Oceanography Internships

Polar Science Center – University of Washington

Arctic Domain Awareness Center (ADAC) – Anchorage, AK

Coastal Mitigation and Climate Change – Marshall Islands

Severe Weather In-Field Training (SWIFT)

Training and Research in Oceanic and atmospheric Processes in Tropical Cyclones (TROPIC)

Alternative Energy, Naval Research Laboratory (NRL) – Washington, DC

Corrosion Science, Naval Research Laboratory (NRL) – Washington, DC/Key West, FL

Hawaii Natural Energy Institute

Robotics Discovery Lab (UDEL)

Joint Typhoon Warning Center – Honolulu, HI

Naval Meteorology and Oceanography Command – Stennis, Ms

Emergency Management and Disaster Planning – Annapolis, MD

National Geospatial Intelligence Agency

Deep Ocean Exploration – E/V Nautilus

Navy Marine Mammal Training at SPAWAR – San Diego, CA
Applied Physics Lab (APL) - Seattle

- Block I or II
- 2 students
- Desire Polar Science Independent Research Follow-on
- Interviews begin 22 January
Arctic Domain Awareness Center (ADAC) - Anchorage

- Block I
- 2 students
- Desire Polar Science Independent Research Follow-on
- Interviews begin 22 January

Department of Homeland Security Center of Excellence

Low-cost Remote Sensing

10-days of Arctic Field-work (Barrow, AK)
Honolulu and Kwajalein

- Blocks 1 or 2; counts for training
- 1 student (1/C preferred)
- Essay application (due Fri 19 Jan; interviews Wed/Thu 24-25Jan)
Severe Weather In-Field Training (SWIFT)
Prof. Bradford Barrett; LCDR Matt Burich
barrett@usna.edu; burich@usna.edu

US Great Plains states

- Block 0 (11-25 May); counts for training
- 7 students
- Essay application (due Fri 19 Jan; interviews Wed/Thu 24-25Jan)
**TROPIC:** Training and Research in Oceanic and atmospheric Processes In tropical Cyclones

* **What do you do?** Release AXBTs from AF WC-130Js into tropical systems to collect ocean data for use in coupled forecast models; then process and transfer the data to those modeling centers in near-real time.

* **Where?** Based out of USAF 53rd Weather Reconnaissance Squadron (Hurricane Hunters)
  - Keesler Air Force Base in Biloxi, MS
  - Possible follow-on deployment(s) to St. Croix

* **When?** 3rd block only (~22July-14August)

* **Who?** min 2, max 5
  - 1/C oceanography majors have priority; synoptic and/or tropical course is advantageous.
  - 2/C oceanographers and rising 1/C engineers and computer science majors also eligible

* **Details:** Funded; can count for training

* **Kicker:** Ac year research phase
This internship will involve conducting unclassified research in support of ongoing NRL Code 6113 Alternative Energy research projects. The midshipman will work with a code which analyzes US Navy weather forecast data from FNMOC to produce conclusions relevant to energy harvesting efforts by Navy assets. This project will support ongoing efforts at NRL to develop solar powered UAVs, energy analysis codes for the Marine Corps, and microgrids for Navy installations.

**Benefits/Impact:**
A Midshipman participating in this internship will gain experience conducting basic and applied research related to alternative energy.

**Training Credit:**
Satisfies Summer Professional Training Requirement

**Funding:** Local Travel

**Dates:** Block 1, 2 or 3; 2 rising 1/C (preferred) or 2/C*

**POC:** Dr. J. P. Smith (x3-6568; jpsmith@usna.edu)
This internship will involve conducting project work with NRL scientists and engineers in the broad topic area of corrosion science & engineering and related topic of biofouling. For their summer internship, Midshipmen will conduct limited, independent research and engineering projects and participate in ongoing research activities at NRL KW and other U.S. Navy installations.

Internship includes work at Pearl Harbor Naval Shipyard and follow-on Research in AY 2019.

Benefits/Impact: A Midshipman participating in this internship will gain experience in conducting Navy-relevant corrosion science & engineering project work with NRL scientists and engineers.

Training Credit: Satisfies Summer Professional Training Requirement

Funding: Full

Dates: Block 3; 2 rising 1/C SOC/SOCH (preferred) or 2/C*; 2 EME (apply through Mech. E. Dept. POC: Dr. J. P. Smith (x3-6568; jpsmith@usna.edu)

NOAA - http://flowergarden.noaa.gov/about/echinodermlist.html

This internship will involve conducting unclassified research in support of ongoing HNEI Alternative Energy research projects supported by Office of Naval Research (ONR) Code 33. A midshipman participating will work on domestic energy-related projects ranging from energy technology to policy as well as working on ONR33 sponsored energy projects on DoD facilities and in the Western Pacific theater.

**Benefits/Impact:** A Midshipman participating in this internship will gain experience conducting basic and applied research related to alternative energy.

**Training Credit:**
Satisfies Summer Professional Training Requirement

**Funding:** Full

**Dates:** Block TBD;
2 rising 1/C
SOC/SOCH (preferred) or 2/C*;

**POC:** Dr. J. P. Smith
(x3-6568; jpsmith@usna.edu)

www.hnei.hawaii.edu
This internship will involve unclassified research with the University of Delaware, RDL in coastal oceanography, seafloor mapping, GIS, environmental monitoring, and robotics. Midshipman interns will get hands-on experience in the operation of environmental robotics. The research activities at RDL will expose Interns to all facets of marine and environmental robotic systems from planning to operation to actual post-processing of oceanographic and geophysical data sets.

Benefits/Impact: A Midshipman participating in this internship will gain experience in conducting basic and applied research in dynamic coastal/littoral environments using robotics technologies.

Training Credit: Satisfies Summer Professional Training Requirement
Funding: Partial
Dates: Blocks TBD); 4 rising 1/C or 2/C, 2 per Block.
POC: Dr. J. P. Smith; jpsmith@usna.edu; x3-6568
JTWC is hosting a joint services summer internship! JTWC provides tropical cyclone analysis and warning support in the Pacific and Indian Oceans.

- Pursue an applied research topic in support of JTWC’s mission
- Interact in a joint services environment
- Tour Pearl Harbor component commands, including U.S. Pacific Command HQ

Benefits/Impact: MIDN will gain critical thinking skills and apply their scientific education to forecast tropical systems and impact Fleet operational decisions.

Training Credit: Satisfies Summer Professional Training Requirement

Funding: Full
Dates: Block 2
Eligible: 2 rising 1/C SOC/SOCH (preferred)
Mission: To provide environmental information that helps Naval and Joint forces operate safely and effectively while maintaining tactical advantage.

- **Witness** operational commands that provide “the home-field advantage at our nation’s away game!”
- **Learn** from the best: HQ, mine warfare, Fleet Survey Team, Naval Research Laboratory, and special warfare (among others!)
- **Participate** in the Advanced Naval Technology Exercise (ANTX)

Benefits/Impact: MIDN will understand and practice the art of operational forecasting, employment of unmanned systems, and gain a technical background in naval research & advanced supercomputing methods.

Training Credit: Satisfies Summer Professional Training Requirement

Emergency Management and Disaster Planning
Office of Emergency Management (OEM), City of Annapolis
Host: Mr. David Mandell, Deputy Director OEM, Esq.    USNA POC: Instr. A.R. Davies

Overview: This internship will involve a limited scope research project in support of the City of Annapolis OEM. The specific project will be tailored to the candidate and the evolving needs of the OEM. Project examples may include:

- Developing coastal flood mitigation assistance, repetitive loss, and/or communication plans/policies.
- Developing coastal flooding extent assessments and visualization tools.

The participant will also become immersed in daily operations within OEM. This includes becoming familiar with disaster planning, response, and management.

Benefits/Impact: The participant will gain experience in conducting applied and interdisciplinary research. The participant will also learn about the logistical challenges of emergency planning and management as they related to environmental hazards.

Training Credit: Satisfies PTE Summer Credit
Funding: None/Local   Dates: 1,2,3 Block/Flexible
Qualifications: Rising 1/C or highly qualified 2/C.
POC: A.R. Davies; adavies@usna.edu; CH210
<table>
<thead>
<tr>
<th>Geospatial Intelligence is the exploitation and analysis of imagery and geospatial information that describes, assesses and visually depicts physical features and geographically referenced activities on the Earth.</th>
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<td><strong>Benefits/Impact:</strong> Midshipmen involved in this internship will receive formal training in remote sensing, imagery, and geographical information systems used in the intelligence community and in the Fleet. They will also learn about the various types of intelligence, in addition to geospatial intelligence, they will be briefed on human and signals intelligence and the role of intelligence support in operational mission planning, with emphasis on support to naval forces.</td>
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<td><strong>Training Credit:</strong> Satisfies Summer Professional Training Requirement</td>
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<td><strong>Funding:</strong> Fully</td>
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<td><strong>Dates:</strong> TBD (1 Midn)</td>
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<td><strong>POC:</strong> CDR Swick (x3-6551; <a href="mailto:swick@usna.edu">swick@usna.edu</a>)</td>
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Deep Ocean Exploration
Aboard E/V Nautilus
USNA POC: CDR William Swick

The Nautilus Exploration Program is led by Dr. Robert Ballard of the Ocean Exploration Trust. This international program centers on exploration of the deep ocean with remotely operated vehicles launched from Exploration Vessel (E/V) Nautilus. Navigation Interns will work with the operations and science teams to ensure the ship and ROVs are in position to carry out exploration at various sites in the Eastern Pacific Ocean. While underway, Navigators are assigned two 4-hour watches daily during ROV and mapping operations.

Benefits/Impact: The navigator role is multifaceted, requiring logistical and spatial awareness, technical operation of navigation software, and clear, concise communication. Midshipmen will apply knowledge related to oceanography and navigation to conduct seafloor mapping and deep sea exploration with remotely operated vehicles. They will also learn how to conduct scientific research and outreach using telepresence technologies to interact with scientists and audiences ashore.

Training Credit: Satisfies Professional Training Event Requirement
Funding: Full
Dates: Blocks 1, 2, or 3 (JUN-AUG 2016); two rising 1/C or 2/C
* Applications due 26Jan *

POC: CDR Swick (x3-6551; swick@usna.edu)
Navy Marine Mammal Training at SPAWAR
Point Loma, San Diego CA

Fleet Marine Mammal Systems utilizing dolphins and sea lions. In addition, the NMMP is doing a variety of research projects investigating the hearing abilities in a number of species of marine mammals.

Benefits/Impact: will work with two types of animal, or Navy Systems, Mark 6, (dolphins) to detect underwater personnel who may pose as a threat to our nation such as terrorists. Mark 5, (sea lions) mine recovery training. MIDN will be involved in daily training routines.

Full spectrum work: [scrubbing decks to training mammals] You will be busy!

Training Credit:
Satisfies Summer Professional Training Requirement
Funding: none*
Dates: All blocks available (Max of 5 Midn per block)
POC: CDR Swick (x3-6551; swick@usna.edu)
Questions

• Intranet.usna.edu
  – AcResearch
    ➢ MIDSHIPMAN RESEARCH
    ➢ INTERNSHIP OPPORTUNITIES
      ➢ Approved 2018 Internships
        ➢ [https://intranet.usna.edu/AcResearch/_files/documents/2018%20Internship/FINAL%20APPROVED%20Internship%20Offers%202018%20for%20review.pdf](https://intranet.usna.edu/AcResearch/_files/documents/2018%20Internship/FINAL%20APPROVED%20Internship%20Offers%202018%20for%20review.pdf)

Slides and other information can be found here:
[https://www.usna.edu/Oceanography/internships/index.php](https://www.usna.edu/Oceanography/internships/index.php)