

# NSCI Naval Science

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## **NSCI 1001 Introduction To Naval Science**

**3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.**

Introduce midshipmen to NROTC Program mission, organization, regulations and broad warfare components of the naval service. Included is an overview of officer and enlisted rank and rating structure, training and education, promotion and advancement and retirement policies. This course also covers naval courtesy and customs, as well as a study of the organization of the naval service. Students are familiarized with the major challenges facing today's naval officers, especially, in the areas of leadership and human resources management.

## **NSCI 1002 Seapower And Maritime Affairs**

**3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.**

A survey of American Naval and Maritime history from the American Revolution to the present with emphasis on major developments. Attention will be focused on Mahan's geopolitical theory; economic and maritime forces; U.S. military and maritime strategy; and a comparative analysis of American and foreign maritime strategies.

## **NSCI 1003 Sailing**

**3 Credit Hours. 2 Lecture Hours. 1 Lab Hour.**

A foundation course that provides students with fundamental knowledge and skills to be a competent crew member. The course covers the basic theory of sailing, nomenclature, seamanship, boat equipment and safety, and application inland waters navigation rules for sailing craft. Upon completion of this course, students will be Skipper "B" qualified. Practical skills to be mastered consist of rigging and sailing from a pier; sail to weather; sail two figure eight courses with two tacks and two jibes; man overboard maneuver; a capsize; return to dock and secure.

## **NSCI 2001 Naval Ships Systems I**

**3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.**

An detailed study of ship characteristics and types, including ship design, hydrodynamics forces, interior communications, ship control and damage control. Basic concepts or the theory and design of steam, gas turbine and nuclear propulsion, shipboard safety and firefighting are also covered.

## **NSCI 2002 Leadership & Management**

**3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.**

An introduction of management functions as they apply to routine daily military activities. The concepts of planning, organizing, staffing, directing, controlling and coordination are introduced and examined using lecture, seminar and case study methods. The course includes discussions on responsibility and accountability, power and influence, managerial theories, decision making, personnel appraisal, organizational structure and communications. Emphasis is placed on management of personnel and physical resources.

## **NSCI 2101 Naval Ships Systems I**

**3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.**

A detailed study of ship characteristics and types, including ship design, hydrodynamics forces, stability, compartmentalization, propulsion, electrical and auxiliary systems, interior communications, ship control and damage control. Basic concepts on the theory and design of steam, gas turbine and nuclear propulsion, shipboard safety and firefighting are also covered.

## **NSCI 2102 Leadership & Management**

**3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.**

An introduction of management functions as they apply to routine daily military activities. The concepts of planning, organizing, staffing, directing, controlling, and coordination are introduced and examined using lecture, seminar and case study methods. The course includes discussions on responsibility and personnel appraisal, organizational structure and communications. Emphasis is placed on management of personnel and physical resources.

## **NSCI 3001 Evolution Of Warfare**

**5 Credit Hours. 5 Lecture Hours. 0 Lab Hours.**

This course traces the historical development of warfare from the dawn of recorded history to the present, focusing on the impact of major military theorists, strategist, tacticians, and technological developments. Students acquire a basic sense of strategy, development and understanding of military alternatives, and become aware of the impact of historical precedent on military thought and actions.

**Corequisite(s):** NSCI 3001L.

## **NSCI 3001L Navigation I Lab**

**0 Credit Hours. 0 Lecture Hours. 0 Lab Hours.**

**Corequisite(s):** NSCI 3001.

## **NSCI 3002 Amphibious Warfare**

**5 Credit Hours. 5 Lecture Hours. 0 Lab Hours.**

A historical survey of the development of amphibious doctrine and the conduct of amphibious operations. Emphasis is placed on the evolution of amphibious warfare in the 20th century, especially, during World War II. Present day, potential, amphibious operations and their limitations, including the rapid deployment concept, will be discussed.

## **NSCI 3003 Navigation I**

**3 Credit Hours. 2 Lecture Hours. 1 Lab Hour.**

An in-depth study of piloting and celestial navigation theory, principles, and procedures, as well as the rules of the nautical road, ship employment and relative motion analysis. Students learn piloting navigation: the use of charts, visual and electronic aids, and the theory and operation of compasses. Celestial navigation is covered in depth. Students develop practical skills in piloting, celestial navigation, and relative motion analysis. Other topics include tides, currents, effects of wind and weather, use of navigational instruments, ship employment, types and characteristics of electronic navigation systems, naval command and control, and afloat naval communications.

## **NSCI 3004 Navigation II**

**3 Credit Hours. 2 Lecture Hours. 1 Lab Hour.**

An in-depth study of piloting and celestial navigational theory, principles, and procedures, as well as the rules of the nautical road, ship employment and relative motion analysis. Students learn piloting navigation: the use of charts, visual and electronic aids, and the theory and operation of compasses. Celestial navigation is covered in depth. Students develop practical skills in piloting, celestial navigation, and relative motion analysis. Other topics include tides, currents, effects of wind and weather, use of navigational instruments, ship employment, types and characteristics of electronic navigation systems, naval command and control, and afloat naval communications.

## **NSCI 3101 Evolution Of Warfare**

**3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.**

This course traces the historical development of warfare from the dawn of recorded history to the present, focusing on the impact of major military theorists, strategists, tacticians, and technological developments. Students acquire a basic sense of strategy, development and understanding of military alternatives, and become aware of the impact of historical precedent on military thought and actions.

## **NSCI 4001 Naval Ships Systems II**

**3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.**

This course outlines the theory and employment of naval RADAR, SONAR, and weapons systems. Students explore the processes of detection, evaluation, threat analysis, weapon selection, delivery, guidance and naval ordnance. Fire control systems, major weapons types, and military platforms are discussed. The concept of command-control-communications and intelligence is explored as a means of weapons systems integration as are space and electronic warfare.

**NSCI 4004 Leadership & Ethics**

**3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.**

which investigates techniques and concepts of task accomplishment in the absence of a A study of military leadership and management includes an examination of military law, ethical normative business environment. The course leadership, personal responsibility, authority and bureaucracy. The focus of discussion is on those normally present in civilian enterprise such aspects of leadership and management not as operation in the presence of hostility and morale management.

**NSCI 4050 Naval Drill**

**0 Credit Hours. 0 Lecture Hours. 0 Lab Hours.**

Introduces the student to basic military formations, movements, commands, courtesies and honors, and provides practice in unit leadership and management. Physical conditioning and training are provided to ensure students meet Navy/Marine Corps physical fitness standards. NSCI 4050 is required each semester for all NROTC students.

**NSCI 4102 Amphibious Warfare**

**3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.**

A historical survey of the development of amphibious doctrine and the conduct of amphibious operations. Emphasis is placed on the evolution of amphibious warfare in the 20th century, especially during World War II. Present day, potential, amphibious operations and their limitations, including the rapid deployment force concept, will be discussed.

**NSCI 4104 Leadership & Ethics**

**3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.**

A study of military leadership and management which investigates techniques and concepts of task accomplishment in the absence of a normative business environment. The course includes an examination of military law, ethical leadership, personal responsibility, authority and bureaucracy. The focus of discussion is on those aspects of leadership and management not normally present in civilian enterprise such as operation in the presence of hostility and morale management.