

# NVSC - NAVAL SCIENCE (NVSC)

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## **NVSC 101 Introduction to Naval Science**

**Credits 2. 2 Lecture Hours. 1 Lab Hour.**

Seapower and the naval service; mission, organization, regulations, and broad warfare components of the Navy; overview of officer and enlisted rank and rating structures, procurement and recruitment, training and education, promotion and advancement, and retirement policies. Basic tenets of naval courtesy and customs, discipline, naval leadership, and ship's nomenclature. Major challenges facing Naval officers; areas of equal opportunity, fraternization and drug/alcohol abuse.

## **NVSC 200 Naval Science for the Merchant Marine Officer**

**Credits 3. 3 Lecture Hours.**

(STCW Course). Organization of the U.S. Navy (including the U.S. Navy Control of Shipping Organization) with discussion of the Merchant Marine Naval Reserve commission in order to provide a sound basis for liaison between the U.S. Navy and the Merchant Marine. Seapower will be analyzed and naval damage control procedures and underway replenishment procedures will be introduced.

## **NVSC 205 Naval Sea Power and Maritime Affairs**

**Credits 3. 2 Lecture Hours. 2 Lab Hours.**

Naval history survey emphasizing major developments in strategy, tactics, technology, and effects of political climate; significant naval engagements and officers; includes an introduction to the role of seapower in national policy and diplomacy, Mahan's naval strategy and the affects of maritime policy on global stability.

## **NVSC 210 Leadership and Management I**

**Credits 3. 3 Lecture Hours. 1 Lab Hour.**

Principles of leadership and management and their application to duties and responsibilities for Junior Naval Officers; management theory, professional responsibility and human resource management programs; skills in leadership and management, communication, counseling, evaluations; administration of discipline developed through participation in case studies, experiential exercises and situational problems.

## **NVSC 301 Navigation**

**Credits 3. 2 Lecture Hours. 2 Lab Hours.**

Theory, principles and procedures of ship navigation in coastal and open ocean environments; piloting, ocean and tidal currents, weather, introduction to USN electronic and satellite navigational systems, guided participation in case studies involving maritime accidents.

## **NVSC 303 Evolution of Warfare**

**Credits 3. 3 Lecture Hours.**

Art and concepts of land warfare; its evolution from the beginning of recorded history to present day; influence that leadership, political, economic, sociological and technological development have had on warfare throughout history.

## **NVSC 320 Naval Ships Systems I: Engineering**

**Credits 3. 3 Lecture Hours. 1 Lab Hour.**

Study of engineering concepts and their application in U.S. Naval vessels; basic ship design, hydrodynamic forces, fluid dynamics, stability, propulsion, closed thermodynamic systems, electrical systems, shipboard power generation and distribution, shipboard safety, organization and firefighting.

**Prerequisites:** Junior or senior classification.

## **NVSC 401 Naval Ships Systems II: Weapons**

**Credits 3. 3 Lecture Hours. 1 Lab Hour.**

Types and purpose of major weapons systems and platforms of the U.S. Naval forces; theory and operational principles of radar, sonar and communication circuits; fire control problem geometry, principles of ballistics, propulsion, launching and guidance of weapons; principles of electronic warfare and nuclear weapons.

## **NVSC 402 Leadership and Ethics**

**Credits 3. 3 Lecture Hours. 1 Lab Hour.**

Theoretical concepts of Western moral traditions and ethical philosophy; topics include leadership, values, military ethics, Just War Theory, Uniform Code of Military Justice and Naval regulations; examination of ethical foundation for the development of leadership and communication skills; should be taken the semester of graduation.

## **NVSC 404 Naval Operations and Seamanship**

**Credits 3. 2 Lecture Hours. 2 Lab Hours.**

Relative motion, formation tactics, ship maneuvering behavior and characteristics, applied aspects of ship handling, afloat communications and ship employment; naval warfare, operations concepts, command and control, and joint warfare; review and analysis of case studies involving moral, ethical and leadership issues.

**Prerequisite:** NVSC 301; junior or senior classification.

## **NVSC 410 Fundamentals of Maneuver Warfare**

**Credits 3. 3 Lecture Hours.**

Study of the foundational concepts and history of the United States Marine Corps as the premier Maneuver Warfare organization; evolution of amphibious and expeditionary doctrine over time and amid emerging technological challenges; exploration of theoretical concepts utilizing historical case studies.

**Prerequisite:** Grade of C or better in NVSC 303.

## **NVSC 485 Directed Studies**

**Credits 1 to 4. 1 to 4 Other Hours.**

Directed study in problems in the field of naval science not covered by other courses in department.

**Prerequisite:** Approval of department head.