

# TECHNICAL SCHOLARS PROGRAM



West Point  
**READY** 

READY TO SERVE. READY TO LEAD.



Lynne Mooradian, Class of 2020, commissioned as a Military Intelligence Officer. Having majored in Mechanical Engineering with focus areas in biomechanical and pre-medical tracks, Lynne quickly found her passion at the nexus between engineering, technology, and medicine. Lynne spent much of her time outside of the classroom participating and eventually leading the Women's Track and Field Team as the Team Captain; she also served as the Brigade's Academic Officer during her senior year. Lynne won the Marshall Scholarship in 2020, where she went on to pursue a Master of Philosophy in Biotechnology at the University of Cambridge and a Master of Science in Science and Technology in Society at the University of Edinburgh. Lynne also won the National Science Foundation's GRFP, which she chose to defer for use later in her career.

## OVERVIEW

West Point cadets are among the top performing undergraduate students in the country, and United States Military Academy (USMA) graduates have a long, proud history of earning graduate scholarships in the science, technology, engineering, and mathematics (STEM) fields. Since 1962, cadets have won 53 National Science Foundation Graduate Research Fellowships; since 1965, cadets have won 40 Hertz Foundation Fellowships. The Churchill Scholarship Program became an option in 2007 and has been awarded to three cadets in the years following. The Draper Laboratory and Massachusetts Institute of Technology (MIT) Lincoln Laboratory fellowships were initially offered in 2014-2015; cadets have won 19 Draper Laboratory fellowships and 68 MIT Lincoln Laboratory fellowships. The Purdue Military Research Institute Fellowship was recently added in 2021, and cadets have received seven awards in the two years it has been offered.

## USMA TECHNICAL SCHOLARSHIP AWARDS

SCHOLARSHIP	OFFERED AT USMA SINCE	WINNERS
NSF Graduate Research	1962	53
Hertz Foundation	1965	40
Churchill	2007	3
Draper Laboratory	2014	19
MIT Lincoln Laboratory	2015	68
Purdue Military Research Institute	2021	7

The USMA Technical Scholars Program is one of three scholarship programs under the umbrella of the West Point Consolidated Scholarship Program. The Technical Scholars Program focuses on cadets, supporting them in reaching their highest academic success while at West Point and assisting them in competing and winning appointments to elite scholarship programs (two undergraduate and six graduate opportunities).

The program also serves three strategic functions: provide intellectual capital to the Army in STEM fields to help support Army modernization, strengthen partnerships to bridge the

civilian-military divide, and provide strategic recruitment benefit to the Academy. The scholars program is a true highlight of cadet excellence, where many of our exceptional cadets and future leaders earn recognition for their performance and potential. This cohort is a clear demonstration of how our best and brightest graduates exemplify USMA and its academic program strategic goals

## UNDERGRADUATE SCHOLARSHIPS

The undergraduate scholarships consist of the Goldwater and Astronaut Scholarship.

### *Goldwater Scholarship*

The Goldwater Foundation awards scholarships to college sophomores and juniors who intend to pursue research careers in the natural sciences, mathematics, and engineering. Goldwater Scholars have gone on to win prestigious awards to support their graduate schoolwork such as the National Science Foundation Graduate Research Fellowship, Rhodes Scholarship, Churchill Scholarship, and the National Defense Science and Engineering Graduate Fellowship.

### *Astronaut Scholarship*

The Astronaut Scholarship Foundation was developed to aid the United States in retaining its world leadership in technology and innovation by supporting the absolute best and brightest scholars in science, technology, engineering, and mathematics while commemorating the legacy of America's pioneering astronauts. Like the Goldwater, many Astronaut Scholarship winners go on to win graduate scholarship awards to further their academic journey.

## GRADUATE SCHOLARSHIPS

The graduate scholarships available through the Technical Scholars Program consist of the Churchill Scholarship, the Hertz Fellowship, the National Science Foundation Graduate Research Fellowship Program (NSF GRFP), the MIT Lincoln Laboratory Fellowship, the Draper Laboratory Fellowship, the Purdue Military Research Institute Fellowship, and scholarships available through the National GEM Consortium. Many of the USMA scholarship winners each year win one or more of these technical scholarships, an important indicator of cadet intellectual excellence.

### *Churchill Scholarship*

Churchill Scholarships in science, mathematics, and engineering provide funding to American students for a year of master's study at the University of Cambridge, based at Churchill College. Sir Winston Churchill's vision of creating an exchange of scientific and technological knowledge between the US-UK drove the establishment of this program, with the goal of advancing science and technology on both sides of the Atlantic and helping to ensure our future prosperity and security.

### *Hertz Fellowship*

The Hertz Foundation awards fellowships to graduate students pursuing a PhD in the applied physical and biological sciences, mathematics, or engineering. This is the most robust offering within the Technical Scholarship graduate portfolio; the scholarship provides for five years of funding for graduate school. This capability allows cadets to pursue a Master of Science immediately following graduation and three years of funding for a Doctorate which the officer can defer to later in their career.

### *National Science Foundation Fellowship*

The National Science Foundation (NSF) Graduate Research Fellowship Program (GRFP) supports outstanding graduate students in NSF-supported STEM disciplines who are pursuing research-based master's and doctoral degrees. This is one of the most flexible scholarship options, widely available at institution across the nation and provides the option for cadets to defer the scholarship to later in their career, should the officer want to pursue military service immediately or win another scholarship which the officer must use immediately following graduation.

### *MIT Lincoln Laboratory Fellowship*

Cadets who win this scholarship serve as research assistants within one of the MIT Lincoln Laboratory's research groups. In return, the research group funds the cadet's pursuit of a Master of Science at a Boston-area institution.

### *Draper Laboratory Fellowship*

Draper Scholar Program, formerly known as the Draper Fellow Program, supports graduate students pursuing advanced degrees in engineering and the sciences. Like Lincoln Laboratory, Draper Laboratories fully funds a cadet's pursuit of a Master of Science at a participating program (some which are available outside of the Boston area) in exchange for their employment by the lab as a research assistant.

### *Purdue Military Research Institute (PMRI) Fellowship*

The Purdue Military Research Institute offers no-cost, resident graduate education for active-duty US military officers. The fellowship provides up to two years of funding for pursuit of a Master of Science at Purdue University in Lafayette, Indiana.

### *GEM Consortium Fellowship*

The GEM Consortium focuses on providing opportunities to historically underrepresented populations by aligning the applicant with practical summer internship experiences in their field during their graduate experience and funding the pursuit of a Master of Science at a participating institution.

## **IMPACT**

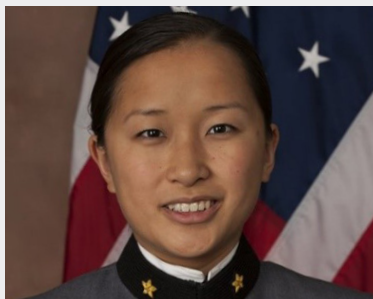
In addition, endowing a Technical Scholars Program Chair would provide the enduring capacity to promote and oversee the program, as well as provide the in-depth mentoring and guidance required for each candidate as they progress through the application process. The Chair would also provide a vital link in assisting candidates in coordinating external technical research and follow-on publications, an essential aspect of a successful application.

The Technical Scholars Program will help build and strengthen USMA's partnerships with other academic, industry and government institutions and organizations. It will highlight the Academy as an intellectual resource to the nation and ensure that USMA maintains its esteemed reputation and its ability to attract the best students.

Most importantly, this program will invest in and develop exceptional talent in the critically important STEM disciplines and provide West Point's top cadets with academic experiences that enhance their development and better prepare them for a life of service and leadership.

The cadets who apply for these scholarships, regardless of whether they win or not, come away with the skills and experiences needed to become well-rounded leaders who can meet the challenges of the 21st century. The process of applying for scholarships is immensely valuable to cadets, offering them opportunities to think critically, work collaboratively, and formulate visions of their future service.

Those who win scholarships and earn the opportunity to pursue postgraduate study immediately upon graduation undertake an unmatched educational experience while acting as ambassadors for the United States Army. Furthermore, the Academy's impressive performance in national scholarship competitions enhances the reputation of West Point and helps to attract America's most promising future leaders.



Jessica Zhu, Class of 2017, commissioned as Military Intelligence Officer. During her time as a cadet, Jessica majored in Operations Research and Chinese; she also conducted research with the National Reconnaissance Office, Department of State, and Sandia National Laboratory. She also spent a semester abroad in Taiwan, where she taught English to Taiwanese high-school students while completing her courses. Jessica graduated with honors in both Operations Research and Chinese. Jessica won a MIT Lincoln Laboratory Fellowship and attended MIT, where she pursued a Master of Science in Operations Research. Her research with Lincoln Lab focused on the application of language models to detect human trafficking efforts. She graduated MIT in 2019 and recently served as a data scientist in the U.S. Army Artificial Intelligence Integration Center (AI2C) within Army Futures Command.



Photo: Lee Ross '73

# FUNDING OPPORTUNITIES

## Technical Scholars Program Endowments ..... \$1.4 million

Cadet Finalist Program .....	\$700,000 endowment/\$28,000 annual
Scholarship Application Initiative .....	\$375,000 endowment/\$15,000 annual
Scholarship Interview & Travel Initiative .....	\$375,000 endowment/\$15,000 annual
Professional Technical Writing Workshop .....	\$250,000 endowment/\$10,000 annual
Scholarship Cadets' AIAD Program .....	\$250,000 endowment/\$10,000 annual
Cadet Research .....	\$200,000 endowment/\$8,000 annual

MARGIN OF EXCELLENCE



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