
DONT GIVE UP
THE SHIP
DEDICATED TO THE HONOR OF THOSE ALUMNI
WHO HAVE BEEN KILLED IN ACTION DEFENDING
THE IDEALS OF THEIR COUNTRY
WITH IMMORTAL VALOR AND THE PRICE OF THEIR
LIVES THESE PROVED THEIR LOVE OF COUNTRY
AND THEIR LOYALTY TO THE HIGH TRADITIONS
OF THEIR ALMA MATER BY INSCRIBING WITH
THEIR OWN BLOOD THE NARRATIVE OF THEIR DEEDS
ABOVE ON AND UNDERNEATH THE SEVEN SEAS
THEY HAVE SET THE COURSE THEY SILENTLY
STAND WATCH WHEREVER NAVY SHIPS PLY
THE WATERS OF THE GLOBE

Academic and Professional Education

The relationship between officers and men should in no sense be that of superior and inferior nor that of master and servant, but rather that of teacher and scholar.
— General John A. LeJeune, USMC, Class of 1888

To prepare midshipmen as Naval officers, the Naval Academy's curriculum blends professional subjects with required and elective courses similar to those offered at leading civilian colleges. Our curriculum has three basic elements:

- Core requirements in engineering, natural sciences, the humanities and social sciences, to assure that graduates are able to think crticially, solve increasingly technical problems in a dynamic, global environment, and express conclusions clearly.
- Core academic courses and practical training to teach the leadership and professional skills required of Navy and Marine Corps officers.
- An academic major that permits a midshipman to explore a discipline in some depth and prepare for graduate level work.

Accreditation

The Naval Academy is accredited by the Middle States Commission on Higher Education, 3624 Market St., Philadelphia, PA 19104, (267) 284-5000; web address: info@msche.org.

In addition, the following engineering majors are accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org: Aerospace Engineering, Electrical Engineering, Mechanical Engineering, Naval Architecture, Ocean Engineering, and Systems Engineering.

The computer science major and information technology major are accredited by the Computing Accreditation Commission of ABET, Inc., http://www.abet.org. The chemistry major is accredited by the American Chemical Society.

Degree Awarded

Upon graduation, a bachelor of science degree is awarded regardless of major, by law, due to the technical content of the core curriculum. Those in the top 10 percent of their class graduate with distinction. Those who have completed special honors programs in one of eight selected majors graduate with honors.

Academic Dean and Provost

Andrew Phillips returned to the U.S. Naval Academy as the chief academic officer in 2009 after having served as Associate Vice Chancellor for Academic Affairs and Dean of Graduate Studies at the University of Wisconsin – Eau Claire. At UW-Eau Claire, Dr. Phillips was responsible for providing institution-wide leadership for the university's academic programs, for personnel matters, for establishing and supporting graduate programs, and for developing and guiding the university's contribution to economic development throughout the state of Wisconsin.

Dr. Phillips began his academic career as a civilian faculty member in computer science at the U.S. Naval Academy in 1988. In 1998 he moved to UW-Eau Claire to serve as department chair in computer science, a position he held until he become the Associate Vice Chancellor for Academic Affairs and Dean of Graduate Studies in 2004. Dr. Phillips has been a program evaluator for ABET, Inc. since 1997, and he was a member of its Computing Accreditation Commission from 2004-2009.

Dr. Phillips is a 1984 graduate of the Pennsylvania State University, and earned his master's (in 1986) and doctor of philosophy (in 1988) degrees, both in Computer Science, at the University of Minnesota.

"The Naval Academy has a long, proud tradition of educating and training leaders for the greatest challenges of national service. We prepare our graduates to lead the nation's sailors and Marines immediately upon graduation. We also provide a firm foundation of knowledge at the baccalaureate level on which our graduates can later build the specific expertise they will need for their career progression. The careers on which Naval Academy graduates embark demand individuals who can think critically, analyze complex problems, speak and write articulately, and faithfully support the values of their service and their nation.

The foundation of the academic program at the Naval Academy is our core curriculum. Taught by one of our nation's finest undergraduate faculties in first class facilities, the core curriculum ensures all graduates receive a comprehensive, intellectually challenging education which prepares them to tackle a diverse array of complex problems. It is in our core curriculum that midshipmen develop the professional competence necessary for any of our graduates to succeed in any available career field in the Navy or Marine Corps.

The Naval Academy also offers each midshipman a selection of 22 majors in disciplines as diverse as engineering, math, the physical sciences, the humanities and the social sciences. Each of these majors contributes to the development of a strong educational foundation necessary for our graduates to excel in their immediate responsibilities and in future studies. Some majors have been rated by independent national authorities as among the best of their discipline in the country.

Most importantly, in the Naval Academy's academic program, we seek not only to educate our midshipmen, but to substantially contribute to the development of their character. Through consistently high standards of performance, a demanding curriculum and a stimulating learning environment, we develop leaders characterized by self-discipline, initiative, determination and a commitment to life-long learning. The academic program complements the professional training, character development and the physical education components of the Academy program to produce these critical leadership qualities. With its comprehensive core curriculum, outstanding majors program, and emphasis on character development, I believe the Naval Academy is producing outstanding leaders for tomorrow and the next millennium."

Educational Philosophy

It's hard to get lost in the classroom at the Naval Academy. Our philosophy of education stresses attention to individual students by highly qualified faculty members who are strongly committed to teaching. Classes are small, with an average size of about 18 students. Even the core courses required of all midshipmen are taught in sections about this size, so that midshipmen receive individualized attention from their instructors. In science and engineering courses, the same professor who lectures in the classroom supervises experiments in the lab. This practice contrasts sharply with many universities, where senior faculty address their students in huge lecture halls, but direct contact with undergraduates in labs or discussion sections is delegated to graduate assistants. All courses at the Naval Academy are taught and graded by faculty members, not by graduate assistants.

Faculty

Our faculty is an integrated group of nearly 600 officers and civilians in roughly equal numbers. This composition is unique among service academies, and dates from the earliest days of the Naval School when three civilian teachers joined four Navy officers in the first faculty in 1845. Officers typically rotate to the Academy for two-to-three-year assignments, bringing fresh ideas and experiences from operational units of the Navy and Marine Corps. They can also explain how studies at the Academy apply in the fleet and the field. A cadre of officer faculty with doctorates adds another dimension to the teaching staff as Permanent Military Professors. The Academy's civilian faculty members give continuity to the educational program and form a core of professional scholarship and teaching experience. All career civilian faculty members have doctoral degrees, and many of them are leading scholars in their fields. Working together, our military and civilian instructors form one of the strongest and most dedicated teaching faculties of any college or university in the United States.

Let us think of education as the means of developing our greatest abilities, because in each of us there is a private hope and dream, which, fulfilled, can be translated into benefits for everyone, and greater strength for our nation.
—John F. Kennedy

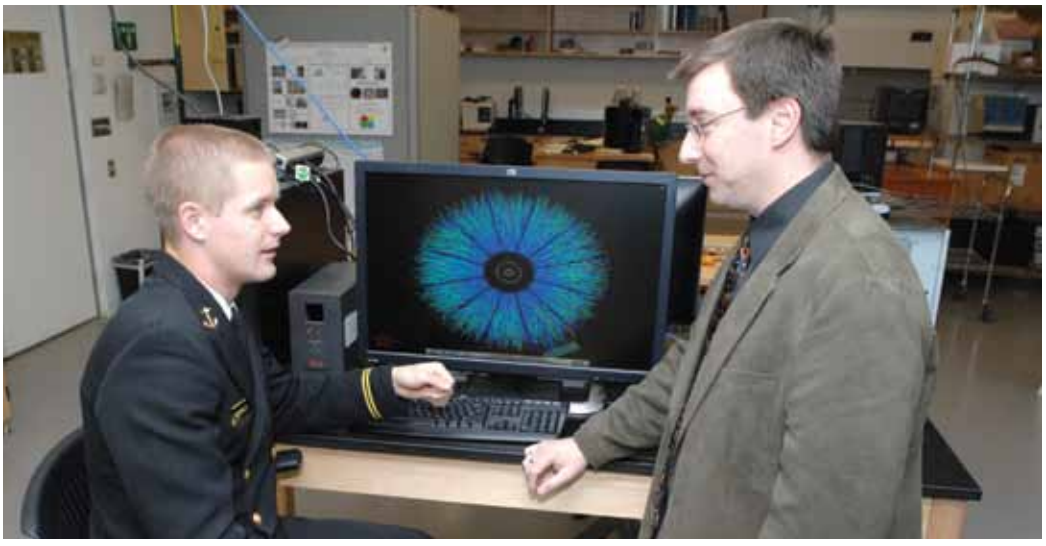
Faculty Senate

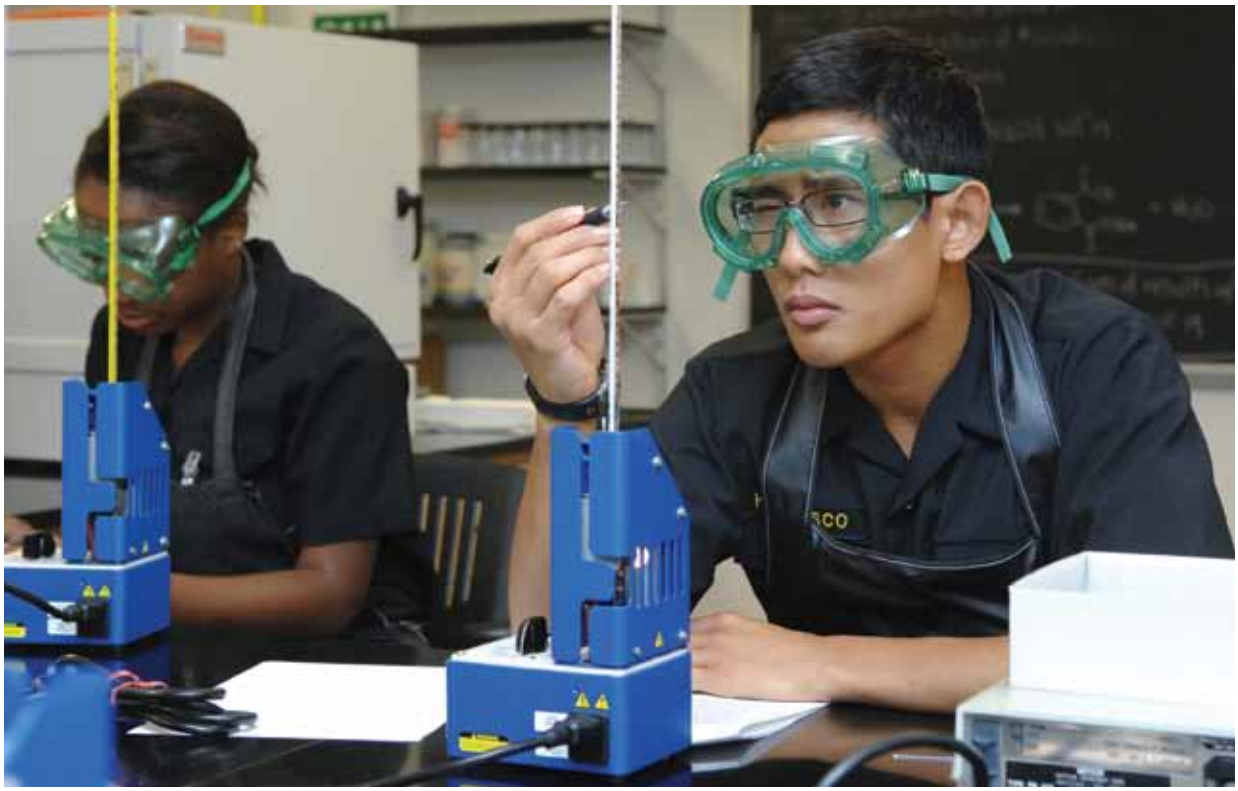
Founded in 1993 as a consolidation of two earlier faculty organizations, the United States Naval Academy Faculty Senate advises the Academy's senior leadership on faculty and curriculum matters. The Senate consists of approximately 30 military and civilian representatives from the Academy's academic departments and divisions. The Senate usually meets twice a month during the academic year.

Improving Yard-wide communication is an important Senate function. Senior Academy administrators are ex-officio members of the Senate and routinely address the membership on issues of current interest.

Academic Advising

Midshipmen receive ample assistance in planning their academic programs. The academic advising system has two stages. During their first summer at the Academy, each company of new midshipmen is assigned two faculty members as their academic advisers. Each plebe receives academic counseling—and basic study skills instruction—before the start of the academic year. Advising continues as often as necessary throughout the year. After academic majors are selected in the spring of plebe year, midshipmen are assigned permanent faculty advisers in the academic department of that major. Professors and company officers are essential and helpful resources in providing academic counseling and advice to midshipmen.





Core Curriculum

In four years at the Naval Academy, midshipmen are required to take certain core courses to make sure they are well prepared for the principal career choices available to Navy and Marine Corps officers. Through required courses in engineering, natural sciences, social sciences, the humanities, professional military subjects and physical education, the Naval Academy gives midshipmen a balanced education for virtually any career path in the operating forces of our country's naval services.

During the first year at the Academy, all courses are part of the required core curriculum. These required courses form the foundation for the more advanced courses, core and major, chosen by upperclass midshipmen. Some core requirements in the upperclass years have alternative courses from which to choose, depending on your academic background, abilities and major. Courses in your academic major also prepare you for advanced professional training and postgraduate education, which are expected of nearly all naval officers.

The typical academic schedule for plebes includes five courses in each of two semesters:

Plebe year, first semester — 16 credit hours

- Calculus I — Most begin here, some validate and are placed into later calculus courses, and a few plebes not ready for calculus take a pre-calculus course that does not count as part of the minimum mathematics requirement.
- Chemistry I — This foundation science course includes two hours of laboratories each week.
- U.S. Government and Constitutional Development — The foundation of American democracy.

- Preparing to Lead – Baseline course for leader development; introduces basic concepts of self-knowledge, self-leadership, and leading others.
- Rhetoric and Introduction to Literature I — Most plebes take this class; some will start with a practical writing course that prepares for this class.
- Fundamentals of Naval Science — The basic elements of shipboard operation, organization and propulsion.

Plebe year, second semester — 18 credit hours

- Calculus II — Continuation of the first-semester course.
- Chemistry II — Continuation of the first-semester course.
- American Naval Heritage — A history of this country's Navy.
- Introduction to Navigation
- Rhetoric and Introduction to Literature II.

A few midshipmen who give evidence of the ability to learn a critical language (Arabic, Chinese, Japanese or Russian) may be selected to begin study of the language in plebe year. This is arranged by postponing the government and naval history courses.

Advanced Placement

More than half the midshipmen entering the Naval Academy validate one or more courses. Each of the Academy's academic departments sets its own validation standards and considers one or more of the following:

- Transcripts.
- Department validation tests, administered at the Naval Academy.
- College Entrance Examination Board Achievement and Advanced Placement tests.

During Plebe Summer, all entering midshipmen take placement examinations in English, mathematics and science. Individual midshipmen may elect to take placement exams in other discipline areas such as chemistry, economics, history, physics, political science and foreign languages. Excellent performance on the placement exams may result in a midshipman validating courses and thus accelerating portions of their academic program. Over four years, this may permit the student to reduce the number of courses taken in a particular semester, or become eligible for special academic programs, for honors programs or for graduate programs. It may allow a student to complete a minor, or take courses that might not otherwise fit into the standard academic schedule.

Most placement exams are scheduled during the first two weeks of Plebe Summer. Midshipmen should arrive at the Naval Academy prepared to take these very important examinations. Following the evaluation of the exam results, midshipmen receive academic counseling from their faculty advisers to help them understand their performance on the examination and subsequent placement in a particular level or section of a course.

In any case, midshipmen must take a minimum of 15 credit hours each semester and spend a total of four years in residence at the Naval Academy to complete professional courses and training. (Service Academy Exchange and International Study Abroad programs are exceptions.)

Majors Program

At the Naval Academy, the academic program is focused especially on science, technology, engineering, and mathematics (STEM) in order to meet the current and future highly technical needs of the Navy. Graduates who are proficient in scientific inquiry, logical reasoning and problem solving will provide an officer corps ready to lead in each warfare community of the Navy and Marine Corps.

While the majority of midshipmen will choose their majors, the needs of the Naval Service take precedence. For the Naval Academy Class of 2013 and beyond, at least 65% of those graduates commissioned into the U.S. Navy must complete academic majors in science, technology, engineering, or mathematics disciplines. This institutional requirement applies as well to NROTC programs at other colleges. At the end of plebe year, midshipmen choose a major course of study with counsel from academic and military advisors.

Twenty-three majors are offered:

Aerospace Engineering
Arabic
Chemistry
Chinese
Computer Science
Computer Engineering
Economics
Electrical Engineering
English
General Engineering
General Science
History
Information Technology
Mathematics
Mechanical Engineering
Naval Architecture
Ocean Engineering
Oceanography
Operations Research
Physics
Political Science
Quantitative Economics
Systems Engineering

Some of these areas offer additional specialization within the major. For example, the aerospace engineering major has tracks in aeronautical engineering and astronautical engineering reflecting the Navy's interest in atmospheric and spatial flight. Minors in French, German, Spanish, Russian, Japanese, Arabic and Chinese are offered to those who complete four advanced courses in one of these languages while at the Academy.

Special Academic Opportunities

Students who excel at the Naval Academy have many opportunities to challenge and advance themselves through several special programs.

Trident Scholars

The Trident Scholar Program provides an opportunity for some exceptionally capable midshipmen to engage in independent study and research during their first class (senior) year. Following their selection to the program at the end of their junior year, Trident Scholars conduct year-long independent research in an area of their interest, working closely with a faculty advisor who is an expert in the area that the Scholar has chosen to investigate. Trident Scholars carry a reduced formal course load to give them sufficient time for in-depth research and for preparation of a published thesis. Trident Scholars often report their findings of national conferences related to their field. Current Trident Scholars come from many different majors and research topics that range from "Analysis and Optimization of Vortex Oxidizer Injection in a Hybrid Rocket Motor System," and "Search for Galactic Asymmetry: Developing a Star Count Model of the Galaxy," to "Design, Synthesis and Testing of Anti-malarial Compounds Based Upon a Novel Chemical Lead."

Bowman Scholar Program

The Bowman Scholar Program provides an opportunity for a small group of Naval Academy midshipmen who are seeking initial service assignments in the nuclear Navy to compete for appointments as Admiral Frank Bowman Scholars. Prior to their selection, candidates are screened for the Navy's nuclear power program by the Director, Naval Reactors. If selected for nuclear power training and subsequently appointed as a Bowman Scholar, the Scholar participates in a tailored research internship during one of the summer training blocks preceding first class year and then participates in a special research-based learning opportunity during his or her last year as a midshipman. During the first year of commissioned service after graduation, Bowman Scholars are generally offered immediate, one-year graduate education resulting in a master's degree in a technical discipline. Class of 2009 Bowman Scholars will be tackling research projects that range from "Material Alternatives for Rapid Metal Prototyping of Military Components," and "Analyzing the Mixed Radiation Field Environments of Naval Aviators and Aircrew," to "Alternate Biometric Algorithm Processing Using Parallel Logic in Field-Programmable Gate Arrays."

Honors Program

Midshipmen with excellent academic and leadership performance can apply for honors programs offered in history, English, political science, mathematics, oceanography, systems engineering, and economics. Honors students complete a thesis or research project and orally defend it before a panel of faculty members. Successful participants graduate with honors.

Voluntary Graduate Education Program (VGEP)

Midshipmen who have completed Academy course requirements early through any combination of validation and overloading can compete for selection and begin work toward master's degrees at nearby civilian universities, such as the University of Maryland and Johns Hopkins University Applied Phyiscs Laboratory. Up to 20 midshipmen can participate annually, starting graduate work during their first class year and completing their master's degree programs within seven months after graduation from the Naval Academy. Fields of study are selected from Navy-approved graduate education programs leading to Navy subspecialty qualification.

Academy-Wide Seminars, Research Projects and Interdisciplinary Courses

In addition to the Trident Scholar Program described on the previous page, every department offers research project courses, usually in the first class year year, available to most students. This is consistent with the Naval Academy's emphasis on project-based learning and "learning by doing." The high concentration of defense-related laboratories near Annapolis increases opportunities for midshipmen to become engaged in research relevant to the Naval Service.

In every semester, midshipmen can find a wealth of special seminars with prominent invited speakers on subject matter as varied as engineering systems under developed for the Navy and Marine Corps or regional politics in Africa or comparative culture. The proximity of the Academy to two major cities, Baltimore and Washington, D.C. provides a vast array of educational opportunities to supplement classroom learning.

Faculty from two or more disciplines at the Naval Academy find common areas of interest and do joint scholarly work or teach courses that are interdisciplinary and engage midshipmen from different majors.

Academic departments may offer seminars and individual research projects to upperclassmen on the following basis:

Seminars and Special Topics:

XX 481 and XX 482	1-0-1
XX 485 and XX 486	3-0-3 Advanced topics

Research projects:

A creative project in the student's field of interest. A faculty adviser must approve and monitor each project. *Prerequisite: described in the Academic Dean and Provost Instruction 1531.79.*

XX 491 and XX 492	0-2-1
XX 493 and XX 494	0-4-2
XX 495 and XX 496	0-6-3

Note: XX represents the departmental designator.

Naval Academy International Program Office

Developing foreign language and regional knowledge skill sets is the third core competency the Naval Academy seeks to instill in its graduates, along with ethical leadership and a strong technical foundation in science, mathematics, and engineering. The International Program Office (IPO) helps provide a focused approach to developing midshipman international awareness. The IPO is the principal point of contact, central coordinating office, and source of expert assistance for all international engagement. This includes foreign travel, visitor coordination, and student and faculty exchanges. The IPO focuses especially on developing midshipman opportunities that reinforce their capabilities in foreign languages and regional knowledge—particularly when these can be combined with Navy and Marine Corps theater security cooperation activities. Examples include semester study abroad at foreign military academies and civilian universities, summer education and cultural immersion opportunities, professional training aboard foreign navy vessels, sail training ships, and short-duration orientation visits. At least one quarter of each graduating class can expect to have a significant language or cultural awareness experience during their four years at the Academy.

Facilities

From wind tunnels to state-of-the-art chemistry labs, the Naval Academy has outstanding facilities and equipment in every phase of its program. Classrooms, labs and athletic facilities provide modern, well-equipped areas for learning and recreation.

The following are only some of the special academic facilities available:

- propulsion lab
- wind tunnels, both subsonic and supersonic
- 120-foot and 380-foot towing tanks
- coastal engineering basin
- environmental chamber facilities
- oceanographic research vessel, field laboratory and weather station
- 16-inch Cassegrain reflector telescope
- fully-equipped laboratories for chemistry, physics, engineering, oceanography and foreign language courses
- 12-meter satellite earth station
- computer network defense and attack facilities

Computers

The Naval Academy has been an educational leader in the use of computer technology since the 1960s. Today information technology is a mission-critical resource and the Academy strives to be one of the most wired, advanced, and forward-looking information technology campuses in the nation, highlighted by a system of multimedia (voice, video, and data) networks. A fiber optic, scalable, high-speed enterprise backbone, with a system of tailored virtual local area networks (vlans), is embedded in every building, office, conference room, classroom, and laboratory. This network also supports Bancroft Hall, the midshipmen's dormitory. Literally hundreds of miles of fiber, copper, and coax wiring give the Academy network unlimited expansion capability. The network provides Intranet and Internet access, multi-media capabilities, thin client applications, intelligent tools, and reliable integrated desktop technologies, on demand, to support teaching and learning, research, and social use. All 1,950 midshipmen rooms are fully networked with 24/7 video and data communications to each midshipman desk. Midshipmen are well equipped to profit from this environment. All midshipmen purchase a Naval Academy-specified personal desktop microcomputer and software during Plebe Summer. After introductory training, midshipmen use their personal computer in most academic courses and professional development.

Nimitz Library

The Nimitz Library includes a collection of more than 615,000 volumes of books and bound periodicals, plus government documents, microforms, audiovisuals, extensive holdings of manuscripts and archival materials in Special Collections and Archives, and a growing array of electronic resources. Special emphasis is on naval science and history. The Library's website (*www.usna.edu/Library*), including its web catalog and an extensive number of electronic journals, books and databases, is accessible via the Academy's network from the midshipmen's dorm rooms and faculty offices. Comfortable reading and study areas can accommodate more than 800 students. The Library also contains seminar and group-study rooms, as well as two electronic classrooms, and a coffee bar.

In close collaboration with other academic departments, Nimitz Library conducts a vigorous program of information literacy, educating students about how to obtain, use, and evaluate recorded knowledge as part of the research process.

A page of history is worth a book of logic.
—Admiral Hyman Rickover, Class of 1922

Writing Center

Open to all midshipmen, the Writing Center exists to help those needing writing assistance. The Writing Center is staffed by English department faculty members, both civilian and military, who are experts in composition and in working with students to improve their writing skills.

Math Lab

The Math Lab is available to midshipmen to supplement meetings with their own instructors. Staffed with faculty members of the Mathematics Department, the Math Lab provides assistance in all core mathematics courses to midshipmen throughout the academic day. Prior appointments are not necessary.

Class of 1963 Center for Academic Excellence (CAE)

All midshipmen have access to the CAE, which offers academic advising services and learning skills classes. Students who encounter academic difficulty during plebe year are referred to the CAE; here they can receive special academic advising, academic effectiveness classes and tutoring. A series of learning skills classes, including topics such as time management, note taking, effective reading, test taking and how to cope with challenges, is offered to interested midshipmen several times a year. The CAE also coordinates the Plebe Advising Program; individual faculty members serve as the advisors for a company of plebes during both plebe summer and academic year.

A part of the CAE, the Midshipman Group Study Program (MGSP) provides an opportunity for midshipmen to study with others taking the same course, to compare notes, to discuss important concepts, and to develop strategies for studying. Groups are directed by midshipmen who have done well in the course and are trained in leading others. The program provides assistance in chemistry, calculus, physics, statics/dynamics and several other courses.

Multimedia Support Center

The Multimedia Support Center (MSC) is the Naval Academy's audio-visual service. Midshipmen and faculty use the services of MSC to enhance teaching and learning at the Academy. MSC's facilities include graphics arts and computer presentation assistance, video audio-visual equipment loans, video-teleconference support, classroom display system installation and maintenance, and video broadcasting.

Resources Afloat

The fundamentals of seamanship, navigation and naval operations are taught in laboratories afloat on the Academy's many sail and power craft. The Robert Crown Center on the Severn River supports many of these activities, as well as recreational, intercollegiate and offshore sailing. The Naval Academy's large and varied fleet includes:

- 21 44-foot sloops;
- eight 30- to 66-foot ocean racing yachts;
- one J/22; one J/24: one Sonar;
- 22 420 dinghies, three Interclub dinghies, three Vanguard 15s;
- 21 FJ dinghies;
- 30 Navy 26 keelboats; and
- 50 Lasers

The Naval Academy's sailing program is comprehensive. It ranges from basic instruction to advanced intercollegiate dinghy and international-level, open-ocean racing. All midshipmen participate in sailing during Plebe Summer receiving sailing instruction in sloop-rigged keelboats.

Ours is a maritime nation, requiring the most powerful navies to protect our free rights to the farthest reaches of the seas.
—Lyndon B. Johnson

After Plebe Summer, midshipmen may try out for either the Intercollegiate Dinghy Team or the Varsity Offshore Sailing Team. Both racing programs are highly competitive and are consistently top-ranked nationally. Midshipmen may also participate in the Academy's Offshore Sail Training Squadron (OSTS). OSTS qualifies midshipmen to sail one of the Academy's 44-foot sloops offshore during summer cruise. Those who master the skills required will qualify as a Cruising Skipper or Senior Offshore Skipper (the Navy "D" Qual).

Professional Courses and Training

Professional courses and training are an important part of the Naval Academy's integrated program. Required courses in such areas as naval science, engineering, navigation and weapons systems promote a working knowledge of modern naval operations and technology. Courses in leadership, ethics and military law help prepare for leadership responsibilities as an upperclass midshipman and a commissioned officer. Physical education teaches the value of physical fitness and staying fit for life. Eight weeks of annual summer training introduces you to operational units of the Navy and Marine Corps, life at sea and the responsibilities of a junior officer.

Courses available as electives include leadership, psychology, sociology, anthropology, philosophy, ethics and military law.

It cannot be too often repeated that in modern war, and especially in modern naval war, the chief factor in achieving triumph is what has been done in the way of thorough preparation and training before the beginning of war.
—Theodore Roosevelt

Academic Year Courses and Training

Fourth Class Year

Professional courses — three required introductory classes in naval science and leadership. Courses include classroom studies and lab sessions in operational trainers and afloat in yard patrol craft.

Infantry drill — about 13 hours of infantry drill in the fall and spring, including four hours in the Brigade of Midshipmen dress parades.

Physical education — the Physical Education Department is tasked with accomplishing one third of the mission of the Naval Academy, to prepare midshipmen physically to become professional Navy and Marine Corps officers. This mission is accomplished through a thorough and rigorous course of instruction in the fundamentals of swimming, personal defense, lifetime fitness and recreational sports, and through the regular administration of the Physical Readiness Test. Midshipmen must meet physical education requirements during their four years at the Naval Academy in order to graduate. Plebes are graded in:

- Swimming — 100-meter crawl stroke; 50 meters using the breaststroke and elementary backstroke (seven to 11 strokes per 25 meters); 5-meter tower jump; 40-foot underwater swim; 200-meter swim (five minutes, 12 seconds maximum).
- Boxing — midshipmen are awarded grades based on proper form, offensive and defensive techniques, fortitude and ring craft during a competitive bout against an opponent of the same size, experience and gender.
- Wrestling — midshipmen are awarded grades based on takedowns, rides, pins, escapes, reversals and aggressiveness during a competitive wrestling bout against an opponent of the same size, experience and gender.

Third Class Year

Professional courses — two required in navigation, ethics and moral reasoning

Infantry drill — about 13 hours in the fall and spring, including dress parades.

Physical Education

- Swimming — midshipmen are required to meet a 3rd class swim qualification to pass the class. Additional skills for service selection specificity and grade include 400-meter swim (11minutes maximum); 50-meter sidestroke (seven to 11 strokes per 25 meters); 3 to 10-meter tower jump; clothing trouser) inflation in three minutes; 50-foot underwater swim fully clothed.
- Martial Arts I — midshipmen are awarded grades based on execution of the martial arts skills; breakfalls, upper and lower body strikes, counters to strikes, counters to front and rear assaults, sweeps, throws, offensive and defensive ground fighting, weapons fighting and a physically challenging culminating event.

Second Class Year

Professional courses — five are required, including courses in naval warfare, naval engineering and weapons. Also required are naval electricity and electronics and a leadership course that focuses on the dynamic interactions of leader, followers, and situation.

Infantry drill — about 13 hours in the fall and spring, including dress parades.

Physical education

- Swimming — midshipmen are tested and graded based upon their ability to meet Navy SWO, and Aviation aquatic requirements and Marine swim requirements. The Physical Education Department provides a letter to each service community recommending those midshipmen who have met the service selection aquatic and swim requirements.
- Personal conditioning/wellness-fundamental knowledge for a lifetime of health and physical fitness.
- Martial Arts II — midshipmen are awarded grades based on execution of advanced martial arts skills; advanced breakfalls, counters to strikes, counters to front and rear assaults, chokes and joint locks and counters, edged weapons, unarmed vs armed pistol, sweeps, throws, offensive and defensive ground fighting, weapons fighting and a physically challenging culminating event.

First Class Year

Professional courses — the three required courses are a control systems lab relevant to warfare systems, a law course covering military justice and the law of war, and a junior officer practicum aligned with service assignment plus an engineering course.

Infantry drill — leading the brigade in about 13 hours of drill, including dress parades.

Physical education

- Electives — opportunity to acquire skills in a lifetime carry-over activity (15 electives). Electives are offered in the first and second semester of the first class year in 15 lifetime carryover sports/activities: first aid, fitness, golf, water polo, racquetball, squash, tennis, volleyball, kayaking, gymnastics, weight training, advanced martial arts, swim conditioning, an introduction to climbing, and advanced climbing. All physical education subjects are graded.

In addition to the above requirements, all midshipmen are regularly required to pass the ***Physical Readiness Test.*** The PRTconsists of push-ups, curl-ups, and a 1.5 mile run. The PRT is administered each semester all four years.

- 1.5 mile run — maximum time for men: 10:30. Maximum time for women: 12:40.
- Push-ups and curl-ups — Men: minimum to pass in two minutes; 45 push-ups, 65 curl-ups. Women: minimum to pass in two minutes; 20 push-ups, 65 curl-ups (sit-ups).
- Sit and reach, touch toes in sitting position.

Summer courses and training

Summer training events are specifically sequenced into the Naval Academy's four-year education and training plan and reinforce your experiences in the classroom, on the athletic field, and in Bancroft Hall. The focus of your summer training is Fleet alignment. Each summer you will spend approximately four weeks immersed in the Fleet, maximizing your exposure to Navy and Marine Corps personnel, operations, and training.

Third class summer

Your cruise onboard a surface ship or submarine provides you a snapshot of a "day in the life" of Fleet enlisted personnel. You will become part of the crew, taking part in ship's operations and drills and standing underway watches. This opportunity allows you to experience the lives of the men and women that you will lead after commissioning.

Second class summer

You will complete Professional Training of Midshipmen (PROTRAMID), a program introducing you to the missions, equipment, and people of the major Navy branches and the Marine Corps. In one action-packed summer, you fly in Navy aircraft, dive in a nuclear-powered submarine, drive Navy ships, and participate in Marine Corps combat training.

First class summer

In the final summer, you get a chance to act as a division officer in training, interacting with a Wardroom and the Chief Petty Officer. Warfare cruise options are surface, submarine, aviation, Special Warfare (SEAL), and Explosive Ordnance Disposal (EOD) cruises, as well as Marine Corps training (Leatherneck and Marine Air-Ground Task Force). This cruise experience will help you decide upon your warfare community preferences prior to service assignment during your final fall semester.

Other summer training opportunities

In addition to a Fleet training event, you will complete another four-week summer training event providing you professional development as a future officer. These opportunities include:

- Demonstrating leadership ashore with assignment to Naval Academy and Naval Academy Preparatory School instructional details or Naval Academy Summer Seminar detail.
- Demonstrating afloat leadership and mariner skills on USNA Yard Patrol craft or Navy 44-foot sailboat cruises.
- Overseas (international) training, such as language studies, cultural studies, and exchange cruises with foreign navies.
- Academic summer school to make up previous unsatisfactory performance in the classroom or to get ahead in curriculum requirements for your major. Summer school is normally done in lieu of taking summer leave and is not designed to replace the Fleet or professional development training events.

Being at the Naval Academy has trained me to accomplish more in a day than I ever thought possible.
—Midshipman 1/C Jordan Rusk, Class of 2012

Leadership Development

The purpose of the United States Naval Academy is to grow, shape and motivate leaders of character for the naval service who will serve the nation in peace and war. The Academy has a deep and abiding commitment to the moral development of its midshipmen and to instilling the naval service core values of honor, courage and commitment. The ultimate goal is to develop leaders by integrating the moral, ethical and character development of midshipmen across every aspect of the Naval Academy experience. The integrated leadership development program is the single most important feature that distinguishes the Naval Academy from other educational institutions and officer commissioning sources. The the four-year developmental program produces graduates who:

- possess fundamental knowledge of human behavior and the dynamic science and art of leadership in the military;
- understand midshipman/junior officer leader role responsibilities and values;
- demonstrate analytical and critical thinking related to leadership in the military;
- apply elements of personal character, ethics and the responsibilities of military officership;
- exercise essential individual, interpersonal and organizational leader skills and abilities; and
- express motivation for continued leader development and military officership.

Elements of the leadership development program include:

• *Admission Candidate Statements and Recommendations.* Candidates for admission are required to write an essay on a significant character-developing experience that they have had, and teachers completing recommendations for candidates are specifically asked to comment on the character and integrity of candidates as compared to their peers.

• *Plebe Summer Training.* Many hours of training during Plebe Summer lay the foundation for character and leadership development as a midshipman. Twelve hours of classroom education are provided to assist the entering class to understand their obligations and responsibilities as a future commissioned officer in the profession of arms and includes topics such Officership, duty, and honor.

• *1/C Officership Capstone Seminars.* Four years of Leadership Development programs culminates in a Officership Capstone Seminar. This seminar is dovetailed with the academic courses in leadership and moral reasoning taught throughout the midshipman's four years at the academy. The goal of this seminar is to support the mission of the Naval Academy by providing first class midshipmen the opportunity to discuss some complex ethical and moral issues. Topics are discussed in small groups, which include a mix of midshipmen and staff/faculty members. The seminar gives each first class midshipman a valuable opportunity to

test his or her thoughts, and challenges those of their peers. This experience is enhanced by input from faculty and staff members in addition to interested alumni, who have experienced similar situations either as commissioned officers in the fleet or civilian professionals who can provide valuable insight from a non-military view not otherwise considered, but important to understand when making a decision. The seminars provide a forum in which midshipmen ideas and solutions to fleet-related problems can be tested. In addition to topics appropriate to their future commissioned service, a guest speaker is invited to add an experienced perspective. Each first class midshipman is required to attend one of these day-long seminars that are offered numerous times throughout the academic year. These seminars are funded by private donations from the Elliott family and the HERO Campaign for Designated Drivers in memory of their son, Ensign John Elliott, Class of 2000.

• *Honor Remediation Program.* The midshipmen who are found in violation of the Honor Concept but retained by the Commandant or Superintendant are placed into a comprehensive honor remediation program. This program places the midshipman under the mentorship of a senior officer for a designated period, usually four months. This introspective period requires readings and personal reflection on honor, extensive discussions with the mentor, participation in community service, and completion of a written thesis.

• *Character Development Speakers Program.* During Plebe Summer, prominent speakers from the Navy and Marine Corps are brought in to talk about the naval service core values of Honor, Courage, and Commitment. The Naval Service Core Values Speakers program enables the new class to interact with such prominent leaders as Major Christopher Bronzi, USMC (*Courage*); Admiral Charles Larson, USN (Ret.) (*Navy Core Values*); Captain Gerald Coffee, USN (Ret.) (*Honor*); MGEN Charles Bolden, USMC (Ret.) (*Commitment*); and Ms. Nesse Godin, Holocaust Survivor (*Surviving the Holocaust*).

The daily routine demands a blend of practical application to classroom techniques that is truly a work-study environment at its finest. I've never felt inhibited by the curriculum or deprived in any sense. Instead I'm given opportunity to regularly make decisions that amount to the best leadership training available.
—1st Lieutenant Dave Parker, USMC, Class of 2008

Grading

Grades have an added dimension at the Naval Academy in that they affect your status and privileges as a midshipman. As the major determinant of class rank, they also influence ship selection or advanced training scheduling following service assignment and seniority upon graduation and commissioning.

We use a letter grading system with these values, called quality point equivalents, or QPE:

A = 4.0 (Excellent)
B = 3.0 (Good)
C = 2.0 (Satisfactory)
D = 1.0 (Marginally passing)
F = 0.0 (Failing)
I = No Value (Incomplete)
W = No Value (Withdrawn)

Grades are averaged using a weighted semester hour system called the quality point rating or QPR. The QPR is figured by multiplying the QPE received in each course by the semester hours of credit for the course. That total is divided by the total number of hours completed in the semester. You earn semester QPRs and a cumulative QPR (CQPR) based on all of your grades.

Midshipmen must maintain a cumulative QPR of 2.0 or above or they risk academic probation or dismissal. As required by law, the Academic Board reviews the records of academically deficient midshipmen. Midshipmen subject to academic discharge are those who fail two or more courses; have a semester QPR below 1.5; fail to remove academic probation; are two or more courses behind in the matrix of the assigned major; do not fulfill a requirement previously assigned by the Academic Board; or do not complete all graduation requirements by the end of the first-class year.

Grades in military performance, conduct, physical education and summer professional training are not included in the QPR, but they are figured into class standing. Satisfactory performance in professional areas is required.

Recognition of Excellence

Three honor categories recognize midshipmen with outstanding academic and professional records:

Superintendent's List — midshipmen with a semester SQPR of at least 3.4 with no grade of D, F, I in any course; grades of A in conduct and A in military performance, and A or B in physical education and A or B in the Physical Readiness Test.

Dean's List — midshipmen not on the Superintendent's List with semester SQPR of 3.4 with no grade of D, F, I in any course; grades of at least a B in conduct and B in military performance, and a C or better in physical education and C or better in the Physcial Readiness Test.

Commandant's List — midshipmen with a semester QPR of at least 2.9, grades of at least B in military performance, A in conduct and A or B in physical education and A or B in the Physical Readiness Test.

Honor societies

A number of national scholastic honor societies are represented at the Naval Academy. Midshipmen who excel academically may be recommended for membership in these societies:

Omicron Delta Epsilon — international honor society for economics. Midshipmen candidates for election to the Naval Academy chapter need not be economics majors but must have an overall scholastic average of B and at least twelve credits in economics with a B average or better.

Phi Alpha Theta — international honor society for history. Membership includes both faculty and students who participate in forums and seminars, also hosting guest speakers and regional meetings of the society.

Phi Kappa Phi — for superior scholarship in all fields of study. Up to six percent of the midshipmen of each class may be chosen to join, half during their second-class year and half in first-class year.

Pi Sigma Alpha — national honor society for political science. To be eligible for membership, midshipmen must stand in the upper one-third of their class with a B or better average in at least 15 hours of political science courses.

Phi Sigma Iota — international honor society for foreign languages. To be eligible for membership, midshipmen must have an overall B average, a B average in foreign language courses and have completed advanced courses in foreign languages.

Pi Tau Sigma — national mechanical engineering honor society. Midshipmen majoring in mechanical engineering who stand in the upper third of their class as seniors or the upper fifth as juniors are eligible for membership.

Sigma Pi Sigma — physics honor society, affiliated with the American Institute of Physics and the American Association for the Advancement of Science. Midshipmen candidates for membership must have completed three semesters of physics with at least a B average and must be in the upper one-third of their class in general scholarship.

Sigma Tau Delta — national English honor society. To be eligible for membership, midshipmen must be in the upper third of their class with at least a B average in advanced English courses.

Sigma Xi — scientific research society that encourages original investigation in the fields of pure and applied science. The Naval Academy chapter includes members from the professional staffs of the academy and the Annapolis laboratory of the Naval Surface Warfare Center.

Tau Beta Pi — national engineering honor society. The top fifth of senior engineering majors and top eighth of junior engineering majors are eligible for membership.

Upsilon Pi Epsilon — international honor society for the computing sciences. To be eligible for membership, midshipmen must have a minimum of a 3.0 QPR overall and a 3.25 QPR in computer science or information technology courses.

Graduation Requirements

To be eligible to graduate, you must:

- complete at least 137 academic credit hours, including core requirements in engineering, natural sciences, humanities and social sciences;
- complete the courses required in your chosen major;
- achieve a final cumulative quality point rating (CQPR) of at least 2.0, a C average;
- meet required standards in professional studies and at-sea training;
- meet required standards of military performance, conduct, honor and physical education; and
- accept a commission in the Navy or Marine Corps, unless one is not offered.

In addition, the midshipman's major is designated on the degree for earning a CQPR of at least 2.0 in the major.

Awards

Outstanding midshipmen are recognized publicly during Commissioning Week. A number of organizations and individuals sponsor more than 200 prizes and awards honoring midshipmen for excellence in academics, professional studies, leadership, and athletics.

Advanced Education

Postgraduate education is encouraged for all naval officers and is virtually a requirement for professional advancement in the changing, complex world of today's Navy and Marine Corps. Nearly all graduates go to advanced professional training en route to their first duty assignments. New Marine Corps officers go to The Basic School at Quantico, Virginia. Navy ensigns go to nuclear power school, flight training or other schools, depending on their chosen specialty and the nature of their first assignment. Professional training continues throughout a Navy and Marine Corps career. Naval Academy graduates can earn advanced academic degrees in several areas besides the Voluntary Graduate Education Program (VGEP) discussed on page 59. Most officers are automatically considered for graduate school when they complete their first duty assignment. If selected, they can enter master's degree programs at the Naval Postgraduate School in Monterey, California, or at an approved civilian university.

Midshipmen with outstanding academic records can compete for a number of scholarships for postgraduate school right after graduation from the Naval Academy or after an initial operational assignment. There's also a program for up to 15 graduates a year who want to

Since I was young I was interested in the military. When I went on a few missions to Mexico, I realized how lucky I was to live in the United States and wanted to give something back to my country. Now I know it's such a blessing. I'm serving my country and doing what I love.
—Ensign Chelsea Wright, Class of 2010

combine careers in medicine and the Navy; to prepare for this program, midshipmen usually major in chemistry and then enter civilian or armed forces medical schools soon after graduation and commissioning.

The following graduate education programs are currently available:

Navy Burke Program (Junior Line Officer Advanced Educational Program) — open to 15 qualified graduates in each class for study toward a master's degree in science or engineering. These studies, usually at the Naval Postgraduate School, begin after one operational tour of two to four years.

Marine Corps Burke Program — open to 15 graduates from each class who enter the Marine Corps. Graduate study begins approximately two years after commissioning. Selectees may choose their field of study from an extensive list of disciplines.

Olmsted Foundation Scholarships — established by the George and Carol Olmsted Foundation in cooperation with the Department of Defense. These scholarships support two years of graduate education at foreign universities, using foreign languages, for Navy and Marine Corps officers. Two Naval Academy graduates who have served between three and eleven years of active duty are eligible each year.

Under all circumstances, a decisive naval superiority is to be considered a fundamental principle, and the basis upon which all hope of success must ultimately depend.
—George Washington

Naval Academy graduates may qualify for a number of immediate scholarships awarded for study at civilian colleges and universities. These graduate studies can be pursued in various fields while graduates receive pay as commissioned Navy and Marine Corps officers. Up to 20 members of each class can begin postgraduate studies under these scholarships immediately after graduating from the Naval Academy. Such scholarships include:

It is an experience unlike any other. I have yet to find anything else that truly forces you to step out of your comfort zone as much. I believe that if you are always comfortable, you are probably not improving. In which case, what is the point of education? —LTJG Erica Reid-Dixon, USN, Class of 2008

Rhodes and Marshall Scholarships for two years of graduate study in any field leading to a master of arts or master of philosophy degree — at Oxford for the Rhodes Scholarship or at any university in the United Kingdom for the Marshall Scholarship. Forty-six midshipmen have won the Rhodes Scholarship since 1930, when Navy participation began. There have been 24 Marshall scholars since 1981.

Gates Cambridge Scholarships for two years of graduate study at Cambridge University in England.

Truman Scholarship for graduate study in any major, with emphasis on public service. Up to four midshipmen are nominated during their junior year.

William H.G. FitzGerald Scholarship — supports two years of graduate study at Oxford University in England for one Naval Academy graduate each year.

Thomas Pownall Scholarship — supports two years of graduate study at Cambridge University in England for one Naval Academy graduate each year.

Otto A. Zipf Scholarship — supports two years graduate study at the Ruprecht-Karl University of Heidelberg, Germany, for one Naval Academy graduate of each class.

Hertz Fellowship (Fannie and John Hertz Foundation) for graduate study in the applied physical sciences at a choice of 27 universities.

National Science Foundation (NSF) Fellowship leading to a master of science or a master of arts degree in the mathematical, physical, biological, engineering, and social sciences and in the history and philosophy of science.

Draper Laboratory Fellowships for graduate study in technical majors at the Massachusetts Institute of Technology, Boston University or Northeastern University.

Immediate Graduate Education Program (IGEP) — 14 submarine officers in the Bowman Scholar Program each year, starting in June or July following graduation from the Naval Academy. Graduates selected for IGEP complete a one-year technical master's degree at the Naval Postgraduate School.

Midshipmen may apply for other scholarships at civilian universities in aerospace engineering, computer science, electrical engineering, mathematics, mechanical engineering, nuclear engineering, and physics.