

2019 SIX-YEAR PLAN: NARRATIVE

VIRGINIA MILITARY INSTITUTE

OVERVIEW:

The totality of the six-year plan should describe the institution's goals as they relate to goals of The Virginia Plan for Higher Education, the Higher Education Opportunity Act of 2011 (TJ21) and the Restructured Higher Education Financial and Administrative Operations Act of 2005. The instructions under institutional mission and alignment to state goals, below, ask for specific strategies around four priority areas. Other sections will offer institutions the opportunity to describe additional strategies to advance institutional goals and state needs. *Please be as concise as possible with responses and save this narrative document with your institution's name added to the file name.*

Section A. Institutional Mission, Vision, Goals, Strategies, and Alignment to State Goals: Provide a statement of institutional mission and indicate if there are plans to change the mission over the six-year period.

RESPONSE:

The Virginia Military Institute believes that the measure of a college lies in the quality and performance of its graduates and their contributions to society. The Institute is guided by Vision 2039 which focuses on leadership and stresses that graduates serve the nation in times of peace and war. Therefore, it is the mission of the Virginia Military Institute to produce educated, honorable men and women, prepared for the varied work of civil life, imbued with love of learning, confident in the functions and attitudes of leadership, possessing a high sense of public service, advocates of the American Democracy and free enterprise system, and ready as citizen-soldiers to defend their country in time of national peril.

To accomplish this result, the Virginia Military Institute shall provide to qualified young men and women undergraduate education of highest quality – embracing engineering, science, and the arts – conducted in, and facilitated by, the unique VMI system of military discipline.

Cadet life at VMI is defined by the Institute's Honor Code. Cadets live by the Honor Code and are responsible for all aspects of its governance. They are also charged with maintaining the military structures and protocols of life in Barracks. Since all cadets reside on Post throughout their four years at VMI, Barracks is the focal point of cadet life and an important laboratory for building and exercising leadership and teamwork skills.

The combination of VMI's rigorous academic program with its disciplined military organization and system distinguish the Institute from most institutions of higher education in the United States. Our comprehensive institutional mission is to educate the cadet intellectually, physically, morally and ethically through challenging and integrated curricular and co-curricular experiences. The Virginia Military Institute maintains a clear educational focus and a well-established niche in the higher education marketplace. We aspire to become neither a large institution nor a research institution.

We believe that this institution offers cadets not only an excellent academic education but also many additional benefits: a disciplined approach to overcoming obstacles, an understanding of the principles of leadership and of working in an organizational setting, and the experience of living in an environment that

greatly values personal integrity, ethical inquiry and physical well-being. Because of these many benefits, the VMI graduate is an educated and honorable citizen-soldier.

Specific Strategies to address four Commonwealth priority areas:

1. Access and Enrollment - VMI has a plan in place to continue to emphasize the recruitment of underrepresented populations, including females, ethnic minorities and first generation college-attending students. Strategies include the employment of representative admissions staff members, the development of partnership programs with organizations who serve these populations and recruitment at high schools identified as those with large representations of these underrepresented populations. VMI will continue to work closely with alumni who provide extensive support in the recruitment of these populations as well.
2. Retention and Completion - VMI ongoing plan of action to address graduation, time-to-degree, and degree completion includes new initiatives overseen by the Miller Academic Center. The Center's staff, working with the cadet staff, oversees tutoring, group study sessions, and special academic training, with a goal of reaching and maintaining a 4-year graduation rate of at least 70% and maintaining a 6-year graduation rate in excess of 75%. Given the unique demands of the VMI program and the single-sanction honor code, this is a lofty but attainable rate.
3. Affordability and Funding - VMI focuses on containment of annual tuition and fee increases by seeking efficiencies in the delivery of the entire education program. A key component of making VMI more affordable is the ability to package financial aid from multiple sources: need, merit, and ROTC. The combination of these three aid sources allows the average student debt at graduation to be approximately \$26,000. The Institute continually strives to bolster the amount of need based and merit aid available to cadets as a means to control overall costs to students and their families while attracting more applicants.
4. Workforce Alignment - VMI promotes internship opportunities for all cadets. Historically, administration and facilitation of internships is housed within each academic department. Department heads and faculty, as part of their cadet development responsibilities, help facilitate internships. Career Services has been tasked with taking a more active role in working across departments to allow prospective employers more efficient access to cadets from the various disciplines, without having to coordinate with each department head. Serving in a consultative role, Career Services personnel will be able to assist departments to increase the internship opportunities for cadets, especially in historically underrepresented majors.

To facilitate this effort, VMI is submitting (15 July 2019) a development track proposal for funding from SCHEV's "Innovative Internship Program."

VMI offers 14 majors and more than 30 minors and concentrations, providing a curriculum aligned with the current needs of employers. Annually, within 6 months of graduation, 98% to 99% of each graduating class is employed in the field of his/her discipline, with US Department of Education data reflecting significantly high mid-career earnings.

Section B. Tuition and Fees Predictability Plans: Provide information about the assumptions used to develop tuition and fee charges shown in PART 1. The tuition and fee charges for in-state undergraduate students should reflect the institution's estimate of reasonable and necessary charges to students based on the institution's mission, market capacity and other factors. Include information, if applicable, on tuition

increase plans for program and level-specific charges or on any other alternative tuition and fee arrangement.

RESPONSE:

VMI's Tuition and Fees Predictability Plan assumptions include varying levels of additional State support similar to that received in FY 2020. In addition to the scenario assuming no increase in State funding, a second scenario assumes full funding through a Tuition Moderation Fund to hold In-State tuition flat for the 2020-2022 biennium. A third scenario assumes Tuition Moderation Funding in the 2020-2022 biennium adequate to reduce planned In-State tuition increases by one-half.

Section C. Other Budget Items: This section includes any other budget items for which the institution wishes to provide detail. Descriptions of each of these items should be one-half page or less.

RESPONSE:

Details on Academic and Support Program Strategies:

#1: Increase T&R Faculty Salaries

An important factor in maintaining VMI's reputation for academic excellence, and in meeting the Vision 2039 objective of becoming a "Premier Undergraduate College in America," is a vibrant, active, and enthusiastic faculty. As VMI seeks to recruit and retain the best faculty – Ph.D. level men and women who are excellent teachers, productive scholars, active in their professions, and engaged in the lives of cadets – it is imperative that the Institute offer competitive salaries.

In recent years, VMI has had difficulty in filling vacant faculty positions with the top applicants, which led the Dean in spring 2012 to charge the Faculty Compensation Committee (FCC) with evaluating the adequacy of the VMI faculty compensation model for determining faculty salaries. The FCC was also charged with comparing VMI salaries to other Virginia colleges and universities, to professional discipline indices, and to selected peer groups. The FCC found that, when compared to the 14 Virginia public colleges and universities, VMI's average faculty salary ranked 11th. When compared to 23 of 25 SCHEV peer group schools for which information was available, VMI's average faculty salary ranked 23rd. In fall 2016, the Superintendent established the goal of raising VMI's average faculty salary into the top five amongst Virginia public colleges and universities. Approximately \$2.5 million in new funding is required to achieve this goal.

From 2014 to 2017, the new Institute Compensation Committee reviewed several iterations of the Institute's Faculty Compensation Model before adopting a relative market value model, which establishes target salaries for all faculty based on their academic discipline and years of service. It uses the College and University Professional Association for Human Resources (CUPA-HR) salary survey to determine the average salary for each academic discipline at VMI, and adjusts the average based on the funding required in order to raise VMI's average faculty salary into the top five amongst Virginia public colleges and universities. Much of the funding to be used to increase faculty salaries will come from private funds used to established distinguished faculty chairs. An ongoing, active campaign for private funds, despite a relatively small alumni population, will assume the full cost of the faculty position (i.e., salary and benefits) and provide the chair with a merit-based salary supplement. The reallocated E&G funds will then be used to adjust other faculty salaries towards their Compensation Model target salaries.

#4: “Right-Sizing”

With the addition of the Third Barracks at the start of the 2009-10 AY, the Corps of Cadets increased from approximately 1,200 to 1,500. However, there was no initial increase to the size of the faculty to accommodate the increased number of students and the Institute increased its use of adjunct faculty. The “Right-Size” Initiative identified 14 new full-time faculty positions by FY 2018 to support a Corps of 1,500. Subsequently, the Corps of Cadets continued to grow, and currently numbers approximately 1,700. As a result, a new “Right-Size II” study was completed in the fall of 2015 to determine if additional faculty were required to support this continued growth. Unlike the original study, which used adjunct demand to determine where new full-time faculty positions would be required, the new study examined faculty teaching loads across all departments. The VMI Applied Mathematics Department analyzed three years (12-13 AY to 14-15 AY) of teaching load information to develop a model that can be used to:

- identify teaching load imbalances between departments;
- model the possible impacts of faculty hires/position shifts as well as changes in enrollment; and
- examine the results of these changes.

While the focus of Right-Size Study II was on faculty teaching load, the Institute also evaluated the number of Core Curriculum courses being taught by adjuncts as opposed to full-time faculty. Therefore, the addition of some term faculty (i.e., predominantly teaching, non-tenure track positions) will help achieve the secondary goal of reducing the reliance on adjunct faculty, and exposing freshmen to full-time faculty in their Core Curriculum courses. Based on the results of this study, an additional ten full-time faculty positions (two tenure track and eight term positions) are required to support a Corps of Cadets of 1,700 in addition to the 14 positions identified in the original Right-Size initiative for a total of 24 new positions.

The cost of these positions will be covered through a combination of new funding, reallocation of resources (adjunct faculty funds and “turnover” savings from replacing retiring faculty) and private funds. Privately funded positions will eventually be converted to E&G positions except for endowed chairs and professorships.

#5: Math that Matters: Contextualizing Mathematics in a Computational World

In order to prepare today’s graduates to succeed in a world where rapidly changing technology is transforming how individuals relate to and function within their environment, the Institute considers it a priority to ensure that all cadets become literate in the language of math, and computational technology and its application in solving real-world problems. Most STEM majors at VMI are exposed to programming and mathematical problem-solving through the course work in their curriculum, but approximately 50-60 percent of cadets could benefit significantly from additional course work in these areas. Therefore, this initiative focuses on improving the common core math requirement by developing a new, two-course math sequence that will include technology-driven mathematical topics and basic computational skills.

This innovative curriculum will emphasize the contextualization of mathematics within a cadet’s discipline by incorporating contemporary pedagogical methods (e.g. problem-based learning) and modern problem-solving tools into one powerful educational package. This new pedagogical paradigm will better prepare VMI graduates to: (a) think critically and solve complex problems within their disciplines that require significant computational, data analytic, and critical thinking skills, (b) better understand the nuances of how technology informs and affects interactions with the environment, and (c) better negotiate the technological-mathematical terrain that pervades the modern world.

Stated simply, the idea is to have cadets, particularly non-STEM majors, engage with math in ways that are meaningful and useful for solving domain-specific problems using computers. Active problem-based projects will be designed and used to apply mathematical skills to realistic math problems including statistics and modeling. In addition, basic computational thinking skills will be developed using software, like Microsoft Excel, in order to teach cadets to solve the problems and understand the capacity and the limitations of both the model and technology. These projects will be developed through collaborations

between the Applied Mathematics Department and other departments whose cadets will be required to take this new math core sequence.

VMI's accreditation by the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC) was reaffirmed in 2017. The concept of quality enhancement is at the heart of the SACSCOC philosophy of accreditation, and each institution that seeks reaffirmation of accreditation is required to develop a Quality Enhancement Plan (QEP). Math that Matters was approved as VMI's QEP, and notably, received no recommendations, a result that nearly 60% of institutions fail to achieve.

#6: Financial Aid

Background

VMI projects an enrollment for Fall 2019 of 1726 cadets consisting of approximately 1080 in-state cadets (62.6%) and 646 out-of-state cadets (37.4%). As of 31 May 2019, 42.1% of in-state cadets (455/1080) and 62.1% of out-of-state cadets (401/646) have established demonstrated need. In 2018-19, VMI awarded over \$27 million in grants and scholarships to include Federal (Pell Grant and Supplemental Educational Opportunity Grant), State (VSFAP-VGAP, COMM, and State Cadetship), ROTC (Army, Navy, Marine Corps and Air Force) and institutional aid. Private and institutional aid accounted for over \$13 million and ROTC scholarships for over \$11.7 million (approximately 28 % of cadets qualified for ROTC scholarships in 2018-19).

The annual percentage of in-state cadets and out-of-state cadets qualifying for need-based aid remains around 40-45% and 60-65%, respectively.

Policies and Commitment

VMI strives to meet 100% of the demonstrated need of in-state cadets with grants and loans for those who meet the March 1st application deadline and as funds are available. The Institute continues to maintain a “need-blind” admissions policy ensuring that no qualified applicant is denied admission based on his or her ability to pay. See Part II Item C of VMI's Six-Year Plan for a description of its Financial Aid Plan to include addressing the impact of tuition and fee increases on low-income and middle-income cadets and their families.

VMI's Vision 2039 includes a goal of commissioning 70 percent of graduates into the Armed Forces so VMI continues to emphasize and support cadet efforts to participate in ROTC scholarship and other military-based aid programs. Recent experience has shown that a commissioning rate of 60% is more realistic and better reflects the needs of the Armed Forces and the interest and qualifications of graduating cadets.

2019 Update:

Financial aid resources provided to “needy” in-state cadets included \$1,036,680 of State General Funds (VSFAP-Virginia State Financial Aid Program) in the 2018-19 AY; the total projected for the 2019-20 AY will be \$1,118,218.

Of the 236 in-state cadets who graduated in 2019 (1 July 2018 to 30 June 2019) 120 or 51% graduated with Federal loans (Direct Subsidized/Unsubsidized and Perkins Loans). Their average debt was \$18,463.

#8: Core Course in “American Civics” - New strategy for 2019 Plan

Although many students are exposed to US History and Civics in their secondary school education, the preparation is not rigorous. As a college wherein more than 50% of each year's graduating class commissions in the US armed forces and a significant percentage of all graduates actively participate in civic engagement, it is imperative the students have a solid understanding of US History, the Constitution, and Civics. History and International Studies majors are required to take courses in US History, the Constitution, and Civics. These two majors represent a minority of the entire student body.

To bolster understanding in this topic area, VMI intends to develop a pilot course of study in “American Civics” for any students who do not take the current History and International Studies curriculum in US History, the Constitution, and Civics. The pilot course curriculum and execution will be undertaken with existing resources. If the pilot course outcome results in making this a permanent curriculum addition, it is estimated the History Department has sufficient faculty currently available, or as planned hires (see “Right-Sizing” strategy #4), so as to be able to serve the entire Corps of Cadets.

#9: Re-Imagination of Core Leadership Course - New strategy for 2019 Plan

All cadets enroll in PS344-Leadership in Organizations, a required, 3-credit hour course in the theory and practice of leadership. Introduced in 2006 as part of the VMI core curriculum, based on survey and assessment data, the course will be redesigned to lessen the time commitment to leadership theory in order to enrich the application component of the course. In addition to curricular enhancements, this course will have a new course director. The course director will oversee the development of: new training modules for current faculty; the training of “Leadership Fellows”, VMI faculty who are qualified to teach leadership but have not heretofore taught the course; and the possible need to hire additional full- and part-time faculty. Additional faculty may be needed for two reasons. First, VMI faculty currently not teaching the course who become Leadership Fellows will teach a section of the leadership course in lieu of a course currently taught. If that currently taught course must be offered, then an additional faculty (possibly part-time) could be necessary. Second, the time and space for the practical application of theoretical principals of the course will be supported with a relatively small class size, which may necessitate additional faculty.

#11: VMI's Center for Undergraduate Research (V-CUR)

The VMI Center for Undergraduate Research (V-CUR) was established to more fully integrate student scholarly inquiry into the VMI experience. The program was originally founded on the premise that the most meaningful academic experiences of college students come through one-on-one interactions with faculty mentors outside the traditional classroom environment. Through the growth of V-CUR, cadets presenting research at regional and national venues, VMI's co-hosting of national and regional undergraduate research conferences, and publications about V-CUR in the Council on Undergraduate Research Quarterly, have made a significant contribution toward the Vision 2039 goal of improving VMI's academic reputation as a premier undergraduate college in America.

V-CUR provides grants for student summer research projects with faculty and for Applied Industrial Mathematics (AIM) research projects. AIM research projects are comprised of cadet teams and faculty advisors that are joined with a sponsor, such as a (usually local) business, industry, or government agency and use applied mathematics to solve a problem presented by the sponsor. This partnership is beneficial to all involved. In developing mathematical solutions for the sponsor, the cadet participants are exposed to the practical applications of mathematics and computer science in a "real world" setting, and they acquire

knowledge that will aid them in their senior capstone project and later in life, to include contact with employers.

The Center for Undergraduate Research is privately funded at \$190,000 annually. VMI faculty are engaged in externally funded research with approximately \$350,000 of funding received annually in support of these projects. As a result of these projects, the VMI faculty make approximately 100 scholarly presentations at conferences in the U.S. and abroad each year.

#12: Math Education and Resource Center (MERC)

The Math Education and Resource Center (MERC) was created to specifically address cadets' performance in mathematics with a particular emphasis on incoming freshmen. As VMI continues its efforts to maintain its goal of 50 percent of all graduates coming from STEM majors, it is essential that students who are poorly prepared in mathematics as they leave the public secondary schools receive instruction and coaching to find success in college-level mathematics, especially math required for technical disciplines.

The MERC is directed by the Applied Mathematics Department Head who assists the department in introducing more historical dialogue into the mathematics curriculum. The MERC employs both professional and cadet tutors who work with cadets one-on-one to develop mathematics skills, to understand strategies useful in solving mathematics problems, to guide efforts in completing course assignments, and to prepare for tests and final exams.

With the support of a private funding grant of \$666,000 covering tutor costs for a five-year period, the MERC began offering services through the Open Mathematics Laboratory (OML) in spring 2011 and was fully implemented by fall 2012. A second private funding grant was awarded in spring 2017, which will support continued operations through the 2021-22 AY. In addition, high cadet demand for the OML's services resulted in increased space allocation. An operating budget was established for the MERC, and a full-time tutor supervisor position was established, both supported by E&G funds. State funding may be required to replace the private funding grant when the end of the term approaches.

#13: Technology Enhanced Instruction

VMI's integrated academic and military life program requires cadets to live on campus and to meet specific accountability requirements throughout the day. Accountability requires that cadets attend all of their classes. To accommodate the military demands of the VMI experience, classes are scheduled between the hours of 8 a.m. and 4 p.m. – the academic day. Consequently, enrollment in VMI courses reflects actual attendance and all classes are taught during the prescribed academic day. This model is inherent to VMI's mission and it does not facilitate independent distance learning.

Faculty are encouraged and expected to use appropriate technology in the development of their courses as stated in the *VMI Statement on Faculty Expectations*. Approximately 50 percent of the Institute's courses use the course management software, *Canvas*. In addition, course instructors are encouraged to develop websites to accompany their courses and many distribute and collect information through the VMI network and through electronic reserves in Preston Library. For many courses, *ePortfolio* is an integral component that is used for both teaching and reflective learning fostered by the use of technology. The Applied Mathematics Department has developed several open source textbooks for use in selected courses that are available in electronic form, and have been adopted for use by other schools.

VMI science and engineering instructional and research laboratories are equipped with state-of-the-art technology, including capabilities that are not readily available elsewhere in Virginia. The capabilities in many of these laboratories were acquired by federal grants, private industry, and private funding from the VMI Foundation. VMI maintains 92 Smart classrooms and maintains e-instructional resources in nearly all other classrooms. These facilities are fully supported by VMI's Information Technology (IT) Department, which also maintains several computer laboratories to provide cadet access to specialty software

applications. VMI's IT Department also provides technical support for student-owned computers including a Help Desk in the Barracks. The VMI Post has 100% WiFi coverage and cadets also have access to hard wired data ports in many academic buildings, including Preston Library, and in their rooms in the Barracks. VMI is an active participant in RANA (Rockbridge Area Network Authority) and provides up to 1,500 Mbps of Internet bandwidth to meet the demand of its 1,700 cadets.

#14: "New Directions" Grant Program

Committed to excellence in teaching and scholarly endeavors, the VMI faculty actively pursues funding to support innovations. However, the competition for external grant monies has become fierce as granting agencies are overloaded with funding requests, and proposals describing new research or pedagogical directions are often not funded without significant preliminary data. Strong, well-developed proposals sent to national funding agencies are routinely declined on the first attempt. As a result, the implementation of ideas that would enhance the academic program is delayed by a year or more, and critical momentum is lost.

In light of the current difficulties in obtaining external funding, the New Directions in Teaching and Research grants program was launched in FY 2012 through a private funding source. This program fills a critical need for monies to enable faculty to implement new ideas and, when appropriate, to gather data to strengthen proposals for external support.

The program promotes innovation and collaboration in teaching and research, and funds are awarded annually through a competitive proposal review process with individual awards ranging from \$10,000 to a single award of \$100,000. Successful proposals include the potential for continuing longer-term funding through alternative private sources, but may ultimately result in requests for state funding where projects directly serve the Commonwealth's interests.

#15: Engineering Graduate Program Research Agreements

VMI has developed some and is pursuing other agreements with Virginia Commonwealth University (VCU) and Virginia Tech engineering departments. These agreements will share laboratory facilities and provide internship and research opportunities for undergraduate and graduate students.

An agreement with the VCU College of Engineering established a summer research program involving VMI rising seniors coordinated with collaborative research between VCU and VMI faculty. Initially limited to the Mechanical Engineering Department at each institution, the VMI Physics & Astronomy and the VMI Chemistry Department have also participated in various aspects of this agreement.

An agreement with Virginia Tech involves the Institute's environmental engineering programs. VMI graduates who attend Virginia Tech for graduate school in environmental engineering use the VMI Environmental Engineering Laboratory to pursue their graduate research work under the direction of a VMI faculty member as their graduate advisor.

#16: Articulation Agreements

VMI has developed articulation agreements with 13 Virginia universities to create incentives for cadets to graduate and pursue advanced professional and graduate degrees and certificates, and the Institute is pursuing additional agreements with other Virginia universities. This program is directed at attracting qualified students, improving retention, and allows students the opportunity to plan their academic progress from community college to four-year college to graduate school.

#17: Maintain Number of STEM Majors

The VMI Core Curriculum, which defines coursework required of all VMI students, includes a two-semester sequence in a laboratory science (eight credit-hours in Biology, Chemistry, or Physics) and a two semester sequence in mathematics (six credit-hours), regardless of the major. As a result, every VMI graduate has a basic background in science and mathematics.

Revisions to curricula in several majors have been implemented since the 2011-12 AY to respond to cadet interests with the intent of attracting additional students and improving retention. The Biology Department established a concentration in Ecology, Conservation, and Organismal Sciences (ECOS) for cadets who wish to explore field-based and organismal disciplines of biology, including plant and animal biology, conservation, and ecology. Additionally, VMI continues to enhance the teaching and research capabilities of the STEM department labs by investing in state-of-the-art equipment (see “Technology Enhanced Instruction”).

The Computer Science program was transformed into a Computer and Information Sciences (CIS) program designed to produce graduates prepared for careers influenced strongly by a firm understanding of the role of technology and its place in military, for-profit and not-for-profit career environments. In addition, the CIS program implemented a multi-disciplined, Cyber Security minor. The Psychology Department eliminated the B.A. degree in Psychology and offers only a B.S. degree. The B.S. Psychology curriculum has a strong foundation in science and research methods, and has firmly established the VMI Psychology program as a STEM major.

In addition to curricular changes, an Enrollment Management Committee was established in the 2012-13 AY to develop policies and procedures to address the unequal distribution across majors at VMI in order to achieve a better balance of STEM and non-STEM majors.

#18: Accreditation for the Department of Computer and Information Sciences - New strategy for 2019 Plan

The renaming of the Computer Science (CS) program into the Computer and Information Sciences (CIS) program was undertaken to facilitate a curriculum that prepares graduates for careers influenced strongly by a firm understanding of the role of technology and its place in military and non-military career environments. A central goal of the Institute is to pursue discipline-specific accreditation from an outside agency, where available. The Civil, Mechanical, and Electrical and Computer Engineering departments are accredited by the Accreditation Board for Engineering and Technology (ABET). The Economics and Business department is accredited by the Association to Advance Collegiate Schools of Business, International (AACSB). The Chemistry department is an American Chemical Society (ACS) – Approved program.

With the ongoing maturation of the Computer and Information Sciences department, offering the Computer Science degree, the Institute plans to pursue ABET accreditation.

#19: Learning Services Program

The mission of VMI’s Learning Services program in the Miller Academic Center is to facilitate cadets’ academic success and timely progress toward degree completion. The program expanded at the start of the 2011-12 AY through the support of a five-year private funding grant of \$750,000. A subsequent private grant awarded in spring 2016 will support the program through the 2021-22 AY. In support of this mission, the program:

- Provides advisors the information and training necessary for them to guide their advisees;
- Coordinates course-specific group study sessions;
- Identifies and coordinates need-specific learning skills programs to be offered to the Corps;

- Serves as Dean's representative to the S2 (cadet academic staff) by meeting regularly to train and coordinate with them as they lead their peers in learning and support programs.

As the program matures and continues to evolve, and the end of the private funding term approaches, state funding may be required for the program to continue.

#20: Year-Round Facility Use

VMI Post. The VMI Post is a relatively small campus (Post) in which all 1,700 cadets live in residence. The Barracks provides housing and support services for all cadets. Crozet Hall (the Mess Hall) provides food service to cadets, who are required to eat there. Eight academic buildings, including Preston Library, provide faculty and administrative support offices, instructional and research laboratories, classrooms, student study areas, and spaces for other academic support functions. In addition, administrative offices are located in the main administrative building and a few smaller structures such as converted residences. The Post also includes athletic program venues and offices, a conference center, and a physical plant.

Academic Program. The VMI academic program schedule includes two regular semesters, each lasting 15 weeks. During the regular semesters, class enrollment is limited to VMI cadets and, by special agreement, Washington & Lee University students. VMI's ROTC programs also enroll students from Mary Baldwin University, Southern Virginia University, and Washington & Lee University. VMI also offers two summer semesters each lasting five weeks. Summer sessions are open enrollment and serve the educational interests of Rockbridge County and surrounding area residents; enrollment averages approximately 600. In addition to summer session, a Summer Transition Program (STP) lasting four weeks is available for incoming freshmen. Approximately 50 percent of the incoming freshman class of about 500 participate in STP. All STP students are required to live in Barracks and eat in the Mess Hall.

Academic and Extracurricular Program Demands. During the summer, VMI hosts numerous academic and athletic camps (resident and day camps), conferences and symposia. Faculty and cadets are also on Post conducting research. Incoming freshmen participating in initial military training exercises, and the upper class cadets who conduct the training, return from summer break one to two weeks early thereby extending their fall semester. Faculty use the winter, spring, and Thanksgiving breaks as uninterrupted periods for focused scholarly work and research. Consequently, VMI facilities are in constant year-round use. In addition, two-thirds of VMI cadets are NCAA or club sport athletes, and all cadets participate in ROTC programs, which impose additional physical training requirements on cadets. This interest in and emphasis on athletics and physical fitness creates a heavy demand on practice and competition venues.

Cadet Life. The unique nature of cadet life ensures high use of VMI facilities. All cadets live and eat on Post and are subject to a demanding schedule resulting in all facilities operating at or near full capacity. Facilities use is expected to remain substantial, with some increasing burden, into the foreseeable future.

#21: Shared Resources

In addition to the Engineering Graduate Program Research Agreements previously described, VMI is involved in several resource-sharing programs with other colleges and universities in the region.

Collaborative Programs. VMI and Washington & Lee University (WLU), which share a common boundary, maintain an agreement to allow their students to enroll in courses at both institutions. This is particularly attractive to WLU students seeking engineering courses, and to VMI cadets seeking foreign language courses not offered at VMI. VMI offers all four ROTC programs, and students enrolled at Mary Baldwin University, Southern Virginia University, and WLU may participate in ROTC at VMI through cross-enrollment agreements. The ROTC programs are important to these students, because they provide substantial scholarship opportunities to help them meet tuition and other educational expenses. VMI waives tuition for non-VMI students who enroll in a VMI-sponsored ROTC program. About 50 non-VMI students typically enroll in VMI ROTC programs each year.

Shepherd Higher Education Consortium on Poverty. VMI was one of the nine founding institutions of the Shepherd Higher Education Consortium on Poverty - a national consortium to develop a curriculum and internship experiences that allow students to understand issues related to poverty in the United States. All partner schools promote civic engagement and research that improves local communities. VMI and WLU each offer classes consistent with the goals of the consortium with enrollment open to students from both institutions. The Consortium has continued to grow, and currently includes twenty-six member schools.

Open Enrollment Summer Semesters. The two VMI summer semesters are open enrollment and serve the educational interests of Rockbridge County and surrounding area residents as well as cadets. Total enrollment is approximately 600, of which about four percent are not VMI students.

Transfer Credit. VMI accepts International Baccalaureate, Advanced Placement and Cambridge Examination credits and transfer credit from other accredited colleges and universities. The Institute also allows cadets who are within 10 credits of completing their VMI degree requirements to do so at other institutions. These policies serve the needs of cadets, allowing them to seek a wider range of course offerings by effectively expanding VMI's academic resources.

VMI Preston Library Programs. VMI's Preston Library collaborates at the local, regional, state, and national levels in multiple ways. It maintains reciprocal borrowing agreements with local institutions. It has been a member of VIVA, the Virtual Library of Virginia, since 1994, which expands the access to materials and provides consortia purchasing benefits. Preston Library is also a member of regional and national consortia (Lyrasis and OCLC), and it participates as a selective depository library in the Library Programs Service of the Government Printing Office.

#22: Increased Degree Completion for Virginia Residents

Cadets who matriculate and then leave the Institute are allowed to reapply for admission within two years, with liberal exceptions for cadets who deploy to meet military commitments. For qualifying transfer students who are willing to conform to the rigors of VMI life, VMI does accept transfer credit from other colleges and universities and from community colleges. VMI also accepts International Baccalaureate, Advanced Placement and Cambridge Examination credits. Because of VMI's leadership development program, the Institute has a three year residency requirement, including transfer students. To provide scholarship opportunities for all students, including transfer students, VMI's ROTC programs offer three-, two-, and one-year academic scholarships and other incentives for students seeking a commission in the U.S. Armed Forces.

VMI offers two summer semesters and multiple study abroad opportunities that are open enrollment and serve the educational interests of Rockbridge County and surrounding area residents as well as cadets. Approximately 70 different courses are typically offered during the summer semesters. Total enrollment of all summer programs is approximately 600, of which about four percent are not VMI cadets.

23: Military Commissioning

Background

VMI possesses a proud tradition of educating citizen-soldiers, ready to defend the country in time of national peril. Toward this end, the Institute encourages all qualified cadets to pursue commissions in the Active Duty, National Guard, and other Reserve components of the U.S. Armed Forces. In addition, curriculum requirements for graduation include four years of ROTC instruction, regardless of a cadet's intention to seek a commission. This instruction provides valuable leadership training and positions the cadet to seek a commission should his or her plans change.

Financial Aid Component

As part of its efforts to assist cadets with financial aid opportunities and increase the number accepting commissions, VMI encourages cadets to seek military financial assistance. In addition to those who matriculate with a four-year ROTC scholarship, VMI assists cadets with seeking three-year, two-year, and one-year scholarships. The number of cadets commissioned at graduation is significantly influenced by the number of ROTC scholarships awarded. Over the past five years, over 80 percent of cadets accepting commissions received ROTC scholarships. Various one to three year ROTC scholarships are available to cadets who do not matriculate with an ROTC scholarship.

Commitment to Maintenance of Effort

VMI is committed to maintaining a high commissioning percentage as a part of its Vision 2039 Strategic Plan. Since the inception of Vision 2039, the percentage of graduates accepting commissions has risen markedly from less than 40 percent in 2003 to over 57 percent for the 2019 graduating class. The five-year average for the classes of 2015 through 2019 is approximately 51%, up two percentage points over the last reported five-year average. Vision 2039 includes a visionary goal of reaching 70% commissioning which is balanced with a competitive job placement program.

The Commonwealth benefits significantly from individuals who accept commissions, complete their service obligations, and return to the state to pursue employment in the professions of their choice. These young officers return to become productive members of the state's workforce with a level of maturity and leadership acumen unsurpassed by their peers. The cadets benefit in that many receive scholarship assistance while in college and all are gainfully employed upon graduation. Likewise, their time in the service offers them invaluable training that is attractive to employers.

#24: STEM Conference Series

VMI's Center for Leadership and Ethics developed a series of annual conferences to address STEM education issues. The first conference was held in Fall 2012, and expands VMI's outreach to the K-12 community.

The mission of the VMI STEM Education conference series is to invest in teachers as learners and professionals in order to impact students. VMI's affordable STEM conferences provide practical, hands-on workshops offering ideas and activities that educators can immediately bring back to the classroom. Each year, the conference has a concentration on a particular aspect of STEM. The 2014 – 2017 conferences were sold out with attendance capped at 300 to ensure small, hands-on workshops. Participant surveys have consistently given the conferences a 95 – 98% satisfaction rating.

Participating teachers and administrators are from across the state of Virginia and 57% were from a Title I school. The focus is on grades 3 – 8, as those educators have the opportunity to instill students with a confidence in their math abilities and an appreciation for science that can lead to their pursuit of STEM classes in high school and in college majors. This can lead to a future-ready workforce for the Commonwealth. By giving teachers the tools and knowledge they need to encourage their students in STEM, we are able to impact student success for work and life.

#25: Efficiency Reforms

Energy Savings

VMI strives to keep both energy use and energy costs down through a variety of measures. Examples include upgrades to lighting and lighting controls in multiple facilities making them more energy efficient, installation of sub-metering capabilities across Post to allow for more accurate monitoring of energy use and to assist in identifying inefficient facilities and systems, and the use of the sub-metering system in various academic endeavors in order to increase energy awareness in the VMI community. VMI models and pre-buys most of its natural gas in advance, avoiding winter price spikes and curtailment penalties. VMI established a central HVAC operations center to allow for central monitoring and control of building temperatures and facilitate the use of automated energy reduction measures when facilities are not in use. The Institute also participates in a voluntary Demand Response program whereby the Institute agrees to limit electricity use during peak demand periods, and in return receives compensation for meeting certain electricity usage reduction targets. An ongoing capital construction project, Post Infrastructure Improvements, includes installation of a Post wide Building Automation System (BAS) to improve efficiency of facility HVAC systems. The BAS is expected to be fully operational in 2020.

Managing Vacancies

VMI's policy is to require the Superintendent's approval to fill any vacant position to ensure that the position continues to be essential to VMI's mission and operation. Justification is provided in writing as part of the process before any vacant position is approved to be filled.

VASCUPP Cooperative Contracts and Cooperative Procurement

As a member of the Virginia Association of College and University Purchasing Professionals (VASCUPP), VMI contributes to and enjoys access to almost 2,000 cooperative contracts that provide volume pricing for goods and services. This volume pricing is much more favorable than VMI could procure with stand-alone contracts. In addition, the ability to use these cooperative contracts eliminates the need to administratively procure and manage many contracts allowing the VMI Procurement Services Office to function with limited staffing. If VMI did not have access to these contracts, there would be an immediate need for one or possibly two additional procurement professional positions at an estimated annual cost of \$60,000 to \$120,000.

VMI is also a member of the Virginia Higher Education Procurement Cooperative (VHEPC). Its purpose is to aggregate and leverage procurement requirements and resources resulting in a greater financial advantage from cooperative procurement. Current member institutions include George Mason University, Old Dominion University, University of Virginia, Virginia Tech, Virginia Commonwealth University, College of William & Mary, James Madison University, Radford University, Virginia Military Institute, University of Virginia at Wise, Longwood University, University of Mary Washington, Christopher Newport University, and the Virginia Community College System. The VHEPC's focus is directed to commonly used goods and services unique to higher education and builds upon the strong foundation put in place through the Virginia Association of Schools, Colleges and University Procurement Professionals (VASCUPP). The VHEPC has demonstrated that collaborative procurement has resulted in price reductions leading to increased savings by combining annual spend and resource allocation, ultimately producing economies that reduce the resources (time, people, effort) required by a single institution. VMI has followed the recommendation of the Joint Legislative Action Review Committee (JLARC) by instituting mandatory use contracts that maximizes value-added standardization.

Capital Projects

Recently Cocke Hall and Cormack Hall have been remodeled to achieve LEED certification, which certifies that the buildings are more energy-efficient than similar buildings. The recently constructed Corps Physical Training Facility also achieved LEED certification, and utilizes a state-of-the-art cooling and ventilation system projected to consume 30% less energy than a conventional system.

#26: Commonwealth Cyber Fusion and Collegiate Cyber Cup Competition

VMI has hosted the Commonwealth Cyber Fusion and Virginia Collegiate Cyber Cup Competition for 3 years, beginning in 2017. Commonwealth Cyber Fusion is an invitation only event for colleges (Community, public and private 4 year colleges) that are NSA/DHS Centers of Academic Excellence in Cyber Defense. The competition portion of the event was hosted by the Virginia Cyber Range.

For the past two years, this has been an official Senate Event, with Senator Mark Warner as a co-host with VMI and the Cyber Range. The event has grown from 11 colleges participating to 17 colleges in 2019, when there were 150 college students from across the Commonwealth participating. The event was held Feb. 22 – 23, 2019.

This event is designed to help build Virginia's cyber security workforce through collaboration with the participating institutions. It is designed to not only challenge the students through the competition portion, but it also offers a job fair with employers eager to offer jobs and internships. By doing so, VMI helps advance the economic prosperity of the Commonwealth and optimize student success for work and life.

This year's event featured an employer panel discussion to help prepare students to enter the workforce with the hard and soft skills employers are seeking. The Virginia Cyber Range also held a presentation on its resources that students and colleges and high schools can access to further their knowledge on a secure, cloud-based platform. In addition, the keynote speaker was Chris Wysopal, a well-known early innovator in the field of cyber security. During the competition, faculty from the colleges took part in a roundtable discussion on the state of cyber security education.

Planning has already begun to hold the 4th Annual Commonwealth Cyber Fusion on Feb. 21 – 22, 2020.

2019 Participating colleges:

| | |
|-------------------------------------|-----------------------------|
| Danville Community College | Norfolk State University |
| George Mason University | Radford University |
| The George Washington University | Regent University |
| Hampton University | Tidewater Community College |
| James Madison University | University of Virginia |
| Liberty University | Virginia Military Institute |
| Longwood University | Virginia Tech |
| Lord Fairfax Community College | |
| Marymount University | |
| Northern Virginia Community College | |

Section D. Programs and Instructional Sites:

RESPONSE:

Change in CIP code for the Department of Psychology

In Spring Semester, 2014, VMI's Academic Board approved a new B.S. degree program for the Department of Psychology, replacing the previous B.S. and B.A. programs that had existed since Psychology was approved as a major at the Institute in 1996. The new B.S. degree requirements went into effect with the Class of 2018.

1. The curriculum in the new Psychology B.S. program is more consistent with STEM CIP code 42.2799 (Research and Experimental Psychology, Other) than the current non-STEM CIP code 42.0101 (Psychology, General). Coupled with the desire to maintain the significant increase in STEM majors over the past 5+ years, the Institute would like to change the classification to reflect the curriculum.
2. SCHEV approval will require filing a new program application, a long and resource-intensive process.

Section E. Financial Aid: The Top Jobs Higher Education Legislation for the Twenty First Century (TJ21) requires “plans for providing financial aid to help mitigate the impact of tuition and fee increases on low-income and middle-income students and their families, including the projected mix of grants and loans.” Virginia’s definitions of low-income and middle-income under TJ21 are based on HHS Poverty Guidelines. A table that outlines the HHS guidelines and the definitions is attached.

RESPONSE:

Award Package Guidelines

Virginia Military Institute’s 2019-20 AY “packaging guidelines” funds 65-70% of the demonstrated need for non-Virginia cadets and 100% of the need for Virginia cadets who meet the March 1st application deadline and as funds are available. For both groups, loans (Federal Direct – Subsidized) are used to meet need. The maximum amount of subsidized loan is used based on the cadet’s year in college (\$3,500 1st year, \$4,500 2nd year, and \$5,500 thereafter up to the aggregate limit for dependent students of \$31,000 of which \$23,000 may be subsidized or need-based). Packaging guidelines are reviewed annually to ensure consistency in financial aid awards, to review compliance with policies and procedures, and to mitigate, to the extent possible, tuition and fee increases.

Low-Income and Middle-Income Families

VMI uses SCHEV guidelines (HHS website, <https://aspe.hhs.gov/poverty-guidelines>) which, for 2019, define low-income families as a family of four with total family income of \$51,500 or less and middle-income as those with family income of \$51,501 to \$103,000. The low-income threshold represents less than 200% of the Virginia poverty level for a family of four while middle-income represents 200% up to 400% of the poverty level for a family of four. High-income families are defined as those with total family income greater than \$103,000 for a family of four which is 400% greater than the Virginia poverty level.

| | |
|---------------|--|
| Low-income | Total family income less than/equal to \$51,500 |
| Middle-income | Total family income between \$51,501 and \$103,000 |

High-Income

Total family income greater than \$103,000

For the 2018-19 AY, 776 of the 1022 Virginia cadets enrolled applied for financial aid with 144 (18.6% of 776) reporting total family income of \$51,500 or less and defined as low-income; another 215 (28% of 776) reported total family income of \$51,501 to \$103,000, and defined as middle-income; the remaining 417 who applied for aid reported total family income above \$103,000. Assuming those who did not apply for aid had total family incomes above \$103,000 would result in 663 cadets (64.9% of 1022) with total family incomes above \$103,000.

For the 2018-19 AY, 590 Virginia cadets demonstrated financial need or 57.7% of the Virginia cadets enrolled. Of the 144 low-income cadets all qualified for need-based financial aid. In addition, of the remaining Virginia cadets, 206 of the 215 middle-income and 240 of the 417 high-income cadets who applied for financial aid qualified for need-based aid.

Steps to Mitigate Impact of Tuition and Fee Increases

VMI takes many steps to mitigate the impact of tuition and fee increases on low and middle income cadets. In addition to Federal and State need-based aid programs, VMI provides significant institutional resources to fund need-based scholarship aid for Virginia cadets. ***VMI institutional aid funds the majority of need-based scholarship aid provided to all cadets.*** VMI continues to use a significant portion of its endowment funds to provide assistance to cadets who without such aid may not be able to attend the Institute.

Need-based grant and scholarship dollars were distributed to instate cadets as follows:

| <u>Source</u> | <u>Low-income</u> | <u>Middle-income</u> | <u>High-income</u> |
|---------------|-------------------|----------------------|--------------------|
| Federal | 84.9% | 15.1% | 0.0% |
| State | 41.1% | 44.3% | 14.6% |
| VMI | 28.8% | 50.8% | 20.4% |

Total need-based institutional funds (\$5,913,979) exceed Federal and state funds combined (\$2,258,365), with over 79% of institutional need-based aid awarded to cadets from low-income and middle-income families.

Use of Loans

Of the 144 Virginia cadets defined as “low-income” 79 or 54.9% used a Federal subsidized loan with average loan of \$4,293 for those who borrowed.

Of the 215 Virginia cadets defined as “middle-income” 130 or 60.5% used a Federal subsidized loan with average loan of \$4,307 for those who borrowed.

Of the 417 Virginia cadets defined as “high-income” and who applied for financial aid 132 or 31.7% used a Federal subsidized loan with average loan of \$3,967 for those who borrowed. Many in the “high-income” category would not be eligible for the subsidized or need-based loan.

Those Virginia cadets defined as “low-income” rely less on loans than the other two groups as VMI is able to provide significant grant/scholarship aid to reduce loans.

| <u>Loan Type</u> | <u>Low-income</u> | <u>Middle-income</u> | <u>High-income</u> |
|------------------|-------------------|----------------------|--------------------|
| Subsidized | \$339,139 | \$ 559,970 | \$ 523,681 |
| Unsubsidized | 123,945 | 289,980 | 907,597 |
| PLUS | <u>20,248</u> | <u>246,665</u> | <u>955,150</u> |
| Total: | \$483,332 | \$1,096,615 | \$2,386,428 |

Use of Tuition Revenue for Financial Aid

VMI uses a portion of its tuition revenue to fund need-based financial aid. In the 2018-2019 AY, tuition revenue used for need-based aid totaled \$1,156,650 for in-state cadets and \$2,268,637 for out-of-state cadets for a total of \$3,425,287. The total aid awarded represented 10.3% of total tuition revenue.

Tuition revenue used for in-state cadets is much less than for out-of-state cadets due primarily to the following factors:

1. The State provides need-based aid for in-state cadets (\$1,036,680 in FY 2019)
2. VMI has significant private endowments that provide scholarships to needy in-state cadets
3. Approximately 40-45% of in-state cadets qualify for need-based aid versus 60-65% of out-of-state cadets
4. Out-of-state cadet tuition is almost four times greater (3.89) than in-state tuition (\$36,128 versus \$9,284 for FY 2019); out-of-state tuition revenue comprised 70% of the total E&G tuition revenue in FY 2019 although out-of-state cadets comprised only 38% of the total Corps

Out-of-state cadet tuition in FY 2019 represented about 174% of the total cost of education, significantly exceeding the State minimum requirement of 100%. In-state tuition represented only about 45% of the total cost of education. Tuition revenue from out-of-state cadets has helped to mitigate the shortfall in State general funds in meeting its goal of funding 67% of the cost of education for in-state cadets. Out-of-state tuition revenue is significantly helping to minimize in-state tuition increases that would otherwise be necessary to make up this shortfall in State general funds.

To attract and retain out-of-state cadets, it is important that VMI provide sufficient financial aid to help meet their demonstrated need. VMI strives to meet 65%-70% of this need and the use of tuition revenue is essential.

Section F. Capital Outlay: Provide information on your institution's top two Education and General Programs capital outlay projects, including new construction as well as renovations, that might be proposed over the Six-Year Plan period that could have a significant impact on strategies, funding, student charges, or current square footage. Do not include projects for which construction (not planning) funding has been appropriated.

RESPONSE:

Post Wide Safety and Security

The mission of the VMI Post Wide Safety and Security project is to implement a slate of infrastructure improvements that will enhance the safety and security of Cadets, Faculty/Staff, and Visitors at the Institute. The project consists of the installation of a combination of barriers (i.e. fixed bollards, hydraulic bollards, and/or drop arm gates) at strategic locations across the Post. Most of the barriers will be installed at control

points in roadways providing a high level of traffic security. The control points will be incorporated into VMI's access control system and open and close according to a schedule that complements VMI's daily schedule of operations. This will give VMI the capability to grant credentialed access to appropriate personnel or secure and close the Post during emergency events. The barriers will provide a level of protection against a variety of potential threats including acts of terrorism, bombings, and assault by motor vehicle. Additional enhancements that may be included will provide protection against physical assaults, sexual assault, and robbery with enhanced safety lighting, emergency call phones, and expanding the network of security cameras. These improvements will also assist VMI Police and Physical Plant operational needs. The goal of the project is to integrate these improvements into the Post environment without significantly impacting the historic nature of the Post or the basic experience of Cadet life at VMI.

Construct Engineering and Laboratory Facility

Nichols Engineering Building requires expansion and renovation to meet both growth in the Corps of Cadets and growing enrollment in STEM majors. Nichols Engineering Building was constructed in 1931. Two annexes were added in the 1960's. The interior renovation of these facilities was completed in 2006. The Corps of Cadets has grown from 1,300 to 1,750 and with much of the enrollment growth occurring in STEM majors which have grown from 39% in 2003 to 61% in 2019. Additional classroom, laboratory and support space is required to meet this growing demand and existing spaces require renovation to stay current with evolving academic program requirements.

Section G. Restructuring: Provide information about any plans your institution has to seek an increased level of authority, relief from administrative or operational requirements, or renegotiation of existing management agreements.

RESPONSE:

VMI continues to enjoy and benefit for its Level 2 Restructuring authority and has no immediate plans to seek increased levels of authority.

Section H. Performance Pilots (optional): For this topic, any institution that wishes to include a Performance Pilot and provided notification by April 1 to relevant parties, should select one or more of the strategies presented in the institution's Academic and Financial plan (PART 3) and General Fund Request (PART 4) that constitute(s) "one innovative proposal" as defined in subsection F of § 23.1-306. Describe the proposal, the proposed performance measures and the requested authority or support from the Commonwealth.

RESPONSE:

VMI is currently reviewing various options for an Institutional Performance Pilot Agreement and will consider submitting a proposal in 2020.

Section I. Evaluation of Previous Six-Year Plan:

#1: Increase T&R Faculty Salaries – 2019 Update

Since establishing the goal of raising VMI's average faculty salary into the top five amongst Virginia public colleges and universities in fall 2016, approximately \$1.1 million has been applied to faculty salaries. Of this amount, approximately \$500K has been from privately funded distinguished chairs. As a result, VMI's average faculty ranked 7th amongst the 14 Virginia public colleges and universities according to the 2018-19 American Association of University Professors Faculty Salary Survey. For FY 2020, VMI will provide all faculty with a five percent, across-the-board salary increase. In addition, approximately \$500K will be applied to faculty salaries for promotions, meritorious chair supplements, and adjustments towards Compensation Model target salaries.

#4: “Right-Sizing” – 2019 Update

In FY 2020, new, full-time, faculty positions are added in the Applied Mathematics, Biology, and Physical Education Departments. Additionally, one privately funded position in the Physical Education Department will be converted to E&G funding. With these additions, 20 of the 24 positions identified in the Right-Size Studies are in place, four of which are privately funded. VMI is on track to have all 24 positions in place by FY 2022.

#5: Math that Matters: Contextualizing Mathematics in a Computational World – 2019 Update

Implementing the Math that Matters Quality Enhancement Plan (QEP) in a two-course, Core Curriculum sequence (MA 101 and MA 102) is progressing as planned. A single section of MA101 was piloted during the 2018 Summer Transition Program. This was followed by 13 sections of MA101 in fall 2018. Similarly, a single section of MA102 was piloted in the fall 2018 and followed by 12 sections in spring 2019 alongside 3 sections of MA101. These sequences culminate in public poster presentations by the enrolled cadets. In addition, a “Boot Camp” was conducted in August 2018 to train faculty in the delivery of this new course sequence, and faculty presented two QEP-related research projects at conferences. Going forward, the most significant remaining steps in implementing the QEP include significant course revisions, assessing the impact of the new approach, and initiating research on the downstream effects of the new course sequence on other courses throughout the curriculum.

#11: VMI's Center for Undergraduate Research (V-CUR) – 2019 Update

All aspects of this strategy remain in effect predominantly through private funding.

#12: Math Education and Resource Center (MERC) – 2019 Update

The Mathematics Education and Resource Center (MERC) and the Open Math Lab (OML) have continued to thrive. Cadet demand remains high, and analysis of cadet grades show the OML succeeded in helping cadets who had a midterm grade of A or B maintain their grade throughout the semester, and helped to improve the final grade of those cadets who had earned a midterm grade of C or D. In addition, the VMI Information Technology Department created a new cadet tracking and survey software system, which was implemented in spring 2018. This provided another means of assessing the OML's performance by having cadets complete a one-question assessment of the OML's helpfulness in reaching their study goals immediately following a tutoring session. Since then, the OML has earned an average of 3.57 out of 4 rating.

#13: Technology Enhanced Instruction – 2019 Update

In FY 2019, VMI continued its efforts to improve laboratories in order to enrich the opportunities for VMI cadets and faculty to engage in innovative educational experiences. Based on the recommendations of the Committee for Enhanced Learning Environments, approximately \$575K in laboratory equipment was

purchased using a combination of State Equipment Trust Funding, local funds, and reallocation of E&G funds.

#14: “New Directions” Grant Program – 2019 Update

Since the inception of the “New Directions” program in 2011, 19 awards have been made totaling \$801,000. These funds have been used to purchase equipment to be used in new areas of research, and to support new academic initiatives. These initiatives include creating an electronic calculus textbook, developing a new Exercise Science Minor, and implementing new pedagogical approaches to teaching Biology classes.

#15: Engineering Graduate Program Research Agreements – 2019 Update

The efforts with the VCU College of Engineering and Virginia Tech have been maintained and are currently in effect.

#16: Articulation Agreements – 2019 Update

VMI has 10 current agreements with 8 Virginia universities. An agreement with George Mason University’s Department of Systems Engineering and the VMI Applied Mathematics department expired in July of 2018; however, both parties have expressed interest in reviving the agreement.

#17: Maintain Number of STEM Majors – 2019 Update

All aspects of this strategy remain in effect. Based on fall 2018 enrollment figures, the continued emphasis on STEM majors is showing positive results as 61 percent of cadets were enrolled in STEM majors. The Institute has no plans to increase the percentage of STEM majors beyond 60% and will work to maintain this level.

#19: Learning Services Program – 2019 Update

A new Director of Learning Services, who has a background in Educational Psychology and extensive experience in higher education, was hired in August 2018, and she revised the Miller Academic Center’s (MAC) mission to more adequately reflect its goal of providing academic success programming and support:

The mission of the MAC has been further refined to provide academic support to cadets in an effort to empower them with the resources to achieve their educational goals. Through individual consultations and group workshops, the MAC emphasizes the connection between metacognition and academic success.

Having worked extensively with students transitioning from high school to college or from community college to the four-year institution, the Director intends to focus on programming that will teach new cadets how to be a successful college student. This includes offering more individual consultations and workshops during the Summer Transition Program and during the academic year. Academic Saturdays remain the primary source for fourth class (freshmen) to receive academic development training, and this program will continue with the support of the S2 (cadet academic staff) and the MAC staff. The GRE (Graduate Record Examinations) Prep program, which was piloted in spring 2018, will continue in the 2019-20 AY, and more cadets will be invited to participate. In addition, the MAC will continue to offer cadet/faculty facilitated Group Study Sessions, and will add a Peer Based Learning program in the 2019-20 AY.

#20: Year-Round Facility Use – 2019 Update

Year-round use of VMI facilities remains substantial. Facility use during the regular academic year remains unchanged as the demands of the academic program, extracurricular programs and cadet life have remained unchanged. VMI continues to offer a summer program and the Summer Transition Program for new cadets. Enrollments remain high. Other summer programs, such as athletic camps (resident and day camps), conferences and symposia, the Summer Undergraduate Research Institute, and the College Orientation Workshop for at-risk youth, remain active.

#21: Shared Resources – 2019 Update

All aspects of this strategy remain in effect.

#22: Increased Degree Completion for Virginia Residents – 2019 Update

All aspects of this strategy remain in effect.

#24 STEM Conference Series – 2019 Update:

The 2018 conference attendance was down by 50%. When surveyed as to why they thought this happened, attendees answered with a mix of likely replies: 1) the 2018 conference had an emphasis on engineering, which may have discouraged teachers from attending; 2) the conference price was raised; 3) some schools and school systems now have STEM specialists, so schools will not send teachers to a STEM conference; and 4) school budget considerations. The VMI Center for Leadership and Ethics staff have responded in planning the 2019 conference by not emphasizing one aspect of STEM and by earlier outreach to administrators before their budget cycles began to ensure that they had the opportunity to plan for the conference in their budget. The same outstanding workshops and quality of speakers are planned, and we will see if 2018 was just an aberration, or if the conference series has run its course.

The 2018 conference featured Dr. Ainissa Ramirez, a self-described “STEM evangelist” and a materials scientist and engineer who now focuses her energies on making science fun. At Yale, she was the director of the award-winning science lecture series for children called Science Saturdays and hosted two popular-science video series called Material Marvels and Science Xplained.

Also featured was John Antonetti, student learning engagement expert, author, and life-long learner, who gave a keynote address and also held a workshop on Powerful Task Design for all attendees.

In addition to the two speakers, there were 39 workshops offered.

#25 Efficiency Reforms - 2019 Update:

VMI continues to strive to reduce both energy use and energy costs. The Institute is currently working to integrate multiple building environmental control systems into a single platform to improve monitoring of building environments, facilitate identification and correction of abnormal energy usage, and thereby reduce energy consumption.

Section J. Economic Development Annual Report (Due October 1): Describe the institution’s contributions to stimulate the economic development of the Commonwealth and/or area in which the institution is located. If applicable, the information should include:

1. University-led or public-private partnerships in real estate and/or community redevelopment.
2. State industries to which the institution’s research efforts have direct relevance.
3. High-impact programs designed to meet the needs of local families, community partners, and businesses.
4. Business management/consulting assistance.

RESPONSE:

VMI's contribution to local and regional economic development can be seen along two major axes. The first is in its commitment to produce graduates who are in demand for their skills and leadership abilities. Secondly, VMI's position as a significant employer in the local community drives a series of programs which provide outreach to local and regional elementary and secondary students as well as programs which impact citizens and educators from across the Commonwealth.

Cyber security is one of the nation's and Commonwealth's top priorities. In order for Virginia to continue leading in this rapidly evolving space, it needs to develop a sustainable talent pipeline capable of providing skilled, industry-ready workers to meet the increasing demand. VMI transformed its Computer Science Program into a Computer and Information Sciences Program and established a minor in cyber security (described in the "Increasing STEM Majors" strategy). In addition, VMI intends to pursue ABET accreditation for the Computer and Information Sciences Department (described in the "Accreditation for the Department of Computer and Information Sciences" strategy). Formal accreditation will give graduate schools and future employers of graduates of the Department assurance regarding the rigor and relevance of their classes. VMI has also hosted the Commonwealth Cyber Fusion event since 2017, bringing 120 Virginia college students together for a cyber job fair, keynote speaker, and panel discussions in addition to a "Jeopardy" style team cyber security competition.

In an effort to support broad interest in STEM fields, VMI supports several outreach programs targeted at Virginia students who may find a career in math and science. VMI's Applied Mathematics department hosts two separate American Mathematics Competitions targeting students from 7th- 12th grades. This year over 725 students participated in the competitions. VMI also hosted the Shenandoah Valley Math Modeling Challenge with 13 college students from Appalachian State, Virginia Commonwealth University, VMI, and University of Virginia.

Reaching more broadly, VMI's Center for Leadership and Ethics held the 7th annual STEM Education Conference. Three hundred educators and administrators from Virginia's elementary and middle schools joined to share ideas, best practices, and educational opportunities. Returning to their respective schools, the ideas and inspiration shared at the STEM Education Conference impacted over 6,000 students in Virginia.

In addition to support of current students of all ages, VMI has also hosted the Environment Virginia Symposium for many years. Almost 600 environmental professionals gathered in 2019 to enjoy the mutual exchange of ideas, best practices, and knowledge. In addition to Continuing Education opportunities and networking, the Symposium offers career and recruitment opportunities for new and emerging "green" jobs throughout the Commonwealth.

2019 SIX-YEAR PLAN: 2020-22 through 2024-26

Due: July 1, 2019

Institution:

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|-----------------------------|
| Virginia Military Institute |
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Institution UNITID:

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| 211 |
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Individual responsible for plan

Name:

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| BG Dallas B. Clark |
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Email address:

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| Clarkdb@vmi.edu |
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Telephone number:

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| 540-464-7321 |
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INSTRUCTIONS FOR SUBMITTING 2019 INSTITUTIONAL SIX-YEAR PLAN

Due Date: July 1, 2019

PLEASE READ INSTRUCTIONS CAREFULLY

Six-year Plan Requirement

The Higher Education Opportunity Act of 2011 (TJ21) requires Virginia's public institutions of higher education to prepare and submit six-year plans. (See below for complete code reference.) During the 2015 General Assembly session, joint resolutions approved by the House (HJR 555) and Senate (SJ 228) also require that the mission, vision, goals, and strategies expressed in the Virginia Plan, the statewide strategic plan, guide the development of the strategic plan and six-year plan at each public institution of higher education, as well as the agency plan for SCHEV, and that SCHEV report annually on the Commonwealth's progress toward achieving these goals and targets to the Governor, General Assembly, institutions of higher education and the public.

2019 Six-year Plan Format

The 2019 Six-Year Plan consists of a workbook and an accompanying narrative. The workbook has an Institution ID page, Instructions page and six parts/worksheets: Tuition and Fee Predictability Plan, Tuition and Other Nongeneral Fund Revenue, Academic-Financial, General Fund (GF) Request, Financial Aid, and Economic Development. **Note: Shaded cells contain formulas.** Instructions for the narrative are provided in a separate attachment. The Enrollment/Degree Projections are being developed in a separate process, but will be incorporated into the six-year plan review.

The 2019 Six-Year Plans are due July 1, 2019. The review group (referred to as Op Six) as outlined in § 23.1-306 - see section B below - will meet with each institution during the months of July and August to review the institution's plan and provide comments. If changes to the plans are recommended, revised institutional submissions are due no later than October 1 or immediately following an institution's Board of Visitors' meeting, if it is later than October 1.

INSTRUCTIONS FOR PARTS

1. Tuition and Fees Predictability Plan

There are two worksheets, Part 1A and Part 1B. Part 1A is for institutions without undergraduate tuition differentials. Part 1B is for institutions with undergraduate tuition differentials. Provide no less than three years (each worksheet allows for four years based on the biennial budget structure) of planned increases in in-state undergraduate tuition and mandatory E&G fees and mandatory non-E&G fees. The tuition and fee charges for in-state undergraduate students should reflect the institution's estimate of reasonable and necessary charges to students based on the mission, market capacity and other factors. Plans shall include a range of tuitions based on available state resources, but must contain a scenario that includes the assumption of no new state general fund support (SCENARIO 1). Add scenarios and tables, if more are needed, and provide brief information about the assumptions for each scenario. Include more detailed information about assumptions used to calculate increases in Section B of the Narrative document. Include anticipated tuition and fee charges affecting first-year students. For institutions that have differential tuition and fee charges by program or level, provide (a) anticipated tuition and fee charges for majority students; (b) a weighted average charge of all first-year students (with a detailed worksheet as attachment); and (c) additional spreadsheets with associated anticipated charges for all undergraduate students by program and level. (Please do not alter the shaded cells that contain formulas.)

2. Tuition and Other Nongeneral Fund Revenue

Based on enrollment changes and other institution-specific assumptions, provide the total revenue for educational and general (E&G) programs, by student level and domicile. Provide other anticipated NGF revenue, tuition used for financial aid (Program 108) and anticipated non-E&G fee revenue for in-state undergraduates and then all other students. (Please do not alter the shaded cells that contain formulas.)

3. Academic-Financial Plan

The Academic Plan, (3A), of this worksheet should contain academic (including faculty), finance, and support service strategies the institution intends to employ in meeting state needs/goals as found in the Virginia Plan. Information related to the Virginia Plan and more specific state priorities is provided below. Provide a short title for each strategy. Indicate the total amount for the strategy, any internal reallocation to support the strategy and the amount of tuition revenue that will be used to support the strategy. Provide a short description of the strategy, including a specific reference as to where more detailed information about the strategy can be found in the Narrative document, in column J. Provide any pertinent information for consideration in 2022 through 2026 in column K. **Strategies for student financial aid, other than those that are provided through tuition revenue, should not be included on this table; they should be included in Part 4 of the plan, General Fund Request.** Funding amounts in the first year should be incremental. However, if the costs continue into the second year, they should be reflected cumulatively. Institutions that submit strategies that reflect incremental amounts in both years will have their plans returned for revision. If you add rows for additional strategies, please update the total cost formulas. **Institutions should assume no general fund (GF) support in the Academic-Financial Worksheet. A separate worksheet (Part 4) is provided for institutions to request GF support.** *Special Notes: If an institution wishes to include any information about FTEs or fringe benefit adjustments (using DPB's FY2020 start-up instructions available by the end of May), it should list them as strategies in the Academic Plan not the Financial Plan.*

The Virginia Plan: In the column labeled "VP Goal," identify the goal of the The Virginia Plan (VP) that applies to each institutional strategy using the appropriate number (i.e., 1, 2, 3, or 4). The four VP goals are listed below. An institution must still submit strategies for TJ21 Objectives A through D (now § 23.1-306 D3, D5, D6, and D8 - please see code reference below) as per the Code of Virginia, but the corresponding VP goal is identified, not the TJ21 objective (please see the special note below). In the Narrative document (Section A), institutions should provide more detailed information.

The Virginia Plan has four major goals (more specific state priorities are included with the goals below):

1. Provide affordable access for all. (Access and enrollment, particularly for underrepresented students.)
2. Optimize student success for work and life. (Retention, completion and time to degree.)
3. Drive change and improvement through innovation and investment. (Affordability and funding.)
4. Advance the economic and cultural prosperity of the Commonwealth and its regions. (Workforce alignment, retention of graduates, and, if applicable, research.)

Special Note: Strategies also can cross several state goals, notably those related to improved two-year and four-year transfer, and should be included.

Additional Objectives (D3, D5, D6, and D8)

D3. Plans for providing financial aid to help mitigate the impact of tuition and fee increases on low-income and middle-income students and their families as described in subdivision 9, including the projected mix of grants and loans.

D5. Plans for optimal year-round use of the institution's facilities and instructional resources.

D6. Plans for the development of an instructional resource-sharing program with other public institutions of higher education and private institutions of higher education.

D8. The identification of (i) new programs or initiatives including quality improvements and (ii) institution-specific funding based on particular state policies or institution-specific programs, or both, as provided in subsection C of § 23.1-307.

Special Note: We recommend that any strategy related to D3 be coded as Goal 1 of the VP and strategies related to D5, D6 and D8 be coded as Goal 3 of the VP.

The Financial Plan, 3B, of this worksheet pertains to the 2020-22 biennium. Complete the lines appropriate to your institution. **As completely as possible, the items in the academic plan and financial plan should represent a complete picture of the institution's anticipated use of projected tuition revenues. For every strategy in 3A and every item in 3B of the plan, the total amount and the sum of the reallocation and tuition revenue should equal one another.** Two additional rows, "Anticipated Nongeneral Fund Carryover" and "Nongeneral Fund for Current Operations" are available for an institution's use, if an institution cannot allocate all of its tuition revenue to specific strategies in the plan. Given the long standing practice that agencies should not assume general fund support for operation and maintenance (O&M) of new facilities, O&M strategies should not be included in an institution's plan, unless they are completely supported by tuition revenue.

4. GF (General Fund) Request

Indicate items for which you anticipate making a request for state general fund in the 2020-22 biennium. The item can be a supplement to a strategy or item from the academic and financial plan or it can be a free-standing request for which no tuition revenue would be used. If it is a supplement to a strategy or item from the academic and financial plan, then describe in the Notes column how additional general fund will enhance or expand the strategy. Requests for need-based financial aid appropriated in program 108 should be included here. If additional rows are added, please update the total costs formulas.

5. Financial Aid

The Financial Aid worksheet is similar to previous versions, but it now collects four years instead of five years of data. Provide a breakdown of the projected source and distribution of tuition and fee revenue redirected to financial aid. To ensure compliance with the state prohibition that in-state students should not subsidize out-of-state students and to provide the review group with the scope of the strategy, projections must be made for each of the indicated categories. Please be aware that this data will be compared with similar data provided by other institutional offices in order to ensure overall consistency. (Please do not alter shaded cells that contain formulas.)

6. Economic Development Annual Report for 2018-2019 (See below for complete code references.)

This worksheet and the narrative piece serve as the required annual report. The reporting period is FY19. **THE REPORT IS NOT DUE UNTIL OCTOBER 1.** This worksheet contains a menu of items. Each institution is asked to provide information as it can and when applicable. There is also a separate narrative portion. The combination of the metrics and narrative portion captures report information as required by § 23.1-102 subdivision 2 and § 23.1-306 (A) of the Code of Virginia. In 2018 the Intellectual Property (IP) Worksheet data elements were integrated into the Economic Development Contributions Worksheet. Assignment of intellectual property interests to persons and nongovernmental entities and the value of funds from persons or nongovernmental entities to support intellectual property research, for the most recently ended fiscal year, are captured in the worksheet. The worksheet is structured to capture separate aggregate data on entities that have a principal place of business in Virginia and those with a principal place of business outside of Virginia. The IP information is required by § 23.1-102 subdivision 2 of the Code of Virginia.

Special Notes:

Enrollment/Degree Projections: Detailed six-year enrollment/degree projections are being collected through a separate process. These projections will be incorporated in the Six-Year Plan as part of the July and August institutional meetings with the Op Six.

BOV Approval: Final board approval of the Six-Year Plan should be done at the earliest possible fall meeting. HB 897 (2018) specified that initial plans do not get posted on the General Assembly's website and that final plans should be submitted to DLAS no later than December 1. However, we are requesting that institutions submit final plans with their responses to Op Six Comments on October 1 (or as soon after fall board meetings as possible) as has been done in the past. We post the responses and final plans for review by the Op Six for a period of time prior to posting to SCHEV's website.

Accessibility: All files need to be checked for accessibility prior to submitting them. Information on accessibility is provided at this link on SCHEV's website: <http://schev.edu/index/accessibility/creating-accessible-content>. The first link, "How to Make Your MS Office Documents Accessible" can be used to learn how to check documents. Only errors, not warnings, must be addressed.

Contacts for Questions:

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Academic - Beverly Rebar (beverlyrebar@schev.edu)

Finance - Yan Zheng (yanzheng@schev.edu)

Financial Aid - Lee Andes (leeandes@schev.edu)

Enrollment/Degree Projections - Tod Massa (todmassa@schev.edu)

Economic Development - Lynn Seuffert (lynnseuffert@schev.edu)

Legislative References:

§ 23.1 - 306. Institutional Six-Year Plans.

A. The governing board of each public institution of higher education shall (i) develop and adopt biennially and amend or affirm annually a six-year plan for the institution; (ii) submit such plan to the Council, the General Assembly, the Governor, and the Chairmen of the House Committee on Appropriations, the House Committee on Education, the Senate Committee on Education and Health, and the Senate Committee on Finance no later than July 1 of each odd-numbered year; and (iii) submit amendments to or an affirmation of that plan no later than July 1 of each even-numbered year or at any other time permitted by the Governor or General Assembly to the Council, the General Assembly, the Governor, and the Chairmen of the House Committee on Appropriations, the House Committee on Education, the Senate Committee on Education and Health, and the Senate Committee on Finance. Each such plan and amendment to or affirmation of such plan shall include a report of the institution's active contributions to efforts to stimulate the economic development of the Commonwealth, the area in which the institution is located, and, for those institutions subject to a management agreement set forth in Article 4 (§ 23.1-1004 et seq.) of Chapter 10, the areas that lag behind the Commonwealth in terms of income, employment, and other factors.

B. The Secretary of Finance, Secretary of Education, Director of the Department of Planning and Budget, Executive Director of the Council, Staff Director of the House Committee on Appropriations, and Staff Director of the Senate Committee on Finance, or their designees, shall review each institution's plan or amendments and provide comments to the institution on that plan by September 1 of the relevant year. Each institution shall respond to any such comments by October 1 of that year.

C. Each plan shall be structured in accordance with, and be consistent with, the objective and purposes of this chapter set forth in § 23.1-301 and the criteria developed pursuant to § 23.1-309 and shall be in a form and manner prescribed by the Council, in consultation with the Secretary of Finance, the Secretary of Education, the Director of the Department of Planning and Budget, the Director of the Council, the Staff Director of the House Committee on Appropriations, and the Staff Director of the Senate Committee on Finance, or their designees.

D. Each six-year plan shall (i) address the institution's academic, financial, and enrollment plans, including the number of Virginia and non-Virginia students, for the six-year period; (ii) indicate the planned use of any projected increase in general fund, tuition, or other nongeneral fund revenues; (iii) be based upon any assumptions provided by the Council, following consultation with the Department of Planning and Budget and the staffs of the House Committee on Appropriations and the Senate Committee on Finance, for funding relating to state general fund support pursuant to §§ 23.1-303, 23.1-304, and 23.1-305 and subdivision 9; (iv) be aligned with the institution's six-year enrollment projections; and (v) include:

1. Financial planning reflecting the institution's anticipated level of general fund, tuition, and other nongeneral fund support for each year of the next biennium;
2. The institution's anticipated annual tuition and educational and general fee charges required by (i) degree level and (ii) domiciliary status, as provided in § 23.1-307;
3. Plans for providing financial aid to help mitigate the impact of tuition and fee increases on low-income and middle-income students and their families as described in subdivision 9, including the projected mix of grants and loans;
4. Degree conferral targets for undergraduate Virginia students;
5. Plans for optimal year-round use of the institution's facilities and instructional resources;
6. Plans for the development of an instructional resource-sharing program with other public institutions of higher education and private institutions of higher education;
7. Plans with regard to any other incentives set forth in § 23.1-305 or any other matters the institution deems appropriate;
8. The identification of (i) new programs or initiatives including quality improvements and (ii) institution-specific funding based on particular state policies or institution-specific programs, or both, as provided in subsection C of § 23.1-307; and
9. An institutional student financial aid commitment that, in conjunction with general funds appropriated for that purpose, provides assistance to students from both low-income and middle-income families and takes into account the information and recommendations resulting from the review of federal and state financial aid programs and institutional practices conducted pursuant to subdivisions B 2 and C 1 of § 23.1-309.

E. In developing such plans, each public institution of higher education shall consider potential future impacts of tuition increases on the Virginia College Savings Plan and ABLE Savings Trust Accounts (§ 23.1-700 et seq.) and shall discuss such potential impacts with the Virginia College Savings Plan. The chief executive officer of the Virginia College Savings Plan shall provide to each institution the Plan's assumptions underlying the contract pricing of the program.

F. 1. In conjunction with the plans included in the six-year plan as set forth in subsection D, each public institution of higher education, Richard Bland College, and the Virginia Community College System may submit one innovative proposal with clearly defined performance measures, including any request for necessary authority or support from the Commonwealth, for a performance pilot. If the General Assembly approves the proposed performance pilot, it shall include approval language in the general appropriation act. A performance pilot shall advance the objectives of this chapter by addressing innovative requests related to college access, affordability, cost predictability, enrollment management subject to specified commitments regarding undergraduate in-state student enrollment, alternative tuition and fee structures and affordable pathways to degree attainment, internships and work study, employment pathways for undergraduate Virginia students, strategic talent development, state or regional economic development, pathways to increase timely degree completion, or other priorities set out in the general appropriation act.

2. A performance pilot may include or constitute an institutional partnership performance agreement, which shall be set forth in a memorandum of understanding that includes mutually dependent commitments by the institution, the Commonwealth, and identified partners, if any, related to one or more of the priorities set forth in subdivision 1 or set forth in a general appropriation act. No such institutional partnership performance agreement shall create a legally enforceable obligation of the Commonwealth.

3. No more than six performance pilots shall be approved in a single session of the General Assembly.

4. Development and approval of any performance pilot proposal shall proceed in tandem with consideration of the institution's six-year plan, as follows:

a. An institution that intends to propose a performance pilot shall communicate that intention as early as practicable, but not later than April 1 of the year in which the performance pilot will be proposed, to the reviewers listed in subsection B, the co-chairmen of the Joint Subcommittee on the Future Competitiveness of Virginia Higher Education, and the Governor. In developing a proposed performance pilot, the institution shall consider the Commonwealth's educational and economic policies and priorities, including those reflected in the Virginia Plan for Higher Education issued by the Council, the economic development policy developed pursuant to § 2.2-205, the strategic plan developed pursuant to § 2.2-2237.1, relevant regional economic growth and diversification plans prepared by regional councils pursuant to the Virginia Growth and Opportunity Act (§ 2.2-2484 et seq.), and any additional guidance provided by the Joint Subcommittee on the Future Competitiveness of Virginia Higher Education and the Governor.

b. An institution that submits a performance pilot shall include the one innovative proposal with clearly defined performance measures, and any corresponding authority and support requested from the Commonwealth, with its submission of the preliminary version of its six-year plan pursuant to clause (ii) of subsection A or with its preliminary amendment or affirmation submission pursuant to clause (iii) of subsection A.

c. The reviewers listed in subsection B, or their designees, shall review and comment on any proposed performance pilot in accordance with the six-year plan review and comment process established in subsection B and may expedite such review and comment process to facilitate the executive and legislative budget process or for other reasons. No later than October 15 of the relevant year, the reviewers shall communicate to the Governor and the Chairmen of the House Committee on Appropriations and the Senate Committee on Finance their recommendations regarding each performance pilot proposal. Such recommendations shall include the reviewers' comments regarding how the proposed performance pilots, individually and collectively, support the strategic educational and economic policies of the Commonwealth.

d. Each performance pilot proposal shall include evidence of its approval by the institution's governing board and, if accepted, shall be referenced in the general appropriation act.

§ 23-4.4 (B). Intellectual Property and Externally Sponsored Research

B. The president of each state-supported institution of higher education, including the chancellor of the Virginia Community College System, shall beginning with the fiscal year 2016, include in its six-year plan adopted pursuant to § 23-38.87:17 the following for the most recently ended fiscal year: (i) the assignment during the year of any intellectual property interests to a person or nongovernmental entity by the institution, any foundation supporting the intellectual property research performed by the institution, or any entity affiliated with the institution; (ii) the value of externally sponsored research funds received during the year from a person or nongovernmental entity by the institution, any foundation supporting the intellectual property research performed by the institution, or any entity affiliated with the institution; and (iii) the number and types of patents awarded during the year to the institution, any foundation supporting the intellectual property research funded by the institution, or any entity affiliated with the institution that were developed in whole or part from externally sponsored research provided by a person or nongovernmental entity. The plan shall report separate aggregate data on (a) those persons or nongovernmental entities that have a principal place of business in Virginia as reflected in the assignment agreement or awarding documents and (b) those persons or nongovernmental entities that do not have a principal place of business in Virginia as reflected in the assignment agreement or awarding documents.

Part 1A: Tuition and Fees Predictability Plans for Institutions without Undergraduate Tuition Differentials Virginia Military Institute

In-State Undergraduate Tuition and Fees Predictability Plans

Instructions: Provide no less than three years (the worksheet allows for four years based on the biennial budget structure) of planned increases in in-state undergraduate tuition and mandatory E&G fees and mandatory non-E&G fees. The tuition and fee charges for in-state undergraduate students should reflect the institution's estimate of reasonable and necessary charges to students based on the mission, market capacity and other factors. Plans shall include a range of tuitions based on available state resources, but must contain a scenario that includes the assumption of no new state general fund support (SCENARIO 1). Add scenarios and tables, if more are needed, and provide brief information about the assumptions for each scenario. Include more detailed information about assumptions used to calculate increases in Section B of the Narrative document. Include anticipated tuition and fee charges affecting first-year students. (Please do not alter the shaded cells that contain formulas.)

In-State Undergraduate Tuition and Mandatory E&G Fees

| | 2019-20 | 2020-21 | | 2021-22 | | 2022-23 | | 2023-24 | |
|-------------------------------------|---------|---------|------------|---------|------------|---------|------------|---------|------------|
| | Charge | Charge | % Increase | Charge | % Increase | Charge | % Increase | Charge | % Increase |
| Scenario 1: No new GF | 9,284 | 9,562 | 3.0% | 9,850 | 3.0% | 10,146 | 3.0% | 10,450 | 3.0% |
| Scenario 2: Tuition Moderation Fund | 9,284 | 9,284 | 0.0% | 9,284 | 0.0% | 9,562 | 3.0% | 9,850 | 3.0% |
| Scenario 3: Tuition Moderation Fund | 9,284 | 9,424 | 1.5% | 9,564 | 1.5% | 9,850 | 3.0% | 10,146 | 3.0% |

Assumptions for:

| | |
|------------|---|
| Scenario 2 | State provides full tuition moderation funding of approximately \$412,000 in FY 2021, and \$648,000 (cumulative for biennium) in FY 2022. |
| Scenario 3 | State provides "one-half" tuition moderation funding of approximately \$206,000 in FY 2021, and \$324,000 (cumulative for biennium) in FY 2022. |

In-State Undergraduate Mandatory Non-E&G Fees

| | 2019-20 | 2020-21 | | 2021-22 | | 2022-23 | | 2023-24 | |
|-------------|---------|---------|------------|---------|------------|---------|------------|---------|------------|
| | Charge | Charge | % Increase | Charge | % Increase | Charge | % Increase | Charge | % Increase |
| Scenario 1: | 9,834 | 10,118 | 2.9% | 10,390 | 2.7% | 10,670 | 2.7% | 10,960 | 2.7% |
| Scenario 2: | | | % | | % | | % | | % |

Assumptions for:

| | |
|------------|---|
| Scenario 1 | Stable enrollment, 1.5% Salary Increases, 5% increase in health benefits, 1.5% increases in other operating costs |
| Scenario 2 | |

**Part 1B: Tuition and Fees Predictability Plans for Institutions with Undergraduate Tuition Differentials
Virginia Military Institute**

In-State Undergraduate Tuition and Fees Predictability Plans

Instructions: Provide no less than three years (the worksheet allows for four years based on the biennial budget structure) of planned increases in in-state undergraduate tuition and mandatory E&G fees and mandatory non-E&G fees. The tuition and fee charges for in-state undergraduate students should reflect the institution's estimate of reasonable and necessary charges to students based on the mission, market capacity and other factors. Plans shall include a range of tuitions based on available state resources, but must contain a scenario that includes the assumption of no new state general fund support (SCENARIO 1). Add scenarios and tables, if more are needed, and provide brief information about the assumptions for each scenario. Include more detailed information about assumptions used to calculate increases in Section B of the Narrative document. Include anticipated tuition and fee charges affecting first-year students. For institutions that have differential tuition and fee charges by program or level, provide (a) anticipated tuition and fee charges for majority students; (b) a weighted average charge of all first-year students (with a detailed worksheet as attachment); and (c) additional spreadsheets with associated anticipated charges for all undergraduate students by program and level. (Please do not alter the shaded cells that contain formulas.)

In-State Undergraduate Tuition and Mandatory E&G Fees

| | 2019-20 | 2020-21 | | 2021-22 | | 2022-23 | | 2023-24 | |
|------------------------------|---------|---------|------------|---------|------------|---------|------------|---------|------------|
| | Charge | Charge | % Increase | Charge | % Increase | Charge | % Increase | Charge | % Increase |
| Scenario 1: No new GF | | | | | | | | | |
| Majority First-Year Students | | | % | | % | | % | | % |
| All First-Year Students | | | % | | % | | % | | % |
| Scenario 2: | | | | | | | | | |
| Majority First-Year Students | | | % | | % | | % | | % |
| All First-Year Students | | | % | | % | | % | | % |
| Scenario 3: | | | | | | | | | |
| Majority First-Year Students | | | % | | % | | % | | % |
| All First-Year Students | | | % | | % | | % | | % |

Assumptions for:

| | |
|------------|--|
| Scenario 2 | |
| Scenario 3 | |

In-State Undergraduate Mandatory Non-E&G Fees

| | 2019-20 | 2020-21 | | 2021-22 | | 2022-23 | | 2023-24 | |
|-------------|---------|---------|------------|---------|------------|---------|------------|---------|------------|
| | Charge | Charge | % Increase | Charge | % Increase | Charge | % Increase | Charge | % Increase |
| Scenario 1: | | | % | | % | | % | | % |
| Scenario 2: | | | % | | % | | % | | % |

Assumptions for:

| | |
|------------|--|
| Scenario 1 | |
| Scenario 2 | |

Part 2: Tuition and Other Nongeneral Fund (NGF) Revenue Virginia Military Institute

Tuition and Fee Increases and Nongeneral Fund (NGF) Revenue Estimates Based on the Assumption of No New General Fund (GF)

Instructions: Based on enrollment changes and other institution-specific assumptions, provide the total revenue for educational and general (E&G) programs, by student level and domicile. Provide other anticipated NGF revenue, tuition used for financial aid (Program 108) and anticipated non-E&G fee revenue for in-state undergraduates and then all other students. (Please do not alter the shaded cells that contain formulas.)

| Items | 2018-2019 (Estimated) | 2019-2020 (Estimated) | 2020-2021 (Planned) | 2021-2022 (Planned) |
|---|-----------------------|-----------------------|---------------------|---------------------|
| | Total Revenue | Total Revenue | Total Revenue | Total Revenue |
| E&G Programs | | | | |
| Undergraduate, In-State | \$10,028,786 | \$10,341,457 | \$10,753,048 | \$10,989,839 |
| Undergraduate, Out-of-State | \$23,209,578 | \$23,115,088 | \$23,970,461 | \$24,904,652 |
| Graduate, In-State | \$0 | \$0 | \$0 | \$0 |
| Graduate, Out-of-State | \$0 | \$0 | \$0 | \$0 |
| Law, In-State | \$0 | \$0 | \$0 | \$0 |
| Law, Out-of-State | \$0 | \$0 | \$0 | \$0 |
| Medicine, In-State | \$0 | \$0 | \$0 | \$0 |
| Medicine, Out-of-State | \$0 | \$0 | \$0 | \$0 |
| Dentistry, In-State | \$0 | \$0 | \$0 | \$0 |
| Dentistry, Out-of-State | \$0 | \$0 | \$0 | \$0 |
| PharmD, In-State | \$0 | \$0 | \$0 | \$0 |
| PharmD, Out-of-State | \$0 | \$0 | \$0 | \$0 |
| Veterinary Medicine, In-State | \$0 | \$0 | \$0 | \$0 |
| Veterinary Medicine, Out-of-State | \$0 | \$0 | \$0 | \$0 |
| Other NGF | \$0 | \$0 | \$0 | \$0 |
| Total E&G Revenue - Gross | \$33,238,364 | \$33,456,545 | \$34,723,509 | \$35,894,491 |
| Total E&G Revenue - Net of Financial Aid | \$29,813,077 | \$29,756,545 | \$30,973,509 | \$32,044,491 |
| Tuition used for Financial Aid (Pgm 108) | \$3,425,287 | \$3,700,000 | \$3,750,000 | \$3,850,000 |
| Non-E&G Fee Revenue | | | | |
| In-State undergraduates | \$20,191,453 | \$21,147,224 | \$21,933,021 | \$22,346,192 |
| All Other students | \$12,375,406 | \$12,634,284 | \$12,992,172 | \$13,407,715 |
| Total non-E&G fee revenue | \$32,566,859 | \$33,781,508 | \$34,925,193 | \$35,753,907 |

Part 3: ACADEMIC-FINANCIAL PLAN

Institution Name

Academic and Financial Plan

3A: Six-Year Plan for Academic and Support Service Strategies for Six-year Period (2020-2026)

Instructions for 3A: In the column entitled "Academic and Support Service Strategies for Six-Year Period (2020-2026)," please provide short titles to identify institutional strategies associated with goals in the Virginia Plan. Provide a concise description of the strategy in the Description of Strategy column (column J). Within this column, provide a specific reference as to where more detailed information can be found in the Narrative document. Note the goal(s) with which the strategy is aligned with the Virginia Plan (in particular, the related priority areas) in the VP Goal column and give it a Priority Ranking in column A. Additional information for 2022-2026 should be provided in column K (Two Additional Biennia). Strategies for student financial aid, other than those that are provided through tuition revenue, should not be included on this table; they should be included in Part 4, General Fund Request, of the plan. If an institution wishes to include any information about FTEs or fringe benefit adjustments (using DPB's FY2020 start-up instructions available by the end of May), it should list them as strategies in the Academic Plan not the Financial Plan. Funding amounts in the first year should be incremental. However, if the costs continue into the second year, they should be reflected cumulatively. Additional rows for strategies must be added before the gray line. Please update total cost formulas if necessary. **ASSUME NO ADDITIONAL GENERAL FUND IN THIS WORKSHEET.**

| SECTION A: ACADEMIC AND SUPPORT SERVICE STRATEGIES FOR SIX-YEAR PERIOD (2020-2026) | | | | | | | | | | |
|--|---|---------|---------------------------------------|--------------|-----------------------------|--------------|--------------|-----------------------------|---|---|
| Priority Ranking | Strategies (Short Title) | VP Goal | Biennium 2020-2022 (7/1/20-6/30/22) | | | | | | Description of Strategy | Two Additional Biennia |
| | | | 2020-2021 | | | 2021-2022 | | | | |
| | | | Total Amount | Reallocation | Amount From Tuition Revenue | Total Amount | Reallocation | Amount From Tuition Revenue | | |
| | | | Concise Information for Each Strategy | | | | | | | |
| 1 | Increase T&R Faculty Salaries | 3 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | Continue to use tuition revenue and private funds, as available, to address faculty compensation inequities. | Continue to use tuition revenue and private funds, as available, to address faculty compensation inequities. |
| 4 | Right Sizing | 2 | \$364,000 | \$120,000 | \$244,000 | \$724,000 | \$244,000 | \$480,000 | Add four, full-time non-tenure track positions - one each in Computer and Information Sciences; English, Rhetoric & Humanistic Studies; History; and Chemistry. "Buy back" privately-funded positions in English, Rhetoric & Humanistic Studies; Civil & Environmental Engineering; International Studies & Political Science; and Modern Languages and Cultures. | No additional positions associated with this strategy are anticipated beyond those planned through FY 2022. |
| 5 | Math that Matters: Contextualizing Mathematics in a Computational World | 2 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | Improve the common Core math requirement by developing a new, two-course math sequence that will include technology-driven mathematical topics and basic programming skills. Funding through a combination of new E&G funds, private funds, and reallocation. | Improve the common Core math requirement by developing a new, two-course math sequence that will include technology-driven mathematical topics and basic programming skills. Funding through a combination of new E&G funds, private funds, and reallocation. |
| 6 | Financial Aid | 1 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | Continue to seek and identify new sources of both internal and external financial aid to better serve low-and middle income in-state cadets. | Continue to seek and identify new sources of both internal and external financial aid to better serve low-and middle income in-state cadets. |
| 8 | Core course in "American Civics" | 3 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | Develop and add a course to the Core Curriculum to ensure all cadets have a solid understanding of US History, the Constitution, and Civics. | Maintain a Core Curriculum course in "American Civics." |
| 9 | Re-Imagination of Core Leadership Course | 3 | \$92,000 | \$0 | \$92,000 | \$92,000 | \$0 | \$92,000 | Continue to offer a revised Core Curriculum course in leadership. | Continue to offer a revised Core Curriculum course in leadership. |
| 11 | Center for Undergraduate Research (V-CUR) | 4 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | Anticipate continuing program with private funding. | Anticipate continuing program with private funding. |
| 12 | Math Education and Resource Center (MERC) | 2 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | Anticipate continuing program with private funding. | Anticipate continuing program with private funding. |
| 13 | Technology Enhanced Instruction | 3 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | VMI will continue to enhance STEM instructional and research laboratories using a combination of State Equipment Trust Funding, local funds, and E&G funds. | VMI will continue to enhance STEM instructional and research laboratories using a combination of State Equipment Trust Funding, local funds, and E&G funds. |
| 14 | "New Directions" Grant Program | 3 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | Anticipate continuing program with private funding. | Anticipate continuing program with private funding. |
| 15 | Engineering Graduate Program Research Agreements | 4 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | Maintain active relationships between the VMI engineering programs and those at VCU and Virginia Tech while looking at opportunities for expanded participation. | Maintain active relationships between the VMI engineering programs and those at VCU and Virginia Tech while looking at opportunities for expanded participation. |
| 16 | Articulation Agreements | 4 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | Maintain the articulation agreements and institutionalize their use in promoting advanced academic study. | Maintain the articulation agreements and institutionalize their use in promoting advanced academic study. |
| 17 | Increasing STEM Majors | 4 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | Maintain the principles of the Core Curriculum. Curricula supporting a baseline STEM education, and continue enrollment practices and academic support programs in order to support 50% enrollment in STEM majors. | Maintain the principles of the Core Curriculum. Curricula supporting a baseline STEM education, and continue enrollment practices and academic support programs in order to support 50% enrollment in STEM majors. |
| 18 | Accreditation for the Department of Computer and Information Sciences | 3 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | Obtain initial ABET accreditation of the CIS department. | Maintain ABET accreditation of the CIS department. |
| 19 | Learning Services | 2 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | Anticipate continuing program with private funding. | Anticipate continuing program with private funding. |
| 20 | Year Round Facility Use | 3 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | Continue all programs that contribute to extensive year-round use of VMI facilities. | Continue all programs that contribute to extensive year-round use of VMI facilities. |
| 21 | Shared Resources | 3 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | Continue to develop and maintain existing cooperative relationships, and seek new opportunities. | Continue to develop and maintain existing cooperative relationships, and seek new opportunities. |
| 22 | Increased Degree Completion for Virginia Residents | 2 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | Continue existing readmission and IB/AP/CI policies. Promote local visibility of the two VMI summer semesters. | Continue existing readmission and IB/AP/CI policies. Promote local visibility of the two VMI summer semesters. |
| 23 | Military Commissioning | 4 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | Continue existing strategies for increasing commissioning percentage. | Continue existing strategies for increasing commissioning percentage. |
| 24 | STEM Conferences | 4 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | The annual series of STEM conferences will continue through the 2018-2020 biennium. An evaluation will be made to determine the interest in hosting future conferences. | The annual series of STEM conferences will continue through the 2018-2020 biennium. An evaluation will be made to determine the interest in hosting future conferences. |
| 25 | Efficiency Reforms | 3 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | Continue existing efficiency reforms and identify and implement additional reforms | Continue existing efficiency reforms and identify and implement additional reforms |

Part 3: ACADEMIC-FINANCIAL PLAN

Institution Name

Academic and Financial Plan

3A: Six-Year Plan for Academic and Support Service Strategies for Six-year Period (2020-2026)

Instructions for 3A: In the column entitled "Academic and Support Service Strategies for Six-Year Period (2020-2026)," please provide short titles to identify institutional strategies associated with goals in the Virginia Plan. Provide a concise description of the strategy in the Description of Strategy column (column J). Within this column, provide a specific reference as to where more detailed information can be found in the Narrative document. Note the goal(s) with which the strategy is aligned with the Virginia Plan (in particular, the related priority areas) in the VP Goal column and give it a Priority Ranking in column A. Additional information for 2022-2026 should be provided in column K (Two Additional Biennia). Strategies for student financial aid, other than those that are provided through tuition revenue, should not be included on this table; they should be included in Part 4, General Fund Request, of the plan. If an institution wishes to include any information about FTEs or fringe benefit adjustments (using DPB's FY2020 start-up instructions available by the end of May), it should list them as strategies in the Academic Plan not the Financial Plan. Funding amounts in the first year should be incremental. However, if the costs continue into the second year, they should be reflected cumulatively. Additional rows for strategies must be added before the gray line. Please update total cost formulas if necessary. **ASSUME NO ADDITIONAL GENERAL FUND IN THIS WORKSHEET.**

| SECTION A: ACADEMIC AND SUPPORT SERVICE STRATEGIES FOR SIX-YEAR PERIOD (2020-2026) | | | | | | | | | | |
|--|--|---------|---------------------------------------|--------------|-----------------------------|--------------|--------------|-----------------------------|--|--|
| Priority Ranking | Strategies (Short Title) | VP Goal | Biennium 2020-2022 (7/1/20-6/30/22) | | | | | | Description of Strategy | Two Additional Biennia |
| | | | 2020-2021 | | | 2021-2022 | | | | |
| | | | Total Amount | Reallocation | Amount From Tuition Revenue | Total Amount | Reallocation | Amount From Tuition Revenue | | |
| | | | Concise Information for Each Strategy | | | | | | | |
| 26 | Commonwealth Cyber Fusion and Collegiate Cyber Cup Competition | 3 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | VMI anticipates hosting this event annually. | VMI anticipates hosting this event annually. |
| | | | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | | |
| | | | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | | |
| Total 2020-2022 Costs (Included in Financial Plan Total Additional) | | | \$456,000 | \$120,000 | \$336,000 | \$816,000 | \$244,000 | \$572,000 | | |

3B: Six-Year Financial Plan for Educational and General Programs, Incremental Operating Budget Need 2020-2022 Biennium

Instructions for 3B: Complete the lines appropriate to your institution. As completely as possible, the items in the Academic Plan (3A) and Financial Plan (3B) should represent a complete picture of the institution's anticipated use of projected tuition revenues. For every strategy in 3A and every item in 3B of the plan, the total amount and the sum of the reallocation and tuition revenue should equal one another. Two additional rows, "Anticipated Nongeneral Fund Carryover" and "Nongeneral Fund Revenue for Current Operations" are available for an institution's use, if an institution cannot allocated all of its tuition revenue to specific strategies in the plan. Also, given the long standing practice that agencies should not assume general fund support for operation and maintenance (O&M) of new facilities, O&M strategies should not be included in an institution's plan, unless they are completely supported by tuition revenue. **Please do not add additional rows to 3B without first contacting Jean Huskey.**

| Assuming No Additional General Fund | | 2020-2021 | | | 2021-2022 | | |
|--|--------------------|------------------|-----------------------------|--------------------|------------------|-----------------------------|--|
| Items | Total Amount | Reallocation | Amount From Tuition Revenue | Total Amount | Reallocation | Amount From Tuition Revenue | |
| Total Incremental Cost from Academic Plan¹ | \$456,000 | \$120,000 | \$336,000 | \$816,000 | \$244,000 | \$572,000 | |
| 1 Increase T&R Faculty Salaries (\$) | \$187,180 | \$0 | \$187,180 | \$388,241 | \$0 | \$388,241 | |
| T&R Faculty Salary Increase Rate(%) ² | 1.50% | | 1.50% | 1.50% | | 1.50% | |
| 2 Increase Admin. Faculty Salaries (\$) | \$96,436 | \$0 | \$96,436 | \$212,230 | \$0 | \$212,230 | |
| Admin. Faculty Salary Increase Rate (%) ² | 1.50% | | 1.50% | 1.50% | | 1.50% | |
| 2 Increase Classified Staff Salaries (\$) | \$124,154 | \$0 | \$124,154 | \$262,538 | \$0 | \$262,538 | |
| Classified Salary Increase Rate (%) ² | 1.50% | | 1.50% | 1.50% | | 1.50% | |
| Increase University Staff Salaries (\$) | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | |
| University Staff Salary Increase Rate (%) ² | 0.00% | | 0.00% | 0.00% | | 0.00% | |
| O&M for New Facilities | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | |
| 3 Addtl In-State Student Financial Aid from Tuition Rev | \$20,000 | \$0 | \$20,000 | \$50,000 | \$0 | \$50,000 | |
| 3 Addtl Out-of-State Student Financial Aid from Tuition Rev | \$30,000 | \$0 | \$30,000 | \$100,000 | \$0 | \$100,000 | |
| 27 Anticipated Nongeneral Fund Carryover | \$165,856 | \$0 | \$165,856 | \$312,244 | \$0 | \$312,244 | |
| 7 Nongeneral Fund for Current Operations | \$231,716 | \$0 | \$231,716 | \$387,957 | \$0 | \$387,957 | |
| Library Enhancement | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | |
| 10 Utility Cost Increase | \$77,485 | \$0 | \$77,485 | \$156,520 | \$0 | \$156,520 | |
| Total Additional Funding Need | \$1,388,827 | \$120,000 | \$1,268,827 | \$2,685,730 | \$244,000 | \$2,441,730 | |

Notes:
 (1) Please ensure that these items are not double counted if they are already included in the incremental cost of the academic plan.
 (2) If planned, enter the cost of any institution-wide increase.

**Part 4: General Fund (GF) Request
Virginia Military Institute**

Requesting General Fund Support

Instructions: Indicate items for which you anticipate making a request for state general fund in the 2020-22 biennium. The item can be a supplement to a strategy or item from the academic and financial plan or it can be a free-standing request for which no tuition revenue would be used. If it is a supplement to a strategy or item from the academic and financial plan, then describe in the Notes column how additional general fund will enhance or expand the strategy. Requests for need-based financial aid appropriated in program 108 should be included here. If additional rows are added, please update the total costs formulas.

| Priority Ranking | Initiatives Requiring General Fund Support | | | | | | Notes |
|------------------|---|---|-------------------------------------|------------|--------------|------------|---|
| | Strategies (Match Academic-Financial Worksheet Short Title) | | Biennium 2020-2022 (7/1/20-6/30/22) | | | | |
| | | | 2020-2021 | | 2021-2022 | | |
| | | | Total Amount | GF Support | Total Amount | GF Support | |
| 1 | Right Sizing of Faculty | 2 | \$364,000 | \$244,000 | \$724,000 | \$480,000 | Add four, full-time non-tenure track positions - one each in Computer and Information Sciences; English, Rhetoric & Humanistic Studies; History; and Chemistry. "Buy back" privately-funded positions in English, Rhetoric & Humanistic Studies; Civil & Environmental Engineering; International Studies & Political Science; and Modern Languages and Cultures. No additional positions associated with this strategy are anticipated beyond those planned through FY 2022. |
| 2 | Re-Imagination of Core Leadership Course | 3 | \$100,047 | \$100,047 | \$203,095 | \$203,095 | A required three-hour course in theory and practice of leadership, Leadership in Organizations (PS344), will be redesigned to enrich the application component of the course. Additional faculty positions may be required to fully implement the new course. |
| 3 | Math Education and Resource Center | 2 | \$167,550 | \$88,500 | \$336,882 | \$179,500 | This initiative, funded in part from private funds, was established to enhance proficiency in mathematics as a complement to VMI's STEM programs that enroll 60% of the Corps of Cadets. Private funding was used to fully develop this program, but grant funding is not expected to continue beyond AY22. Assessment data indicates significant satisfaction with this high demand program, but state funding may be required to continue it. |
| 4 | Miller Academic Center | 2 | \$204,650 | \$34,000 | \$415,420 | \$69,000 | This initiative was established to facilitate cadets' academic success and progress toward degree completion through academic advisor training, central coordination of group study sessions, identifying and coordinating specific learning skills programs, and training cadet academic staff. Private grant funding was used to fully develop this program, but private funding is not expected to continue beyond AY22. State funding may be required to continue this program. |

**Part 4: General Fund (GF) Request
Virginia Military Institute**

Requesting General Fund Support

Instructions: Indicate items for which you anticipate making a request for state general fund in the 2020-22 biennium. The item can be a supplement to a strategy or item from the academic and financial plan or it can be a free-standing request for which no tuition revenue would be used. If it is a supplement to a strategy or item from the academic and financial plan, then describe in the Notes column how additional general fund will enhance or expand the strategy. Requests for need-based financial aid appropriated in program 108 should be included here. If additional rows are added, please update the total costs formulas.

| Priority Ranking | Initiatives Requiring General Fund Support | | | | | | Notes |
|------------------|--|---|-------------------------------------|------------|--------------|-------------|--|
| | Strategies (Match Academic-Financial Worksheet Short Title) | | Biennium 2020-2022 (7/1/20-6/30/22) | | | | |
| | | | 2020-2021 | | 2021-2022 | | |
| | | | Total Amount | GF Support | Total Amount | GF Support | |
| VP Goal | | | | | | | |
| 5 | Water/Sewer Distribution System Acquisition | 3 | \$200,000 | \$200,000 | \$330,000 | \$330,000 | City of Lexington desires to transfer ownership and responsibility for all water and sewer distribution facilities on the VMI Post. FY 2021 costs include \$70,000 in one-time start-up costs. |
| 6 | Virginia Based Defense and Intelligence Industry: Government and Private Industry Partnerships | 4 | \$86,027 | \$86,027 | \$174,635 | \$174,635 | This initiative will develop partnerships with Virginia state-supported graduate schools to offer VMI graduates completing their service in the military an opportunity to gain the credentials necessary for work in the defense and intelligence industries. In addition, partnerships with private industry in Virginia would be created to provide internship opportunities for veterans enrolled in graduate school programs. The intention is to attract VMI graduates and veterans back to Virginia in increased numbers so that the Virginia economy will benefit from junior and senior military officers returning to work in the state with security clearances, degrees in STEM fields, and many with advanced degrees completed while in the US Armed Services. |
| | | | \$0 | \$0 | \$0 | \$0 | |
| | | | \$1,122,274 | \$752,574 | \$2,184,032 | \$1,436,230 | |

Part 5: Financial Aid Plan
Virginia Military Institute

FINANCIAL AID PLAN

Instructions: Provide a breakdown of the projected source and distribution of tuition and fee revenue redirected to financial aid. To ensure compliance with the state prohibition that in-state students not subsidize out-of-state students and to provide the review group with a scope of the strategy, projections must be made for each of the indicated categories. Please be aware that this data will be compared with similar data provided by other institutional offices in order to ensure overall consistency. (Please do not alter shaded cells that contain formulas.)

Note: If you do not have actual amounts for Tuition Revenue for Financial Aid by student category, please provide an estimate. If values are not distributed for Tuition Revenue for Financial Aid, a distribution may be calculated for your institution.

Allocation of Tuition Revenue Used for Student Financial Aid

*2018-19 (Estimated) Please see footnote below.

| T&F Used for Financial Aid | Gross Tuition Revenue | Tuition Revenue for Financial Aid (Program 108) | % Revenue for Financial Aid | Distribution of Financial Aid |
|--|-----------------------|---|-----------------------------|-------------------------------|
| Undergraduate, In-State | \$10,028,786 | \$0 | % | \$1,156,650 |
| Undergraduate, Out-of-State | \$23,209,578 | \$3,425,287 | 14.8% | \$2,268,637 |
| Graduate, In-State | \$0 | \$0 | % | \$0 |
| Graduate, Out-of-State | \$0 | \$0 | % | \$0 |
| First Professional, In-State | \$0 | \$0 | % | \$0 |
| First Professional, Out-of-State | \$0 | \$0 | % | \$0 |
| Total | \$33,238,364 | \$3,425,287 | 10.3% | \$3,425,287 |
| Total from Tuition & Other NGF Revenue worksheet | \$33,238,364 | \$3,425,287 | 10.3% | |
| In-State Sub-Total | \$10,028,786 | \$0 | % | \$1,156,650 |

2019-20 (Planned)

| T&F Used for Financial Aid | Gross Tuition Revenue | Tuition Revenue for Financial Aid (Program 108) | % Revenue for Financial Aid | Distribution of Financial Aid |
|--|-----------------------|---|-----------------------------|-------------------------------|
| Undergraduate, In-State | \$10,341,457 | \$0 | % | \$1,220,000 |
| Undergraduate, Out-of-State | \$23,115,088 | \$3,700,000 | 16.0% | \$2,480,000 |
| Graduate, In-State | \$0 | \$0 | % | \$0 |
| Graduate, Out-of-State | \$0 | \$0 | % | \$0 |
| First Professional, In-State | \$0 | \$0 | % | \$0 |
| First Professional, Out-of-State | \$0 | \$0 | % | \$0 |
| Total | \$33,456,545 | \$3,700,000 | 11.1% | \$3,700,000 |
| Total from Tuition & Other NGF Revenue worksheet | \$33,456,545 | \$3,700,000 | 11.1% | |
| In-State Sub-Total | \$10,341,457 | \$0 | % | \$1,220,000 |
| Additional In-State | \$312,671 | \$0 | % | \$63,350 |

2020-21 (Planned)

| T&F Used for Financial Aid | Gross Tuition Revenue | Tuition Revenue for Financial Aid (Program 108) | % Revenue for Financial Aid | Distribution of Financial Aid |
|--|-----------------------|---|-----------------------------|-------------------------------|
| Undergraduate, In-State | \$10,753,048 | \$0 | % | \$1,240,000 |
| Undergraduate, Out-of-State | \$23,970,461 | \$3,750,000 | 15.6% | \$2,510,000 |
| Graduate, In-State | \$0 | \$0 | % | \$0 |
| Graduate, Out-of-State | \$0 | \$0 | % | \$0 |
| First Professional, In-State | \$0 | \$0 | % | \$0 |
| First Professional, Out-of-State | \$0 | \$0 | % | \$0 |
| Total | \$34,723,509 | \$3,750,000 | 10.8% | \$3,750,000 |
| Total from Tuition & Other NGF Revenue worksheet | \$34,723,509 | \$3,750,000 | 10.8% | |
| In-State Sub-Total | \$10,753,048 | \$0 | % | \$1,240,000 |
| Additional In-State | \$411,591 | \$0 | % | \$20,000 |
| Additional In-State from Financial Plan | | \$20,000 | #DIV/0! | |

2021-22 (Planned)

| T&F Used for Financial Aid | Gross Tuition Revenue | Tuition Revenue for Financial Aid (Program 108) | % Revenue for Financial Aid | Distribution of Financial Aid |
|--|-----------------------|---|-----------------------------|-------------------------------|
| Undergraduate, In-State | \$10,989,839 | \$0 | % | \$1,270,000 |
| Undergraduate, Out-of-State | \$24,904,652 | \$3,850,000 | 15.5% | \$2,580,000 |
| Graduate, In-State | \$0 | \$0 | % | \$0 |
| Graduate, Out-of-State | \$0 | \$0 | % | \$0 |
| First Professional, In-State | \$0 | \$0 | % | \$0 |
| First Professional, Out-of-State | \$0 | \$0 | % | \$0 |
| Total | \$35,894,491 | \$3,850,000 | 10.7% | \$3,850,000 |
| Total from Tuition & Other NGF Revenue worksheet | \$35,894,491 | \$3,850,000 | 10.7% | |
| In-State Sub-Total | \$10,989,839 | \$0 | % | \$1,270,000 |
| Additional In-State | \$236,791 | \$0 | % | \$30,000 |
| Additional In-State from Financial Plan | | \$0 | % | |

* Please note that the totals reported here will be compared with those reported by the financial aid office on the institution's annual S1/S2 report. Since the six-year plan is estimated and the S1/S2 is "actual," the numbers do not have to match perfectly but these totals should reconcile to within a reasonable tolerance level. Please be sure that all institutional offices reporting tuition/fee revenue used for aid have the same understanding of what is to be reported for this category of aid.

Part 6: Economic Development Annual Report for 2018-19

Virginia Military Institute

ECONOMIC DEVELOPMENT: CONTRIBUTIONS (HB515; which was enacted as Chapter 149, Virginia Acts of Assembly, 2016 Session)

Requirement: As per § 23.1-306 (A) of the Code of Virginia each such plan and amendment to or affirmation of such plan shall include a report of the institution's active contributions to efforts to stimulate the economic development of the Commonwealth, the area in which the institution is located, and, for those institutions subject to a management agreement set forth in Article 4 (§ 23.1-1004 et seq.) of Chapter 10, the areas that lag behind the Commonwealth in terms of income, employment, and other factors.

Instructions: The reporting period is FY19. **THE REPORT IS NOT DUE UNTIL OCTOBER 1.** The metrics serve as a menu of items that institutions should respond to as applicable and when information is available to them. Leave fields blank, if information is unavailable. (Please do not alter shaded cells that contain formulas.) Please note the narrative question at the bottom of the page. The response should be provided in the separate Narrative document, Section J.

6A: Provide information for research and development (R&D) expenditures through June 30, 2019 by source of fund with a breakdown by Science and Engineering (S&E) specific and non-S&E. (Definition: The response is an unaudited version of the data to be submitted to the NSF Higher Education R&D [HERD] Survey in early 2020.)

| VA PLAN Strategy Reference | 6A: Research and Development (R&D) Expenditures by Source of Fund | *S&E | Non S&E | Total |
|----------------------------|---|----------|-----------------|--------------------|
| | Source of Funds | | | |
| 4.3 | Federal Government | \$54,563 | \$1,014,521 | \$1,069,084 |
| | State and Local Government | \$23,313 | | \$23,313 |
| | Institution Funds | \$17,140 | \$34,111 | \$51,251 |
| | Business | | | \$0 |
| | Nonprofit Organizations | | \$36,157 | \$36,157 |
| | All Other Sources | | | \$0 |
| | Total | | \$95,016 | \$1,084,789 |
| | * S&E - Science and Engineering | | | |

6B: For the following items, provide responses in appropriate fields. Insert an X for yes/no responses. Use Number/Amount field for other information. A Comments field has been provided for any special information your institution may want to provide.

| VA PLAN Strategy Reference | 6B: General Questions | Yes | No | Number/Amount | Comments |
|----------------------------|---|-----|----|---------------|--|
| 4.1 | 1. Does your institution offer an innovation- or entrepreneurship-themed student living-learning community (student housing)? | | X | | |
| 4.1 | 2. Does your institution offer startup incubation/accelerator programs? If yes, please comment if people/companies external to the institution can access them and, if so, how. (Definition: Incubation or accelerator programs are structured multi-week or multi-month programs for which a cohort of start-up companies are chosen; includes mentoring and connections to investors) | | X | | |
| 4.2 | 3. Does your institution have an entrepreneurship center? If yes, please comment if people/companies external to the institution can access it and, if so, how. | | X | | |
| 4.2 | 4. Does your institution use Entrepreneur(s)-in-Residence? (Definition: EIRS are usually experienced founders of high-growth start-up companies who partner with a university to explore active research projects and seek out opportunities to commercialize the products of research; alternatively, an EIR could be a grad student, post-doc, business major, etc., who assists to evaluate IP and provide assessments of market pull potential, business planning, etc.) | | X | | |
| 4.1 | 5. Number of students paid through externally funded research grants or contracts. | | | 10 | |
| 4.1 | 6. Please answer Yes if (i) your institution's written tenure policy specifically mentions the development of intellectual property and/or the commercialization of research; or (ii) the policies of any schools or other divisions mention IP and/or commercialization as a consideration for promotion and tenure; or (iii) the instructions for compiling a P&T portfolio include providing information about patents, licenses, and other commercialization activities? If Yes, please provide a brief explanation in the comments field. If No, use the comments field to describe other ways a promotion and tenure committee might value those contributions, if any. | | X | | IP and commercialization ventures would be evaluated as a part of the faculty member's "Scholarly Engagement" component of their performance plan. |
| 4.2 | 7. Does your institution or an affiliated entity offer translational research and/or proof of concept funding? If yes, please provide the dollar amount awarded in FY19 in the number/amount field. In the comments field, please provide the number of grants awarded; additional comments can also be entered if needed. | X | | \$100,000 | New Directions in Teaching and Research Funding |
| 4.2 | 8. Does your institution or an affiliated entity offer a seed fund or venture capital fund that awards money to start-ups? If yes, please comment on whether it awards funding only to university-based start-ups or to the general public as well? If yes, please provide dollar amount awarded in FY19 in the number/amount field and the number of awards made in the comments field. | | X | | |

6C: Provide information for federal research and commercialization grants by type, number, and dollar value with a breakdown by college and department. If additional rows are needed, please contact Jean Mottley (jeanmottley@schev.edu) for assistance.

| VA PLAN Strategy Reference | 6C: Research and Commercialization Grants | No. | \$ Value | College | Department |
|----------------------------|---|-----|----------|---------|------------|
| 4.3 | SBIR - Small Business Innovation Research | 0 | | | |
| | STTR - Small Technology Transfer Research | 0 | | | |

6D: The Intellectual Property (IP) section captures information on disclosure, patent, and licensing activities. It is divided into three tables. Tables 1 and 2 capture information regardless of source of funds or nature of entity to whom IP is transferred. Table 3 is required by § 23.1-102 subdivision 2 of the Code of Virginia. It details assignment of IP interests to persons or nongovernmental entities and the value of externally sponsored research funds received during the year from a person or nongovernmental entity by the institution, any foundation supporting the IP research performed by the institution, or any entity affiliated with the institution. Information is sought on research that yields IP regardless of the project's intent. Information is sought about IP transferred as a result of either basic or applied research. Tables 2 and 3 capture separate aggregate data on entities that have a principal place of business in Virginia and those with a principal place of business outside of Virginia.

| VA PLAN Strategy Reference | 6D: Table 1 - All Activity for FY 2018-19 | No. |
|----------------------------|---|-----|
| 4.2 | 1. Number of Intellectual Property disclosures received | 0 |

| | |
|--|---|
| 2. Number of Provisional Patent Applications filed during the year | 0 |
| 3. Number of Patent Applications filed during the year (by type) | |
| Design | 0 |
| Plant | 0 |
| Utility | 0 |
| Total | 0 |
| 4. Total number of Patent Applications pending (by type) | |
| Design | 0 |
| Plant | 0 |
| Utility | 0 |
| Total | 0 |
| 5. Number of Patents awarded during the year (by type) | |
| Design | 0 |
| Plant | 0 |
| Utility | 0 |
| Total | 0 |

| | | | |
|---|---|--|---|
| VA PLAN Strategy Reference 4.2 | 6D: Table 2 - All Activity for FY 2018-19 | Principal Place of Business in VA | Principal Place of Business Outside VA |
| | 1. Total number of intellectual property licenses executed in FY18-19 | 0 | 0 |
| | 2. Number of start-ups created through IP licensing in FY18-19 | 0 | 0 |
| | 3. Amount of licensing revenue in FY18-19 resulting from all intellectual property licenses | \$0 | \$0 |
| | 4. Number of jobs created as a result of university start-ups | 0 | 0 |

| | | | |
|--|---|--|---|
| VA PLAN Strategy Reference 4.2 | 6D: Table 3 - Research Supported by Persons or Nongovernmental Entities | Principal Place of Business in VA | Principal Place of Business Outside VA |
| | 1. Value of funds received (not expended) from persons or nongovernmental entities to support research | \$55,786 | \$0 |
| | 2. Number of patents awarded during the year (by type) developed in whole or part from research projects funded by persons or nongovernmental entities: | This is a subset of Table 1, #5. | |
| | a. Design Patent | 0 | 0 |
| | b. Plant Patent | 0 | 0 |
| | c. Utility Patent | 0 | 0 |
| d. Total | 0 | 0 | |
| 3. Number of assignments of intellectual property interests to persons or nongovernmental entities (definition: "assignment" is the outright conveyance, sale and transfer of the IP, in contrast to "license" of IP rights, which is the contractual permission given to another party to use the IP) | 0 | 0 | |

6E: These items are VCCS specific. Please provide responses in appropriate fields. A Comments field has been provided for any special information the VCCS may want to provide.

| | | | |
|---|--|---------------|-----------------|
| VA PLAN Strategy Reference 4.1 | 6E: General Questions - VCCS Specific | Number | Comments |
| | 1. Number of training programs leading to workforce certifications and licensures. | | |
| | 2. Number of students who earned industry recognized credentials stemming from training programs. | | |
| | 3. Number of industry-recognized credentials obtained, including certifications and licensures. | | |
| | 4. Number of Career/Technical Education certificates, diplomas and degrees awarded that meet regional workforce needs. | | |

NARRATIVE REQUIREMENT (Section J):

Contributions to Economic Development – Describe the institution’s contributions to stimulate the economic development of the Commonwealth and/or area in which the institution is located. *If applicable*, the information should include:

- a. University-led or public-private partnerships in real estate and/or community redevelopment.
- b. State industries to which the institution’s research efforts have direct relevance.
- c. High-impact programs designed to meet the needs of local families, community partners, and businesses.
- d. Business management/consulting assistance.