be initiated online at <http://www.webstar.nova.edu/>. Submit the application package containing letters of recommendation, statement of career goals, GRE scores, undergraduate and graduate transcripts, general research topic, and statement of support from the prospective Major Professor. This is the package that will go to faculty. Acceptance into

the PhD program is effectively provisional for all. The accepted student is a “pre-candidate” until the later defense of proposal and successful passing of Comprehensive Exams.

3.1.3.3. Graduate Certificate Entrance requirements

Applicants for the distance Graduate Certificates are required to have a baccalaureate (four year degree). They must apply for the certificate at <http://webstar.nova.edu/> and must submit an official transcript as part of the application process.

3.1.4. Class Registration

It is the student’s responsibility to register *prior to* the beginning of class. First term in-house students must register on paper with the Halmos College of Natural Sciences and Oceanography (HCNSO). First term students will have registration packets mailed to their permanent address. From then on students may register online (<http://webstar.nova.edu/>) or at the HCNSO Program Office. Payment is due to the Bursar’s office upon registration. NSU accepts major credit cards, checks, money orders, and financial aid. MS students pay tuition each term for their courses, according to the number of credit hours taken. PhD students pay a flat rate per term. In addition to registering, the WebStar site (<http://webstar.nova.edu/>) allows students to update addresses, look at financial aid standings, and view transcripts anytime day or night. For more information about WebStar, please see: <http://cns0.nova.edu/admissions/index.html>.

NOTE: NSU Employees must always register using the online [student transaction form](#).

3.1.5. NSU ID

To reduce identity theft, NSU has developed its own identification system for all students, faculty, and staff. The NSU ID is a nine-character code that starts with “N” and is followed by 8 digits. This code is created at the time of application and will remain with a student throughout their academic career at NSU. Students who forget their NSU ID may look it up at <https://www.nova.edu/sbin/nsuidhelp>. They will need their social security number and WebStar pin; or their NSU email name, NSU email password, and either the last 4 digits of their social security number or the month/day of birth.

Students will need their NSU ID to

- access WebStar for student services, including registration and financial aid
- access NSU Online library resources
- request transcripts

Protect your Identity - Keep your NSU ID Secure

3.1.6. NSU Email and SharkLink

Your NSU Email Name is created automatically when you become a new student of NSU. Your NSU Email Name will also be your SharkLink ID.

Your NSU Email Name & Password is used for:

- Your SharkLink Login
- Your WebCT Login

- Your NSU WebMail Account
- Security access to various NSU Web Applications
- [Retrieve Your SharkLink ID](#)
- [Change Your Password](#)

Please note that all official electronic mail communications directed to NSU students, faculty, and staff members are sent exclusively to NSU email computer account addresses. **Students should use this email address for all university correspondence** (including with faculty). The student email address is available from:

<http://www.nova.edu/cwis/oit/nsuidentity.html>

For all policies related to use of your NSU computing account, please see the NSU Student Handbook at http://www.nova.edu/studentaffairs/forms/studenthbk_2015-16.pdf and the NSU Policy on Acceptable Use of Computing Resources at <http://www.nova.edu/common-lib/policies>.

3.2. Credit-Hour Requirements

For individual marine MS degrees (Marine Biology, Coastal Zone Management, Marine Environmental Sciences): The (non-thesis) capstone review requires a minimum of 45 total credits, consisting of 13 three-credit courses (including five core (OCOR) courses), a six-credit capstone review paper, and extra capstone review continuation credits as necessary. The thesis track requires a minimum of 39 total credits, consisting of 10 three-credit courses (including five core (OCOR) courses), a minimum of nine credits of master's thesis research, and extra thesis research credits as necessary.

For joint OCMB/CZMT, OCMB/MEVS, or CZMT/MEVS majors: The capstone review track requires a minimum of 57 total credits, consisting of five core (OCOR) courses, six courses from each of two specialties chosen from the three available, and a six-credit capstone review paper. Additional capstone review paper credits are taken as necessary. The thesis track requires a minimum total of 51 credits consisting of five core (OCOR) courses, nine (five plus four) specialty courses chosen from two of the three specialties: Marine Biology (OCMB), Coastal Zone Management (CZMT), or Marine Environmental Sciences (MEVS), and a minimum of nine thesis credits. Additional thesis credits are taken as necessary.

For the MS in Biological Sciences (MSBSc): the program offers both thesis and capstone (non-thesis) tracks. The capstone (non-theses) track is the default option and will require 45 credit hours (24 hours of core/required courses, 15 hours of electives, and 6 hours of capstone). The theses track will require 39 credit hours for completion (24 hours of core/required courses, 9 hours of electives, and 6 hours of theses) and also the approval of a Halmos College of Natural Sciences and Oceanography (HCNSO) faculty member to advise and support a specific research project.

The MA requires a minimum of 36 total credits, consisting of five core courses and seven elective courses (MAMC). Students present a final portfolio consisting of rigorous scaffolded written work compiled from core courses throughout the program. Each core course requires a final term paper which will be graded as 20% of the course final grade. After grading, these term papers will

be rewritten until the course instructor finds them acceptable to be incorporated into the student's portfolio. The course instructor will sign-off on the term-paper as acceptable. The final portfolio, consisting of the 5 approved core term papers and a summative essay integrating and showing the synthesis of knowledge and skills gained through completion of the core papers will be presented to the Director of Academic Programs upon completion of all coursework. The Director of Academic Programs will insure the summative essay is rewritten until acceptable. Program requirements are not complete until acceptance of the full portfolio by the Director. No grading of the portfolio, other than the 20% of each core grade, will be required.

None of the NSU HCNSO graduate programs are lock-step. Students may go at their own pace, selecting the courses and credit hours they wish to take each term to complete the requirements listed above within the required time frame for completion of the degree (see section 3.4). Students are cautioned that any courses within a term can impact financial aid and student employment.

3.3. Transfer Credit Policy

3.3.1. Transfer of Credits to Halmos College of Natural Sciences & Oceanography

MS or MA students may transfer up to six credits of previous graduate course work. Course work must replicate HCNSO offerings in the major field of interest or must clearly be closely related. Students should submit requests for transfer credits in writing to the Program Office with documentation indicating the subject matter and that the transfer credits were of graduate level from accredited institutions. This can consist of the course syllabus, transcripts, and/or the course description from the professor.

PhD students may transfer up to 30 graduate course credits from prior graduate programs in the same discipline as the PhD degree aspired to. Transfer courses must be either reasonable duplicates of courses offered at NSU or clearly in the applicable PhD field of interest. Students should submit requests for transfer credits in writing to the Program Office with documentation indicating the subject matter and that the transfer credits were of graduate level from accredited institutions. This can consist of the course syllabus, transcripts, and/or the course description from the professor.

Transfer acceptability for both the MS, MA, and PhD programs will be decided by the Director of Academic Programs at the HCNSO.

3.3.2. Transfer of Credits from Halmos College of Natural Sciences & Oceanography

Nova Southeastern University has no control over acceptance of course credits at other institutions. Credits earned at HCNSO are transferable to other institutions at the discretion of the receiving school.

3.4. Time Limits

The maximum time limit for completion of the MS or MA programs is nine years. MS or MA students must petition the program office in writing for an extension of the time limit, which may be granted only under extenuating circumstances. There is no minimum time limitation for completion of the MS or MA.

PhD students are expected to complete the program in nine years; a minimum of three years is required. Students must petition the program office in writing for an extension of the time limit, which may be granted only under extenuating circumstances.

3.5. Tuition, Fees, Withdrawal, Leaves of Absence

3.5.1. Tuition and Fees

Tuition and fees are listed at <http://www.nova.edu/ocean/admissions/tuition-fees.html>.

Payment is due at the time of registration and is considered past due 30 days after the start of the semester. An email will be sent to the student 20 days after the first day of the semester reminding of the approaching late fee date. NSU offers a 3-Month (one semester) and a 10-Month (fall and winter semester combined) Payment Plan. For more information, visit the NSU Payment Plans Web page (http://www.nova.edu/bursar/payment/payment_plans.html). International students are not eligible. For more information about billing and payments, please visit the NSU Bursar's Office at <http://www.nova.edu/bursar/index.html> or contact them at

Nova Southeastern University
University Bursar
3301 College Avenue
Ft. Lauderdale, FL 33314
(954) 262-5200
800-541-6682, ext. 25200

bursar@nova.edu

3.5.2. Student Enrollment Agreement (SEA)

All students must complete the new Student Enrollment Agreement (SEA) form in order to register for classes. The SEA requires students to agree with NSU standards and policies regarding course registration and withdrawal, financial responsibility, a release of liability, and more. Students registering for courses will be prompted to complete the form as part of the registration process on [Sharklink](#) and [Webstar](#). **Students must complete the SEA or course registration will not occur.**

To complete the SEA, follow the steps below once registration has opened:

- Log in to [SharkLink](#).
- Locate the **Records & Academics** section on the student tab and click on **Course Information**.
- Select **Registration-Add/Drop**.
- After selecting the appropriate term, you will be presented with the SEA.

For more information, please view a [copy of the SEA](#) or see our [FAQs](#).

3.5.3. Standard of Academic Progress (SAP)

In order to be eligible for federal and/or state financial aid, a student must meet all federal Satisfactory Academic Progress (SAP) requirements. All students must continuously meet the following four criteria in order to maintain SAP for financial aid eligibility.

- **Qualitative Measure (Grade Point Average)**
- **Quantitative Measure (Annual Credits)**
- **Maximum Time Frame Measure (Total Allowable Credits)**
- **Pace**

For complete information, students may refer to the SAP standard website at <http://www.nova.edu/financialaid/eligibility/sap-standards.html>.

3.5.4. Withdrawal and Refunds

MS students may withdraw from a course under specific timing criteria and receive a partial refund. A request for tuition refund must be made in writing at the time of withdrawal. Refunds will be made solely at the option of the university and will be based on the legitimacy of the reason for withdrawal. If granted, refunds are adjusted as follows:

For Fall/Winter Session I and Summer Term:

Before the end of the 1st week of a session	100% refund
Before the 2nd class meeting (end of 2nd week for online students)	75% refund
Before the 3rd class meeting (end of 3rd week for online students)	50% refund
After 3rd meeting or week	0%

For Fall/Winter Session II:

Before session II begins	100% refund
Before the end of the 1st week of session II	75% refund
After the 1st week of session II	0%

Refunds are not granted to PhD students upon withdrawal.

3.5.3. Leaves of Absence

A leave of absence may be granted in all OC program. Details of the NSU policy are located at http://www.nova.edu/studentaffairs/forms/studenthbk_2015-16.pdf. However, it is clearly understood that during a leave no NSU resources are to be used. The student is neither working on a research or review project nor is in communication with their advisor on academic subjects.

A leave of absence for one or more terms may be granted under special circumstances if a student must interrupt thesis research or capstone review paper studies. The leave request must be submitted in writing and approved in writing. It is granted at the discretion of the Director of Academic Programs. Reentry into the MS program after a leave of absence should be requested in writing and is not guaranteed.

Note: Unregistered students lose their online library privileges, including database searches and interlibrary loan. Students not registered for 6 months will automatically lose their email account. A leave of absence can impact student loan disbursement and repayment. See: <http://www.nova.edu/financialaid/>

3.5.3.1. MS or MA Programs

Students do not have to register for course work sequentially in each subsequent term. If a student anticipates a hiatus of one term or longer between registrations for course work, the

program office should be notified. Note, however, that once a student has formally registered for credits towards their capstone review paper or thesis, continuous registration each term is required. **Failure to register for capstone or thesis credits during a given term without an approved leave of absence is not permitted and may signal a student's withdrawal from the degree program.**

3.5.3.2. PhD Program

Students are expected to register for course or thesis work sequentially in each subsequent term. A leave of absence for one or more terms may be granted under special circumstances if a student must interrupt dissertation research. The leave request must be submitted in writing and approved in writing. It is granted at the discretion of the Director of Academic Programs. Reentry into the PhD program after a leave of absence should be requested in writing and is not guaranteed.

3.6. Academic Activities and Approvals

3.6.1. Advising

There are 3 levels of advising at the Halmos College of Natural Sciences and Oceanography (HCNSO)

- Program Advising from the Program Office
- Interim Advising by assigned faculty
- Mentorship Advising (for Capstone/ Thesis) by selected faculty

Program Advising:

- Program Advising (PA) will include program requirements, scheduling guidelines and milestones, and any problems, issues, or concerns.
- PA follows the mandatory orientation program for new students prior to the start of their first term.
- Each student will meet formally with the Associate Dean and the Director of Academic Support and Administration for initial Program Advising.
- Initial Program Advising will occur during the student's first term. **Each new student must participate in initial Program Advising before they are permitted to register for the second term of classes.**
- The Program Office will be available for subsequent Program Advising as needed.

Interim Advising:

- Interim Advising is an important part of the advising mix. It is designed to be of utility for the students and to promote program engagement and success during their graduate study experience prior to obtaining a capstone or thesis advisor.
- Each entering MS student will be assigned to a faculty member as their "Interim Advisor" (IA).
- The IA faculty member will hold one group meeting with his/her advisees during each semester (Fall, Winter, Summer). These are simple, cordial meetings aimed at getting to know the students and to provide a better sense of belonging for the student during the beginning of their graduate experience.
- IA group meetings continue until the student acquires a Capstone or Thesis advisor. (Note: the IA faculty does not need to be the Capstone or Thesis advisor.)

Mentorship Advising:

- Mentorship Advising (MA) begins after the student and a faculty member have together selected a Capstone or Thesis topic. That faculty member will become the MA until the student completes the program
- The MA will advise the student relative to his or her research and the writing of the Capstone or Thesis and provide discipline relevant career advice.

3.6.2. Orientation

A mandatory orientation session is held every fall for incoming in-house students and may be held at other times for groups of incoming students to inform them about center facilities and MS or MA program requirements. It is recommended that in-house students not starting in the fall meet with the Associate Dean of Academic Programs during their first term.

Distance students are welcome but not obliged to attend place-based orientation sessions. However, distance students or students that did not attend the on-site orientation must view the orientation information posted on NSU's Blackboard.

3.6.3. Disabilities

If a student has a documented disability, they should contact The Office of Student Disability Services on the Ft. Lauderdale/Davie campus. It is the student's responsibility to initiate the process for disability services. The mission of Student Disability Services is to provide accommodations, support services, and auxiliary aids to qualified students with disabilities to ensure equal and comprehensive access to University programs, services, and campus facilities. Once the student has established eligibility with Student Disability Services, they should also notify the Program Office at the Halmos College of Natural Sciences and Oceanography (HCNSO) to ensure that this information is kept with their file. This information must be on file with the program office and Student Disability Services before requesting consideration in any course.

For more information, please call 954-262-7189 or visit the Student Disability Services website at: <http://www.nova.edu/disabilityservices/>.

3.6.4. Veteran Benefits

Department of Veterans Affairs (DVA) educational benefits are designated to provide eligible individuals with an opportunity for educational and career growth. It is certainly one of the most valuable benefits afforded to veterans and qualified dependents and should be wisely utilized.

Veterans have earned the right to use their educational benefits for the purpose it was intended for, and we at Nova Southeastern University are both pleased and honored to assist the veteran in utilizing it to your best advantage.

Veteran's may contact NSU's VA certifying official at <http://www.nova.edu/financialaid/veterans/>
or at VA Certifying Official
800-541-6682, ext. 27236
Fax (954) 262-3966
E-mail: VAbenefits@nova.edu

Office Hours: Monday - Friday, 8:30 am - 5:00 pm EST

The Department of Veterans Affairs (DVA) has assigned NSU to the Atlanta Regional Processing Office.

Department of Veterans Affairs (DVA)
Atlanta Regional Processing Office
P.O. Box 100022
Decatur, GA, 30031-7022.
888-GI-Bill-1

3.7. Program of Studies

Descriptions for all courses are located at www.nova.edu/ocean/course_descriptions.html.

Since the “normal” electives for each major may not exactly suit an individual student’s career goals, interests, or research needs, some program flexibility may be provided in the form of elective courses from a specialty other than the one in which the student is enrolled. Permission for program flexibility must be given in writing by program administrators. Such course flexibility is limited to one or (in extreme cases) two courses. It is stressed that any deviation from the normal program must be done carefully and with approval of a program administrator and the major professor (if one has been selected). The applicability of the elective course must be justified and approved prior to registration. Failure to do this risks non-approval of the course for program credit after the fact. This can delay a student’s progress.

Specific suggestions for the timeline of activities for a capstone or thesis proposal are located at

Capstone: <http://cnso.nova.edu/forms/2013-directions-for-the-capstone-track-student.pdf>

Thesis: <http://cnso.nova.edu/forms/2013-directions-for-the-thesis-track-student.pdf>

3.7.1 MS Capstone/Thesis Tracks

There are two options for completing an MS degree: a capstone track and a thesis track.

All entering students are automatically accepted in the capstone track option. Although the number of students taking thesis credits in a given year is more than the capstone this is because thesis is typically a longer duration track. About half of graduating students each year are capstone students.

To successfully complete the capstone track, students nearing completion of required coursework must submit and defend a capstone review paper. Prior to completion of either capstone or thesis, a proposal must be passed by the reading committee. A capstone review paper is a scholarly review manuscript, based upon a comprehensive literature search, review, and synthesis of the chosen topic. It is similar to a thesis, inasmuch as data need to be acquired and analyzed within the framework of a scholarly article with the exception that these data can be acquired from the literature. Students are required to develop their hypothesis (or review of certain problems, questions, etc.) and find from the literature, or any other sources, data that can be analyzed in support of what is said in the capstone. In certain cases, a study subject may not lend itself to quantification. In such a case, the argument for the chosen approach in the proposal must be as clear and convincing as any quantitative argument. The term “scholarly” (defined in Webster’s as: concerned with or relating to formal study or research) applies in the natural sciences to data analysis far more than to writing, therefore it should not be misconstrued as

permitting pure essays. Science is quantitative and requires quantitative skills – a “mastery of science” is generally not possible without them. Carrying out a capstone review paper is possible with agreement from a major professor, typically, capstone students find a major professor on their own by approaching faculty in the student’s area of interest. Students will be assigned a capstone advisor if they have difficulty finding one. Prior to beginning a capstone review paper and registering for capstone credits, the student must write a proposal which must be approved by the student’s major professor, committee, and the Director of Academic Programs, and be submitted to the Departmental Administrator in the Program Office.

Some students complete the thesis track. A thesis is an original contribution to knowledge resulting from the systematic study of a significant problem or issue. A thesis track is guaranteed with any MS program. It requires the student to secure agreement from a faculty member, with adequate funding to carry out the proposed research, to be the student’s major professor. Students are not provided with a thesis advisor. Prior to beginning thesis research and registering for thesis credits, the student must write a proposal which must be approved by the student’s major professor, committee, and the Director of Academic Programs, and be submitted to the Departmental Administrator in the Program Office.

3.7.1.1. Committee Composition

Each MS student will have an advisory committee. To obtain the maximum benefit, it is to the student’s advantage to form this committee early in his or her program.

Capstone: The capstone committee will consist of at least two members, one of which must be a faculty member of the Halmos College Natural Sciences and Oceanography (HCNSO). The major professor and at least one other committee member must have the terminal degree in a field relevant to the capstone topic. Other members of the committee must ordinarily have the terminal degree.

For more information about the capstone and proposal process students may refer to the directions for the capstone track student at <http://nova.edu/ocean/forms/2013-directions-for-the-capstone-track-student.pdf>.

Thesis: The thesis advisory committee will consist of a major professor from the HCNSO faculty and at least two additional members, one of whom must be from another center of Nova Southeastern University or from outside the university. In rare cases, requiring approval by the Director of Academic Programs, the major professor may be an adjunct faculty member. The committee participates in topic selection and preparation of the proposal/outline and thesis. Close coordination between student and committee during this process is strongly advised. The major professor must have the terminal degree in a field relevant to the thesis research. Other members of the committee must ordinarily have the terminal degree.

For more information about the thesis and proposal process students may refer to the directions for the thesis track student at <http://nova.edu/ocean/forms/2013-directions-for-the-thesis-track-student.pdf>.

3.7.1.1.1 Proposals

The major professor and committee member(s) will review a proposal draft. The student may meet and discuss issues with the professor and committee. The committee members make a final decision as to whether the proposal is defensible and sign a cover sheet (signature page) available on the website (<http://cnso.nova.edu/tools-resources/student-forms.html>). The student must then submit a copy of the approved proposal and its signature page to the program office before registering for capstone or thesis credits.

The proposal is a demonstration by the student and the involved faculty that the student is indeed ready to produce a thesis that will allow graduation according to the standards of NSU Halmos College of Natural Sciences and Oceanography (HCNSO). This forms the basis of an understanding that the faculty involved (including the head of department, who has final signing authority) will allow graduation if the student produces a document with agreed-upon quality and content. To avoid unpleasant surprises and undue delays to a student's graduation, a proposal is only acceptable once it demonstrates, in all matters, that the student will indeed be able to produce the thesis/capstone and meet the high quality criteria required by the department. Fairness to student and committee as well as maintenance of academic integrity are the utmost concern here. A proposal will not be accepted if the style, presentation, and content are not to the quality as would be accepted in the thesis. This because it may give the student a wrong impression of what is acceptable as a thesis – leading ultimately to unnecessary delays at submission stage. Therefore, the proposal should be seen as a “mini-thesis” that is at the same stage the blue-print for the work that will be done in the thesis. Thinking about methods, familiarity with data that need to be analyzed, thorough knowledge of the literature, etc, are not to be delayed until the thesis writing-stage, but must have been brought to fruition already at proposal stage and the proposal will be evaluated as such. This is the only way that can assure full awareness of faculty and student of what content exactly is expected. A thesis proposal must therefore be as well thought out and perfect in format and style, and understanding of work-flow, as the thesis will be expected to be.

The proposal must be approved before the end of the registration period. If the committee believes the student is close to completing the proposal but needs a little more time, then the student may register for a Directed Independent Study (DIS). The student then has 30 extra days for completing the proposal. If approved by the program office within the 30 days, it may be switched to the thesis or capstone track credits. However, if the student does not have the proposal approved within those 30 days, the DIS remains and cannot be dropped.

3.7.1.2. Report of Progress

The report of progress is required from each student registered for thesis or capstone credits by the end of each term of registration before a grade is issued. The completed report is turned into the Program Office by the student's advisor. **Not submitting the Report of Progress prior to the end of term will result in failing the thesis, capstone, or Directed Independent Study (DIS) credits for that term.**

The form is available online at:

<http://www.nova.edu/ocean/tools-resources/student-forms.html#progress-report>

The report will include the following information:

- Student's name and date
- A brief narrative synopsis of the work completed since the last report (for example, details of experiments conducted and literature reviewed)
- Target date for thesis or capstone completion

- Estimate of time spent on thesis or capstone work this term
- A list of problems experienced (if any)
- Major Professor's comments
- Major Professor's signature

3.7.1.3. Capstone review

The capstone review paper is in format generally similar to that of the more formal thesis. It is a serious scholarly review that also requires data analysis and should not be confused with a course term paper. A typical capstone is in excess of 50 pages and references about predominantly peer-reviewed 50 sources.

The capstone process begins with the student finding an advisor credentialed in the topic of interest to the student. This is a collegial process; there must be a mutual agreement between advisor and student. Neither topics nor advisors are assigned to students. Students having difficulty finding an advisor should see the Director of Academic Programs for assistance. After a topic is decided, and a second committee member has agreed to serve on the student's committee, the student prepares a proposal. This may take several iterations. Once the capstone paper proposal has been approved by the student's committee the final draft is submitted and approved by the Department Chair. Only after proposal approval by the Chair may capstone students register for the first of two capstone courses. The capstone paper is expected to be completed by the end of the second term of registration. However, if the capstone paper is not finished after completion of the minimum number of required capstone review credits (6), the MS student continues registration for three additional credits in each subsequent term until the capstone review paper is finished and has been successfully defended. If a student fails to register for any given term without written approval by the Director, missed credits must be made up before graduation, usually during the next term of registration. A recommended timeline, helpful suggestions, and examples of required cover sheets are provided at <http://www.nova.edu/ocean/tools-resources/students.html>.

3.7.1.3.1. Capstone Style and Format

The capstone should be soft-cover bound using the HCNSO Library approved cover (<http://nova.campusguides.com/oclibrary>) and should be presented as a high-quality, word-processed, laser-printed document. The student should use a manuscript format applicable to library research and term papers. Capstone reviews must follow the writing and citation guidelines of the Chicago Manual of Style. The Manual is available online (<http://www.chicagomanualofstyle.org/home.html>). A table of contents must be provided which is then expanded into major topics and divided with subtopics. A left-hand margin of one and one-half inches is essential. Tables and Figures should be imbedded in the text. Final copies of capstones with a left-hand margin less than one and one-half inches will be rejected. This is necessary to prevent loss of text during binding. All other margins (e.g. right-hand, top and bottom) should be one inch. Word processing should be neat and clean and laser-printed. For the final copies, paper must be of good quality, acid-free, 20 percent cotton (rag) bond. Right margins should be justified. Please check with the librarian for current printing protocols.

No further guidelines are provided in order to allow some flexibility. Three copies of the capstone are required: one for the library, one for the program office, and one for the major professor. For more information, please check the [HCNSO Library Guide to Capstone Binding](#).

3.7.1.4. Thesis

The thesis is a write-up of a scientific study done by the student. The thesis process begins with the student finding an advisor credentialed in the topic of interest to the student. This is a collegial process; there must be a mutual agreement between advisor and student. Neither topics nor advisors are assigned to students. Thesis research is typically tied to grants or contracts held by the thesis advisor. The number of research projects available at any one time is dependent on the vagaries of funding. The student interested in pursuing a thesis should begin searching for a project as soon as possible; finding one is not guaranteed. After a research project is decided upon, and two additional faculty members have agreed to serve on the student's committee, the student prepares a proposal. This may take several iterations.

Once the thesis proposal has been approved by the student's committee the final draft is submitted and approved by the Director of Academic Programs. Once the thesis proposals have been approved by the Director, MS thesis students sequentially register for and complete a minimum of nine thesis research credits) in each succeeding term until the thesis is complete and has been successfully defended. Sequential registration continues until the thesis is finished. If a student fails to register for any given term without written approval by the Director, missed credits must be made up before graduation, usually during the next term of registration. It should be noted that while a minimum of nine thesis research credits is required; more than this is usually necessary for the completion of MS research. A recommended timeline, helpful suggestions, and examples of required cover sheets are provided at <http://www.nova.edu/ocean/tools-resources/students.html>.

The thesis is hardcover bound through the Halmos College of Natural Sciences and Oceanography (HCNSO) (<http://nova.campusguides.com/oclibrary>) at the student's cost. The required editorial style for a thesis that is reporting lab or field research can be obtained from an appropriate scientific journal in the field (selected with approval of the major professor). Each journal publishes a list of guidelines to authors. The thesis is written as a journal article but with more methodological detail and raw data than would normally be published. The intent is to prepare the thesis in a form that can be pared down and submitted for publication.

A left-hand margin of one and one-half inches is essential. Tables and Figures should be imbedded in the text. Final copies of theses with a left-hand margin less than one and one-half inches will be rejected. This is necessary to prevent loss of text during binding. All other margins should be one inch. Word processing should be neat and clean and laser-printed. For the final copies, paper must be of good quality, acid-free, 20 percent cotton (rag) bond. Right margins should be even, not ragged. Three copies are required: one for the library, one for the program office, and one for the major professor. For more information, please check the [HCNSO Library Guide to Thesis Binding](#)

3.7.1.5. Rough Drafts - Committee Inspection of Capstones and Theses

Rough draft copies of a capstone or thesis submitted to committee members prior to the defense must be complete, containing imbedded figures and tables with legends and a bibliography. The draft copy must be double-spaced and should be in good form. It must not be missing parts essential to a proper evaluation, especially the data.

Students should expect demands for major revisions by the committee (editorial or otherwise), especially in the first drafts. Several drafts are usually necessary before the final form is achieved.

The entire process from first draft to a final defensible copy can be very time consuming. To avoid unnecessary delays, students are advised to work out a timeline with their advisors and committee members and adhere to it. Bear in mind that staff and faculty members have a host of responsibilities. Without prior coordination, an unanticipated draft may languish on a committee member's desk for weeks or even months (for example, if a committee member is in the field).

3.7.1.6. Defense of Capstone and Thesis

On completion of the capstone paper or thesis to the major professor's satisfaction, it is formally submitted to the other committee members. Upon agreement of the full committee, submission of the paper to the program office, and approval of the Director of Academic Programs, the defense may be scheduled.

The defensible copy must be complete, including, for example, all relevant materials, appendices, figures, and data tables. The copy (or reproductions thereof) will be available for review to any interested faculty member. Incomplete works will not be acceptable for defense. Once the defensible copy is submitted, additional revisions should not be made or circulated prior to the defense.

All MS thesis and capstone defenses must be scheduled at least one week in advance. Thus, although they may be scheduled later, a defense for a capstone review or thesis may be scheduled no sooner than one week after submission to the program office. For very long works, this time period may be extended to provide interested faculty adequate time for reading.

There are two components to a defense: public and private. For the public defense, requirements generally include a 30- to 50-minute oral presentation (with appropriate visual aids) to the faculty, student body, and other interested persons. In the case of distance students who are unable to attend their defense in person at the Department of Marine and Environmental Sciences, alternate arrangements may be made using audio-visual software. The committee then will question the candidate in private on aspects related to their capstone or thesis work. This private session is closed and limited to the candidate, members of the committee, and interested faculty members. The committee then takes a vote in closed session. The capstone paper or thesis may be accepted, accepted with revision, or rejected.

The Department of Marine and Environmental Sciences faculty ultimately must pass on thesis acceptability. The student should consult frequently with the committee during all phases of thesis work for continuity and in order to avoid problems during the formal defense. If the paper is not acceptable, the student receives the grade of "F" for the thesis or capstone credits. If the paper and defense are acceptable, the student receives a grade of "P". If the paper is acceptable, but requires only minor corrections, the student may receive a grade of "P" when the corrected paper is received. The student will be informed of the committee's decision following the closed defense. If extensive corrections are required the student may have to register for additional thesis or capstone credits.

3.7.2. MA

During the course of study, students should develop a collaborative national and international online network of colleagues, professionals, and organizations related to coastal and marine processes and issues. This will form a sound base for lifelong learning and professional development, as well as sensitivity to cross-cultural and international issues and perspectives.

Completion of the degree is expected to lead to placements in a related field, in positions requiring graduate training; it may also allow career advancement for working professionals, and/or lead to advanced graduate training (e.g. doctoral level specialization in coastal or marine policy, business, anthropology or education).

For more information about the MA and portfolio process students may refer to the directions for the MA Student at: <http://nova.edu/ocean/forms/directions-for-ma-students.pdf>.

3.7.2.1. Portfolio

To complete the MA in Marine and Coastal Studies students must successfully complete the 5 core courses and 7 electives and present a final portfolio prior to graduation consisting of rigorous integrated papers scaffolded over their completed term of study. Each core course will require a final term paper which will be graded as 20% of the course final grade. After grading, these term papers will be rewritten until the course instructor finds them acceptable to be incorporated into the student's portfolio. The course instructor will sign-off on the term-paper as acceptable. The final portfolio, consisting of the 5 approved core term papers and a summative essay integrating and showing the synthesis of knowledge and skills gained through completion of the core papers will be presented to the Director of Academic Programs upon completion of all coursework. The Director of Academic Programs will insure the summative essay is rewritten until acceptable.

3.7.3. PhD Program

3.7.3.1. General and Credit-Hour Requirements

There are two informal divisions within the PhD in Oceanography Program: marine biology and physical oceanography. The PhD degree requires a minimum of 90 credits beyond the baccalaureate. At least 42 credits must consist of upper-level course work. At least 24 credits must consist of dissertation research. The student may not register for research credits (DIS) until after successfully defending the research proposal. After faculty acceptance of the research proposal the student must register for 3 research credits per term until completion of the degree. The student is limited to a total of 9 credits of coursework per term. In rare circumstances the student may register to take more than 9 credits/term but this requires written permission from the Director of Academic Programs.

PhD students pay full tuition while in active status; that is, while taking courses, finalizing the proposal, performing research, and writing the dissertation. The minimum activity requirement is three years, but the typical activity requirement for a student with an in-field master's degree is more than three years. The minimum time limit (three years) begins with the initial course registration. Once PhD activity has begun, registration is sequential each term. Full tuition must be paid each term. Failure to register for a particular term is not permitted without prior written approval by the Director and may signal the student's resignation from the degree program. A recommended timeline, helpful suggestions, and examples of required approval and cover sheets are provided at <http://www.nova.edu/ocean/tools-resources/students.html>.

3.7.3.2. Academic Activities and Approvals

PhD students may transfer up to 30 graduate course credits from prior graduate programs in the same discipline as their anticipated PhD. Transfer courses must be either reasonable duplicates of courses offered at NSU or clearly in an applicable PhD field of interest. Transfer acceptability

will be decided by the Director of Academic Programs, the student's advisors, and the student's dissertation committee (if formed at entrance).

3.7.3.3. Committee

The student's PhD Committee consists, at a *minimum*, of four people, at least three of whom must be Center faculty and one of who must be from outside the Halmos College of Natural Sciences and Oceanography (HCNSO). The committee monitors all phases of the candidate's progress. The committee is formed prior to acceptance or within two terms of admission.

3.7.3.4. Proposal Defense

Before research relevant to the PhD can begin, a student must produce a detailed research proposal written under guidance of the major professor and members of the supervising committee. The dissertation proposal should consist of at least the following elements:

- title of the proposed dissertation
- statement of the problem and hypothesis to be tested
- statement of the significance of the work
- detailed description of the methodology with enough detail that the methodology can be understood without having to consult secondary sources
 1. literature should be cited where applicable
 2. proper experimental design is very important and will be subject to review and comment by the dissertation committee
- expected results of the research should be provided, and any required funding, facilities, and other equipment/resources should be listed
- references/bibliography

A candidate will defend the proposal in an oral presentation to faculty. A written version must be submitted at least one week beforehand and reside in the program office for inspection by the faculty if desired. At the oral presentation defense, a candidate will be expected to demonstrate sufficient knowledge about the proposed research project, and to justify the chosen research topic. Presentation will be only be open to NSU faculty and OC students; a closed session with the student will follow, restricted to the committee and interested faculty. If areas of deficiency are highlighted, a candidate will be notified and will have the opportunity to modify the proposal. The committee may require a second presentation.

3.7.3.5. Qualifying Examination

Within 6 months to a year after admission, the student will complete a qualifying exam before his/her committee that will determine basic knowledge and deficits to be corrected by coursework. This test is used to tailor the student's curriculum. It is not graded, and does not determine candidacy. The qualifying examination may be taken directly after the proposal defense.

3.7.3.6. Comprehensive Examination

The examination consists of written and oral phases. The written exams, taken on completion of formal course work, are administered by the major professor and consist of questions submitted by each committee member. The candidate is allowed a day to answer each member's questions. The entire exam takes at least four days. The student is informed of the results of the written examination within one week of completion. At that time, the committee determines if the answers to the written portion warrant further examination, in which case an oral exam is scheduled. The

student normally takes the oral examination within two weeks of this notification. The oral phase consists of questions concerning any aspect of marine science posed by each committee member during a joint meeting but typically concentrates on areas highlighted by weak responses on the written exam. After the examination, the student will be excused and the committee will determine the outcome. The decision of the committee must be unanimous. A student failing either written or oral parts may retake the exam once, typically two to six months after the first attempt.

3.7.3.7. Defense of Dissertation

On completion of the dissertation to the major professor's satisfaction, it is formally submitted to the other committee members. The dissertation may be scheduled for defense only after approval by the entire committee and the Director of Academic Programs.

All PhD dissertation defenses must be scheduled at least two weeks in advance through the program office. Notice will be provided to the faculty. At least two weeks prior to a student's scheduled defense, a copy of the work must be submitted to, and reside in, the program office. For very long works, this time period may be extended to provide the committee adequate time for reading. The defensible copy must be essentially complete, including, for example, all relevant materials, appendices, figures, and data tables. The copy (or reproductions thereof) will be available for review to any interested faculty member. Incomplete works will not be acceptable for defense.

The defense will consist of a 40- to 50-minute oral presentation (with slides/visual aids) to the faculty, student body, and other interested persons. The committee will then question the candidate on the dissertation work and related aspects. This session is closed and limited to the candidate, members of the committee, and interested faculty members. The committee then takes a vote in closed session. The thesis may be accepted, accepted with revision, or rejected. The Halmos College of Natural Sciences and Oceanography (HCNSO) faculty ultimately must pass on acceptability of the dissertation. The student should consult frequently with the committee during all phases of thesis work for continuity and in order to avoid problems during the formal defense.

3.7.3.8. Final Submission of Dissertation

At least three signed copies of the successfully defended dissertation, including any revisions specified during the defense, must be submitted, in bound form, to the Halmos College of Natural Sciences and Oceanography librarian (HCNSO). The complete dissertation may be submitted to the librarian for binding or the student may elect to have this done elsewhere. The cost of binding is the student's responsibility.

The major professor is responsible for insuring that changes specified by the committee are incorporated in the final version. One bound copy will be placed in the library, one is for the student's major professor, and one is for the program office. The student may submit any number of additional personal copies for binding.

3.7.3.9. Report of Progress

This report is required from each student registered for dissertation credits by the end of each term of registration. The completed report is turned into the Program Office by the student's advisor. The form is available online at:

<http://www.nova.edu/ocean/tools-resources/student-forms.html#progress-report>

The report will include the following information:

- student's name and date
- a brief narrative synopsis of work completed since the last report -- for example, details of experiments conducted and literature reviewed.
- target date for dissertation completion
- estimate of time spent on dissertation work this term
- a list of problems experienced (if any)
- major professor's comments
- major professor's signature

Not submitting the Report of Progress prior to the end of term will result in failing the credits for that term.

3.8. Distance and In House Education

The Halmos College of Natural Sciences and Oceanography (HCNSO) offers a variety of courses in a distance learning format at a graduate (MS or MA) level. Other MS courses are offered in house.

The distance programs are designed for students who may be located in another state or on another continent. There is no requirement for distance students to come to the site. The standard web-based course communication is predominately asynchronous so the student can set their own schedule relative to course deadlines. Students admitted into the distance program are expected to take the distance versions of the core courses, and have priority with regard to all distance courses.

3.8.1. Course Delivery

Distance courses are offered directly from the web by means of the Blackboard course software delivery program (found at <https://sharklink.nova.edu>). Students must be fully admitted, registered within a course, and have an active NSU email account before they can access their Blackboard materials. Admitted distance students are encouraged to explore the information and links at: <http://www.nova.edu/ocean/tools-resources/students.html>.

To ensure effective communication, it is particularly important that distance students update WebSTAR (<http://webstar.nova.edu/>) with any changes in contact details (e.g. address, telephone), and use their NSU email address for all formal email communication.

3.8.2. Textbooks

Any texts required for distance learning courses may usually be ordered and shipped from the NSU bookstore, which can be accessed directly from the web at: www.nsubooks.bncollege.com

3.8.3. Technological HELP Desk

The Office for Information Technologies at NSU maintains a computing help desk that may be contacted for assistance with any academic computing problems. They can be contacted online

at: <http://www.nova.edu/help/> or by telephone at (954) 262-HELP (4357), or toll free: (800) 541-NOVA (6682) x24357.

3.8.4. Attendance

As a requirement for accreditation, regular attendance is necessary. Each professor has the responsibility to enforce class attendance. To fulfill this requirement, students must have logged-in, accessed, and/or interacted with the majority of online course requirements (e.g. assignment submissions, asynchronous discussion) by the first week of the session or they may be withdrawn from the course by the instructor through the Program Office. For this reason, if students anticipate or encounter any reason why they may be unable to engage with their online coursework for an extended period during a term, they must communicate this to their instructor and the Program Office as soon as possible. Students do have the option of requesting an Incomplete; if this is granted by their instructor, they then have 3-months from the end of the term date to submit the required course work as decided with the instructor. An incomplete grade agreement form must be completed and filed with the distance education office. An instructor reserves the right to request original written documentation to substantiate any such absences. A falsified excuse is cause for disciplinary action. An Incomplete course graded I must be completed in one semester or the grade is changed to F. All students are referred to the [section 3.5.2.](#) of this catalog for details on course withdrawals and refunds.

3.8.5. Final Examinations

If a final examination is scheduled for a distance course, students who reside within a 50-mile radius of the Halmos College of Natural Sciences and Oceanography (HCNSO) are required to come to the site to write it. Final exams are generally scheduled in the evening during the last week of term. Students located close to NSU Student Educational Centers (<http://www.nova.edu/sec/>) may make arrangements to write there. Students who reside more than 50-miles from the HCNSO and do not wish to travel to the Center, must make formal arrangements to write their final examinations under the supervision of invigilators at an appropriate institution convenient to them. Further details on this can be provided by the program office.

3.8.6. Proctoring

We know that many students chose online coursework for the convenience; we want to ensure that testing is convenient as well.

However, at NSU we are increasingly enforcing proctored exams for our online courses, to ensure the integrity and security of the assessment process, so some testing must be proctored.

Students can take their proctored exam at any of the NSU's campuses or regional centers for free, or take their proctored exam using ProctorU for a fee.

Students can arrange for the convenience of an online proctor through ProctorU by visiting <http://www.proctoru.com/howitworks.php> and following the instructions provided. There is a cost associated with this service, and students need to have audio-video capabilities (webcam and microphone) and a stable Internet connection in their computer.

It is recommended that students are proactive and don't wait until the last minute to arrange for proctoring or ask questions about the process. Students need to make arrangements at least 72 hours before the exam time.

It is recommended that students are proactive and don't wait until the last minute to arrange for proctoring or ask questions about the process. Students need to make arrangements at least 72 hours before the exam time.

In terms of ADA/special accommodations: ProctorU will not charge students for any extra time needed to complete their exam. ProctorU needs to know which student is allowed the accommodation and the accommodation given, so the student must provide the instructor proof of ADA accommodations needed during the first week of the semester.

3.9. Grading

3.9.1. Grading System

The following system is used to grade academic performance:

GRADE	DESCRIPTION
A	Excellent
B	
C	Marginal Pass
D	Poor
F	Failure
W	Withdrawal: Given after the third class week or termination by the instructor for non-completion of the course by the student.
I	Incomplete: Given when most (80 percent), but not all, work has been completed.
Au	Audit
P	Pass

Professors may use + or – in grading. However, the grading scale ranges from A to D-, no A+ or F+ are awarded.

A grade of incomplete (I) must be requested from the instructor, have the Associate Deans's approval, and be accompanied by a **completed contract specifying outstanding course requirements and completion dates**. Completion of the course graded incomplete must occur within one semester (or 3 months) of the end of the course and the incomplete be changed to a different grade. If the course is not completed in 3 months, or the student has not withdrawn and received a W, the incomplete will automatically be converted to a grade of F. Under unusual circumstances students may request a time-extension to complete the course. Such requests must be submitted to, and approved by, the Associate Dean of Academic Programs prior to the end of the 3-month time limit. **There are no exceptions to this rule. Securing the completed and signed incomplete contract forms is the responsibility of the student.**

Students are permitted to retake, at their expense, courses for which a grade of C or lower has been earned. Retaking a course is only permitted once. Retaking of courses does not remove from the student's official transcript the entry of the earlier registration nor the grades earned; however, only the highest grade earned in a course will be computed as part of the grade point average, thus enabling the student to improve his/her academic standing. Courses with a grade of C- or lower will not be counted as credits towards degree requirements. Core classes with a C- or lower must be retaken to count towards degree conferment.

3.9.2. Quality Points

Quality points are used to compute the overall Grade Point Average (GPA) of a student.

GRADE	QUALITY POINTS
A	4.00
A-	3.67
B+	3.33
B	3.00
B-	2.67
C+	2.33
C	2.00
C-	1.67
D+	1.33
D	1.00
D-	0.67
F	0.00

Note: In some courses, only whole letter grades are awarded.

3.9.3. Grading Policies

3.9.3.1. Audit

Master's degree candidates and special students may audit courses (non-credit) for one-half the normal tuition rate (plus fees). These students may withdraw from audited courses and receive full or partial tuition reimbursement according to the Withdrawal and Refund Policy listed in the handbook and bulletin. PhD candidates may register to audit courses at no additional charge beyond their regular tuition.

Audit students are expected to attend classes and participate in the courses as regular students. If this is not the case, the students will be administratively dropped from the class roster. Audit students may take course exams and complete term papers at their option. An audit does not count towards degree or certificate requirements.

3.9.3.2. Attendance

As a requirement for accreditation, regular and punctual class attendance is necessary. Each professor has the responsibility to enforce class attendance. To fulfill this requirement, students must be present for 80% of the regularly scheduled sessions and field trips or they will automatically be withdrawn from the course by the instructor through the Program Office. There are no excused absences for purposes of this rule.

3.9.4. Examinations

Final written examinations are required in graduate courses, except in seminars and other tutorial courses where research papers or other requirements may replace a final exam. Usually the final examination or total accumulated points determine the grade for a course. However, the instructor may indicate otherwise.

A student failing to take the final examination in any course must notify the program office as soon as circumstances permit, preferably prior to the final. If the Associate Dean is satisfied that the absence was justified, permission may be given to take the course as an incomplete and the student falls under the incomplete rules ([see section 3.9.1](#)).

3.9.5. Student Grade Transmittal

No grades will be released to students without full payment of tuition and fees (or firm arrangements for their payment). *Grade reports are mailed to the student's permanent address and are not given over the telephone or verbally by the program office.* Students may access their grades in [WebStar](#).

3.9.6. Grade Appeal/Grievance Procedure

Students who have reason to believe that there has been an error in assigning a grade may formally protest and invoke the Grade Appeal Procedure. The grade appeal or other grievance procedure for students is itemized below and should be followed in all instances, making sure that each step is completed before going on to the next step. If resolution is reached at the end of any given step, it is not necessary to continue.

Step 1:	The professor should be contacted to discuss the grade disparity. The problem should be resolved at this level if at all possible.
Step 2:	The student must make an appeal in writing to the professor noting specific objection to the grade received or the problem encountered. The professor must respond in writing giving justification for the grade or action given. Copies of both communications should be forwarded to the program administrator. The program administrator may decide the matter, if that is agreeable to all parties.
Step 3:	An appeal committee will review both written and oral arguments in the case. The committee will consist of at least one administrative officer of the program, at least one faculty member who teaches in the program, and others as deemed necessary by the program administrator(s).
Step 4:	The student and professor will be informed of the committee's decision and, barring any written objections to the committee by either party within fourteen calendar days, the recommendations of the committee will be accepted.
Step 5:	If written objections are received within fourteen days, the matter will be referred to the Associate Dean of Academic Programs for review and resolution. This step does not apply if the Director served on the appeal committee. In the latter case, the matter will be referred to the Dean of the HCNSO.

4.0. Academic Standing

The academic progress of all students will be evaluated after each term, including the summer term. **Students shall be deemed in good academic standing unless they have a cumulative GPA of less than 3.0.**

4.0.1. Academic Probation/Dismissal

Any student who fails to maintain a cumulative 3.0 GPA will be placed on academic probation for two terms. If probation is not removed at the end of the two terms, the student will be released from the program. A student may petition for reinstatement after 12 months, explaining the reasons why their academic potential has changed and re-admission should be considered. Reinstatement is not guaranteed and is only possible if it is probable that the student can raise their cumulative GPA to 3.0 in two terms.

A minimum 3.0 cumulative GPA is required for graduation.

4.0.2. Grade/Progress Reports

Each student will be provided course grades at the end of every term. Grades will also be placed in the student's official record, maintained by the school's registrar, to which the NSUOC Program Office has access. The student may access their unofficial transcript through [WebStar](#). This transcript shows current status of grades and earned semester hours for all courses completed and/or attempted.

5.0. Student Conduct

All students are expected to comply with the legal and ethical standards of the institution. Academic dishonesty and/or nonacademic misconduct will result in disciplinary action.

The University and the Department of Marine and Environmental Sciences expects its students to manifest a commitment to academic integrity through rigid observance of standards for academic honesty. The academic honesty standards include:

1. Original Work. Assignments such as course preparations, exams, texts, projects, term papers, practicums, etc., must be the original work of the student.

- Original work may include the thoughts and words of another author but if that is the case those ideas or words must be indicated in a manner consistent with a university-recognized form and style manual.
- Work is not original that has been submitted previously by the author or by anyone else for academic credit.
- Work is not original that has been copied or partially copied from any other source, including another student, unless such copying is acknowledged by the person submitting the work for the credit at the time the work is being submitted or unless copying, sharing, or joint author-ship is an express part of the assignment.
- Exams and tests are original work when no unauthorized aid is given, received, or used prior to or during the course of the examination.

2. Referencing the Works of Another Author. All academic work submitted for credit or as partial fulfillment of course requirements must adhere to each center's specific accepted reference manuals and rules of documentation.

- Standards of scholarship require that proper acknowledgment be given by the writer when the thoughts and words of another author are used.

- At Nova Southeastern University, it is plagiarism to represent another person's work, words, or ideas as one's own without use of a center-recognized method of citation. Deviating from center standards (1) or (2) is considered plagiarism at Nova Southeastern University.

3. Tendering of Information. All academic work must be the original work of the student. Giving or allowing one's work to be copied, giving out exam questions or answers, or releasing or selling term papers is prohibited.

4. Acts Prohibited. Students should avoid any impropriety or the appearance thereof, in taking examinations or completing work in pursuance of their educational goals. Violations of academic responsibility include, but are not limited to:

- plagiarism
- any form of cheating
- conspiracy to commit academic dishonesty
- misrepresentation
- bribery in an attempt to gain an academic advantage
- forging or altering documents or credentials
- knowingly furnishing false information to the institution
- falsifying excuses for attendance
- The use of cell phones, or any other electronic devices not specifically allowed by your instructor, during an exam is not permitted. The use of such devices for any reason will be assumed to be for the purposes of cheating and will result in your dismissal from class and administrative action up to permanent expulsion from all NSUOC programs. If you need the phone for emergency notifications, or the like, leave the phone with your instructor at the start of class. You will be immediately notified if there is an incoming call.

For clarification on plagiarism and copyright, students are referred to the online overview provided at: <http://www.nova.edu/library/dils/lessons/plagiarism>.

In cases of academic dishonesty occurring in the classroom, the faculty member has the option of discussing the incident with the student and deciding on the appropriate sanction (e.g. refusing to accept the paper, failing the course, etc.). A memo describing the offence and sanction is forwarded by the faculty member to the student and the Department Chair of the Department of Marine and Environmental Sciences. For a first offense, this is placed in the student's file at the Program Office. For subsequent offenses, further review and more serious disciplinary action may be warranted, including suspension or expulsion. However, any capstone or thesis, submitted for defense, exhibiting possible plagiarism as determined by the Associate Dean of Academic Programs will be returned to the student and his/her major advisor and committee members will be notified. If a majority of the student's committee members agree there was plagiarism, the student will be suspended from all NSUOC programs for 12 full months and the student must take or retake the in-house course on scientific communications prior to resubmitting the thesis or capstone for defense. The student may take the communications course during the suspension period. While taking the course, the student will be allowed on campus and have full use of NSU library and email resources. The student will pay full tuition to take the course and will have to wait until it is offered during the normal annual cycle of course offerings. Thus, it is possible the student will be delayed by more than a year to defend. If the resubmitted thesis or capstone contains possible plagiarism, the student's committee will be notified. If a majority of the committee agrees there was plagiarism, the student will be immediately expelled from the program with no chance for reenrollment.

Post-graduation, any dissertation, thesis or capstone found to possibly be a result of plagiarism will be submitted to a committee of not less than five NSUOC faculty members and two faculty members from other NSU Centers. The committee will recommend a course of action, up to and including revoking the Masters or PhD degree, to the NSUOC Dean and the Vice-President of Academic Affairs.

The Department of Marine and Environmental Sciences is committed to maintaining a student, staff, and faculty culture where high ethical standards are the norm. Faculty members at the Department of Marine and Environmental Sciences have access to comprehensive web-based Turnitin.com plagiarism prevention software. Students registered in OC classes have the option of requesting access to Turnitin.com for evaluation of their research papers, prior to submission, as a learning tool.

The institution reserves the right to require a student to withdraw at any time for misconduct as described above. It also reserves the right to impose probation or suspension on a student whose conduct is determined to be unsatisfactory.

STUDENTS WHO FEEL THEIR RIGHTS HAVE BEEN DENIED ARE ENTITLED TO DUE PROCESS.

The NSU student handbook is located on the student affairs website at http://www.nova.edu/studentaffairs/forms/studenthbk_2015-16.pdf.

6.0. Previous HCNSO Catalogs

Previous HCNSO Catalogs are available on the [NSU Halmos College of Natural Sciences and Oceanography](http://www.nova.edu/hcnso).