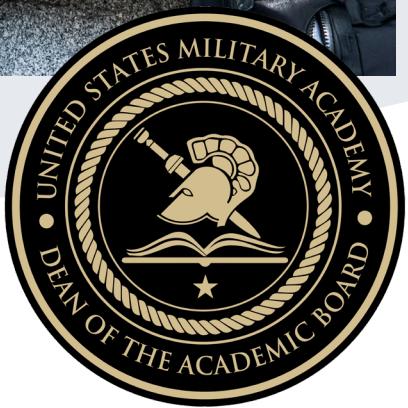


# EDUCATING FUTURE OFFICERS

PREPARING SOLDIER-SCHOLARS TO WIN ON THE  
MODERN BATTLEFIELD



## — TABLE OF CONTENTS

Preface .....	iii
The Mission .....	1
The Faculty .....	2
The Cadets .....	7
Academic Program Goals .....	8
The Academic Curriculum .....	14
Enriching the Curriculum .....	18
Educating and Inspiring Cadets .....	22
Continual Improvement .....	27
Dean's Directorate Strategy: 2022 - 2027 .....	35

# PREFACE

The United States Military Academy's Academic Program is committed to providing the education necessary to develop leaders capable of mastering the challenges of the modern battlefield. This is not a new effort at West Point, as the institution has long understood that success in warfare requires a professional military led by Soldier-Scholars. In other words, Academy graduates have always been expected to blend military proficiency with intellectual depth and to be both modern-day Spartan "warriors" and Athenian "thinkers." We develop these Soldier-Scholars by educating and inspiring leaders of character who think critically, internalize their professional identity, and employ their education to help build the Army and the Nation's future. This vision is even more important as the challenges of future warfare—continuous armed conflict, the proliferation of technology, differing views on ethical and legal obligations in combat, and the speed of operations to name a few—will require Army officers to think critically and creatively while simultaneously making speedy, analytical decisions. Put more simply, for the United States Army to win our future wars we need our officers to out-think our enemies. *Educating Future Officers* and our strategy describe how we work together to develop cadets into these types of officers.

*Educating Future Officers* and our strategy center on our faculty model. This model blends recent operational experience in the Army with disciplinary expertise and the best pedagogical approaches, all grounded in the values and mission of USMA, and sustained by faculty development tailored to each individual faculty member. The faculty's development of cadets is not limited to the classroom. Our faculty, who have been recognized as the most accessible to students in higher education, spend immeasurable hours with cadets out of the traditional academic environment. Whether through additional instruction, formal or informal mentorship programs, or supervising extracurricular activities, faculty constantly engage cadets. This frequent contact provides cadets invaluable mentorship on personal and professional conduct while simultaneously modeling selflessness. The faculty are exemplars of how to both think and act like a professional. Our faculty model also enables West Point to provide intellectual capital to the Army and the Nation through the contributions of faculty, staff, cadets, and centers. We strive to be the intellectual engine of the Army's innovation ecosystem.

The Academic Program is one of four programs - academic, military, physical, and character - that helps to comprise the West Point Leader Development System (WPLDS). I encourage you to read USMA's "Developing Leaders of Character" and the USMA Strategy to more fully understand how the Academy's four programs work together to shape the leaders of tomorrow.

USMA's comprehensive approach to cadet development is intended to prepare West Point graduates for the demanding and complex challenges of warfare. Yet, as history repeatedly teaches, war is persistent and constantly evolving. West Point's Academic Program remains flexible and responsive so that it produces the leaders our Army and Nation need.

## **Academic Program Vision and Outcomes**

West Point educates and inspires leaders of character who think critically, internalize their professional identity, and employ their education to fight and win our Nation's wars.

1. Educate, train, and inspire cadets to become leaders of character.
2. Prepare the rotating military faculty to return to the operational force.
3. Drive the Army's innovation ecosystem by developing and supporting faculty and centers.
4. Provide intellectual capital to the Army and the Nation.

# THE MISSION

**As members of the Academic Program at the United States Military Academy, we educate, train, and inspire leaders of character to live honorably, lead honorably, and demonstrate excellence so they are prepared to lead our Army and our Nation.** The faculty and staff must be dedicated to building these leaders today, knowing that the return on this investment may come decades into the future. It is our responsibility to equip West Point graduates to respond well to any situation with insight, character, and strength. We help them build the intellectual capacity to be lifelong learners and to bring the pursuit of knowledge, truth, and reason to their life's work, both inside the Army and beyond. If we root them firmly in these traits, there is no limit to how far they can grow.

The United States Military Academy challenges cadets with a broad base of structured, rigorous, and developmental experiences across the Academic, Military, Physical, and Character programs to shape self-aware, confident, humble, and principled leaders. These four programs and their associated experiences are elements of the West Point Leader Development System (WPLDS). This system is more fully described in "Developing Leaders of Character" (DLC). All of these programs support USMA's Strategy.

The Dean of the Academic Board is responsible for ensuring that the Academic Program contributes to the achievement of WPLDS through the academic curriculum and associated activities, and for providing the necessary knowledge, skills, and attributes that future officers should have as they begin their careers as Second Lieutenants.



# THE FACULTY

USMA's unique mission, "to educate, train, and inspire the Corps of Cadets so that each graduate is a commissioned leader of character committed to the values of Duty, Honor, Country and prepared for a career of professional excellence and service to the Nation as an officer in the United States Army," requires a unique faculty committed to developing young leaders. Faculty at USMA are multifaceted. We are teachers, role models, mentors, institutional leaders, nationally and internationally renowned scholars, leaders in our respective professional societies, and caring, engaged members of the community. USMA faculty developed a bionic foot to change the lives of our wounded warriors; others conducted groundbreaking research in the field of combating terrorism; and still others continue to inform the Nation's preparedness against weapons of mass destruction. The faculty's broad range of research pursuits creates a rich and engaging learning environment for faculty and cadets.



The USMA faculty model is deliberately designed to include individuals with varying career paths to meet the needs of our mission. A combination of full-time military and civilian faculty members make up the core of this blend of excellence. With advanced degrees from an array of academic institutions including, but not limited to, Harvard, Princeton, Yale, Stanford, MIT, Oxford, and Cambridge, the faculty are united as exceptional educators dedicated to developing critical and independent thinkers who will succeed as Army officers.

Approximately 18% of our faculty are senior military, 55% junior military, and 27% civilians (junior and senior). This blend of backgrounds provides diverse expertise and perspective to collectively accomplish our mission. Our military faculty are carefully selected from across the Army, and our civilian faculty are recruited through nationally-competitive searches. Our most senior military faculty, Professors, United States Military Academy (PUSMAs), are nominated by the President of the United States and confirmed by the United States Senate to lead departments and serve in other key positions.

## Senior Faculty

Our senior faculty includes a blend of military officers and civilians who have achieved the position of Professor, USMA; Academy Professor; and/or the academic rank of Associate Professor or Professor in their respective disciplines. Senior faculty members offer academic expertise and provide continuity to the curriculum because of their long-term appointments. Our military faculty members bring careers of leadership experience in the operational Army, and our civilian faculty members provide strong connections to higher education and other areas of society. All senior faculty members are expert educators who understand pedagogy, curriculum design, course design, and best practices in assessment. They are responsible for establishing the intellectual foundation for service as a commissioned officer and fostering development in leadership, moral courage, and integrity essential to such service. They lead our academic programs, oversee the curriculum, and share in the governance of the institution. They are accomplished scholars who are actively engaged in research and other activities that advance

their disciplines' bodies of knowledge and provide valuable intellectual expertise to our Army and the Nation. They are responsible for developing junior faculty both academically and professionally.

### Junior Faculty

The junior faculty is the largest group of faculty members at USMA. The junior military faculty is largely composed of active-duty captains and majors who usually teach at USMA for three years as a broadening opportunity. The goal of these assignments is to provide junior officers with exposure to different environments to gain new perspectives and to grapple with complex problems. These junior rotators arrive to West Point having just completed advanced degrees in their respective fields and will move back out to the operational Army following their tour here. Junior civilian faculty members come to USMA early in their academic careers after earning a PhD or equivalent training in their respective fields. Because they are usually fresh out of graduate school, the junior faculty are imbued with the latest pedagogical practices and cutting-edge research. Given their recent field experiences in the operational Army, our junior rotating military officers are particularly important role models and mentors for cadets. Our junior civilian faculty also serve as key role models, providing depth of discipline and real-world experience in the classroom. Some of the most lasting bonds that we see at USMA form among our junior faculty. Rotating military faculty often act as guides for new civilians as they experience military culture for the first time. Civilian faculty, usually fresh from earning their PhDs or postdoctoral research experiences, are vital resources for junior military faculty who seek coaching on research, teaching, and navigating the world of academia. Junior civilian faculty members serving in tenure-track positions are eligible for tenure. The procedures for awarding tenure follow very closely those for awarding academic promotion and involve review and recommendations of the faculty member's department head, USMA's Faculty Credentials and Promotions Committee, and the Academic Board. The Superintendent grants qualified faculty members tenure.

We often refer to our junior faculty as USMA's "second graduating class." During their time here, this group develops additional skills, knowledge, and experience that empowers their continued service in the Army and in the academic community. Aided by continual perspectives from senior faculty, our goal is for the junior faculty to use their graduate education and experiences teaching at USMA to grow into the next generation of senior leaders for the Army, for higher education, and for the Nation.

### Accessibility and Approachability

The emphasis on cadet development is one of the defining characteristics of the USMA faculty. These professional relationships begin in the classroom. We maintain small class sizes and have a low student-to-instructor ratio. Small classes facilitate an engaging formal learning environment filled with dynamic discussions, small group work, and in-person visits to meet with and observe key leaders in a given field. The low student-to-instructor ratio also provides faculty members the bandwidth to cultivate meaningful relationships with cadets in their classes and to meet with cadets to provide additional help as needed.

Interactions between faculty and cadets are not confined to the classroom. All USMA faculty are encouraged to become involved in other aspects of the cadet experience. A visitor to USMA will see faculty conversing with cadets in individualized instruction, engaged in original scholarship and meaningful research with cadets, visiting team practices, mentoring our highly competitive NCAA and

club athletic teams, as well as providing leadership to our student interest clubs. USMA faculty also contribute to the holistic development of cadets when they host cadets in their homes as sponsor families and role models, providing an understanding of life in an Army family. In partnership with USMA's tactical officers and coaches, faculty members provide cadets diverse forms of focused development. Many faculty members form mentoring relationships with cadets that last well beyond a cadet's tenure.



### Faculty Development

The development of our faculty is a necessity as we build the strongest team possible to educate, inspire, and train leaders of character. There are opportunities and expectations for growth for all levels and types of faculty members based on their talents, aspirations, and roles as well as programs and support systems to aid in this development. Faculty members pursue development and seek academic promotion by demonstrating excellence within five domains:

teaching, scholarship, cadet development, faculty development, and service. The focus on cadet and faculty development are integral to making USMA unique in the higher education landscape.

**Academic Research Division** West Point's research model is integral to the cadet academic experience. Through a combination of capstone and thesis projects, independent studies, field research, and internships, cadets and faculty experience a breadth and depth in their disciplines. Focused research on Army issues places faculty advisors at the nexus of military experience and academic expertise. Through projects-based learning, cadets develop hands-on research skills. The research program is critical to the development of preeminent world-class faculty and Army leaders who are agile, adaptive, and creative thinkers capable of fighting and winning in a complex environment.

The Academic Research Division coordinates the execution of research activities and outreach with USMA's various research centers and institutes and external research partners. As the Academy's official Office of Research and Technology Administration (ORTA), the ARD is the conduit for all federal and non-federal research awards and grants funded by federal and state agencies, foundations, and other sources by authorizing faculty research proposals for submissions and interpreting and accepting funding. It also is responsible for the execution of all technology transfer agreements in support of research partnerships. The ARD supports the Human Subjects Research Protection Program (HRPP) to ensure regulatory compliance with ethical, professional, and lawful treatment of human subjects when engaged in research in support of the Academy's mission. ARD also serves as the compliance office for the USMA Research Operations Compliance Program (ROCP) that ensures all research activities are conducted in accordance with the appropriate laws and regulations and ensures all research faculty and administrative support staff are properly trained. Finally, ARD serves as the USMA link to the Office of the Deputy Assistant Secretary of the Army for Research and Technology (DASA R&T), the Federal Laboratory Consortium, and Deans of Research throughout the federal research enterprise and Academia.

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### ***Center for Faculty Excellence***

The Center for Faculty Excellence (CFE) provides programs, services, and opportunities to support USMA staff and faculty members' continued growth as educators, scholars, and leaders. Its programs focus on enabling excellence across all domains of teaching, scholarship, cadet development, faculty development, and service. CFE programs and events include the Master Teacher Program, Teaching Improvement Presentations, Faculty Development Workshops, Office Hours, All Academy Collaboration Sessions, Project Management Professional Review Course, Issues in Higher Education Book Club, and more.

### ***Center for Junior Officers***

The Center for Junior Officers (CJO) provides leader development tools that cadets and faculty can use for individual and unit growth. CJO's creation and support of the Cadet Character Education Program Leader Challenge supplies experiential learning opportunities for cadets and faculty alike formed around real problems with no easy answers

### ***Dean's Fellows program***

The Dean's Fellows program supports continual improvement across the directorate by selecting faculty members to advance a portfolio of strategic initiatives related to the Directorate and Academy's mission. In working on these important projects, the fellowship program also offers leadership opportunities for faculty members and provides a broader perspective of how the Directorate and Academy operates.

All of these developmental activities reinforce one another as we continue to grow as scholars in our disciplines. The process of teaching often inspires ideas worthy of further investigation. Diving into research allows us to bring fresh perspectives back into the classroom, deepens subject matter expertise, and motivates subsequent teaching. Throughout this process, we also rely on and encourage our faculty to mentor one another. It is often these hallway conversations and discussions over lunch that have the most lasting impact and generate interesting research projects.

## Academic Freedom

USMA subscribes to the principles of academic freedom as outlined in the American Association of University Professors' (AAUP) 1940 Statement of Principles on Academic Freedom and Tenure, inclusive of the 1970 interpretive comments.



## Academic Staff

The academic staff serve alongside our faculty and are dedicated to providing foundational and enriching academic experiences that are needed to educate, train, and inspire cadets. From classroom and laboratory support to the

### The Academic Board

According to the USMA Command Historian, Sherman Fleek, in 1816, rules were drafted for the "Academic Staff," which were later codified by the Secretary of War in 1817. Although the term "Academic Board" (AB) did not appear in staff records until 1822, the organization as it existed then performed many of the functions currently performed by the AB. Sylvanus Thayer, who arrived in 1817, is credited for the creation of the Academic Board that year. Today, the AB serves as the integrator of the academic, military, physical, and character programs. It adjudicates issues of curriculum across the programs; cadet disposition related to admission, readmission, and proficiency and deficiency; graduation requirements; memorialization; senior military faculty selection; and senior faculty promotions. AB members include the Superintendent, Dean, Commandant, Department Heads, Director of Intercollegiate Athletics, Brigade Tactical Officer, Director of Admissions, Director of the Simon Center for the Professional Military Ethic, and Vice Dean for Academic Affairs. AB members make holistic judgments regarding cadet risk and disposition by applying standards, considering faculty comments, and taking into account the human element. The Dean, who is the chair of the AB, sets the agenda for and runs AB meetings, determines when issues are ready for a vote, and presents the summary of the vote to the Superintendent for decision.

provision of core academic and administrative services, our mission could not be completed without our staff's commitment to excellence and professionalism. Because many members of the academic staff serve at USMA in extended appointments or permanent civilian positions, they are critical to the stability and continuity of our academic operations. The academic staff partner with our faculty as valued team members who help ensure the success of the Academic Program.

# THE CADETS

The United States Corps of Cadets brings together a diverse set of young men and women from all over the world united in their desire to be the Army's next generation of leaders. Admission to USMA is highly selective, drawing from an extremely talented pool of applicants who likely had many options for their higher education. Our cadets chose a path that is quite unique. Our cadets tend to be confident, focused, and hard-working. They are motivated by our faculty, by each other, and by the ideals of service to the Nation. They believe they can make the world a better place and are willing to make personal sacrifices to achieve that end.

## West Point Leader Development System Outcomes

### Live honorably by:

- Taking morally and ethically appropriate actions regardless of personal consequences.
- Exhibiting empathy and respect towards all individuals.
- Acting with the proper decorum in all environments.

### Lead honorably by:

- Anticipating and solving complex problems.
- Influencing others to achieve the mission in accordance with the Army values.
- Including and developing others.
- Enforcing standards.

### Demonstrate excellence by:

- Pursuing intellectual, military, and physical expertise.
- Making sound and timely decisions.
- Communicating and interacting effectively.
- Seeking and reflecting on feedback.

The diversity of the Corps is a strength. Cadets come to USMA for a variety of reasons and have vastly different experiences from which to draw as they set out together on their 47-month journey. Some cadets graduated from high schools with thousands of students, while others were homeschooled. Some grew up in urban environments, while others have never visited a large city. Some were raised in relative comfort, while others faced issues of housing and food security. Despite these differences, our cadets have arrived at the same place, USMA. They have exhibited a desire to serve something larger than themselves, a drive to be challenged, and a commitment to become leaders of character in the United States Army.

The USMA classroom experience reflects the diversity of the Corps of Cadets. Faculty must harness the opportunities afforded from these different skills and backgrounds. Faculty will encounter cadets at various stages of intellectual, emotional, and character

development. Our focus on teaching individual cadets in small settings allows us to understand their personal level of development and to help cadets realize their own potential.

# ACADEMIC PROGRAM GOALS

Our faculty come from a range of experiences and study an array of disciplines and our cadets are more diverse across a range of characteristics than ever before. The Academic Program brings together this variety of talent to educate, train, and inspire the next generation of Army leaders. We developed and are guided by the Academic Program Goals (APGs), which focus on specific knowledge, skills, and attributes that we expect cadets to possess at the time of graduation. The APGs are rally points that help synergize our broad array of academic offerings. As a result, the cumulative USMA experience is far greater than a collection of discrete learning opportunities. The APGs provide concrete guideposts for curriculum design and instructional execution, helping our faculty prioritize when resources are constrained. They lay the foundation for continuous improvement of our curriculum and pedagogy and push us to remain focused on producing the best graduates possible for service to the Army and the Nation. These goals guided the Class of 2019 curriculum revision and are stewarded by departments, programs, and interdisciplinary goal teams.

## Academic Program Goals (APGs)

1. Graduates communicate effectively with all audiences.
2. Graduates think critically and creatively.
3. Graduates demonstrate the capability and desire to pursue progressive and continued intellectual development.
4. Graduates recognize the ethical issues and apply ethical perspectives and concepts in decision-making.
5. Graduates apply science, technology, engineering, and mathematics concepts and processes to solve complex problems.
6. Graduates apply concepts from the humanities and social sciences to understand and analyze the human condition.
7. Graduates integrate and apply knowledge and methodological approaches gained through in-depth study of an academic discipline.

Each of the seven goals is accompanied by supporting objectives called “What Graduates Can Do” (WGCD) statements. WGCD statements define specific indicators of skills expected of cadets at the time of graduation. Our APGs also directly reflect upon, connect with, and contribute to achievement of the institutional outcomes defined within the West Point Leader Development System (WPLDS).

## Goal One: Communication

**Graduates communicate effectively with all audiences.**

The ability to listen, read, speak, and write with thoughtfulness, clarity, and purpose is critical for Army officers to accomplish missions across a spectrum of twenty-first century operations. Graduates must also possess skills in cross-cultural communication and evidence-based argumentation. Learning how to speak and write in foreign languages enables effective communication with diverse audiences in operational environments around the world. Given the evolving landscape, graduates must also be proficient in various media.

## Goal Two: Critical Thinking and Creativity

**Graduates think critically and creatively.**

### What Graduates Can Do

1. Listen actively, read critically, and develop an informed understanding of the communications of others.
2. Speak and write using Standard American English.
3. Effectively convey meaningful information to diverse audiences using appropriate forms and media.
4. Communicate in a foreign language.
5. Use sound logic and relevant evidence to make convincing arguments.

### What Graduates Can Do

1. Identify the essential aspects of a situation and ask relevant questions.
2. Integrate knowledge and skills from a variety of disciplines.
3. Make meaningful connections and distinctions among diverse experiences and concepts.
4. Reason both quantitatively and qualitatively.
5. Think innovatively and accept risk to pursue solutions in the face of ambiguity.

As critical thinkers, graduates determine the credibility and utility of ideas and information. Their discernment sets the stage for appropriate, effective, and innovative responses to complex issues. As creative thinkers, graduates draw on extant knowledge and social norms without being constrained by these conventions.

### Goal Three: Lifelong Learning

**Graduates demonstrate the capability and desire to pursue progressive and continued intellectual development.**

Graduates understand that success as an officer is dependent upon taking personal responsibility for acquiring the necessary knowledge and skills needed to excel in an ever-changing and dynamic operational environment. The USMA experience is not an end in itself, but rather a foundation upon which graduates must build.

### Goal Four: Ethical Reasoning

**Graduates recognize the ethical issues and apply ethical perspectives and concepts in decision-making.**

#### What Graduates Can Do

1. Demonstrate the willingness and ability to learn independently.
2. Engage successfully in deliberate self-directed and collaborative learning experiences.
3. Pursue self-awareness and embrace the responsibility for personal intellectual development.
4. Pursue knowledge in areas of personal or professional interest.

#### What Graduates Can Do

1. Understand the intellectual foundations of ethical principles.
2. Recognize ethical components of problems and situations.
3. Examine and evaluate different ethical perspectives, principles, and concepts in context.
4. Apply ethical perspectives and concepts in solving complex problems, including those found in military settings.

Graduates must recognize the moral and ethical implications of their decisions and successfully engage the ethical components of problems and situations. When confronted with an ethical dilemma, graduates leverage broad historical, cultural, and legal perspectives to make the right decision.



## Goal Five: Science, Technology, Engineering, and Math

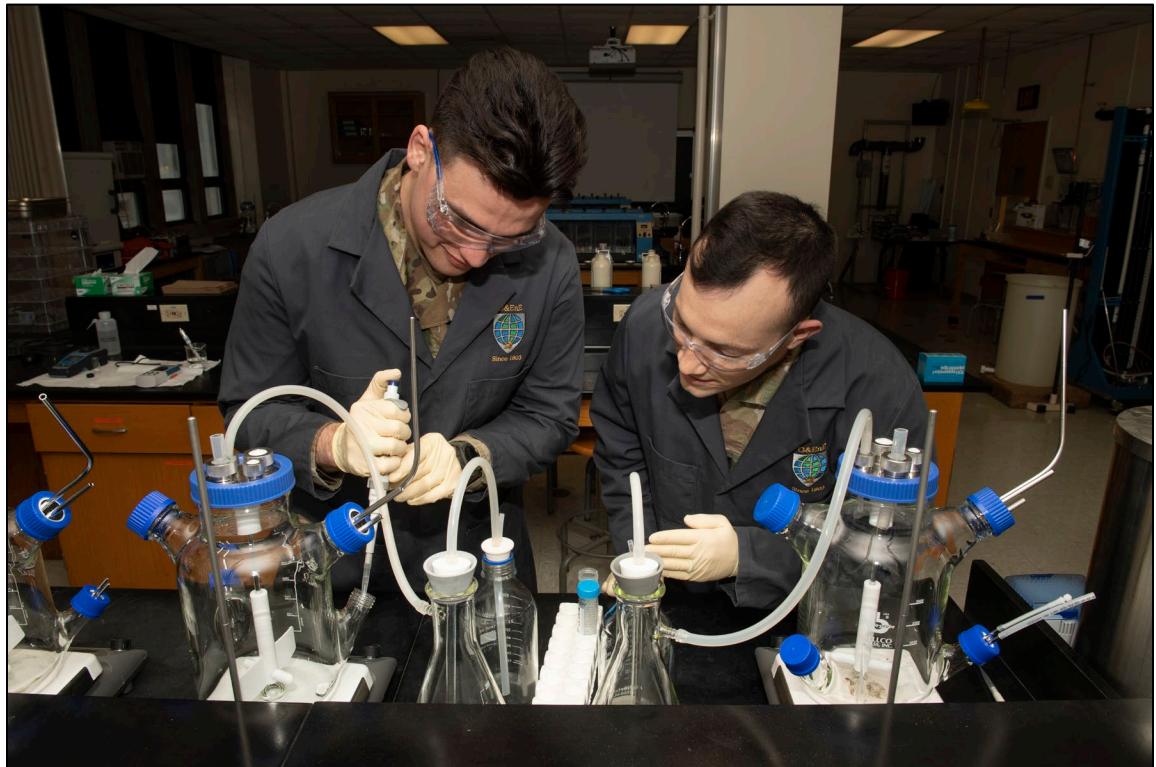
**Graduates apply science, technology, engineering, and mathematics concepts and processes to solve complex problems.**

Applications of the science, technology, engineering, mathematics (STEM) disciplines are pervasive in the modern Army. Properly employed, technology is an effective force multiplier that creates opportunities to improve situational awareness, shorten decision cycles, secure communications, enhance the effectiveness of weapon systems, and improve survivability.

Technology also creates challenges as adversaries seek to exploit potential weaknesses and vulnerabilities. Graduates use scientific and mathematical literacy to anticipate opportunities and challenges associated with changing technologies and employ the systematic engineering design process to develop appropriate responses in the context of technological, economic, cultural, political, social, and ethical constraints.

### What Graduates Can Do

1. Apply mathematics, science, and computing to model devices, systems, processes, or behaviors.
2. Apply the scientific method.
3. Collect and analyze data in support of decision making.
4. Apply an engineering design process to create effective and adaptable solutions.
5. Explain and apply computing and information technology concepts and practices in the context of the cyber domain.



## Goal Six: Humanities and Social Sciences

**Graduates apply concepts from the humanities and social sciences to understand and analyze the human condition.**

### What Graduates Can Do

1. Understand, analyze, and know how to influence human behavior.
2. Analyze the history, diversity, complexity, and interaction of cultures.
3. Analyze political, legal, military, and economic influences on social systems.
4. Engage in and reflect on cross cultural experiences.
5. Integrate the methodologies of the humanities and social sciences in decision-making.

USMA graduates effectively interact with and lead people in a variety of contexts. Graduates comprehend the human condition of diverse peoples and organizations, at home and abroad, and create relevant tools to define, shape, and solve complex problems of the modern world. USMA prepares future Army officers to reflect upon and learn from experiences, and to develop deeper cross-cultural competence.

## Goal Seven: Disciplinary Depth

**Graduates integrate and apply knowledge and methodological approaches gained through in-depth study of an academic discipline.**

Academic majors complement USMA's broad core curriculum, synthesizing and building on the core courses in the context of a chosen discipline that is aligned with the interests and life-long educational goals of each cadet. Drawing on a wide range of specialties, graduates contribute intellectual diversity to the Army and make substantive contributions to multi-disciplinary teams.

### What Graduates Can Do

1. Apply disciplinary tools, methods of inquiry, and theoretical approaches.
2. Identify and explain representative questions and arguments of their chosen disciplines.
3. Recognize limits of a discipline as well as areas in which it contributes to intellectual inquiry and problem solving.
4. Synthesize knowledge and concepts from across their chosen disciplines.

## Overarching Academic Goal

**Graduates integrate knowledge and skills from a variety of disciplines to anticipate and respond appropriately to opportunities and challenges in a changing world.**

The Overarching Academic Goal encapsulates the intent of the Academic Program by focusing on two behaviors essential to the successful Army officer—the ability to anticipate and the ability to respond. Both behaviors require a wide variety of knowledge and skills. Importantly, though, they also require intentional integration and synthesis of the knowledge and skills acquired through the curriculum. We cannot expect an individual to fully possess these abilities without specific education and training on other skills, including perceiving new ideas and trends, imagining possible outcomes, and following through with an action plan. Developing anticipation and response behaviors in a wide variety of contexts and in fluid and changing circumstances cannot be left to serendipity; rather, many components of the Academic Program must contribute in their own ways to achieve this overarching academic goal.



# THE ACADEMIC CURRICULUM

At the United States Military Academy, the term “curriculum” encompasses more than traditional academics. The 47-month experience also includes military, physical, and character development through required and voluntary courses, extracurricular activities, and other events. Every interaction with faculty, staff, tactical (TAC) teams, coaches, and other mentors helps to model and reinforce the roles and relationships, norms and standards, and responsibilities and obligations that we expect from a future Army officer. From this institutional perspective, every interaction is a leader development event that builds leaders of character. Moving beyond this holistic approach to focus on the academic pillar, the academic curriculum consists of a minimum of 40 academic courses, including the core curriculum and a minimum of 13 courses for a selected major, required to earn an undergraduate degree.

## A Common Foundation: A Broad Liberal Education

The core curriculum is the hallmark of the academic curriculum and is central to the Academic Program. Spanning science, math, engineering, language, the humanities, and the social sciences, the core courses, in conjunction with the academic major, constitute the necessary elements of a liberal arts education. This suite of courses seeks to provide a broad foundation that teaches cadets how to think about problems in varied and adaptive ways as they learn to navigate and succeed in an increasingly complex world. Core courses, in conjunction with the disciplinary depth offered by the major and threads, help cadets think critically, internalize their professional identity, and provide a great foundation to employ their education to help build the Army and Nation’s future.

The academic core curriculum usually consists of 24-27 courses (depending on the major) selected to collectively broaden and build a cadet’s repertoire of disciplinary perspectives to better engage with the world. A core course introduces students to disciplinary content and to each discipline’s methods of inquiry. The core curriculum provides cadets with various ways of thinking and highlights myriad ways to interpret phenomena and approach problems. This breadth encourages cadets to make informed judgments on an argument’s validity and to distinguish that evaluation from opinion.

Although most core courses are required as a common broadening experience, cadets have some options from which to choose (limited by course availability) in science, language, and engineering:

- In **science**, cadets build upon introductory courses in Physics and Chemistry with a higher-level course of their choice (to include Biology) that extends application of the scientific method and emphasizes scientific writing.
- To fulfill the two-course **language** requirement, cadets choose among eight languages. Cadets rank their preferences and are assigned to their courses based on their preference, aptitude in the language, and course availability.
- For the core **engineering** three-course sequence for non-engineering majors, cadets specify their preferences among six engineering sequences and are placed based on their preferences and availability.

## The Major



A focus on disciplinary depth in a chosen area complements the strong foundation laid by the core curriculum. Cadets select and complete at least one academic major with a minimum of 13 courses. In general, an academic major at USMA is comprised of three parts. The study-in-depth component is the foundation for the major and consists of a minimum of nine courses intended to provide depth in a chosen discipline. Some of these courses may be required of all cadets enrolled in the major while other courses are electives based on cadet interest. The second part of every major is a collection of three Complementary Support Courses (CSCs). CSCs can offer alternate viewpoints or modes of thought, intellectual exploration, other opportunities depending on the major and individual cadet, and additional courses required for the major. An integrative experience is the final piece of each major. The integrative experience consists of one or more courses designed to synthesize knowledge and skills developed throughout the core and major programs. Majors are, however, more than courses – they are also the people and experiences. Cadets work with our world-class faculty who possess a wealth of experiences in the Army, in academia, in government, and in industry. Faculty mentor and inspire cadets, and they serve as guides for their educational journey. Majors also offer experiential learning opportunities for cadets that include Academic Individual Advanced Development (AIAD) opportunities, trip sections, research, and guest speakers.

## The Minor

Many cadets who wish to pursue their studies beyond a single academic major opt to complete a minor in another field. A minor consists of a minimum of five academic courses of 3.0 credit hours or higher as determined by the program. To pursue both a major and a minor, a cadet must meet all curricular requirements for both programs. A minimum of three courses must be unique to the minor.

## Integrative Curricular Components (ICCs)

The core curriculum provides interdisciplinary breadth, and the majors provide disciplinary depth, but there are other themes, intellectual pursuits, and learning processes that bind together the various courses within the Academic Program. Integrative curricular components are explicit efforts to highlight these links and can be further broken down into sequences, threads, and capstones. A sequence is a series of specific courses designed around a disciplinary topic, while a thread follows a broad subject or way of learning across many disciplines. Sequences and threads foster integrative connections across core courses and bring together knowledge and skills from multiple disciplines. A capstone course serves as the integrative experience of an overall academic program.

Every core course pertains to a *sequence*:

- **Mathematics, Science and Engineering (MSE) sequence:** The MSE sequence provides each cadet with a fundamental knowledge of the experimental and analytic techniques of the basic sciences: two semesters of mathematics, one semester of chemistry, one semester of physical geography, one semester of statistics and an additional science course that cadets select based

on their major and their interests. The engineering courses are identified by their core engineering sequence and are embedded within the appropriate engineering major or are generally taken in the Second- and First-Class years for non-engineering majors.

- **Core engineering sequences:** Non-engineering majors complete a three-course core engineering sequence that complements their academic major and interests. Cadets choose among Cyber Engineering, Electrical Engineering, Environmental Engineering, Infrastructure Engineering, Nuclear Engineering, and Systems Engineering sequences.
- **Information Technology / Cyber sequence:** The IT/CYBER sequence is designed to ensure that every graduate is comfortable with and capable of securely using computers and information technology in an Army that must fight and win within an overarching cyber domain.
- **The Humanities and Social Sciences (HSS) sequence:** In order to develop an awareness of the people, government, and society that the commissioned officer will serve, cadets are provided a strong sequence of courses from social sciences, behavioral sciences, and humanities. Cadets take one semester each of history (either U.S. or regional), a history course on the Army of the Republic, literature, psychology, political science, philosophy, economics, international relations, military leadership, military history, and constitutional and military law.
- **Foreign Language sequences:** All cadets in this two-course foreign language sequence develop an introductory level of proficiency in one of eight languages, learn about other cultures and perspectives, and develop strategies for future language learning.



*Threads* provide the opportunity for courses from multiple disciplines to explore similar concepts within the core program, often providing complementary yet distinct perspectives on shared themes. Many core courses are involved in threads; some are involved in more than one.

- **Study of War (SoW) Thread:** The SoW thread is a multi-disciplinary effort that fosters cadets' intellectual understanding of war as a human phenomenon. It is organized around the four fields of expertise described in the Army Profession doctrine: military-technical, geo-cultural/political, moral-ethical, and human-leader development. Cadets develop an understanding of how the military-technical character of warfare has developed over long historical time periods, the relationship between the armed forces of the United States and the American political system, the social, cultural, economic, human, moral-ethical, political, and psychological contexts of war and warfare, and the unique moral-ethical and leadership challenges inherent to war and warfare.
- **Human Condition Thread:** The Human Condition thread provides cadets opportunities to explore the human condition from the perspectives of multiple disciplines. It seeks to foster an appreciation of difference and appreciation of others; develop insights into sociocultural elements of identity construction; promote understanding, evaluation, and cross connections between concepts related to gender, sexuality, and respect; and promote analysis and

evaluation of how, why, and to what extent social, political, economic, cultural, and spatial factors contribute to social conflict and cohesion within a given space.

A *capstone* course serves as the integrative experience of the overall academic program.

- **MX400 Officership Course:** MX400, also called the “Superintendent’s Capstone Course,” is the common integrative experience for the Academic Program and their experiences in the West Point Leader Development System. Through MX400, cadets integrate and synthesize much of what they learned during their time at USMA as they explore professional issues and security challenges in a rigorous, intellectual environment. The culminating experience is the Integrative Challenge, which drives cadets to think critically, draw upon and examine their internalized character, and work with others to address a realistic, complex problem in a military scenario.

#### *Programs*

- **West Point Writing Program (WPWP):** The WPWP works across the curriculum to provide cadets and faculty with continuity, depth, and coherence in their study of composition, critical thinking, academic argument, writing pedagogy, and professional communication. More than forty courses in the core curriculum and in academic majors contribute to the program, each observing specific pedagogical and curricular standards as well as designating an individually authored Signature Writing Event (SWE) for cadets to complete. Faculty and cadet work find further support in two key subcomponents of the WPWP, the **Writing Fellows Program** and **Mounger Writing Center**.
- Since 2019, WPWP leaders have also led the design, development, and scoring of argumentative and strategic communications exercises for the Army Talent Management Task Force’s new **Command Assessment Programs**. This work decisively impacts selection for battalion and brigade command, among other senior leadership positions.

#### **Projects Day**

Projects Day is one of the highlights of the academic year at USMA. The academic community comes together with external sponsors, donors, and graduates to celebrate academic accomplishments. At locations around the Academy, cadets from all departments and majors share their academic work with the broader community. Myriad forms of scholarly expression are represented as cadets offer demonstrations of integrative experiences, artistic performances, thesis defenses, presentations of independent research, and results (or pre-demonstrations) of external academic competitions. Some of this work is presented through poster presentations, others through performances, others as answering examiners/panelist questions, still others are orations, or presentations of papers. The genesis of these projects varies with many ideas initiated by cadets based on their coursework, study and travel abroad experiences, and enrichment activities, some commissioned by outside agencies, and others inspired by ongoing faculty research. Building on lessons learned from the COVID-19 pandemic, many Projects Day offerings include a remote component, allowing graduates and interested parties from all over the world to appreciate the rigor of cadet work.

# ENRICHING THE CURRICULUM

Cadets have many opportunities to augment their academic work with enrichment experiences. We also provide an array of support services to help cadets reach their potential. All of these programs and experiences help cadets engage with the world and scholarship in new ways, building and inspiring lifelong learning.

## Research Centers

Most academic departments house specialized research centers that provide significant enrichment opportunities for cadets and faculty across the curriculum. Cadets can learn and practice their discipline in real-world research environments that provide opportunities for them to solve contemporary and highly relevant problems. Faculty are able to work in these centers to further their own development through innovative research and scholarship. These centers connect outside organizations across the Army, Department of Defense, academia, and the corporate world, allowing us to contribute intellectual capital to the Army and the Nation.

## USMA Library

The United States Military Academy Library embraces and advances scholarship, research, and excellence through information service in an increasingly digital world. Services are designed to support all aspects of undergraduate research and to integrate information literacy skills and training into courses throughout the curriculum. The special collections and archives are particularly noteworthy in terms of academic enrichment. These primary

### Research Centers and Partnered Research Centers (with parent organizations)

- Academic Research Division (Office of the Dean)
- Army Cyber Institute
- Combating Terrorism Center (Social Sciences)
- Center for Data Analysis and Statistics (Mathematical Sciences)
- Center for Environmental and Geographical Science (Geography and Environmental Engineering)
- Center for Holocaust and Genocide Studies (History)
- Center for Innovation and Engineering (Civil and Mechanical Engineering)
- Center for Junior Officers (Office of the Dean)
- Center for Languages, Cultures, and Regional Studies (Foreign Languages)
- Center for Leadership and Diversity in STEM (Mathematical Sciences)
- Center for Molecular Science (Chemistry & Life Science)
- Center for Oral History (History)
- Center for the Study of Civil-Military Operations (Geography and Environmental Engineering)
- Cyber Research Center (Electrical Engineering & Computer Science)
- Mathematical Sciences Center (Mathematical Sciences)
- Modern War Institute (Military Instruction)
- Network Science Center (Mathematical Sciences)
- Nuclear Science and Engineering Research Center (Physics & Nuclear Engineering)
- Office of Economic and Manpower Analysis (Social Sciences)
- Operations Research Center (Physics & Nuclear Engineering)
- Photonics Research Center (Physics & Nuclear Engineering)
- Robotics Research Center (Electrical Engineering & Computer Science)
- Systems Design and Analysis Center (Systems Engineering)
- US Army Space and Missile Defense Command Research and Analysis Center (Physics & Nuclear Engineering)
- West Point Center for the Rule of Law (Law)
- West Point Leadership Center (Behavioral Sciences & Leadership)
- West Point Music Research Center (West Point Band)
- West Point Simulation Center (Military Instruction)

sources focus on both the history of USMA and our graduates and provide rich opportunities for cadets to build research skills.

### **Center for Enhanced Performance (CEP)**

The Center for Enhanced Performance is USMA's comprehensive student assistance center. CEP provides all cadets with a variety of individual services and group programs designed to help cadets reach their potential. The CEP helps cadets develop across USMA's pillars – academic, physical, military, and character – through targeted education and training on specific strategies and skills that underlie elite human performance.

### **Mounger Writing Center (MWC)**

The MWC, a subcomponent of the West Point Writing Program, sponsors one-on-one consultations, group workshops, and special events for all cadets and faculty working on writing and communications projects for any academic course, personal interest, or professional opportunity. The developmental conversations that occur in the MWC are designed to help writers express themselves clearly, forcefully, and effectively.

### **First Year and Beyond (FYB)**

The FYB program assists select cadets who are having difficulty adapting to the rigors of the Academic Program. Cadets are identified as potential candidates for FYB based on early performance in their first term and are offered the opportunity to participate in the program. Those who participate drop one course (to be made up during a summer term) and are assigned an Academic Excellence Program instructor who coordinates support across the Academy, to include current instructors, TAC officers, and coaches. In addition to the immediate relief and assistance provided during the first term, FYB helps cadets develop as self-directed learners by continuing to provide educational support as they move beyond their initial academic term.

### **Study Abroad Program (SAP)**

The purpose of the SAP is to provide an authentic culture and language immersion opportunity for qualified cadets. The SAP seeks to develop increased cross-cultural competence, foreign language proficiency, and knowledge of the regional dynamics in over 20 different countries. Cadets are selected for a specific program of study for one semester at select foreign institutions, which are a combination of military academies and civilian universities.

### **Academic Individual Advanced Development (AIAD) Opportunities**

AIADs provide cadets with diverse scholarship and travel offerings not available in the formal course structure but are vital to enhanced learning and application of knowledge and skills. These real-world experiences complement classroom experiences by engaging cadets in opportunities to grapple with both the overlap of and disconnect between theory and practice. Cadets often expand upon their AIAD work toward a capstone project or independent study. Cadets participate in AIADs primarily in the Summer Term for approximately two to four weeks, often in lieu of leave. Host locations for AIADs span the globe and are opportunities for cadets to learn about different cultures, political structures, and economic systems, all while gaining an appreciation for history, geography and more. As a result of AIAD

participation, cadets typically gain greater self-awareness, confidence, and humility: all important traits for future officers expected to lead and win as part of our global Army. Cadets also conduct research or perform duties in Army Research Labs, Congressional offices, the Pentagon, the FBI, the State Department, and with various companies engaged in military partnerships throughout the United States. In addition to benefiting cadets, AIADs bolster civil-military relations. Sponsors routinely comment on the professionalism, work ethic, and abilities of our cadets. For many that do not routinely work with military academies, sponsors gain a greater appreciation for West Point and the caliber of young people that attend our institution.

## Conferences

The Student Conference on US Affairs (SCUSA), McDonald Cadet Leadership Conference, Model United Nations, and the West Point Negotiation Workshop are examples of national academic conferences held annually at USMA. Cadets design and lead these major academic events to foster engagement with the broader higher education and practitioner communities.

## Academic Clubs

Among the myriad clubs available to cadets, 47 are considered academically oriented. From the Astronomy Club and Jazz Forum to the Electronics Experimenters Group and Investment Forum, there are ample opportunities for cadets and faculty to get involved in an old hobby or to learn something new.

## Post-Graduate Scholarships

Cadets are encouraged to compete for nationally recognized scholarships and fellowships that provide them opportunities to pursue academic studies after graduation. A wide variety of scholarships and fellowships are available and range from those with a focus on Science, Technology, Engineering, and Mathematics (STEM) disciplines to opportunities that provide immersion in another culture to gaining depth in a discipline to those that send graduates to medical school. Multiple programs and activities across the Academic Program support cadets looking to pursue these opportunities. Cadets have won a variety of scholarships and fellowships in recent years, including Draper Labs, Fulbright, GEM, Lincoln Labs, Marshall, National Science Foundation, Rhodes, and Rotary.

### Selected Academic Clubs

- Amateur Radio
- American Institute of Chemical Engineers
- American Society for Engineering Management
- Astronomy
- Behavioral Science and Leadership Seminar
- Cadet Competitive Cyber Team
- Civil and Military Engineering Club
- Creative Writing Forum
- Debate Council and Forum
- Electronics Experimenters Group
- Engineers & Scientists for a Sustainable World
- Film Forum
- Foreign Language and Culture (Arabic, Chinese, French, German, Polish, Portuguese, Russian, Spanish Forums)
- Gamma Theta Upsilon
- Investment Forum
- Jazz Forum
- Mathematics Forum
- Mechanical Engineering Club
- Model Arab League
- Model UN
- Nuclear Engineering Club
- Opera Forum
- Student Conference on US Affairs
- Studio Arts Forum
- Systems Club
- Wargames Committee

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## Honor Societies

USMA offers exceptional cadets the opportunity to participate in 18 different national and international honor societies associated with either general academic excellence or excellence in their discipline.



# EDUCATING AND INSPIRING CADETS

Bringing the curriculum to life requires knowledgeable and committed faculty. While institutional and academic frameworks provide opportunities for an academic program to thrive, success depends upon the intentional cadet-faculty interactions that occur on a daily basis. Whether in one-on-one settings, small groups, in the classroom, or online in a remote environment, the passions of our faculty for their teaching and for their disciplines are essential to ensuring success in our mission to educate future Army leaders.

Faculty prepare the minds of cadets to engage with the world as Army officers in ways that are consistent with disciplinary perspectives, institutional goals, and Army values. As such, the faculty have two main and interdependent roles: an institutional role and a disciplinary role. Institutionally, every faculty member has a responsibility to be a role model and mentor or coach who guides cadets through opportunities for learning in and out of the classroom. Additionally, faculty are integral to cadets learning an academic discipline. Disciplinary knowledge is not just a set of facts to be memorized but a perspective or way of thinking that is added to a cadet's repertoire, building capacity for interpreting and acting in a complex and ever-changing environment. The most beneficial experiences foster integration across disciplines because they broaden and deepen perspectives and reinforce the interconnectedness in our world.

## Laying the Foundation: Teaching, Learning, and Development

Some say that teaching is a performance art, but there is a science to it as well. Teaching is an intentional act that should be rooted in contemporary understandings of learning and knowledge acquisition. Throughout its history, USMA has developed and retained powerful teaching methods, most notably the Thayer Method (see adjacent box for more on Thayer's contributions). Recent advances in our understanding of how individuals grow and develop over a lifetime must also inform how we prepare and deliver content. As our understanding of pedagogy evolves and we embrace and experiment with new pedagogical techniques, we should not lose sight of our historical focus on small classes, close faculty interaction, and sharp attention to cadet learning.

### Thayer's Revolutionary Method

In a letter to President James Monroe dated 1828, then-Superintendent Sylvanus Thayer described a teaching method employed at USMA and inspired by his observations at the École Polytechnique while on an extensive tour of European universities. According to Thayer, large classes were lectured by a Professor and subsequently divided into sections of 20 or fewer cadets where each cadet "should demonstrate a proposition or explain an investigation at the Black-board and be interrogated to see that he thoroughly understands the principles." These smaller sections were run by assistant professors or upper-class cadets, with the Professor as overseer, visiting each section in turn. Each cadet was expected to demonstrate mastery of material, which included a high degree of recitation of memorized material as well as demonstration of "a proposition or explain an investigation...and be interrogated to see that he thoroughly understands the principles." His insistence that cadets progress to new levels of material only after they had mastered the previous levels predated the now common method of mastery learning and created a rigorous learning environment for classes of cadets that varied widely in their preparation for higher education studies. Cadets were graded on nearly every lesson, and seated according to their level of performance, thus emphasizing the importance of performance and raising the level of academic rigor and expectations.

Sylvanus Thayer is credited with turning the Military Academy into a rigorous educational institution through his teaching method, formal academic curriculum, military experiences, character development, and discipline structure, known collectively as the Thayer System.

Some of the hallmarks of this Thayer Method of teaching- small classes, cadet preparation prior to class, minimal lecturing, and cadet briefings and board work - have endured to the present, with many departmental variations reflecting disciplinary differences and advances in higher education practices. For example, higher educational professionals have shown that mastery of material includes higher levels of cognitive functioning such as analysis, synthesis, and evaluation rather than memorization. In adapting the Thayer Method to these widely accepted practices, the daily recitations of extensive memorized material have evolved into application of concepts to real life situations. Current higher education practices also recognize the value of students actively working with course material rather than passively attending lectures as the sole instructional strategy, thus validating Thayer's focus on cadet in-class demonstrations of mastery.

## Developing Meaningful Disciplinary Knowledge



Disciplinary knowledge generally falls into one of two categories. The first type is “knowing that.” This declarative knowledge includes facts, steps, formulas, processes, or definitions. This knowledge tends to be task and memory-based and can be recalled and reproduced. We can think of this as “the basics” of any discipline. However, knowing these basics is not enough to grapple with the ambiguity inherent in any field. Teachers must also provide opportunities to instill understanding of the material, or “knowing how.” We seek to achieve understanding by asking and addressing a litany of questions for any act: How do we do  $x$ ? When? Where? With whom? With what purpose? With what outcome? And most importantly, Why? “Knowing how” provides depth of meaning for the basics of a given field. Acquiring both types of knowledge, “knowing that” and “knowing how,” is critical to learning a discipline and to learning from that discipline.

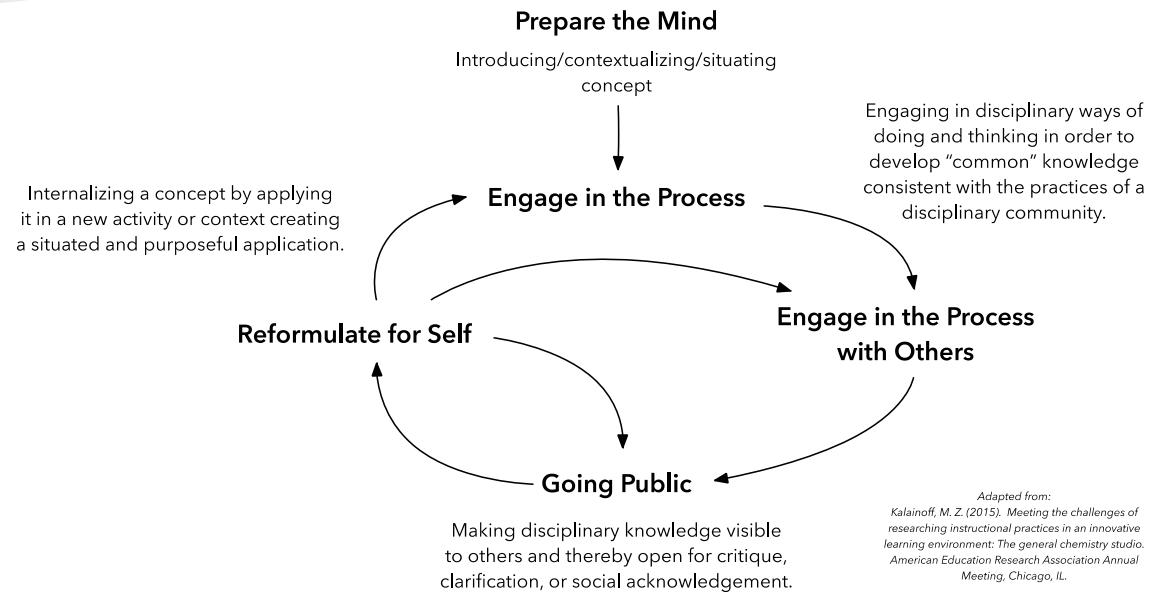
### A Developmental Model for Teaching and Learning

The process of getting from “knowing that” to “knowing how” can be conceptualized in a developmental model that provides one perspective for understanding teaching and learning. (“Developing Leaders of Character” provides another, broader model of teaching and learning.) This model acknowledges that teaching and learning are different than developing. The difference is evident in the way that we use these words in common language: we learn to tie a necktie, to hit a golf ball, to charge a car battery, and to cook spaghetti. The object of learning is a process or skill that is finite and bounded. This is distinctly different than the context in which we use the word “develop.” We develop character, a clothing style, a love of music, and an ability to distinguish fine wines. Development encompasses many iterative and recursive learning cycles in which, over time, the learned processes and skills take on a comprehensive and integrated meaning.

The figure below depicts four generalized interdependent processes that describe the driving mechanism for this developmental model for teaching and learning: 1) prepare the mind; 2) engage in disciplinary

processes independently and with others; 3) make knowledge public; and 4) reformulate and integrate for self.

## Learning Model as a Process of Interdependent Processes



1. *Prepare the mind.* The process of introducing new content is important. Instructors should offer context to help prepare the minds of those about to receive the information. This encourages learners to integrate new information within existing conceptual frames. There are many ways to prepare the minds of students. For example, instructors can publicize content in syllabi, mention upcoming themes in preceding lessons, explicitly reference past content linkages, or pose a puzzle that creates recognition of the need for a concept or an idea. Learners also prepare their own minds by reviewing lesson outlines, completing before-class homework, and reading subject-specific texts.
2. *Engage in disciplinary processes independently and with others.* Learners must be exposed to and engaged in ways of doing and thinking to develop "common" knowledge consistent with the practices of the disciplinary community. This can include diving into texts and using artifacts of the discipline on their own as well as with peers and instructors. Interaction with the content, the processes, and the people involved in the discipline is vital to development.
3. *Make knowledge public.* It is essential that learners have opportunities to discuss their knowledge and understanding of the discipline so that it may be accepted, rejected, or modified by the community. This process can take many different forms, but most often occurs when instructors ask questions of learners in a classroom setting. Learners must formulate ideas to provide a response, and these ideas may be accepted, rejected, or modified by the instructor or other students. Working in learning teams or small groups enables learners to construct knowledge together and allows multiple students opportunities to make their knowledge public. Team members can challenge current thought, expose misconceptions, help to understand the material in the context of the discipline, and develop "common" knowledge. Furthermore, peers are in a good position to challenge each other within a shared developmental range, and this process shows students that they can and should learn from each other. Students can also make

knowledge public to themselves. Often, students may believe that they fully understand a concept but then fumble when explaining it to others or try to use it in a different context.

4. *Reformulate and integrate for self.* Reformulating is internalizing a concept by applying it in a new activity or context. It is not just reproducing knowledge. It develops capabilities across multiple situations and in concert with knowledge from disparate areas. Reformulating and integrating for self helps expand a learner's repertoire in how they interpret and respond to the world.

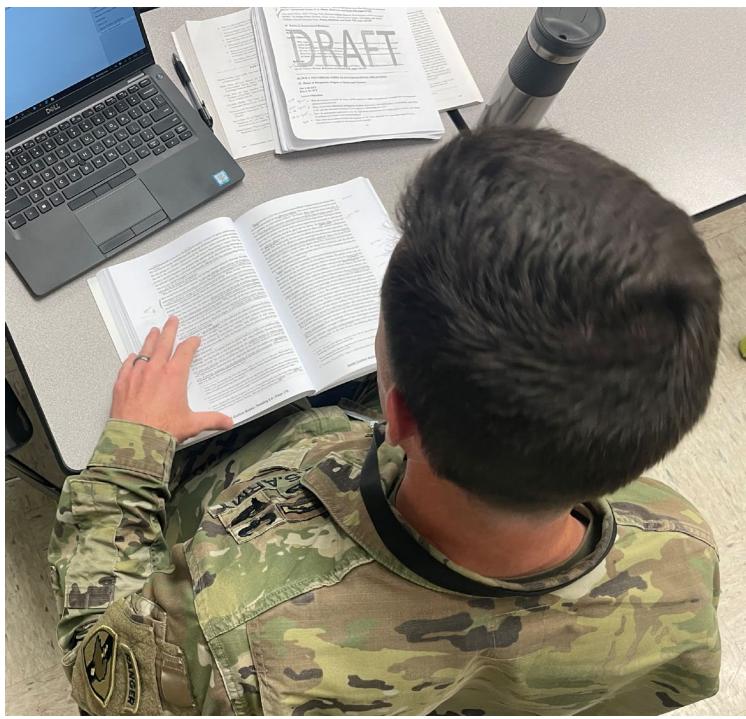
This conceptual model helps us understand why we teach the way we do and should motivate the creation of new instructional designs or modification of existing ones. It does not direct specific methods of instruction. Our responsibility is to design and construct the best possible opportunities for learning. The best instructors will adjust in real-time to ensure that the right environment is present based upon direct observations of or feedback from learners. It is, however, the full responsibility of cadets to take up the opportunities for learning and, in fact, learn.

A common method for shaping the environment for learning is to purposefully challenge ways of thinking. Struggling is an essential part of learning and should be accepted, even embraced, in any learning environment. In other words, instructors often deliberately place learners in situations where the conceptual model of students clashes with what they observe or are trying to influence. Developmental change occurs as students struggle to build conceptual frameworks that appropriately interpret and address a particular problem. Learners must be afforded the opportunity and time necessary to reconcile their understandings with what they observe.

#### Teaching during COVID-19

During March 2020, cadets did not return to West Point due to the COVID-19 pandemic. Faculty members transitioned to remote teaching in three days so that cadets could continue their coursework from their locations around the country and world. Initially, this shift was expected to last for two weeks; however, increased COVID-19 cases around the country led to the Academy's decision to not bring cadets back to West Point and to remain remote throughout the 20-2 semester. A Remote Teaching and Distance Education Working Group (RTDEWG) was established and led by two Dean's fellows and FLICR. This group designed faculty development opportunities to help faculty members teach remotely, and these opportunities were offered throughout the remained of Academic Year 2020 and Academic Year 2021. FLICR also supported departments to ensure they had the technology needed to effectively teach cadets. Throughout Academic Year 2021, many sections remained remote or partially remote. Although it was very disruptive, our response to the pandemic will shape how we incorporate technology into the classroom.

# CONTINUAL IMPROVEMENT



From our classroom faculty to all levels of our academic leadership, assessment is part of our basic responsibility to ensure we deliver the best education we can. The most effective assessment system includes input from faculty who are in the classroom delivering instruction and observing cadet demonstrations of achievement as well as integration of feedback across the curriculum by the academic leadership. The foundation of continual improvement in our Academic Program starts with proactive planning that results in quality assessment in each course and

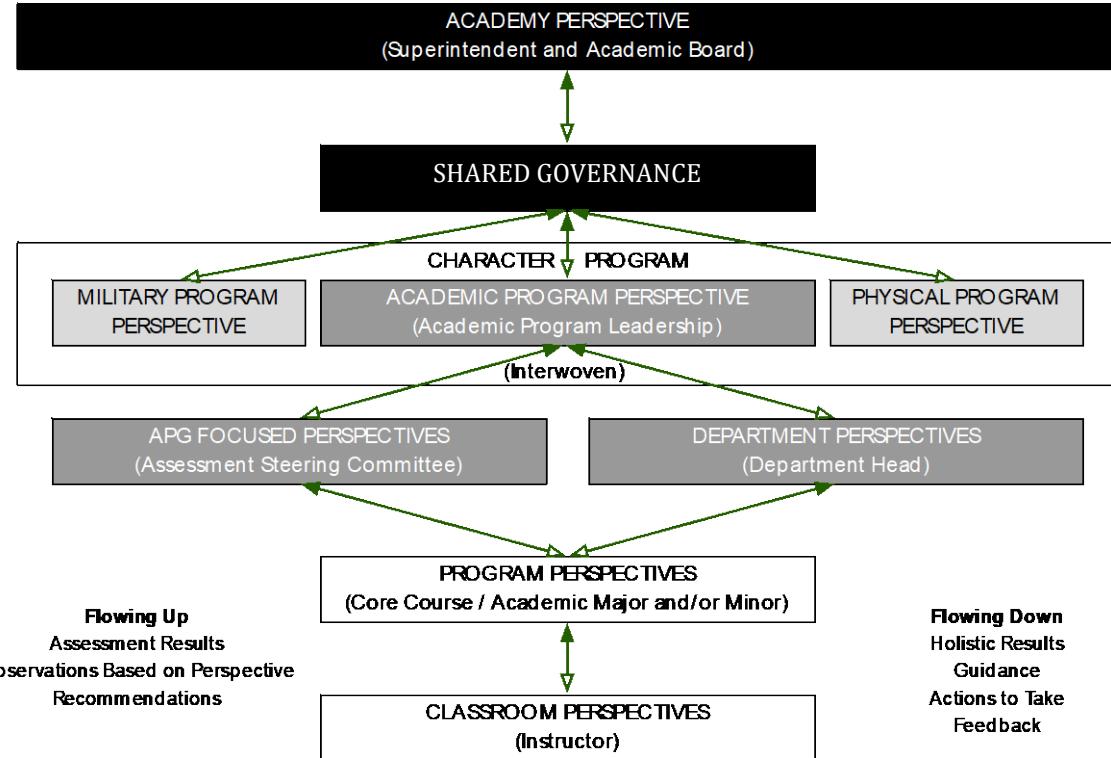
major program.

Instructors are the most important part of this process. The instructor's knowledge and understanding of cadet performance within the classroom feed higher levels of curriculum oversight enabling reflection and responsive curricular improvement at all levels. This is assessment. It is a systematic process of:

- examining evidence relative to achievement of cadet learning goals (e.g., course objectives, program-level student learning outcomes, WGCD statements, APGs, or WPLDS outcomes);
- engaging in conversations and reflection about that evidence to identify strengths and areas for improvement;
- formulating recommended actions to improve pedagogy, material covered, the goals themselves, or the assessment process;
- deciding which recommendations to implement and assigning responsibility where appropriate; and eventually;
- assessing again to measure the impact of the actions relative to goal achievement.

Successful assessment and continual improvement are meaningful and sustainable over time. It encompasses all aspects of the teaching-learning cycle and derives actionable inputs that will drive us to improve. This process should not be onerous. Actionable assessment measures should become natural outgrowths of how we construct and reflect on our courses and programs.

Our layered assessment system seeks improvement at the instructor level, the course level, the program level, the department level, the Academic Program level, and Academy level (see the figure below). Stakeholders throughout focus on their own perspective while connecting to others across their departments, the Academic Program, and the Academy. The following sections briefly describe this process at each level.



## Role of Classroom Instructors

Individual classroom faculty have all the responsibilities associated with teaching their assigned course consistent with the guidance given to them by their core course or academic major program director. Faculty set lesson objectives based on course goals, design classroom activities towards achievement of those objectives, adapt the classroom experiences even in the middle of a lesson based on how well the cadets respond, and adjust the next course-related activities as they see fit to improve overall cadet learning in the course. Cadets demonstrate their level of achievement of the course objectives through graded and ungraded events, and the instructor evaluates their products accordingly.

To improve teaching, the instructor uses (1) the perspective gained through interactions with cadets, both in the classroom and through additional instruction (AI), (2) class performance on graded events (e.g., statistics or pass rate), and (3) other evidence gained from, for example, cadet feedback and observations from classroom visitors.

The instructor contributes to core course or academic major assessment not only by providing grades on individual events, but also by participating in program level faculty discussions. Faculty provide collected evidence of student learning outcome (SLO) achievement within the course (e.g., cadet products) to their program director, which contributes to the assessment of the core course, the major program, or the

APGs. This feedback and conversation among instructors and program directors about what works and what does not is vital to improvement.

### Role of Core Course and Major Directors

Directors of each core course and of each academic major are responsible for leading the design, implementation, and assessment of curriculum. Throughout the semester, directors interact with each of their instructors about their courses and programs, collaborating to determine what works and what does not. They hold meetings during which faculty share their reflections and challenges based on what they see in the classroom. Directors conduct end of semester reviews (akin to after-action-reviews) that formulate recommendations for future changes to their curriculum, learning activities, and pedagogy.

This continual process allows directors to gain broad insight on cadet abilities, seeing their strengths and areas of needed improvement. Directors use (1) the perspective they gain through interactions with their faculty, (2) direct evidence of cadet performance through targeted embedded indicators, and (3) other indirect evidence gained from, for example, external visitors and cadet surveys to assess how well their cadet population achieves the goals the directors established for their respective course or major. In consultation with their Department Heads, directors use those assessment results to inform the design, revision, and/or implementation of the next offering of the curriculum. Directors create both an assessment map that outlines how the course or major program is assessing SLO's and an executive summary report (ExSum) that outlines progress towards those goals and continuance or revision of the program curriculum and/or SLOs based

#### The Relationship between Grades and Assessment

"I give my students grades. That is evidence of their achievement. Why do we need to collect other assessment data?" This common comment from a faculty member is understandable. Grades have a long history of providing evidence of faculty evaluation of student achievement and do represent how individual students perform. But in the context of assessment, grades alone do not typically provide evidence that allows specific curricular decisions to be made based on the results of student learning outcome assessment. Grades represent subjective evaluation of multiple aspects of a course and an individual's predisposition toward a course and his or her external environment.

Assessment, to be meaningful, needs a collection of evidence that allows judgments to be made regarding the achievement of specific student outcomes. When the evidence points to a weakness in the achievement of an outcome, it should also inform the stakeholders where action can be taken to strengthen the outcome. Grades give a general sense of the faculty member's evaluation, but what can a class average of 74% on a course, final, test, paper or project tell us about how to improve outcome performance? Certainly, a well-crafted product may do just that if the component parts are structured to align with specific outcome measures and grades for the component pieces are presented as the evidence. Grades for the component parts related to the student learning outcomes can then be summarized across students and even courses to provide direct evidence of student achievement of the outcomes. Another method for examining the relevant components of a test given to students or a student project is the use of rubrics as an ancillary tool for assessment of these products, independently or in conjunction with the grading process.

Adapted from Judd, T. & Keith, B. (2012) Student learning outcomes assessment at the program and institutional levels. In Secolsky, C. and Denison, D.B. (Eds.) Handbook on Measurement, Assessment, and Evaluation in Higher Education, New York: Routledge.

on the data examined. For the director, the Executive Summary serves as a snapshot of the course or program in a given year, and taken together with previous Executive Summaries, serves as an historical record of the development and progression of the course or major over time and should be written and used by directors as such. This summary is submitted to the Dean's office for use by goal teams, the Assessment Steering Committee, and the Assessment Mentor Advisory Council. For the Dean's office, the Executive Summary reports outline how a core course or a major's assessment results contribute to the Academic Program and its goals (APGs).

### Role of Department Heads

Department Heads have primary oversight and responsibility for continual improvement within their departments. They lead their faculty in meaningful efforts to support the Overarching Academic Goal and the APGs. Department Heads also are responsible for guiding the preparation and delivery of ExSums based upon course and program reports. Department heads, working with their faculty and drawing on information from ExSums and other sources, provide guidance on actions to improve cadet learning within their departments. As members of the Academic Program leadership, Department Heads also share their synthesized perspectives with the General Committee and Academic Board.

### Supporting Improvement: The Assessment Mentor Advisory Council

Faculty and program directors are not alone in their assessment efforts. The Assessment Mentor Advisory Council (AMAC) supports a culture of continual improvement by helping faculty at all levels engage in feasible, meaningful, and sustainable assessment processes. They keep abreast of the best assessment practices and methods of research design in higher education and, when appropriate, bring those practices to USMA. They are also responsible for providing advice to core course and academic major program directors and goal team leaders on their assessment efforts through mentorship relationships and AMAC-led workshops and activities. The AMAC also advises Academic Program leaders by evaluating the quality of assessment efforts across the Academic Program and presenting recommendations to foster meaningful assessment that promotes continual improvement of cadet learning. Members of the AMAC include faculty and staff from diverse disciplinary backgrounds who possess experience and expertise in assessing and improving student learning.

### Role of the Assessment Steering Committee

The Assessment Steering Committee (ASC) oversees the process of collecting, mapping, and evaluating cadets' achievement of the APGs and their applicability to WPLDS outcomes. The ASC, which includes leaders of each goal team as well as members of the Dean's staff, meets regularly throughout the year to provide annual guidance to the goal teams for their focus activities and to monitor and support assessment activities throughout the Academic Program. The ASC uses as a foundation the Academic Program Development Framework (APDF), which maps core course and major program contributions to achievement of the APG's. The ASC analyzes goal team reports across multiple years and across goals to identify trends and to determine the overall effectiveness of the Academic Program. The ASC also identifies strengths and areas for improvement as well as which issues should be collectively addressed. The ASC prepares an annual executive summary presenting the key findings and recommendations to the Dean. The executive summary facilitates discussion among the Academic Program leadership to enable continual improvement of the Academic Program. Over the course of three years, every APG and WGCD statement is assessed by the ASC and goal teams.

## **Role of Goal Teams**

At the Academic Program level, the assessment structure starts with seven goal teams, each responsible for assessing cadet achievement relative to an assigned APG. The faculty members comprising each goal team are typically core course and/or academic major leaders and are the experts with respect to their APG. They create and revise the standards for their APG and WGCD statements. Each year, each goal team assesses one or two WGCD statements along with the APG's using a variety of evidence, discussion, and deliberation to develop their findings. Each goal team then works with course and program directors to continually reflect and make improvements when necessary.

Each goal team culls and collects evidence from a range of sources, including direct evidence (e.g., Executive Summaries from core course and academic major program directors), as well as materials not drawn directly from cadet products. Indirect evidence is also used to assess our APGs and is collected at all levels. Examples of such instruments include First and Fourth Class Cadet surveys and the Faculty Survey on Cadet Achievement. We also use surveys of graduates, interviews with Army leaders who have had our graduates in their command, and graduate school performance to aid in our assessment efforts. Both direct and indirect evidence provide perspectives from several viewpoints on cadet performance and help us determine if our graduates can apply their knowledge, skills, and behavior in the field as Army officers. Using all of this evidence, goal teams determine overall achievement of the APGs and WGCD statements. They also reflect on the meaning of their assessment results relative to the WPLDS outcomes associated with that goal. Each goal team presents its assessment results and recommendations to the Assessment Steering Committee. The core course and academic major program directors then use these results as they design and implement subsequent course offerings and program requirements.

## **Role of the Academic Program Leadership**

The Dean, Vice Dean for Academic Affairs, and Department Heads work together to examine, hear, and reflect on assessment results from the departments and at the ASC and goal team levels. As the caretakers of the academic curriculum, they identify strengths and areas for improvement in cadet learning, consider recommendations, and determine what actions should be taken by the Academic Program and the faculty in respective departments. Department Heads are responsible for taking actions based on recommendations formulated throughout the assessment process and provide feedback about the impact of those actions on APGs. These actions may include refinements to the academic curriculum, teaching practices, or the assessment process itself.



## Integrating with the West Point Leader Development System

While this section is focused on the Academic Program's continual improvement, assessment is also ongoing at the institutional level and is led by the WPLDS Assessment Committee. Course and program objective alignment with the APGs and the APG alignment with WPLDS outcomes allows the Academic Program results to contribute to the assessment of the broader WPLDS outcomes. The ASC generates an annual

report that addresses cadet achievement of the APGs and WGCDs and is then shared with appropriate stakeholders to include the WPLDS Assessment Committee. The Academic Program leadership, as part of the General Committee and Academic Board, plays an integral part in the broad WPLDS assessment through reflection across all programs and direction within the Academic Program.

### Comprehensive Major Review

Academic majors will conduct periodic comprehensive reviews to identify their strengths and opportunities for improvement related to academic quality and how well they support attainment of the APGs and program SLOs. These reviews allow faculty members and department leaders opportunities to reflect on different aspects of their majors and to receive feedback from an external team. These reviews should be conducted at least once every eight years.

### Academic Program Review

The Academic Program is also comprehensively reviewed periodically to ensure it is effectively promoting cadet attainment of the APGs and whether the APGs themselves need to be changed. These reviews will include a review of the APGs and curriculum by an external team and a consideration of any changes to the USMA mission, WPLDS outcomes, Army needs, best practices in higher education, and anticipated future challenges and opportunities.

### Directorate USMA Strategy Assessment

The Dean's staff leads an annual assessment of the Directorate's contributions to the USMA Strategy. This includes initiatives undertaken over the past academic year and assessments from various elements such as the Library, Center for Enhanced Performance, and West Point Writing Program.

### Academics 2052

The Academics 2052 working group scans and explores the future in order to highlight uncertainty, depict possible futures, and identify challenges and opportunities associated with those futures. The group's insights inform curricular change and strategy development.

## Our Continual Improvement Rhythm

The goal of assessment is reflection and improvement. Course and program directors annually assess cadet achievement of student learning outcomes and produce summary reports of their findings and recommendations for their respective Department Heads. The cornerstone of quality assessment occurs at this fundamental level as directors and instructors work together to improve both core course and major program offerings. Faculty should learn from these assessments and use them to innovate and drive change where needed.

Goal teams are also using this information to understand curricular effects across the Academic Program within a specific domain. The ASC takes an even broader look as it aggregates conclusions and recommendations across the entire Academic Program for presentation to Department Heads and the Dean. The Dean and the Department Heads use all of this evidence to provide appropriate guidance to faculty. The process continues into subsequent years when any changes that were adopted are subject to further assessment.

## Characteristics of Meaningful Assessment

The dual pursuits of knowledge and improvement drive assessment. We seek to understand how we develop cadets by determining how well, as a group, they are achieving the APGs and WGCD statements. Over the long-term, we consider and reconsider the effectiveness of APGs and WGCD statements themselves in the context of evidence, relevancy to the broader mission, trends in higher education, advances in disciplines, and appropriateness for the needs of the Army. We must develop these longitudinal assessments to shape and guide development of the Academic Program over time.

Our Academic Program assessment process yields useful information that allows the curriculum to maintain currency and relevance to the Army and higher education. It allows us to measure the Academic Program's outcomes and to respond to inquiries from external agencies including the Department of the Army, the Department of Defense, and the United States Congress and feedback from our accreditors that include, the Middle States Commission on Higher Education, ABET, United States Geospatial Intelligence Foundation, and American Chemical Society. Most importantly, our assessment system fosters a culture of continual improvement as we educate future Army officers.

## Academic Governance Regulations

The USMA regulations below provide policy and regulatory guidance for essential components of Directorate operations.

**Civilian Faculty Career Model (USMA Regulation 150-2):** This regulation defines primary components of the civilian faculty career model such as roles, benefits, work schedules, and general administration.

**Procedures for Awarding Titles and Tenure (USMA Regulation 150-3):** This regulation defines relationships among academic titles, functional area designations, and academic duty positions at USMA and establishes general qualifications, guidelines for evaluation, and procedures for awarding those academic titles. It also establishes the eligibility and process for civilian professors to obtain tenure.

**Broadening Programs (USMA Regulation 150-5):** This regulation describes the types of broadening programs available at USMA for faculty members and the procedures for requesting a broadening absence.

**Academy Research (USMA Regulation 150-6):** This regulation provides policy and regulatory guidance for the conduct of research at USMA.

# ACADEMIC PROGRAM STRATEGY: 2022 – 2027

(As of June 2022)

## **Academic Program Strategy: 2022-2027**

The Academic Program Strategy 2022-2027 describes three interrelated priorities that will enable the Academic Program to better support the USMA Mission, USMA Strategy's Lines of Effort, and the Academic Program's Vision and Outcomes. Each priority will have an action plan that identifies relevant initiatives along with action leads and timelines. The Academic Program Strategy priorities will serve as the framework for the Dean's academic year annual guidance.

### **USMA Mission**

To educate, train, and inspire the Corps of Cadets so that each graduate is a commissioned leader of character committed to the values of Duty, Honor, Country and prepared for a career of professional excellence and service to the Nation as an officer in the United States Army.

### **USMA Strategy's Lines of Effort**

- Line of Effort 1: Develop Leaders of Character
- Line of Effort 2: Cultivate a Culture of Character Growth
- Line of Effort 3: Build Diverse, Effective, and Winning Teams
- Line of Effort 4: Modernize, Sustain, Secure
- Line of Effort 5: Strengthen Partnerships

### **Academic Program Vision**

The United States Military Academy educates and inspires leaders of character who think critically, internalize their professional identity, and employ their education to fight and win our Nation's wars.

### **Academic Program Outcomes**

1. A rigorous education that prepares cadets to thrive in complex and uncertain environments.
2. A culture of commitment to cadet development through an emphasis on standards, innovation, and collaboration.
3. A world-class military and civilian faculty that is professionally and deliberately recruited, developed, and enabled.
4. The Academy's intellectual capital is leveraged for the benefit of the Army and the Nation.

## **Strategic Environment**

The United States Military Academy stands at a strategic inflection point. The future environment in which the Army will be called upon to plan and operate includes several key features. One is major-power competition with Russia and China. Another feature of the future environment is rapidly advancing technology. Accelerating developments in cyber-capabilities, automation, AI, space systems and many other technological areas will reshape not only how wars are waged but how states amass and exercise power. It is virtually certain that the future Army officer corps must prepare for strategic competition with China in which both sides are continually adapting to new technologies. This requires a generation of officers who are politically, technologically, diplomatically, and culturally sophisticated. There are many other features of the future environment, however, that cannot be predicted confidently, and the next generation of Army leadership must be intellectually agile in facing that uncertainty. This requires a generation of officers who can think critically about assumptions, adapt to new circumstances, and design creative solutions to novel problems.

The characteristics of incoming cadets have also changed over time, and the Academy must adapt its developmental efforts to ensure they are appropriate. Socioeconomic friction, social movements, and deep political polarization characterize the diverse environments from which our cadets are drawn. The pandemic has impacted the educational and social growth of incoming cadets, which may result in learning gaps and weak interpersonal skills. Cadets are also arriving at West Point hesitant to lead their peers and with very little exposure to military life. While their developmental needs are significant, our extraordinary staff and faculty have the talent and commitment to meet these needs. Inculcating the professional military ethic will require careful, sustained mentorship at an increased level of personal engagement by staff and faculty. There is intense competition for talented students in a changing higher education environment that includes a range of more affordable and flexible options for the delivery of instruction and some skepticism about the value of higher education.

Modernization is underway at the Academy. The Cyber & Engineering Academic Center and Academic Building Upgrade Plan will deliver a modern Academy for the next half-century. In the near term, these efforts will be disruptive to staff, faculty, and cadets, and will create challenges for delivering the academic program's outcomes. Additionally, the Academy's efforts to develop commissioned leaders of character take place in a resource-constrained environment caused by budgetary pressures and economic uncertainty. This environment, however, provides opportunities for reflecting on how to improve the academic program's outcomes and being creative in acquiring new resources.

## Academic Program Strategy 2022-2027 Priorities

### **1. Improving our holistic education and development of cadets.**

The pandemic made it difficult to execute our foundational developmental practices, which are distinctive attributes of USMA's 47-month developmental experience that is designed to produce future officers. We are returning to these practices by modelling and enforcing academic and military standards and discipline in and out of the classroom and fostering a culture of character growth. We will inspire cadets to embrace their role confidently and optimistically as future Army officers. Confidence and optimism start with us as leaders who are the most accessible faculty in higher education. In the classroom, we will challenge cadets through a rigorous education that develops them into discerning officers who can discuss and debate complex ideas in a civil and thoughtful manner. Outside of the traditional academic environment, our engagement with cadets provides invaluable mentorship on personal and professional conduct while simultaneously modeling selflessness. Faculty serve as exemplars for cadets on how to both think and act like a professional.

### **2. Optimizing and modernizing the Academic Program.**

The education we provide must develop cadets into Soldier-Scholars who can be trusted to think critically and creatively about the most complex and ambiguous of issues while simultaneously making speedy, informed decisions. Our academic program must also be among the top in higher education so that it attracts talented cadets, staff, and faculty. The external reviews of our academic program and majors will serve as starting points for determining whether our current curriculum, pedagogy, organizational structure, and support systems are preparing our graduates to lead diverse teams that can overcome the demanding and complex challenges of warfare and place USMA among top-tier institutions in higher education. To ensure we maintain our exceptional faculty and staff, we will continue to enhance our efforts to acquire, develop, employ, and retain talent. The Cyber Education Academic Center and Academic Building Update Program will provide USMA with world-class facilities. We will keep these efforts on track while employing creative approaches that minimize disruption to our mission. We will reevaluate and reimagine all we do and modify, reduce, or eliminate those activities with costs greater than their benefits.

### **3. Fostering a culture of innovation.**

West Point is the intellectual engine of the Army's innovation ecosystem. With a persistent focus on timely, relevant, and interdisciplinary research, and by partnering with key stakeholders in government, academia, and industry, we will further enhance USMA's preeminence at the intersection of academic and military innovation. Led by our engagement team, we will amplify the academic successes and capabilities within our academic departments and centers of excellence through comprehensive outreach on all platforms, including social media, best-in-class websites, applied research podcasts, and the first-ever

academic press at West Point. Our culture of innovation will fuel cadet intellectual curiosity, disciplinary depth, and a desire for lifelong learning. It will also provide opportunities for cadets to grapple with real-world problems and interact with real-world customers. We will work to improve support structures that assist faculty and centers in their efforts to seek, receive, and manage the funding necessary to leverage our intellectual capital and identify and leverage potential internal and external partnerships. Through expanded outreach to the Association of Graduates, West Point Societies/Field Force teams, and the Admissions Directorate, we will continue to inspire previous and current generations—and influence future generations—of graduates to be ambassadors for the West Point academic program.

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