Naval Science

Mission

The Naval ROTC Unit at Texas A&M University provides qualified young men and women the opportunity to learn the mission of the Naval Services and pursue a commission as an officer in the United States Navy or United States Marine Corps. The Naval ROTC Unit operates as the Department of Naval Science at Texas A&M and is one of the largest Naval ROTC Units in the United States. Graduates from our program can be found serving around the world. Officers commissioned as Ensigns in the United States Navy have the option, based on physical and aptitude qualification, to serve in the Aviation (Pilot or Naval Flight Officer), Surface Warfare (Conventional or Nuclear), Nuclear Submarine, or Special Warfare (SEAL or Explosive Ordnance Disposal) communities. Officers commissioned as Second Lieutenants in the United States Marine Corps can serve in one of more than 36 military operational specialties in three categories including Aviation (Pilot or Naval Flight Officer), Combat Arms (Infantry, Artillery, Armor, Assault Amphibians, Combat Engineers, etc.), or Combat Service Support (Logistics, Supply, Data Processing, Finance, etc.).

Naval ROTC students may participate fully in all aspects of university life. This includes serving in positions with Student Government or the Memorial Student Center, belonging to campus clubs and service organizations, or participating in religious, social, professional or personal interest organizations. The NROTC Unit also sponsors and advises special units within the Corps of Cadets; SEAL Platoon and RECON Company.

Scholarships

The Naval ROTC program provides numerous scholarship opportunities for qualified individuals who are seeking a commission upon graduation as an officer in either the United States Navy or United States Marine Corps. The four-year Naval ROTC scholarship program is a nationally competitive program. High school students seeking a four-year Navy or Marine Corps Option Naval ROTC scholarship may apply as early as the spring of their junior year in high school, and should apply no later than December of their senior year in high school. The Naval ROTC scholarship pays for all tuition, most university fees, some uniform fees, and provides the student with a monthly stipend and a semester book allowance. Three- and two-year scholarships with the same benefits listed above are available for qualifying students who apply while enrolled as NROTC students at Texas A&M.

College Program

Students without NROTC scholarships initially participate in Naval ROTC as Naval Science Students. Basic College Program students are guided by the same goals as the NROTC Scholarship students; to include meeting the physical requirements of the Corps of Cadets, maintaining a required minimum GPR, and possessing the aptitude and motivation for service above self. The Basic College Program exists to provide students the opportunity to learn about the United States Navy and United States Marine Corps and provide an alternate means for a commission for those not on scholarship. Basic College Program students can apply for a two-year or three-year Navy or Marine Corps Option Naval ROTC scholarship. Students who do not qualify for a scholarship but still desire a commission can apply for acceptance into the College Program (Advanced Standing). The College Program (Advanced Standing) begins during the junior year and pays a monthly stipend, but does not pay for tuition and fees.

All NROTC students are provided Naval Science textbooks, which are returned at the end of each semester, at no cost.

Leadership

All Scholarship and College Program (Basic and Advanced Standing) NROTC students are also members of the Texas A&M Midshipman Battalion, an organization providing distinct training and leadership opportunities for students pursuing Navy and Marine Corps commissions. This training is accomplished through the NROTC’s Leadership Laboratory. Associated with each Naval Science class and conducted every Tuesday afternoon, Leadership Laboratory is a combination of classroom study and practical hands-on application that exposes the students to many facets of the Navy and Marine Corps and provides them the opportunity to develop their leadership skills.

Academic Requirements

Academic requirements vary by program, but all freshmen and sophomore Naval ROTC students must take a Naval Science (NVSC) class each Fall and Spring semester. These courses provide a basic understanding of the history of American sea power and the evolution of warfare throughout the ages. All Scholarship and College Program (Advanced Standing) students continue to take Naval Science courses during their junior and senior year. These courses cover additional topics such as navigation, weapons systems, amphibious warfare and leadership and ethics for the junior officer.

Summer Cruise

Scholarship students receive four to six weeks of additional training every summer with operational Navy and Marine Corps units around the world. Between the freshman and sophomore years, students receive orientation training with naval aviation, surface combatant, submarine and Marine Corps units. Between the sophomore and junior years, Navy Option students experience the life of enlisted sailors aboard ships and submarines and Marine Option students experience the life of enlisted marines with Marine units in the field. For the final training session between the junior and senior years, all Scholarship and College Program (Advanced Standing) students receive service-specific training in final preparation for commissioning. Navy Option students are assigned to aviation units, surface combatants or submarines depending upon their qualifications and desires and receive hands-on training working closely with qualified junior officers. Marine Option students attend Officer Candidate School at Quantico, VA where they are screened, trained and evaluated in an intense, competitive environment alongside other Marine Option students from around the country. Students participating in summer cruises are provided government travel, medical and dental care, commissary and exchange privileges, and are paid for the duration of the training.

Commissioning

Upon graduation, qualified Naval ROTC Navy and Marine Option Scholarship students receive commissions as Ensigns in the United States Navy or as Second Lieutenants in the United States Marine Corps and serve a minimum of four years of active duty. Qualified Naval ROTC College Program (Advanced Standing) Navy Option students receive
commissions as Ensigns in the United States Navy and serve a minimum of three years of active duty. Qualified Naval ROTC College Program (Advanced Standing) Marine Option students receive commissions as Second Lieutenants in the United States Marine Corps and serve a minimum of three and a half years of active duty. Those Navy Option graduates who are academically qualified and accepted to graduate school in certain disciplines may apply for active duty deferments to complete their post-graduate education.

NROTC Staff

The staff of the Naval Science Department is dedicated to producing officers of the highest quality for the United States Navy and United States Marine Corps. All instructors are active duty Navy or Marine Corps officers and senior enlisted personnel assigned to the University by the United States Navy or United States Marine Corps. In addition, they work with the Corps of Cadets and act as military advisors to the University by the United States Navy or United States Marine Corps. All instructors are active duty Navy or Marine Corps officers and senior enlisted personnel assigned to the University by the United States Navy or United States Marine Corps. In addition, they work with the Corps of Cadets and act as military advisors to the University by the United States Navy or United States Marine Corps.

Courses

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 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 Amphibious Warfare
Credits 3. 3 Lecture Hours.
Historical survey of the projection of seapower ashore; background of military history with emphasis on Marine Corps contributions; selected amphibious operations and the evolution of current amphibious doctrine. Development of concepts, principles and techniques of amphibious operations.

Prerequisite: 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.