

NAVAL SCIENCE

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 ¹

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

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