

CURRICULUM REQUIREMENTS

(Honors option available. See course catalog.)

3/c FALL

NE203	Ethics
SP211	General Physics I
SM221	Calculus III with Vector Fields
HH215	The West in the Premodern World
SO251	Descriptive Physical Oceanography

3/c SPRING

NN210	Basic Navigation
SP212	General Physics II
SM212	Differential Equations
HH216	The West in a Modern World
SO254	Intro to Meteorology
SO264	Statistics for Ocean and Atmos. Sciences

2/c FALL

NL310	Leadership: Theory & Applications
EC310	Cyber Security II
NN310	Advanced Navigation
SO351	Biogeochemical Oceanography
SO335	Ocean & Met. Quantitative Methods
SO345	Atmospheric Thermodynamics

2/c SPRING

EE301	Elective Fundamentals and Applications
EM300	Naval Engineering II
HUMSS	Elective I
SO414	Oceano & Atmospheric Processes
SO4xx	Major Elective

1/c FALL

NL400	Law for the Junior Officer
SP411	Underwater Acoustics and Sonar
EA/N4XY	Engineering Elective
HUMSS	Elective II
SO416	Waves and Tides
SO4xx	Major Elective

1/c SPRING

NS43X	Junior Officer Practicum
ES300	Weapons Systems Engineering Lab
ES360	Weapons Systems Engineering Lab
SO470x	Capstone Course
SO4xx	Major Elective
	Free Elective

ELECTIVE COURSES

Biological Oceanography	SO451
Environmental Remote Sensing	SO431
Estuarine Oceanography	SO427
Geographical Information Systems	SO432
Geological Oceanography	SO461
Global Climate Change	SO445
Nearshore Oceanography	SO422
Polar Oceanography	SO426
Synoptic Meteorology	SO441
Tropical Meteorology	SO442
Energy Security	SO485
Historical Shipwrecks	SO486Z

CAPSTONE SEMINAR

Biological Oceanography	Biogeochemistry
Geological Oceanography	Meteorology
Physical Oceanography	



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OCEANOGRAPHY MAJOR

UNITED STATES NAVAL ACADEMY

Group II Technical Major



OCEANOGRAPHY AT THE ACADEMY



The oceanography major provides future naval officers practical and theoretical knowledge of the air-ocean environment, applicable to any warfare specialty. An interdisciplinary science major, oceanography includes the study of meteorology, geophysics, physics, chemistry, biology, and geology, building a foundation for graduate study in many scientific disciplines.

LABS

The Naval Academy boasts the most extensive undergraduate oceanographic facilities in the country. Our Yard Patrol Craft (YP-686) specially outfitted with modern oceanographic instrumentation and is used for weekly underway labs and summer cruises. Located on a pier adjacent to the mouth of the Severn River, the Hendrix Oceanography Lab is a multi-functional building featuring a wet and dry lab for student projects and faculty research.



Our advanced computer labs are among the most up-to-date facilities on the Yard. These labs are equipped with individual computer workstations with on-line capability to access various types of environmental data.

STUDENT OPPORTUNITIES

OCEANOGRAPHY SUMMER CRUISE: This month long event provides midshipmen an intensive “hands-on” training in oceanographic research as well as the operation of small craft. This program familiarizes them with physical oceanographic instrumentation and scientific data collection and analysis.



THE OCEANOGRAPHY CLUB: All midshipmen, regardless of major, may participate in the Marine Technology Society chapter’s activities. Club members enjoy activities such as scuba dives and National Aquarium visits as well as field trips around the Chesapeake Bay and conducting volunteer work.



SUMMER INTERNSHIPS

FLEET OPERATIONAL OCEANOGRAPHY CENTERS NAVAL POSTGRADUATE SCHOOL (NPS)

MONTEREY, CA: Midshipmen analyze environmental data/models to aid in operational planning. They spend time in the field and at sea aboard research vessels working with Fleet Oceanographers.

OCEAN EXPLORATION ABOARD E/V NAUTILUS: Midshipmen serve as navigators during mapping and exploration of deep ocean sites with a team of civilian researchers.

**NAVY MARINE MAMMAL PROGRAM (SPAWAR),
SAN DIEGO:** Midshipmen train dolphins and sea lions for use in mine countermeasures and combat swimmer defense with the Navy’s EOD units.

TROPIC: Midshipmen participate in data-gathering missions with USAF 53rd Weather Reconnaissance Squadron (The “Hurricane Hunters”).



SEVERE WEATHER IN-FIELD TRAINING (SWIFT):



Midshipmen are actively engaged in forecasting, observing, and verifying severe convective storms. They develop professionally with visits and briefings at NOAA and military operational and research facilities along their route.

ARCTIC EXPEDITION: Midshipmen have the opportunity to apply and validate concepts learned in the classroom while gaining first-hand experience with researchers in the field.

