

# NAVAL SCIENCE

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## Contact Information

### Naval Science

<https://nrotc.rice.edu/>

6100 Main Street

713-348-3940

### Jeff Bowman, USN

Program Chair

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Students may enroll in the Naval Reserve Officers' Training Corps (NROTC) program as scholarship or non-scholarship students.

An academic minor in Naval Science is also available to all Rice students in undergraduate degree-granting programs. The faculty and instructors in the program consist of active-duty military officers.

## Minor

- [Minor in Naval Science \(https://ga.rice.edu/programs-study/departments-programs/interdisciplinary/naval-science/naval-science-minor/\)](https://ga.rice.edu/programs-study/departments-programs/interdisciplinary/naval-science/naval-science-minor/)

Naval Science does not currently offer an academic program at the graduate level.

## Program Chair

Jeff Bowman, USN

## Advisors

Daniel Collins, USMC

Emily Konoza, USN

Adam Winters, USN

## Professor in the Practice

Jeff Bowman, USN

## Adjunct Professors in the Practice

Daniel Collins, USMC

Emily Konoza, USN

Eric Kroeger, USMC

Adam Winters, USN

*For Rice University degree-granting programs:*

To view the list of official course offerings, please see [Rice's Course Catalog \(https://courses.rice.edu/admweb!/SWKSCAT.cat?p\\_action=cata\)](https://courses.rice.edu/admweb!/SWKSCAT.cat?p_action=cata)

To view the most recent semester's course schedule, please see [Rice's Course Schedule \(https://courses.rice.edu/admweb!/SWKSCAT.cat\)](https://courses.rice.edu/admweb!/SWKSCAT.cat)

## Naval Science (NAVA)

### NAVA 100 - NAVAL SCIENCE LABORATORY

**Short Title:** NAVAL SCIENCE LABORATORY

**Department:** Naval Science

**Grade Mode:** Standard Letter

**Course Type:** Laboratory

**Credit Hour:** 1

**Restrictions:** Enrollment is limited to Undergraduate, Undergraduate Professional or Visiting Undergraduate level students.

**Course Level:** Undergraduate Lower-Level

**Description:** Practical applications of leadership principles as a Junior Naval Officer. Repeatable for Credit.

### NAVA 101 - NAVAL ORIENTATION

**Short Title:** NAVAL ORIENTATION

**Department:** Naval Science

**Grade Mode:** Standard Letter

**Course Type:** Lecture/Laboratory

**Credit Hours:** 3

**Restrictions:** Enrollment is limited to Undergraduate, Undergraduate Professional or Visiting Undergraduate level students.

**Course Level:** Undergraduate Lower-Level

**Description:** An introduction to naval traditions and customs, seamanship, naval organization and missions, and the fundamental concepts of sea power.

### NAVA 103 - SEA POWER AND MARITIME AFFAIRS

**Short Title:** SEA POWER

**Department:** Naval Science

**Grade Mode:** Standard Letter

**Course Type:** Lecture/Laboratory

**Credit Hours:** 3

**Restrictions:** Enrollment is limited to Undergraduate, Undergraduate Professional or Visiting Undergraduate level students.

**Course Level:** Undergraduate Lower-Level

**Description:** Readings, discussions, and research on selected topics related to the history, importance, and impact of sea power on modern civilization.

### NAVA 203 - LEADERSHIP AND MANAGEMENT I

**Short Title:** LEADERSHIP AND MANAGEMENT I

**Department:** Naval Science

**Grade Mode:** Standard Letter

**Course Type:** Lecture/Laboratory

**Credit Hours:** 3

**Restrictions:** Enrollment is limited to Undergraduate, Undergraduate Professional or Visiting Undergraduate level students.

**Course Level:** Undergraduate Lower-Level

**Description:** An introduction to the principles and concepts of management, organization, leadership, information systems, and decision making.

**NAVA 238 - SPECIAL TOPICS**

**Short Title:** SPECIAL TOPICS

**Department:** Naval Science

**Grade Mode:** Standard Letter

**Course Type:** Internship/Practicum, Laboratory, Lecture, Seminar, Independent Study

**Credit Hours:** 1-4

**Restrictions:** Enrollment is limited to Undergraduate, Undergraduate Professional or Visiting Undergraduate level students.

**Course Level:** Undergraduate Lower-Level

**Description:** Topics and credit hours may vary each semester. Contact department for current semester's topic(s). Repeatable for Credit.

**NAVA 301 - NAVIGATION I**

**Short Title:** NAVIGATION I

**Department:** Naval Science

**Grade Mode:** Standard Letter

**Course Type:** Lecture/Laboratory

**Credit Hours:** 3

**Restrictions:** Enrollment is limited to Undergraduate, Undergraduate Professional or Visiting Undergraduate level students.

**Course Level:** Undergraduate Upper-Level

**Description:** Marine navigators and laws of vessel operations. Includes coastal piloting, navigational aids, nautical astronomy, satellite and inertial systems, and rules of the nautical road.

**NAVA 302 - NAVAL OPERATIONS AND SEAMANSHIP**

**Short Title:** NAVAL OPERATIONS & SEAMANSHIP

**Department:** Naval Science

**Grade Mode:** Standard Letter

**Course Type:** Lecture/Laboratory

**Credit Hours:** 3

**Restrictions:** Enrollment is limited to Undergraduate, Undergraduate Professional or Visiting Undergraduate level students.

**Course Level:** Undergraduate Upper-Level

**Description:** An analysis of ship movements, formations, and fleet operations; includes Rules of the Road, maneuvering board, tactical publications and communications.

**NAVA 303 - EVOLUTION OF WARFARE**

**Short Title:** EVOLUTION OF WARFARE

**Department:** Naval Science

**Grade Mode:** Standard Letter

**Course Type:** Lecture/Laboratory

**Credit Hours:** 3

**Restrictions:** Enrollment is limited to Undergraduate, Undergraduate Professional or Visiting Undergraduate level students.

**Course Level:** Undergraduate Upper-Level

**Description:** Historical survey of the evolution of the conduct of warfare. Strategy, tactics, weapons, organization, and military leaders/thinkers are studied. Course is taught in the NROTC Building.

**NAVA 304 - NAVAL WEAPONS-NAVAL SHIP SYSTEMS II**

**Short Title:** NAVAL WEAPONS

**Department:** Naval Science

**Grade Mode:** Standard Letter

**Course Type:** Lecture/Laboratory

**Credit Hours:** 3

**Restrictions:** Enrollment is limited to Undergraduate, Undergraduate Professional or Visiting Undergraduate level students.

**Course Level:** Undergraduate Upper-Level

**Description:** The theory and employment of weapons systems. The student explores the processes of detection, evaluation, threat analysis, weapon selection, delivery, guidance, and explosives. The physical aspects of radar and underwater sound are described in detail.

**NAVA 402 - LEADERSHIP AND ETHICS**

**Short Title:** LEADERSHIP AND ETHICS

**Department:** Naval Science

**Grade Mode:** Standard Letter

**Course Type:** Lecture/Laboratory

**Credit Hours:** 3

**Restrictions:** Enrollment is limited to Undergraduate, Undergraduate Professional or Visiting Undergraduate level students.

**Course Level:** Undergraduate Upper-Level

**Prerequisite(s):** NAVA 203

**Description:** Leadership principles, with particular emphasis on ethics, human resources management, military law and discipline, and administration. The Capstone course for NROTC seniors. Recommended prerequisite(s): Spring semester of senior year.

**NAVA 403 - NAVAL ENGINEERING**

**Short Title:** NAVAL ENGINEERING

**Department:** Naval Science

**Grade Mode:** Standard Letter

**Course Type:** Lecture/Laboratory

**Credit Hours:** 3

**Restrictions:** Enrollment is limited to Undergraduate, Undergraduate Professional or Visiting Undergraduate level students.

**Course Level:** Undergraduate Upper-Level

**Description:** Ship propulsion systems, auxiliary systems, steering systems, electrical power distribution, ship design, ship stability and damage control measures.

**NAVA 411 - FUNDAMENTALS OF MANEUVER WARFARE**

**Short Title:** FUND OF MANEUVER WARFARE

**Department:** Naval Science

**Grade Mode:** Standard Letter

**Course Type:** Lecture

**Credit Hours:** 3

**Restrictions:** Enrollment is limited to Undergraduate, Undergraduate Professional or Visiting Undergraduate level students.

**Course Level:** Undergraduate Upper-Level

**Description:** Mutually Exclusive: Cannot register for NAVA 411 if student has credit for NAVA 410.

**NAVA 477 - SPECIAL TOPICS****Short Title:** SPECIAL TOPICS**Department:** Naval Science**Grade Mode:** Standard Letter**Course Type:** Internship/Practicum, Lecture, Seminar, Laboratory**Credit Hours:** 1-4**Restrictions:** Enrollment is limited to Undergraduate, Undergraduate Professional or Visiting Undergraduate level students.**Course Level:** Undergraduate Upper-Level**Description:** Topics and credit hours may vary each semester. Contact department for current semester's topic(s). Repeatable for Credit.

## Description and Code Legend

*Note: Internally, the university uses the following descriptions, codes, and abbreviations for this academic program. The following is a quick reference:*

### Course Catalog/Schedule

- Course offerings/subject code: NAVA

### Department (or Program) Description and Code

- Naval Science: NAVA

### Undergraduate Minor Description and Code

- Minor in Naval Science: NAVA

### CIP Code and Description <sup>1</sup>

- **NAVA** Minor: CIP Code/Title: 28.0505 - *Naval Science and Operational Studies*

<sup>1</sup> Classification of Instructional Programs (CIP) 2020 Codes and Descriptions from the National Center for Education Statistics: <https://nces.ed.gov/ipeds/cipcode/>