

MINIMUM CREDITS: Naval Reserve Officer Training Corps (NROTC) students (midshipmen) must maintain a minimum of 12 credit hours before adding NROTC classes. Any plan to take less than 12 term credits of non-NROTC classes must be preapproved by the Professor of Naval Science (PNS) prior to the end of the add period and should be in keeping with the midshipman's degree completion plan.

CLASS WITHDRAWAL, DROP, or CHANGE OF MAJOR: NROTC students require PNS permission BEFORE withdrawing or dropping a degree completion plan class or making a change of major. Failure to get PNS approval is looked upon as a failure and can result in adverse impact upon scholarship eligibility or continuation in NROTC.

ELIGIBLE CLASSES: Only Classes that are in a degree completion plan approved by the NROTC advisor can be paid for by NROTC. If a student's degree completion plan must change, that NROTC student must advise the NROTC advisor before acting on the change and incurring a financial obligation.

OVERRIDES. The NROTC State Secretary performs course overrides for NROTC classes, max credit hour overrides remain under the direction and discretion of primary academic advisors. If a conflict arises where an NROTC student needs a max credit hour override to take an NROTC class and the advisor believes that to be adverse to student success, either the student or the advisor should reach out to the NROTC advisor using the following information:

Freshman / Fourth Class	surface @oregonstate.edu	541-737-5620
Sophomore / Third Class	aviation@oregonstate.edu	541-737-5610
Juniors / Second Class /	submarines@oregonstate.edu	541-737-5611
Navy Officer Candidates		
Seniors / First Class	xo@oregonstate.edu	541-737-5607
Marine Enlisted Commissioning	moi@oregonstate.edu	541-737-5608
Education Program		

## NAVAL SCIENCE COURSES.

NS 111 INTRODUCTION TO NAVAL SCIENCE (3 credits) Naval organization and administration; organization of the Navy or Marine Corps, the Navy and Marine Corps as a career, responsibilities and commitments as an officer in the Navy or Marine Corps.

NS 112 U.S. NAVAL HISTORY I (3 credits) A study of U.S. seapower and maritime affairs from the American Revolution through 1900. Lec/lab. PREREQS: NS 112, NS 113 must be taken in order.

NS 113 U.S. NAVAL HISTORY II (3 credits) A study of U.S. seapower and maritime affairs from 1900 through present day. Lec/lab. PREREQS: NS 112 [D-]

NS 211 LEADERSHIP AND MANAGEMENT (5 credits) Overview of the principles, philosophies, and methodologies of effective Naval leadership with emphasis on moral, ethical actions with respect to the principles of authority, responsibility, and accountability as they apply to military organizations.

NS 212 NAVAL ENGINEERING (5 credits) Propulsion, basic engineering systems theory, and concepts application in modern ship and jet propulsion. Course will include auxiliary systems, theory and design of shipboard auxiliaries, ship design, and damage control/safety procedures. Offered every other winter term. PREREQS: NS 111 [D-]

NS 311 NAVIGATION (5 credits) Introduction to navigation including piloting, dead reckoning, and voyage planning. Course includes nautical rules of the road, maneuvering board, relative motion, and shipboard external communications.

NS 313 NAVAL OPERATIONS AND SEAMANSHIP (3 credits) Theory of shiphandling, communications, shipboard evolutions, heavy weather, case study discussions. PREREQS: NS 311 [D-]

NS 321 EVOLUTION OF WARFARE I (3 credits) The art and concepts of warfare from the beginning of recorded history to present [the Age of Napoleon]. PREREQS: NS 321, NS 322 must be taken in order.

NS 322 EVOLUTION OF WARFARE II (3 credits) The art and concepts of warfare post-WWI (from the beginning of the Industrial Revolution) to present, the current world political situation and U.S. foreign policy and their effects on the Naval services, and forecast for the future. PREREQS: NS 321 [D-]

NS 323 NAVAL SCIENCE III: MARINE CORPS OPTION (3 credits) Preparation for officer candidates' school and practical field exercises. For U.S. Marine Corps candidates option. PREREQS: NS 322 [D-] and /or prior approval required.

NS 405 READING AND CONFERENCE (1-16 credits) To prepare midshipmen returning from a leave of absence from the Naval ROTC program for commissioning and entrance into the fleet. This course is repeatable for a maximum of 16 credits. PREREQS: Instructor approval required.

NS 411 NAVAL WEAPONS SYSTEMS (5 credits) Introduction to the theory and development of U.S. Naval weapons systems, current weapons systems types, platforms, and employment. Course will include naval weapons systems types, launch platforms, characteristics and employment. PREREQS: NS 111 [D-]

NS 413 LEADERSHIP AND ETHICS (4 credits) Junior Officer administrative responsibilities with emphasis on moral and ethical decision making of Naval leaders. PREREQS: NS 211 [C-] and approval of Professor of Naval Science required if student has not completed NS 211 with C- or better.

NS 421 AMPHIBIOUS WARFARE I (3 credits) Amphibious warfare from the beginning of recorded history to WW II.

NS 422 AMPHIBIOUS WARFARE II (3 credits) Amphibious warfare post-WW II to present, current world political situation and U.S. foreign policy and their effects on the future of expeditionary warfare.

NS 450 AT-SEA TRAINING (6 credits) Four-week to six-week training cruise taken aboard U.S. Naval ships or submarines as arranged by the Professor of Naval Science.