# Naval Science (Naval ROTC)

# Special Studies Department Office: 152 Hearst Gymnasium, (510) 642-3551

## Department Website: Naval ROTC (http://

navyrotc.berkeley.edu)

## Overview

The Department of Naval Science offers several programs of instruction for men and women leading to commissions in the U.S. Navy or U.S. Marine Corps. Naval Science courses are open to all university students or may be taken through UC Berkeley Extension.

Students enrolled in one of the four-year Naval ROTC programs will normally complete the following courses during their first two years as part of their overall academic load: NS 1, 2, 3, and 10.

Navy Option students enrolled in either the four-year or two-year program will normally complete the following courses during their junior and senior years: NS 12A, 12B, 401 and 412. Marine Option students will participate in a Marine seminar and complete the History of Littoral Warfare (MA 154) and Evolution of Warfare (MA 20). All Navy Option scholarship students must complete one year of calculus and one year of calculus-based physics by the end of their sophomore and junior years respectively.

Students are also required to attend weekly professional development laboratories. These three-hour sessions offer the student midshipman an active role in the management and direction of the midshipman battalion and provide time for the midshipmen to explore professional topics. Student midshipmen participate in four-to-six week summer training cruises throughout the world. At sea they apply theoretical aspects of their education and training to the real world environment of a Navy ship. Marine Option midshipmen attend Marine Corps Officer Candidates School in the summer between their junior and senior year.

Currently, there are five programs available:

- Naval Reserved Officers' Training Corps (NROTC) Five-Year Scholarship Program: Nationwide competition is open to physically qualified men and women between the ages of 17 and 21 with waivers available for prior active duty to maximum commissioning year age of 29. U.S. citizenship is required. High school seniors and college freshmen are eligible to apply. Successful applicants receive full payment of tuition, fees, books and \$250-\$400 per month during the school year. Three summer training cruises are required. Upon graduation, the student receives a commission in the Navy or Marine Corps with a four-year active duty obligation. (Obligated service is not incurred until the start of the sophomore year in the five-year scholarship program.) Application deadline is December 1. Apply online here. (http://www.nrotc.navy.mil)
- 2. **Tweeddale Scholarship Program:** This program provides NROTC Navy scholarship benefits specifically for students who are affiliated with an engineering/technical discipline program or who are members of an underrepresented minority group. Applicants cannot have been affiliated with NROTC or any other officer accession program. Students must be currently enrolled and must have completed one college-level mathematics course and one semester/

term of college coursework with all course grades of "C" or better. These scholarships can be conditionally granted by the Professor of Naval Science at 152 Hearst Gymnasium following an interview and screening process. Accepted applicants must meet NROTC physical qualification standards and will be required to take Naval Science courses. For additional details, call (510) 642-3551.

- 3. **NROTC Four-Year College Program:** Open to physically qualified men and women between the ages of 17 and 23, with the same active duty age waiver possible as above. Participants receive uniforms, Naval Science books, and a \$350 and \$400-per-month stipend in their junior and senior years, respectively. They complete one summer training cruise after their junior year. Upon graduation, the student receives a commission in the Navy or Marine Corps Reserve with a three-year active duty obligation. (Obligated service is not incurred until the start of the junior year in the five-year college program.) Scholarships may be offered to highly qualified college program students.
- 4. NROTC Two-Year Scholarship Program: Nationwide competition open to academically and physically qualified men and women who will be entering their junior year (or their third year in a fiveyear curriculum). US citizenship is required. One year of calculus is required before entrance into the program. Two-year scholarship students must not reach their 25th birthday before June 30 of the year in which graduation and commissioning are anticipated. Waivers to age 29, however, are possible for prior service. Candidates for the two-year scholarship attend a six-week summer training period at the Naval Science Institute in Newport, Rhode Island, before the start of their junior year. Graduates of the Naval Science Institute will receive full payment of tuition, fees, books, and a \$350 and \$400-per-month stipend during their junior and senior years, respectively. One summer training cruise is required. Upon graduation, the student receives a commission in the Navy or Marine Corps with a five-year active duty obligation. Application deadline is normally March 1 of the sophomore year.
- 5. NROTC Two-Year College Program: Open to physically and academically qualified men and women who will be entering their junior year of undergraduate study (or their third year in a five-year curriculum). The age limit is the same as above. US citizenship is required. Candidates attend the Naval Science Institute in Newport, Rhode Island, during the summer before their junior year. Graduates of Naval Science Institute enroll in the NROTC unit as juniors and receive uniforms, Naval Science books, and a \$350 and \$400-permonth stipend in their junior and senior years, respectively. One summer training cruise is required. Upon graduation, the student receives a commission in the Naval or Marine Corps with a five-year active duty obligation. Application deadline is normally March 1 of the sophomore year.

For further information, call (510) 642-3551.

### NAV SCI 1 Introduction to Naval Science 2 Units

Department: Naval Science

Course level: Undergraduate

Terms course may be offered: Fall and summer

Grading: Letter grade.

**Hours and format:** 3 hours of Lecture and 3 hours of Lecture per week for 10 weeks.

This curriculum provides guidelines for introducing students to the organization of the Department of Defense and the naval service, the long-held customs and traditions of the service, basic leadership, ethics and character development, the duties of a junior officer, and basic information concerning shipboard procedures and safety. It is the intent of this course to stimulate the students' interest for study and investigation in future courses.

#### NAV SCI 2 Sea Power and Maritime Affairs 2 Units

Department: Naval Science

Course level: Undergraduate

Terms course may be offered: Spring and summer Grading: Letter grade.

**Hours and format:** 2 hours of Lecture per week for 15 weeks. 3 hours of Lecture per week for 10 weeks.

Prerequisites: Consent of instructor.

Traces the U.S. historical evolution of sea power, its concepts, theories and applications. Emphasizes the impact of world situation, U.S. national interest, changing technology, and naval leadership on the evolving concept of sea power. Relates historical developments to current trends. Examines briefly the U.S. Merchant Marine's and the former Soviet Navy's impact on sea power policy formulation.

#### NAV SCI 3 Leadership and Management I 3 Units

Department: Naval Science

Course level: Undergraduate

Terms course may be offered: Fall and spring

Grading: Letter grade.

Hours and format: 3 hours of lecture/discussion/seminar per week for 10 weeks.

This course will cover basic management, decision making, and moral leadership. The student will learn to establish meaningful goals, prioritize among competing demands, and plan and forecast in a task-centered organization. The course includes exposure to measures of organizational effectiveness, methods to overcome resistance to change, effective communications, and techniques to aid in counseling, team building, and resolution of disciplinary and personnel matters.

#### NAV SCI 10 Naval Ship Systems I 3 Units

Department: Naval Science Course level: Undergraduate Term course may be offered: Spring Grading: Letter grade.

Hours and format: 3 hours of Lecture per week for 15 weeks. Prerequisites: Mathematics 1A or 16A.

Principles of design and operation of ships. Emphasis on description and analysis of major types of propulsion plants, both conventional and nuclear. Principles of thermodynamic cycles, electrical theory, power generation and distribution, auxiliary machinery systems. Ship construction, strength and stability in intact and damaged conditions. Factors and design criteria for seaworthiness, structural integrity, and operational employment.

Course may be repeated for credit with consent of instructor. Course may be repeated for credit when topic changes.

NAV SCI 12A Navigation and Naval Operations I 3 Units Department: Naval Science Course level: Undergraduate Term course may be offered: Fall Crading: Letter grade