

# Naval Science (NAV SCI)

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## 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