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.

Navy: Department of Naval Science
Military Science Building
1520 Summerfield Hall Drive. Room 115
Lawrence, KS 66045-7554
785-864-3161
https://kunrotc.ku.edu/

Admissions
Male and female citizens of the United States who are 17 years old on or before September 1 of the year of initial enrollment may apply.

- Scholarship applicants must not have reached age 27 on June 30 of the year in which they will be commissioned.
- College Program students must not have reached age 27½ on June 30 of the year in which they will be commissioned.

Age waivers may be available to students with active duty military backgrounds. Please contact the NROTC office for details. All students must be physically qualified for the NROTC program and must enter into an agreement with the Secretary of the Navy to accept a commission, if offered, in the Navy or Marine Corps upon successful completion of work toward their first bachelor’s degree.

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 occurs between January and February of the following year). 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

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 Naval or Marine Corps Reserve and serve a minimum of three years on active duty.

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 sophomore year to complete training.

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 degree. 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.

Students who are accepted into either program may complete a paid 6-week summer course at the Naval Science Institute in Newport, Rhode Island. Upon successful completion of NSI, students have the same program benefits and requirements as students in the 4-year scholarship or college programs.

Applications for these programs must be completed by date released via message to the Navy ROTC at University of Kansas.

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/or Marine-option courses as part of the NROTC program. The normal sequence of courses is

NAVY 4-Year Scholarship Students

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>NAVY 101</td>
<td>Introduction to Naval Science</td>
<td>2</td>
</tr>
<tr>
<td>NAVY 220</td>
<td>Seapower and Maritime Affairs</td>
<td>3</td>
</tr>
<tr>
<td>NAVY 401</td>
<td>Principles of Naval Organization and Management (Leadership and Management I)</td>
<td>3</td>
</tr>
</tbody>
</table>

Students with 30 or more college credits are not eligible to apply for this scholarship. More information can be found at www.nrotc.navy.mil.
NAVY 180  Introduction to Naval Ships Systems I (Engineering)  3
NAVY 300  Navigation and Operations I  3
NAVY 304  Navigation and Operations II  3
NAVY 184  Introduction to Naval Ships Systems II (Weapons)  3
NAVY 402  Seminar in Military Leadership and Management (Leadership and Management II)  3

Marine 4-Year Scholarship Students

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>NAVY 101</td>
<td>Introduction to Naval Science</td>
<td>2</td>
</tr>
<tr>
<td>NAVY 220</td>
<td>Seapower and Maritime Affairs</td>
<td>3</td>
</tr>
<tr>
<td>NAVY 401</td>
<td>Principles of Naval Organization and Management</td>
<td>3</td>
</tr>
<tr>
<td>MCOR 380</td>
<td>Evolution of Warfare</td>
<td>3</td>
</tr>
<tr>
<td>MCOR 384</td>
<td>Fundamentals of Maneuver Warfare</td>
<td>3</td>
</tr>
<tr>
<td>NAVY 402</td>
<td>Seminar in Military Leadership and Management</td>
<td>3</td>
</tr>
</tbody>
</table>

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.

**Courses**

**MCOR 380. Evolution of Warfare. 3 Hours U.**
A study of the art, science, concepts, and evolution of warfare as one instrument of political action 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. This course is substituted for NAVY 300 by NROTC students selected for Marine Corps training. 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. LEC.

**MCOR 384. Fundamentals of Maneuver Warfare. 3 Hours U.**
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. LEC.

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

**Mathematics and Physics (17)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 121</td>
<td>Calculus I</td>
<td>5</td>
</tr>
<tr>
<td>MATH 122</td>
<td>Calculus II</td>
<td>5</td>
</tr>
<tr>
<td>PHSX 211</td>
<td>General Physics I</td>
<td>4</td>
</tr>
<tr>
<td>PHSX 212</td>
<td>General Physics II</td>
<td>3</td>
</tr>
</tbody>
</table>

(MATH 122 is a prerequisite for PHSX 212.)

**Plus courses in the following areas (12)**

<table>
<thead>
<tr>
<th>Area</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>American history, military affairs, or national security policy</td>
<td>3</td>
</tr>
<tr>
<td>English</td>
<td>6</td>
</tr>
<tr>
<td>Computer science</td>
<td>3</td>
</tr>
</tbody>
</table>

**Navy-option college program students** must complete 1 year (6 semester credit hours) of college-level study in both mathematics and physical science as a prerequisite for commissioning. Mathematics courses must be at the level of college algebra or higher and must be completed by the end of the junior year. The physical science requirement can be completed by a 1-year sequence, or 2 courses, in an area of physical science, and must be completed by the end of the senior year. Additionally, college program students must complete 6 semester credit hours of English and 3 credit hours of computer science.

**Marine Corps Option**

Marine-option students are not required to take MATH 121, MATH 122, PHSX 211, or PHSX 212, but are encouraged to do so. During the junior and senior years, Marine-option students take MCOR 380, MCOR 384, and 2 relevant courses taught by civilian faculty and approved by the marine officer instructor in lieu of NAVY 300 and NAVY 304.
NAVY 184. Introduction to Naval Ships Systems II. 3 Hours U.
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 and stated as transfer functions. 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. 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. (Same as ENGR
184.) Prerequisite: MATH 002. LEC.

NAVY 220. Seapower and Maritime Affairs. 3 Hours U.
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. LEC.

NAVY 300. Navigation and Operations I. 3 Hours U.
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. (Same as ENGR
301.) LEC.

NAVY 304. Navigation and Operations II. 3 Hours U.
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. (Same as ENGR 305.) Prerequisite: MATH 111 or higher. NAVY
300 or ENGR 301. LEC.

NAVY 401. Principles of Naval Organization and Management. 3 Hours U.
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. LEC.

NAVY 402. Seminar in Military Leadership and Management. 3 Hours U.
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. LEC.