NAVAL SCIENCE (NSC)

Explanation of Course Numbers

- Courses in the 1000s are primarily introductory undergraduate courses
- Those in the 2000s to 4000s are upper-level undergraduate courses that also may be taken for graduate credit with permission and additional work assigned
- Those in the 6000s and 8000s are for master's, doctoral, and professional-level students
- The 6000s are open to advanced undergraduate students with approval of the instructor and the dean or advising office

NSC 1051. Introduction to Naval Science. 3 Credits.
Introduction to the naval profession and to concepts of sea power. The mission, organization, and warfare components of the U.S. Navy and Marine Corps.

NSC 1052. Naval Ships Systems I (Engineering). 3 Credits.
Detailed study of ship characteristics, types, design, control, propulsion, hydrodynamics, stability, and electrical and auxiliary systems. Includes basic concepts of the theory and design of steam, gas turbine, and nuclear propulsion.

NSC 2125. Naval Ships Systems II (Weapons). 3 Credits.
Theory and employment of weapons systems, including the processes of detection, evaluation, threat analysis, weapon selection, delivery, guidance, and explosives. Fire control systems and major weapon types, including capabilities and limitations. Physical aspects of radar and underwater sound. Facets of command, control, and communications as means of weapons system integration.

NSC 2126. Sea Power and Maritime Affairs. 3 Credits.
A survey of U.S. naval history. Naval aspects of U.S. conflicts from the American Revolution to the global war on terror. The influence of technology, politics, and foreign policy on the development and execution of naval doctrine and tactics.

NSC 2150. Navigation. 3 Credits.
Development of practical skills in naval piloting procedures. Charts, visual and electronic aids, and magnetic and gyro compasses; inland and international rules of the nautical road. The celestial coordinate system, including spherical trigonometry and how celestial information can be applied to navigation at sea. Environmental factors affecting naval operations.

NSC 2151. Naval Operations and Seamanship. 3 Credits.
Relative motion vector analysis theory, formation tactics, and ship employment; practical skills in relative motion problems. Controllable and noncontrollable forces in shiphandling, ship behavior, and maneuvering characteristics; various methods of visual communication, including flaghoist, flashing light, and semaphore.

NSC 2160. Evolution of Warfare. 3 Credits.
The art and science of war through recorded history. Warfighting philosophies, historical case studies, and military leadership models. Addresses the levels of war and relationships between the military, technology, politics, economics, and culture.

NSC 2175. Leadership and Management. 3 Credits.
Organizational behavior, management, and leadership principles in the context of naval organization. The management functions of planning, organizing, and controlling; individual and group behavior in organizations; motivation and leadership.

NSC 2180. Amphibious Warfare. 3 Credits.
A historical survey of the development of amphibious doctrine and the conduct of amphibious operations. The evolution of amphibious warfare in the twentieth century, especially during World War II. Present-day potential and limitations on amphibious operations, including the concept of rapid deployment force.

NSC 2190. Fundamentals of Maneuver Warfare. 3 Credits.
Examination of broad aspects of warfare and their interactions with maneuver warfare doctrine, with a focus on the U.S. Marine Corps. The skills, knowledge, leadership background, and mentality necessary for a successful Marine Corps Officer.

NSC 2199. Naval Science Leadership Seminar. 0 Credits.
Professional development for Naval Reserve Officers Training Corps (NROTC) midshipmen in areas not covered in formal Naval Science courses. NROTC students are required to register in each semester of their enrollment at GW.

NSC 4176. Leadership and Ethics. 3 Credits.
A capstone course that completes the NROTC preparations for midshipmen commissioning as Ensigns and Second Lieutenants. Application of Western moral traditions and ethical philosophy to issues involving military leadership, core values, the Uniform Code of Military Justice, and Navy regulations.

NSC 4176W. Leadership and Ethics. 3 Credits.