NAVAL SCIENCE (NAVY)

**NAVY 100a or b, Naval Science Laboratory**  
Staff  
Leadership and practical application skills from the Professional Core Competency objectives that are not covered in other Naval Science courses. Emphasis on professional training that is not of an academic nature. Includes both classroom instruction and physical training. Topics and special briefings as determined by Naval Science faculty and the Naval Service Training Command. Required for NROTC students each term. Receives no credit; cannot be applied toward the 36-course-credit requirement for the Yale bachelor’s degree. Grades earned in this course do not count toward GPA or eligibility for General Honors.  

* NAVY 111a, Introduction to Naval Science  
Scott Ryan  
An overview of the naval service for first-year Naval ROTC students and others interested in pursuing the NROTC program. Organization, missions, customs and traditions, leadership principles, ethics, duties of a junior officer, and career options in the U.S. Navy and Marine Corps. Discussion of shipboard organization and procedures, safety, and damage control prepares students for summer training aboard naval vessels. For enrollment credit only; cannot be applied toward the 36-course-credit requirement for the Yale bachelor’s degree. Grades earned in this course do not count toward GPA or eligibility for General Honors.

* NAVY 112b, Navigation  
Dale Pettenski  
Introduction to surface-ship navigation and practical piloting in both restricted and open water. Celestial navigation theory, navigational charts and instruments, and electronic navigation. Weather and other environmental factors that affect naval operations. Navigation rules and regulations, maneuvering board concepts, and practical exercises. For enrollment credit only; cannot be applied toward the 36-course-credit requirement for the Yale bachelor’s degree. Grades earned in this course do not count toward GPA or eligibility for General Honors.

**NAVY 211b, Leadership and Management**  
Scott Ryan  
A study of leadership, ethics, resource management, and organizational behavior, with emphasis on situations commonly encountered by junior officers in the naval service. Classical theories of management, motivation, and communication; development of skills in organizational thinking and problem solving. Required for second-year NROTC students. For enrollment credit only; cannot be applied toward the 36-course-credit requirement for the Yale bachelor’s degree. Grades earned in this course do not count toward GPA or eligibility for General Honors.

* NAVY 212a, Seapower and Maritime Affairs  
Ron Withrow  
This course is a study of the U.S. Navy and the influence of sea power on history that incorporates both a historical and political science process to explore the major events, attitudes, personalities, and circumstances that have imbued the U.S. Navy with its proud history and rich tradition. Topics include: issues of national imperatives in peacetime, as well as war; varying maritime philosophies that were interpreted into naval strategies/doctrines; budgetary concerns which shaped force realities; and the pursuit of American diplomatic objectives. The course concludes with a discussion of the Navy’s strategic and structural changes at the end of the Cold War and its new focus, mission, and strategy in the post-September 11, 2001 world. For enrollment credit only; cannot be applied toward the 36-course-credit requirement for the Yale bachelor’s degree. Grades earned in this course do not count toward GPA or eligibility for General Honors.

**NAVY 311a, Naval Engineering**  
Samantha Barszowski  
An overview of Naval engineering systems and a detailed study of the principles behind ship construction. Topics include ship design, hydrodynamic forces, stability, conventional and nuclear propulsion, electrical theory and systems, interior communications, damage control, hydraulics, and ship control. Basic concepts in the theory and design of steam, gas turbine, and diesel propulsion. For enrollment credit only; cannot be applied toward the 36-course-credit requirement for the Yale bachelor’s degree. Grades earned in this course do not count toward GPA or eligibility for General Honors.

**NAVY 312b, Naval Systems**  
Samantha Barszowski  
The characteristics and capabilities of the major systems and platforms used in the U.S. Navy. Technical concepts and scientific theory addressed through study of designations, characteristics, capabilities, and missions of ships and aircraft. How computers and electronic and space-based communications influence operational employment of various naval platforms. Classic theory of radar, sonar, and fire-control systems. For enrollment credit only; cannot be applied toward the 36-course-credit requirement for the Yale bachelor’s degree. Grades earned in this course do not count toward GPA or eligibility for General Honors.

**NAVY 411a, Naval Operations and Seamanship**  
Dale Pettenski  
Study of relative motion, formation tactics, and ship employment. Introductions to Naval operations and operations analysis, ship behavior and characteristics in maneuvering, applied aspects of ship handling, afloat communications, Naval command and control, Naval warfare areas, and joint warfare. Analysis of case studies involving related moral, ethical, and leadership issues. Prerequisites: NAVY 111 and 112. For enrollment credit only; cannot be applied toward the 36-course-credit requirement for the Yale bachelor’s degree. Grades earned in this course do not count toward GPA or eligibility for General Honors.

* NAVY 412b, Leadership and Ethics  
Ron Withrow  
Exploration of Western moral traditions and ethical philosophy and of their applications to naval leadership in the twenty-first century. Topics include military leadership, core values, and professional ethics; the Uniform Code of Military Justice and Navy regulations; the roles of enlisted members, junior and senior officers, command relationships, and the conduct of warfare. Discussion of current and historical events in the United States Navy and Marine Corps. Prerequisite: NAVY 212. For enrollment credit only; cannot be applied
toward the 36-course-credit requirement for the Yale bachelor’s degree. Grades earned in this course do not count toward GPA or eligibility for General Honors.

* NAVY 413b, Maneuver Warfare  Ratsamy May
The development of warfare to the present day, with attention to the causes of continuity and change in the means and methods of warfare. The influence of political, economic, and societal factors on the conduct of war, with a focus on the role of technological innovation in changing the battlefield. The contributions of preeminent military theorists and battlefield commanders to the modern understanding of the art and science of war. Prerequisites: NAVY 111 and 212. Required for Marine-option NROTC students. For enrollment credit only; cannot be applied toward the 36-course-credit requirement for the Yale bachelor’s degree. Grades earned in this course do not count toward GPA or eligibility for General Honors.