TECHNICAL SCHOLARS PROGRAM

West Point READY

READY TO **SERVE**. READY TO **LEAD**.

Goldwater Scholarship winner, CDT Nathon Segovia, Class of 2024, is a Physics major and a Launch Vehicle Design member on the Army Rocketry and Engineering Schiences (ARES) Team for the NASA Student Launch Competition. Having an interest in both theory and application, Nathon has been an intern at the National Security Agency's Laboratory for Physical Sciences (LPS) working on optimal control as well as the Los Alamos National Laboratory (LANL) simulating, constructing, and analyzing data on optical traps for quamtum technology applications. Nathon conducts research as a part of West Poin's Photonics Research Center (PRC) with a team in the Quantum Information and Science (QIS) Laboratory by applying a first-principles approach to open quantum systems to generate a quantitative model for guiding quantum technology experiments. Nathon intends to continue developing his research in quantum sensors but also intends to focus on expanding Latino representation in the field of physics and emphasizing theoretical physics.

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 57 National Science Foundation Graduate Research Fellowships and 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; since then, 27 cadets have been named Draper Scholars and 72 cadets have been awarded MIT Lincoln Laboratory fellowships. The Purdue Military Research Institute Fellowship was recently added in 2021, and cadets have received ten awards in the three years it has been offered. The undergraduate Goldwater Scholarship was first offered in 2018 with six cadets receiving awards, and the Astronaut Scholarship for undergraduates will be announced, along with its first winners, in 2024.

USMA TECHNICAL SCHOLARSHIP AWARDS

SCHOLARSHIP	OFFERED AT USMA SINCE	WINNERS
NSF Graduate Research	1962	57
Hertz Foundation	1965	40
Churchill	2007	3
Draper Laboratory	2014	27
MIT Lincoln Laboratory	2015	72
Goldwater (Undergraduate)	2018	14
Purdue Military Research Institute	2021	10
Astronaut (Undergraduate)	2024	*

* as of Academic Year 2023

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

The program also serves three strategic functions: provide Army modernization, strengthen partnerships to bridge the civilian-military divide, and provide strategic recruitment benefit to the Academy. The West Point 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 of scholars 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, and the Churchill Scholarship.

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 STEM 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 Scholars Program, and the Purdue Military Research Institute Fellowship. 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 with the scholarship providing for five years of funding for graduate school. This capability allows cadets to pursue a master's degree 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 if the officer wins another scholarship which the officer must use immediately following graduation.

MIT Lincoln Laboratory Fellowship

Cadets who win this scholarship conduct research 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. Draper Laboratory fully funds a cadet's pursuit of a master's degree at participating programs, some which are available outside the Boston area, while collaborating with Draper Laboratories on a research project.

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's degree at Purdue University in Lafayette, Indiana.

IMPACT

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

Endowing a Technical Scholars Program Chair would provide 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.

Most importantly, endowing this program will invest in and develop exceptional talent in the critically important STEM disciplines. It will 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 undertake an unmatched educational experience while acting as ambassadors for the United States Army. The Academy's impressive performance in national and international scholarship competitions enhances the reputation of West Point and helps to attract America's most promising future leaders to join the Long Gray Line.

National Science Foundation Graduate Research Fellowship winner, CDT Bryn Ellwein, Class of 2023, is a Mechanical Engineering major with a Middle Eastern Regional Studies minor, who joined the Signal Corps following graduation. During her time at West Point, Bryn conducted research on the fluid dynamics of wind-driven ventilation using magnetic resonance imaging and planar laser-indused fluorescence measurement techniques. CDT Ellwein also has an interest in culture and language, which she explored during her semester abroad in Yerevan, Armenia. Bryn is using her scholarship to build upon her fluid dynamics expertise to develop advanced battery designs, with the aim of using her research to help improve the army's energy sustainability.

Photo: Lee Ross '73

FUNDING OPPORTUNITIES

Technical Scholars Program Endowments	**$3.5 million**
Cadet Finalist Program	$1.5 million endowment/$60,000 annual
Scholarship Application Initiative	$750,000 endowment / $30,000 annual
Scholarship Interview & Travel Initiative	$750,000 endowment / $30,000 annual
Undergraduate Scholarship Program	$750,000 endowment / $30,000 annual
Cadet Research	$400,000 endowment / $18,000 annual
Professional Technical Writing Workshop	$300,000 endowment/$12,000 annual
Cadet Academy Scholarship Program	$250,000 endowment / $10,000 annual
Guest Lecture Series	$250,000 endowment / $10,000 annual

MARGIN OF EXCELLENCE

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