

Navy: Department of Naval Science

The Program

Courses in naval science include both practical and theoretical instruction in subjects pertaining to the Navy and the Marine Corps. The **Navy-option** student receives 23 credit hours of naval science instruction over a period of 4 years. The **Marine-option** student receives 17 credit hours of instruction.

Additionally, naval science laboratory meets every semester for 4 years. Laboratory sessions integrate and apply knowledge gained from naval science courses through practical application during tactical planning exercises, leadership training, and professional development. They also include classroom instruction on issues relating to naval careers and policies and some close-order drill.

4-Year Scholarship NROTC Students

Students may begin applying for scholarships as early as their second semester of their high school junior year (preceding the year in which the scholarship is desired). This scholarship is rolling, and therefore students will be selected periodically until the deadline (which typically occurs between December and January). Selection is based on high school grades, SAT/ACT test results, physical ability, citizenship, and aptitude for naval service.

If selected, students are appointed as midshipmen and granted compensation and benefits specified by law. These benefits include tuition, required fees, laboratory equipment, a \$750-a-year book stipend, and subsistence pay of \$250 a month for first-year students. Subsistence pay increases to \$300 a month for sophomores, \$350 for juniors, and \$400 for seniors.

Scholarship students participate in 3 required summer training cruises. Scholarship students assume an obligation to serve at least 5 years on active duty after commissioning as Ensign, U.S. Navy, or 4 years as Second Lieutenant, U.S. Marine Corps.

Students with 30 or more college credits are not eligible to apply for this scholarship. More information can be found at <https://www.nrotc.navy.mil/>.

4-Year College Program NROTC Students

These NROTC students have the status of civilians who have entered into an agreement with the Navy. They are not entitled to the benefits and compensation given to scholarship NROTC students, but are entitled to uniform issue. A subsistence allowance of \$350 a month for juniors and \$400 for seniors is paid in the final two years of training if they are selected for scholarship.

These students participate in one summer cruise between their junior and senior years. College program students agree to accept commissions in the Navy or Marine Corps.

Upon proven superior performance in the college program, students will apply for a 3- or 2-year scholarship with the same requirements and benefits as 4-year scholarship students. Students must be selected for a scholarship by the end of their junior year to complete training. Admission into this program is through the KU NROTC Recruiting Officer.

3- and 2-Year Programs (Side-load Scholarship)

Entrance into the 3- or 2-year scholarship, or "side load scholarship", program is offered to qualified students with 3 or 2 years remaining to complete their undergraduate degrees. Students applying for these scholarships are encouraged to have completed 1 year of differential and integral calculus of 1 real variable (MATH 115 and MATH 116, or MATH 121 and MATH 122) and must have attained a minimum grade of C.

Applications for these programs must be completed by date released via message to the Naval ROTC at University of Kansas. For more information contact the KU NROTC Recruiting Officer.

Naval Science Students

Any student enrolled at KU may enroll in a naval science course for KU credit after obtaining consent of the Naval Science Instructor. Such students are not considered to be in the NROTC program and are not entitled to receive any compensation, benefits, or a commission.

4-Year Program Requirements

Both Navy- and Marine-option students must take professional Navy and Marine courses as part of the NROTC program. The normal sequence of courses is:

Navy Students

| Code | Title | Hours |
|----------|---|-------|
| NAVY 100 | Naval Science Laboratory (every semester) | 0 |
| NAVY 101 | Introduction to Naval Science | 2 |
| NAVY 220 | Seapower and Maritime Affairs | 3 |
| NAVY 401 | Principles of Naval Organization and Management (Leadership and Management I) | 3 |
| NAVY 300 | Navigation and Operations I | 3 |
| NAVY 180 | Introduction to Naval Ships Systems I (Engineering) | 3 |
| NAVY 184 | Introduction to Naval Ships Systems II (Weapons) | 3 |
| NAVY 304 | Navigation and Operations II | 3 |
| NAVY 402 | Seminar in Military Leadership and Management (Leadership and Management II) | 3 |

Marine Corps Students

| Code | Title | Hours |
|----------|---|-------|
| NAVY 100 | Naval Science Laboratory (every semester) | 0 |
| NAVY 101 | Introduction to Naval Science | 2 |
| NAVY 220 | Seapower and Maritime Affairs | 3 |
| NAVY 401 | Principles of Naval Organization and Management (Leadership and Management I) | 3 |
| MCOR 380 | Evolution of Warfare | 3 |
| MCOR 384 | Fundamentals of Maneuver Warfare | 3 |
| NAVY 402 | Seminar in Military Leadership and Management (Leadership and Management II) | 3 |

The above courses are approved by the College of Liberal Arts and Sciences (<http://clas.ku.edu/>) and count as elective credit but do not count toward the required 100 hours in the College for students earning a baccalaureate degree in the College of Liberal Arts and Sciences.

Navy Option

Navy scholarship students must take the following courses in the College of Liberal Arts and Sciences:

| Code | Title | Hours |
|--|-------------------------------|-------|
| Mathematics and Physics | | |
| MATH 115 | Calculus I | 3 |
| MATH 116 | Calculus II | 3 |
| -- OR -- | | |
| MATH 125 | Calculus I | 4 |
| MATH 126 | Calculus II | 4 |
| PHSX 211 | General Physics I | 4 |
| PHSX 216 | General Physics I Laboratory | 1 |
| PHSX 212 | General Physics II | 3 |
| PHSX 236 | General Physics II Laboratory | 1 |
| (MATH 126 is a prerequisite for PHSX 212.) | | |
| Plus courses in the following areas | | |
| English | | 6 |
| American History/National Security Policy | | 3 |
| World Cultural/Regional Studies | | 3 |

Navy-option college program students must take the following courses in the College of Liberal Arts and Sciences. While not required, Calculus and Physics are highly encouraged in order to be competitive for a scholarship:

| Code | Title | Hours |
|---|------------------------|-------|
| Mathematics and Physics | | |
| MATH 101 | College Algebra: _____ | 3 |
| Any math course greater than MATH 101 (must have at least 6 credit hours total) | | 3 |
| Physical Sciences | | 6 |
| Plus courses in the following areas | | |
| English | | 6 |
| American History/National Security Policy | | 3 |
| World Cultural/Regional Studies | | 3 |

Marine Corps Option

All Marine-option students must take the following courses in the College of Liberal Arts and Sciences:

| Code | Title | Hours |
|---|-------|-------|
| English | | 6 |
| American History/National Security Policy | | 3 |

Courses

MCOR 380. Evolution of Warfare. 3 Credits.

A study of the art, science, concepts, and evolution of warfare as one instrument of government policy throughout history. The study of selected battles and campaigns serves as a vehicle to emphasize the application of the classical principles of warfare, the influence of leadership, and the advancement of technology of the art and science of war. Approved for degree credit in the College of Liberal Arts and Sciences effective fall 1975. Such courses count within the limit of twenty-five hours accepted from other schools and divisions.

MCOR 384. Fundamentals of Maneuver Warfare. 3 Credits.

Broad aspects of warfare and their interactions with maneuver warfare doctrine. Focus on the United States Marine Corps as the premier maneuver warfare fighting institution. Historical influences on current tactical, operational, and strategic implications of maneuver warfare practices. Approved for degree credit in the College of Liberal Arts and Sciences effective Fall 1976. Such courses count within the limit of 25 hours accepted from other schools and divisions.

Courses

NAVY 100. Naval Science Laboratory. 0 Credits.

Designed for and required annually of all NROTC midshipmen, Sailors and Marines in order to provide increased knowledge in the areas of close-order drill, ceremonial functions, and general military training. Also applies knowledge learned from other accredited naval science courses. Highly educated, well known, professional guest lecturers appear frequently and make presentations on topics which apply to naval science courses, increase the educational awareness of future Navy and Marine Corps officers, and further develop the leadership and decision making of the officer candidates. Graded on a satisfactory/unsatisfactory basis.

NAVY 101. Introduction to Naval Science. 2 Credits.

An introduction to the Department of the Navy (U.S. Navy and U.S. Marine Corps) emphasizing its mission, organization, operation, and relationship to other U.S. federal and military institutions. Through historical overview, the development of the current Department of the Navy mission, organization and operation, both at sea and ashore, including customs, traditions, regulations, and professional/technical vocabulary is examined. Educational opportunities and specializations for naval officers are also detailed. Approved for degree credit in the College of Liberal Arts and Sciences effective spring 1982. Such courses count within the limit of 25 hours accepted from other schools and divisions.

NAVY 180. Introduction to Naval Ships Systems I. 3 Credits.

A course designed to familiarize students with the types, structures, and purpose of naval ships. Ship compartmentation, propulsion systems, auxiliary power systems, electrical systems, interior communications, and control are included. Elements of ship design to achieve safe operations, damage control, and ship stability characteristics are examined. Approved for degree credit in the College of Liberal Arts and Sciences effective fall 1971. Such courses count within the limit of 25 hours accepted from other schools and divisions.

NAVY 184. Introduction to Naval Ships Systems II. 3 Credits.

The concept of weapons systems and the systems approach are explored. The techniques of linear analysis of ballistics and weapons are introduced. The dynamics of the basic components of weapons control systems are investigated. This course provides the tools for the future development in the student's understanding of the basic principles that underlie all modern naval weapons systems. To understand the evolving domain of cyber warfare, this course introduces topics in information systems. Approved for degree credit in the College of Liberal Arts and Sciences effective fall 1971. Such courses count within the limit of 25 hours accepted from other schools and divisions. Prerequisite: NAVY 180.

NAVY 220. Seapower and Maritime Affairs. 3 Credits.

A survey of U.S. naval history. Explores the historical evolution of sea power and its effect on world history. Presents naval aspects of U.S. conflicts from the American Revolution to the global war on terror. Introduces prominent U.S. Navy and Marine Corps leaders and their contributions. Examines the influence of technological innovation, domestic politics, and foreign policy on the development and execution of naval doctrine and tactics. Approved for degree credit in the College of Liberal Arts and Sciences effective fall 1975. Such courses count within the limit of 25 hours accepted from other schools and divisions.

NAVY 300. Navigation and Operations I. 3 Credits.

A comprehensive study of the theory, principles, and procedures of ship navigation in coastal and open ocean environment. Includes piloting, triangulation, ocean and tidal currents, International and U.S. inland rules of the road for navigation, sight reduction, publications, and logs; an introduction to electronic navigation, including theory of wave propagation, hyperbolic and azimuthal systems, doppler, inertial, and satellite systems. Approved for degree credit in the College of Liberal Arts and Sciences effective fall 1971. Such courses count within the limit of 25 hours accepted from other schools and divisions.

NAVY 304. Navigation and Operations II. 3 Credits.

A study of the laws for the prevention of collisions at sea; tactical formations and dispositions, relative motion, and the maneuvering board. A portion of the semester is devoted to an analysis of naval operations utilizing formal decision making theory, particularly as applied to command and control. Numerous case studies are used to examine the application of the above topics. Approved for degree credit in the College of Liberal Arts and Sciences effective fall 1971. Such courses count within the limit of 25 hours accepted from other schools and divisions. Prerequisite: MATH 101 or higher and NAVY 300.

NAVY 401. Principles of Naval Organization and Management. 3 Credits.

An introduction of management functions as they apply to routine daily military activities. The concepts of planning, organizing, staffing, directing, controlling, and coordinating are introduced and examined using lecture, seminar, and case study methods. The course includes discussions on responsibility and accountability, power and influence, managerial theories, decision making, personnel appraisal, organizational structure, and communications. Emphasis is placed on management of personnel and physical resources. Approved for degree credit in the College of Liberal Arts and Sciences effective fall 1975. Such courses count within the limit of 25 hours accepted from other schools and divisions.

NAVY 402. Seminar in Military Leadership and Management. 3 Credits. AE51

A study of military leadership and management which investigates techniques and concepts of task accomplishment in the absence of a normative business environment. The course includes an examination of military law, ethical leadership, personal responsibility, authority, and bureaucracy. The focus of discussion is on those aspects of leadership and management not normally present in civilian enterprise such as operating in the presence of hostility and morale management. Approved for degree credit in the College of Liberal Arts and Sciences effective fall 1975. Such courses count within the limit of 25 hours accepted from other schools and divisions.