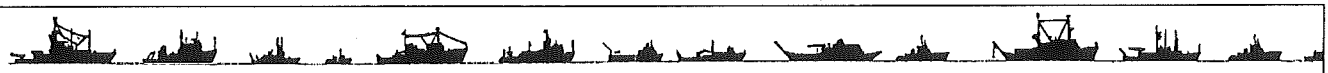

UNIVERSITY-NATIONAL OCEANOGRAPHIC LABORATORY SYSTEM
Graduate School of Oceanography – University of Rhode Island
215 South Ferry Road, Narragansett, Rhode Island 02882
(401)-874-6825 Fax (401) 874-6167 www.unols.org office@unols.org

Application for Membership

Membership in UNOLS is open to those institutions that use, or operate and use, sea-going facilities and maintain an academic program in marine science. It is intended that UNOLS institutions make substantial contributions to the national oceanographic program. Both individual institutions and consortia of such institutions may be members of UNOLS for purposes of attending UNOLS meetings, receiving UNOLS information, and other non-voting UNOLS activities.

Each UNOLS institution shall designate a representative with authority to speak and act for the institution in UNOLS matters. UNOLS representatives may authorize alternates. Addition of members shall be by application to and majority action by the existing membership.

Whereas according to the UNOLS Charter, the below named organization hereby submits application for membership in the University-National Oceanographic Laboratory System. In doing so the applicant fully understands and agrees to work towards the objectives set forth in the UNOLS Charter (http://www.unols.org/info/ucharter.html).

Instructions: Please complete all sections of this application and submit to the UNOLS Office at <office@unols.org>.

Name of Institution: Stockton University

Delegate to act as Representative to UNOLS:

Name:	Steve Evert
Title:	Field Station Manager
Address:	Stockton University Marine Field Station 30 Wilson Ave. Port Republic, NJ 08241
Telephone:	609 - 652 - 4486
Fax Number:	NA
E-mail:	steve.evert@stockton.edu

General information on oceanographic, Sea Grant and other marine science programs:

Number of Faculty in Marine Science Programs:	7
Number of Oceanographic Researchers:	2
Number of Professional Marine Personnel (Facility support individuals):	3
Number of Oceanographic Graduate Students:	0
Approximately how many of your institution's scientists are sea-going researchers?	5
How many years has your institution been in existence?	40 +

Describe your institution, its marine science research, and academic programs in marine science. (Additional details can be provided by attachment.)

Hands-on undergrad dominated marine science program w/ a growing oceanography focus.

See attached

Please provide a list of the research vessels that have been or are commonly used by your institution's scientists. (Additional details can be provided by attachment.)

See R/V on website
(1) 30' workboat
(1) 28' "
(1) 24' "
(2) 21' center consoles

Please explain your reasons for wanting to become a UNOLS member institution (Additional details can be provided by attachment.)

Developing interest in networking w/ oceanographic community. Interested in supporting regional research w/ our vessels + facilities.

Provide a list of your institution's oceanographic faculty and researchers. If the list is available on-line, please provide the URL in the space below; otherwise provide the faculty/researcher list as an attachment.

URL: stockton.edu/marine/marine-faculty.html

Research vessel(s) greater than 75-feet LOA owned and/or operated: None

Name:	Size:
Name:	Size:
Name:	Size:
Name:	Size:
Name:	Size:
Name:	Size:

Other oceanographic facilities owned and/or operated by your institution:

Description:	Marine Field Station - waterfront
Description:	
Description:	
Description:	
Description:	
Description:	

Please provide the URL(s) for your institution, marine facilities or marine programs.

Description:	Stockton University
URL:	stockton.edu
Description:	Marine Science Program
URL:	stockton.edu/Sciences-math/marine-science.html
Description:	Marine Field Station
URL:	stockton.edu/marine

Submitted by,

Signature:	
Name: (Please Print)	Steve Event
Title:	Field Station Manager
Date:	3/25/18

Applications should be sent to the UNOLS Office at office@unols.org.

STOCKTON UNIVERSITY

Overview of the

Marine Science Program and Marine Field Station

Stockton University Marine Field Station
30 Wilson Avenue
Port Republic, NJ 08241
609-652-4486
www.stockton.edu/marine

Stockton University Marine Science Program

Stockton University is located adjacent to the Jacques Cousteau National Estuarine Research Reserve (Mullica River-Great Bay Estuary) and is one of only a few undergraduate institutions in the U.S. that offers a degree program in Marine Science (MARS) alongside a dedicated, easily accessible field facility (Stockton Marine Field Station). With direct access to the Field Station only 15 minutes away, the Program is well situated to provide superior field, teaching and undergraduate research opportunities that form the backbone of the curriculum.

MARS encompasses two general areas of study: marine biology and oceanography. Oceanography concentrations are increasing with the addition of a third oceanography faculty line in 2016. Within each of these broad areas of study are several focus areas that students may choose as a function of their selected electives. A number of field courses, laboratory courses, seminars, independent studies and research team opportunities are offered—with a strong emphasis on teaching in the field. The Program is interdisciplinary and requires student competence in several areas of science. Upper-level students have the opportunity to design and implement their own independent study projects and are strongly encouraged to present results at the NAMS Research Day and at regional science conferences. Students study the relevant original literature, identify research problems, collect-analyze-synthesize data and interpret results in the light of previously published studies. One of the major objectives of the MARS program is to demonstrate that undergraduate students can become actively involved in research and make contributions to the field.

Stockton University Marine Field Station (MFS)

The Stockton Marine Field Station (MFS) is located only 15 minutes from campus on an eight-acre waterfront site in the Jacques Cousteau National Estuarine Research Reserve. The MFS makes available the facilities, research vessels, sampling equipment, and staff to provide Stockton students with hands-on learning experiences in a marine environment second to none. The Field Station is also home to the University's Coastal Research Center, a grant and contract-funded research group focusing on New Jersey's coastal zone issues. The location of the Field Station within the Mullica River-Great Bay estuary is central to its offerings; only 7 miles from the Atlantic Ocean and mere minutes from appropriate estuarine sites. The Field Station offers teaching and research laboratories and offices, research vessels, various marine sampling equipment, general-use laboratory equipment, state-of-the-art water sampling equipment and a fleet marine technology instrumentation including a remotely operated vehicle, side scan sonar, multibeam sonar, acoustic doppler current profilers, and a magnetometer. The inshore research fleet consists of several shallow-draft vessels ranging from 16' – 28' – these vessels are used regularly throughout both teaching and research activities. The flagship vessel of the program is a 2015 offshore research vessel, the R/V Petrel. This 36' x 14' downeast-style vessel has an open transom and A-frame system for the deployment of mooring systems, towed arrays and other oceanographic activies requiring lifting capabilities. The R/V Petrel is also used throughout the teaching and research programs.

The Field Station plays an integral role in student's education at Stockton. Undergraduate students engaged in marine science and marine science-related courses (biology, environmental science,

geology) access the facility regularly throughout their academic career. Graduate students engaged in the Professional Sciences program have the opportunity to conduct course and research work at the MFS. All students are encouraged to further utilize the facility for independent studies projects and to become part of the numerous faculty and staff-led research teams. There are many opportunities to carry out research at the undergraduate level at Stockton and at State and Federal agencies and Institutions nearby. The Coastal Research Center also offers research opportunities related to their monitoring of New Jersey's coastal zone. Both the Field Station and the Coastal Research Center provide part-time work and volunteer opportunities for Stockton science students, as do numerous local agencies. Plans are underway to develop joint facilities involving new construction and renovation with the NJ Department of Environmental Protection, Bureau of Marine Water Monitoring which will enhance academic and research capabilities of the MFS.

Academic and Community Support of the MFS

The MFS is a University and community-wide asset utilized by multiple programs within and occasionally outside of the School of Natural Sciences and Mathematics. NAMS's programs or associated faculty utilizing the facility in approximate order of frequency include;

- Marine Science/Oceanography
- Biology
- Environmental Science/ and Professional Science Masters in Environmental Science
- Geology
- Physics

Independent Studies and student-centered research projects, AY 2016 and 2017.

Undergraduate participation in research activities through independent study, academic experience or through non-credit or paid experience is a goal of the Marine Field Station. Opportunities for students have increased with the expansion of the Coastal Research Center as well as expansion of externally sponsored faculty research activities. Below is a listing of recent activities.

Evert, Steve:

- Mullica River Oyster Spat Monitoring; student volunteers and research assistants, Summers 2012-current
- Barnegat Bay oyster reefs - biological and cost benefit analysis for scale up efforts; student research assistants, 2016-current

Grguric, Gordan:

- Marine waters: interstitial water chemistry form select site in the MRGB estuary, 2010-current

Lacey, Elizabeth:

- Marine Ecosystem Research Laboratory: 15 undergraduates researchers involved in monitoring Seagrass Beds in Barnegat Bay Dancer (independent study student)
- The effects of seasonal stressors on eelgrass *Zostera marina* in Barnegat Bay, Dancer (independent study student)
- Restoration practices in Great Bay, Pedrick (independent study student)

Luke, Tara:

- *Astrangia poculata* at New Jersey Shipwrecks, student researchers
- Metagenomic Analysis of Marine Sediment from a New Jersey Shipwreck, student researchers
- Comparison of the DNA sequence of 18s ribosomal RNA of North Star Coral (Astrangia poculata) from the shipwreck Almirante to surrounding New Jersey artificial reefs, student researchers
- Analysis of the Effects of External Electrochemical Charge on the Transcriptome of the Northern Star Coral (*Astrangia poculata*), student researchers

Moskalski, Susanne:

- Stratigraphy and sediment accumulation rates in a small, disturbed salt marsh. Bethany Williams, GEOL, senior project.
- Marsh response to migratory bird habitat creation. Higbee Beach, Cape May, NJ. Personal research with undergraduate assistants
- Marine Geology independent study, Summer 2016
- Introduction to Matlab independent study, Spring 2017

Pfeiffer-Herbert, Anna:

- Water Circulation Patterns within the Great Bay (MARS student Jaymes Swain)
- Variability of Springtime CO2 in the Gulf of Maine (MARS student Jennifer Wolfson)
- Sea Surface Temperature Rise and Atlantic Surf Clam Distribution 1985-2015 (MARS student Scott Stueber in collaboration with NJDEP Shellfisheries division)

Sullivan, Mark:

- NJDEP Coastal Estuaries Inventory (field work and related data entry). Stockton Undergraduates Taylor Fuchs, Chase Barber, Sean Crowley, Thomas Johnson. Summer 2016
- NOAA Community Debris Removal Project, MARS 3307 Fisheries Science and Management students. Spring 2016.

MFS Academic Course support.

The MFS supports a variety of courses within NAMS including, Marine Science, Biology, Environmental Science and Geology as well as the Professional Science Masters in Environmental Science. Courses may be totally offered at the MFS (Lec/Lab) or may take advantage of the MFS for laboratory/field support for all or part of the course. Table 1 Below lists course offerings at the MFS for the past two years. Additional courses have been offered at the MFS on a longer term rotational schedule based on space and faculty availability.

Table 1. MFS course listings, Summer 2015 - current

Course Title	Terms	Mode	Program Listing(s)	Instructor
Environmental Pollution	fall	Lab	ENVL 3241	Chirenje
Tide Marsh Ecology	summer	Lec/Lab	BIOL 3465	Erickson
Marine Chemistry	fall	Lec/Lab	MARS 3381	Grguric
Oceanography II	spring	Lab	MARS 3375	Grguric
Analysis of SW and Sediments	spring	Lec/Lab	MARS 3382	Grguric
Global Ocean Basins	spring	Lab	MARS 3365	Grguric
Intro to Mar Biology	fall	Lab	MARS 2201	Multiple sections/instructors
Marine Botany	fall	Lab	MARS/BIOL 3335	Lacey
Underwater Robotics	spring	Lec/Lab	MARS/BIOL 3337	Luke
Molecular Evolution	fall	Lab	BIOL 4211	Luke
Marine Geology	spring	Lab	GEOL 2115	Moskalski
Coastal Processes	fall	Lab	MARS 3305	Moskalski
Underwater Archeology	spring	Lab	MARS 3360	Nagiewicz
Coastal Oceanography	fall	Lab	MARS 3309	Pfeiffer-Herbert
Ocean Observing Data Analysis	summer	SIRE	MARS 4899	Pfeiffer-Herbert
Data Methods in Marine Science	spring	Lab	MARS 3107	Pfeiffer-Herbert
NJ Benthic Studies	SIRE	Lec/Lab	BIOL 4899	Straub
Intro to Ichthyology	fall	Lab	MARS 3340	Sullivan
Fisheries Science and Management	spring	Lab	MARS 3307	Sullivan
Invertebrate Zoology	spring/fall	Lab	MARS/BIOL 3300	Landau/Thompson