l'm not a robot



## Naval academy majors

California State University Maritime AcademyVallejo, CA•82% accept rateEmbry-Riddle Aeronautical University - PrescottPrescott, AZ•74% accept ratePoint University West Point, GA•47% accept rateEmbry-Riddle Aeronautical University - PrescottPrescott, AZ•74% accept ratePoint University West Point, GA•47% accept rateEmbry-Riddle Aeronautical University - PrescottPrescott, AZ•74% accept ratePoint CollegeThroggs Neck, NY•74% accept rateUnited States Military Academy | ArmyWest Point, NY•11% accept rateUniversity of North Carolina at Chapel Hill | UNCChapel Hill | UNCChap needs. Aerospace systems are operated in unforgiving environments that demand rigorous engineering standards and state-of-the-art materials, analysis, and design tools. The major has two tracks: Aeronautics emphasizes vehicles and systems (manned and unmanned, fixed-wing) that remain within the atmosphere. Astronautics emphasizes vehicles and systems (manned and unmanned) that operate outside the atmosphere, as well as the launch vehicles that get them into space. Two courses in the 3/C year introduce students to the fundamental of both tracks. such as aerodynamics, orbital mechanics, space environment, propulsion, structural design, stability and control, and vehicle design. Both tracks are supported by modern laboratory facilities. Students conduct experiments in research-quality wind tunnels with air speeds ranging from subsonic to supersonic. A unique rotor lab is used for studying the performance of helicopter rotors and propellers. Propulsion systems are studied by operating reciprocating engines, gas turbines, and rocket motors. Aircraft performance, stability and control principles are taught in the classroom using simulators and are demonstrated in flight with the department's twin-engine aircraft. A satellite ground station allows for monitoring and communicating with the International Space Station and other satellites in orbit. A satellite environmental testing laboratory supports thermal, thermal-vacuum, and vibration tests for student-built small satellites. In the 1/C year, aerospace engineering students immerse themselves in team-driven capstone projects to design, construct, and operate an aircraft, spacecraft, or similarly interdisciplinary system. Recent aeronautics projects involved remotely-piloted aircraft and rotorcraft designed to carry out a variety of missions. Astronautics projects involved small satellites and payloads launched into Earth orbit to test concepts for future space exploration. These capstone projects often entail collaboration with scientists and engineers at the Naval Research Laboratory, NASA, or other agencies. Capstone teams have also competed and placed well for several years in the NASA student Launch competition, and provided specialized knowledge and skills on interdisciplinary projects such as the Formula SAE car. Opportunities A variety of summer internships with corporations such as Boeing and Lockheed Martin and government agencies such as NASA, SPAWAR, NRO, NRL, and NAVAIR have majors working with engineers and test pilots and personnel on the development and operation of air and space vehicles. Naval Academy aerospace engineering graduates find success in all service assignments. They regularly earn opportunities to enter graduate school, the U.S. Navy Test Pilot School, the U.S. Navy Test Pilot School, the Navy Space Cadre, and to fulfill critical roles in program offices improving and testing naval aviation platforms and missiles. Considerations for those who might be interested in this major Aerospace students like the combination of big-picture thinking and technical expertise that go into air and space vehicle design. They value how mathematics and computers provide us with a language and a means for formulating and solving real-world problems. They also recognize the value of aerospace engineering knowledge, technologies, and ways of thinking in many other industries such as automotive, wind power, and solar power. Aerospace majors are rewarded with a comprehensive, relevant education that serves them well in the fleet and in future career and education opportunities. Aerospace Engineering Department Site 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. The following majors are offered from which midshipman may select to study: \* = honors program available, + = STEM major, # = majors no longer available to class of 2028 While the majority of midshipmen will choose their majors freely, 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. Some of these areas offer additional specialization within the major. Minors in French, German, Spanish, Russian, Japanese, Arabic and Chinese are also available. 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, General science is, as its name suggests, not a single discipline. Rather, it draws from subject matter offered by each of the departments in the School of Mathematics and Science. The major allows midshipmen to pursue a broad program in the field of physical applications of twelve courses of which nine are specified and three are elective. The required courses are introductory courses in general oceanography, atmospheric science, modern physics, basic programming, differential equations, the mathematics of naval tactics, underwater acoustics and sonar, biology and the philosophy of science. Two of the elective courses may be chosen from a very large menu of courses in mathematics, science and engineering for which the prerequisites are the aforementioned introductory courses. The third elective is fairly unconstrained. Opportunities Midshipmen who graduate from the Naval Academy having succeeded in the general science major will have a strong technical background that has prepared them well for any aspect of naval service. Some may be able to enter graduate study in more specialized programs. Considerations for those who might be interested in this major Very few midshipmen choose general science initially. Instead, they transfer into it after finding their initially assigned major to be a poor fit or more narrowly focused than expected. The major is designed to allow such midshipmen to complete graduation requirements in a strong science program. As described above, the structure of this major is more flexible than any of the other technical majors. In particular, courses taken previously in another technical major may count in meeting some of the requirements of general science. This should not be understood to mean that general science provides a soft path to graduation; it does not. To achieve success in the general science major requires dedication, effort, and fundamental skills in mathematics and science. General Sciences, engineering, and radiation physics to the design and development of nuclear power systems and other radiological applications of interest to national security as well as industrial and medical problems. The major is broad-based and covers fundamental engineering subjects such as solid and fluid mechanics, material science, thermodynamics and heat transfer. It also encompasses the study of nuclear physics, nuclear power plants, numerical simulations, health physics, radiation instrumentation and measurement, nuclear proliferation, nondestructive testing using radiological techniques and the use of radiation for medical diagnostics and testing. After completing the nuclear engineering program at the Naval Academy, one will be well prepared to enter a multitude of technical naval and civilian careers. After taking fundamental engineering courses and introductory courses in nuclear engineering and nuclear physics, one takes courses in reactor physics, reactor design, nuclear energy conversion, and radiation engineering. The major culminates with a capstone design experience in the first class year that provides midshipmen with a relevant, practical opportunity to incorporate what they have learned into a single project. The program takes seriously the need to develop graduates who have a sound understanding of the design process and its importance in the success of engineering activities. Each capstone team is expected to design, build or model some type of nuclear- related system Laboratories and testing facilities dedicated to the nuclear engineering curriculum are some of the best in the country for an undergraduate education. They include a subcritical nuclear reactor, two neutron sources. A large range of internships are available at Naval Laboratories, DoD facilities, and National Laboratories during the intersessional period. Internships introduce midshipmen to such topics as advance radiological sensors, nuclear weapon effects, shipboard radiological controls, and nuclear propulsion. prepares its graduates to assume responsibilities in the U.S. Navy and U.S. Marine Corps which involve the operation and maintenance of highly technical systems. With a bachelor's degree in nuclear engineering, a Navy or Marine Corps which involve the operational sea billets in surface ships, submarines, surface nuclear ships, and aircraft squadrons provide a wealth of opportunities for a nuclear engineering are in demand in naval service and civilian life. Considerations for those who might be interested in this major As a student of nuclear engineering, learning will primarily take place via active problem-solving. Therefore, application and practice of analytical skills are essential elements of engineering practice and are emphasized throughout the program Computer programming and simulation software skills will be employed to analyze and report data. Successful and satisfied engineering majors are often those that have a desire to understand the mathematical and physical relationships that underlie engineering analysis and design. Mechanical and Nuclear Engineering Department Site The Foreign Area Studies major is designed to give insight into the study of particular areas, enriched through social scientific research (including theories and methods surrounding cultural studies) and the investigation of humanistic endeavors, i.e., how the knowledge of a given culture, with its particular language, economy, literature, art, political structure and history, constitutes the basis for a better understanding of the societies of the world, including one's own. The goal is to go beyond American and Eurocentric points of view in order to understand the world from a more native perspective, to uncover the internal logic that is reflected in various expressions of deep-rooted cultural values. The assumptions, meanings, social structures and dynamics of another society and culture are thus made more comprehensible, creating opportunities for self-reflection that may expand and even challenge assumptions about one's own society and culture. Opportunities Majoring in FAS opens doors to USNA-sponsored Language Summer Study Abroad Programs (LSAP) as well as semester abroad programs (SSA) throughout the world. career that includes service as a Foreign Area Officer (FAO). With the FAS major under their belts, midshipmen will be able to analyze, understanding of a region. Considerations for those who might be interested in this major While the FAS major is by definition interdisciplinary, midshipmen should also focus on one or more of the following academic specialties: Cultural Studies, History or Political Science. Midshipmen should also focus on one or more of the following regions and languages. Note: for the classes of '24, '25, and '26, only the first two areas listed below are to be offered. The other regions will be offered in future as the program develops. • East Asia/Eurasia: Chinese, Japanese and Russian• Middle East/North Africa: Arabic, French, German, Portuguese Europe: French, German, Portuguese, Russian and Spanish• Latin America: Spanish and Portuguese Europe: French, German, Portuguese Europe: French, German, Portuguese, Russian and Spanish• Latin America: Spanish and Portuguese Europe: French, German, Portuguese, Russian and Spanish• Latin America: Spanish• Latin America Department Site Once upon a time, midshipmen took a so-called "core curriculum" that led to every graduating midshipmen in the majors program started in 1969, when it required the Class of 1972 to complete a major in order to graduate. Qualifying midshipmen in the 1969 graduating class that year received the first designated engineering, mechanical engineering, mec all designed as USNA notes, 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. engineering and mathematics (STEM). Although the selection is much greater than it was in the past, engineering still remains one of the most popular majors. While majors across various schools, divisions and departments: The Naval Academy also offers minor degrees in French, German, Spanish, Russian, Japanese, Arabic and Chinese. \* = honors program available, + = STEM majors are decided after the first year of study. As midshipmen finish their plebe year, they work closely with their academic and military advisors to select their majors. In the following fall as third classmen when they're known as "Youngsters," midshipmen begin to take the classes that fulfill these majors. Although the Naval Academy is different in most ways from a typical college, most midshipmen can choose their major like students do at other colleges. However at the Naval Academy, the needs of the Naval Service always take precedence. Therefore, starting with the Class of 2013, and expanding to NROTC college programs, at least 65 percent of the U.S. Naval Academy graduates commissioned into the U.S. Naval Academy graduates Midshipmen often delve into these majors with increased levels of specialization. Core Courses for All Regardless of the majors aren't selected until their second year, all plebes take the same core courses, which are required study. Since majors aren't selected until their second year, all plebes take the same core courses during their first year. As they progress, midshipmen will take coursework from both the core and majors courses. The core forms the basis for both a "sound general education and strong professional development" that readies them for participation in any warfare community in the Naval Academy Majors and Accreditation All classes at the Naval Academy are accredited by the Middle States Commission on Higher Education (MSCHE). The Engineering, computer engineering, general engineering, general engineering, mechanical engineering, naval architecture and marine engineering, nuclear engineering, ocean engineering and systems engineering (now known under the name of robotics and control engineering) degrees. The Computing Accreditation Commission (CAC) of ABET, Inc. accredited by the American Chemical Society. Beyond the quality that these accreditations confer, these programs are also highly respected for their rigor. If you thought applying to the Naval Academy was hard due to the eight percent acceptance rate, you won't be surprised to learn that excelling in these classes can be even harder; USNA was ranked as the number one public school in the most recent U.S. News and World Report rankings. Graduating with a Degree—and a Purpose Therefore reaching graduation is a huge cause for celebration. At the end of May, commissioning week culminates in an incredibly moving graduation is a huge cause for celebration. At the end of May, commissioning week culminates in an incredibly moving graduation is a huge cause for celebration. the top 10 percent of their class academically graduate with distinction. Midshipmen who have finished special honors programs in one of the selected majors graduate with honors. All midshipmen receive a Bachelor of Science degree, whether they are commissioned in the U.S. Navy or the U.S. Marine Corps, and regardless of which major and minor they earned. This is in accordance with the law, since the core curriculum has such technical content. However no matter what accolades they've earned, the honor of graduating with an esteemed Naval Academy diploma is a point of tremendous pride. Naval Academy diploma is a point of tremendous pride. physical skills, and they leave the Naval Academy as fully commissioned officers who are prepared to lead their country with the highest standards as their guides. No matter what major and minor they've chosen, their USNA degree has equipped them for excellence. The oceanography major is designed for the "hands-on" student with a strong interest in the physical and dynamic properties of the ocean and atmosphere. Oceanography majors reinforce knowledge gained in the classroom with underway and computer laboratories and conduct current fleet experience and permanent military professors. Oceanography majors take 13 courses in oceanography, meteorology, and applied mathematics. Students in the honors program take 14. Oceanography attracts a diverse cross-section of midshipmen that has included a Rhodes Scholar, several Trident Scholars, varsity athletes, high-ranking members of the Brigade leadership and many students whose research work has been published in professional conferences and journals. A prospective major can expect to take two courses in general oceanography and a course on the dynamics of the atmosphere during third class year. courses on atmospheric thermodynamics, quantitative methods in the science of the ocean and atmosphere and research methods if selected for honors. The list of available electives is diverse and includes geological oceanography, estuarine oceanography, global climate change, synoptic meteorology, tropical meteorology, and environmental remote sensing. The first class year includes required courses in waves and tides, underwater acoustics and sonar, mathematical modeling of the ocean and atmosphere and a faculty mentored capstone or honors research project. Opportunities Faculty-directed field and computer-based research opportunities include the retreat of glaciers associated with global climate change, the survey of century-old ship wrecks, ocean turbidity in Key West, oxygen depletion and oyster populations in the Chesapeake Bay, and wind regimes over the Andes mountains in Chile. Our robust internship program includes storm chasing over the midwest, flying through hurricanes over the Atlantic Ocean, analyzing satellite imagery of icebergs, sampling sea ice in the Bering Sea and a week in Antarctica that includes a flight to the South Pole. After graduation, oceanography majors may pursue careers in surface warfare, submarines, naval aviation, the Marine Corps (air and ground), special warfare, and other fields. Opportunities exist for immediate graduate school at the University of Rhode Island, Massachusetts Institute of Technology or Scripps Institute. After their initial tours, a few transfer into the naval oceanography community and obtain advanced degrees at the Naval Postgraduate School in Monterey, California. After transition to the public sector, employment opportunities exist in the federal government (NOAA, NSF, USGS, NASA, EPA, Department of Energy), numerous academic institutions that offer courses in oceanography and meteorology related fields, and in private industry (engineering companies, fisheries, petroleum industry and marine policy). Considerations for those who might be interested in this major Because the major is scientifically diverse and technologically oriented, prospective students should be inquisitive and persistent, have a strong background in mathematics and be comfortable with the use of computers. Midshipmen are attracted to the major because they are interested in the ocean or the atmosphere and want to learn the science of the Earth's environment. Ocean and Atmospheric Sciences Department Site Chemistry is the study of the composition, structure and properties of matter on the atomic and molecular level and the investigation of the laws that govern changes in matter. It is sometimes called "The Central Science, explosives, propellants and medicine (to name a few) are fundamentally based on chemistry. Now is an especially exciting time to study chemistry. Advances in our ability to manipulate molecules and even atoms (nanotechnology) will lead to faster and more efficient devices. The Human Genome Project and biotechnical advances have led to a molecular-level understanding of disease and possible treatments. New materials, with unusual optical, electrical or mechanical properties are constantly being developed and used in a host of military and civilian applications. Chemistry will play a key role as the nation and society transition from a fossil fuel-based economy in the coming century. The chemistry major at the Naval Academy provides midshipmen with training in all of the discipline's traditional fields, leading to a bachelor of science degree certified by the American Chemical Society. All chemistry majors take courses in organic, inorganic, analytical, physical and biochemistry. In addition to the required courses, midshipmen may take advanced courses in each of these subject areas along with other specialized areas such as polymer chemistry, environmental chemistry, and medicinal chemistry. Midshipmen in the chemistry major will develop the ability to make critical observations, keep accurate records, conduct and explain scientific research, and solve modern scientific research, and solve modern scientific research, and solve modern scientific research projects during the 1st class year enable midshipmen to investigate topics of personal interest to them under the guidance of a faculty member. Many chemistry majors travel to present the results of their work at regional or national chemistry meetings, the service academy exchange program, become Trident scholars, and occasionally begin a graduate education program. The chemistry faculty possesses a wealth of experience, not only in their academic understanding of chemistry, but also in practical applications of chemistry major gives midshipmen a solid background in scientific principles required for any of the technical disciplines in which they will work as naval officers. It also provides an excellent academic base for graduate studies in such diverse fields as medicine, oceanography, operations research, management and engineering. Considerations for those who might be interested in this major Chemistry is an experimental science and the major involves a significant amount of laboratory and hands-on work with sophisticated scientific instruments. A solid foundation in math and a curiosity about how things work at the molecular level is necessary. Chemistry offers challenging and fulfilling career opportunities to people with inquisitive minds who are creative, persistent, interested in solving problems, think independently, work well with details, have keen powers of observation and follow logical paths of reasoning. Chemistry can be both an independent and collaborative science, so self-discipline and teamwork are both important. Chemistry Department Site