

Report of the University Mission Initiative (UMI) - Fall 2025

Executive Summary

Virginia Tech stands at a critical inflection point in its evolution as a leading land-grant research university. Building on a foundation of strong academic programs, expanding research enterprises, and rising global visibility, the University Mission Initiative (UMI) was convened to evaluate and reimagine the policies, funding structures, and strategic investments necessary to support the next decade of growth in graduate education. The committee's work centers on enabling sustainable doctoral expansion, strengthening master's and professional programs, modernizing policies that govern graduate funding and administration, and building new pathways for externally supported research training.

Across the several subcommittees that explored the core areas noted below, a consistent theme emerged: Virginia Tech has the capacity and aspiration to grow into a significantly larger, more competitive graduate institution. Achieving this vision requires coordinated investments in tuition remission policies, expanded GTA and GRA funding structures, growth of professional programs, industry-integrated doctoral pathways that support working professionals, and philanthropic support for graduate fellowships. It also requires a strategic recalibration of administrative systems to ensure clarity, equity, and modernized support for graduate students and their mentors.

The UMI recommendations focus on four core areas of transformation:

1. *Modernizing Graduate Funding and Policy Frameworks:* UMI recommends substantial updates to Policy 6210, including more precise definitions of candidacy and tuition remission, modernization of partial assistantship eligibility, a transition to 12-month assistantship models, and establishment of consistent leave and workload policies. A pilot program to move doctoral candidates toward full tuition remission is also recommended, along with aligning Policy 6210 procedures to ensure students on external fellowships are not financially disadvantaged.
2. *Expanding self-funded and Professional Graduate Programs (PGP):* Virginia Tech has substantial capacity to grow self-supported master's enrollment, particularly through high-demand online and hybrid programs. The committee identifies three tiers of expansion priorities, with scalable online degrees in technology, business, analytics, and natural resources generating the most immediate revenue potential. Mission-driven programs in health, life sciences, and environmental fields will require measured, capacity-aware growth. A Graduate Growth Task Force is recommended to coordinate enrollment, infrastructure, advising, and instructional design needs.
3. *Expanding Doctoral Teaching and Research Capacity:* Achieving a 4:1 full-time undergraduate-to-graduate ratio requires approximately 462 new GTA lines and a corresponding expansion of GRA and externally funded PhD positions. The committee proposes transparent allocation principles that prioritize high-demand instructional areas, research-intensive doctoral programs, and university strategic themes. GTA assignments must balance instructional needs with the value of doctoral training, while ensuring that lines primarily support students within their academic units and that 10% are reserved for research-focused student trainees who are expected to transfer to externally funded support.
4. *Strengthening Externally Funded PhD Pipelines and Philanthropic Graduate Endowments:* Externally supported doctoral training represents one of the most sustainable pathways for institutional growth. Recommendations include creating a Graduate Training Grant Office, providing seed funding for T32/NRT development, expanding fellowship-writing curricula, implementing incentive structures for students and faculty, and launching industry-integrated doctoral pathways co-funded with corporate partners. A centralized Graduate Bridge and Incentive Fund is recommended to support early-stage doctoral students and stabilize faculty research pipelines. To align graduate growth with long-term financial sustainability, UMI recommends closer coordination with University Advancement

to establish endowed graduate fellowships, create donor-supported Graduate Hubs in key research areas, and increase philanthropic visibility of graduate education. Endowed fellowships would provide flexible, renewable mechanisms to match federal training grants, recruit top students, and scale interdisciplinary programs.

Collectively, these recommendations chart a path for Virginia Tech to strengthen its competitiveness, expand graduate education capacity, and modernize the institutional structures that support research and teaching. By coordinating efforts across policy, finance, academic programs, industry partnerships, and philanthropy, the University Mission Initiative presents an integrated framework for achieving a sustainable, ambitious future of graduate enrollment. The proposed strategies offer both near-term pilots and long-term structural changes that, taken together, position Virginia Tech to meet its aspirations for global distinction and research excellence.

Introduction and Charge

In February 2025, following approval by the University Council and the President, Virginia Tech established the University Mission Initiative (UMI) Committee to examine and strengthen the policies, practices, and financial structures that support doctoral research training at the university. The creation of the UMI Committee was authorized through Resolution UC 2024-25A, which called for a university-wide, representative body to “*develop recommendations to enhance the research enterprise of the university via increased doctoral student training through revisions to policies and practices associated with funding graduate trainee research activities.*”

Name	Affiliation	Role
Ronnie Mondal	PhD candidate, CHEM	Co-Chair
Michelle Theus	Professor, DBSP	Co-Chair
Erin Poff	A/P Faculty Senator Representative	Member
Dan Folescu	GPSS Representative	Member
Jennifer Russell	Faculty Senate Representative	Member
Kevin Edgar	Assoc. Dean of the Graduate School	Member
Tim Hodge	VP for Finance / Budget & Planning	Member
Jeff Earley	Academic Resource Management	Member
Meryl Mims	CFA Representative	Member
Karen Schnatterly	COR Representative	Member
Veronica van Montfrans	CGPSP Representative	Member
Ira Blader	Department Heads Executive Council	Member
Mario Ferruzzi	Council of College Deans	Member
Randy Heflin	Office of Research & Innovation	Member
Lance Collins, Barbara Hoopes, and Andy Woodall	Washington, DC campus (VP & Exec Director; Associate Dean; Asst Vice Provost-PGPs)	Additional consultations sought by committee chairs

Table 1. UMI Membership

This initiative emerges at a pivotal moment for Virginia Tech. Engagement in research is a core element of the university’s tripartite mission, and the resolution recognizes that expanding the scale, accessibility, and excellence of research-based doctoral education is central to achieving global distinction. Global distinction is not simply a matter of prestige; it reflects Virginia Tech’s ability to compete for top faculty and students, secure large-scale external funding, influence national and international policy and innovation agendas, and address complex global challenges at scale. Institutions recognized for global research excellence shape scientific discovery, workforce development, and economic growth far beyond their regions. For Virginia Tech, advancing global distinction strengthens the university’s reputation, expands its partnerships, attracts investment, and reinforces its responsibility as a land-grant institution to generate knowledge with national and global impact. As stated in the resolution, a significant opportunity exists to transform university operations to increase graduate enrollment, better align funding mechanisms with research priorities, and support the success of current and future doctoral students. This includes re-examining how faculty deploy extramural funding, how the university structures research and teaching assistantships, and how funding policies can be modernized to support a high-quality, financially sustainable doctoral training ecosystem.

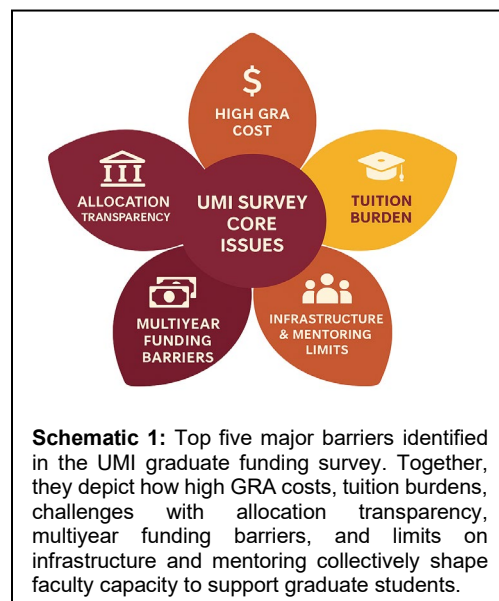
The UMI Committee comprises faculty, staff, students, administrators, and financial and academic planning leaders drawn from across the university, ensuring broad representation and the expertise needed to undertake this work. Membership includes representatives from the Faculty Senate, Graduate and Professional Student Senate, Academic Resource Management, the Graduate School, VP for Finance, ORI, the Council of College Deans, the Department Heads Executive Council, and the three sponsoring commissions (CFA, COR, and CGPSP). Together, the committee is charged with advancing a university-wide

vision for strengthening doctoral research training, informed by an understanding of the current landscape and guided by the principles articulated in UC 2024-25A. Specifically, the committee is tasked with:

- Reviewing current university policies and practices that shape doctoral trainee funding, mentorship, and research engagement.
- Identifying opportunities to expand the number of graduate research assistantships and to evaluate the role of teaching assistantships relative to instructional needs and doctoral training priorities.
- Assessing how faculty deploy extramural research funding, especially the balance between graduate students, postdoctoral associates, and research faculty, and identifying strategies that encourage sustainable, student-centered training models.
- Evaluating supports for graduate student fellowship applications and external funding efforts.
- Considering the instructional capacity required to accommodate increased doctoral enrollment, including potential needs for additional faculty hiring.
- Developing specific recommendations related to financial impacts, including budget projections for doctoral compensation, tuition and fee structures, candidacy-related considerations, and extramural funding models relevant to the FY2026 budget.

As mandated by the resolution, the committee will deliver **policy recommendations** by the end of Fall 2025 and **initial financial and budgetary projections** to the University Council Cabinet by the conclusion of Spring 2026. These recommendations will help shape an integrated, forward-looking framework for resourcing doctoral education that elevates Virginia Tech's research mission and reinforces its commitment to high-quality, inclusive, and globally distinctive and competitive graduate training. This work represents an ambitious, collaborative effort that will inform institutional planning and ensure that Virginia Tech's doctoral programs are positioned to thrive in an increasingly competitive national landscape and to support the next generation of scholars, innovators, working professionals, educators, and leaders.

The UMI Committee conducted a university-wide faculty survey (n = 290) to understand how graduate students are funded across Virginia Tech and to identify the barriers and opportunities that shape doctoral and master's training capacity. Responses spanned all major colleges, disciplines, and campus locations. Faculty reported a strong commitment to graduate education, but also significant structural barriers that limit their ability to recruit, fund, and support students (**Schematic 1**).



Key Findings:

- **High Cost of Graduate Research Assistants (GRAs).** Faculty overwhelmingly identified the total cost of a GRA, stipend, fringe, tuition, and fees, as the single largest barrier to supporting more PhD students. Many noted that a single GRA can consume one-third or more of a typical research grant. Several stated that GRA costs now exceed the cost of hiring a postdoctoral researcher.
- **Tuition Burden and Post-Candidacy Charges.** Post-candidacy tuition was deemed duplicative and misaligned with students' actual activity. Faculty widely expressed concern about covering full tuition with grants while also covering indirect costs. Multiple respondents stated that this structure directly reduces the number of GRAs they can support.

- **Limited Transparency and Predictability of GTA/GRA Allocations.** Many faculty reported difficulty understanding how assistantships are allocated across their departments and colleges. Year-to-year variability and unclear processes make long-term recruitment planning challenging.
- **Recruitment Challenges and Multiyear Funding Constraints.** Faculty frequently stated they cannot recruit PhD students unless they can guarantee four or more years of funding. Perceived uncertain departmental backing and short-term grants may restrict the ability to make competitive offers, leading some faculty to avoid taking PhD students altogether.
- **Grant Timeline and Training Misalignment.** Faculty described a structural mismatch between grant deliverables and the time students need to complete coursework, prelims, and research training. Shorter grants (e.g., R21, specific NSF programs) are particularly difficult to pair with GRAs.
- **Discipline- and Location-Specific Needs.** Units in the arts, social sciences, professional programs, and ARECs often lack access to grants that can fund GRAs. These colleges rely heavily on GTAs, hourly wages, or alternative models and expressed concern that university-wide policies often assume that grant-funded research is the default.
- **Mentoring Load, Infrastructure, and P&T Considerations.** High advising and administrative load, space limitations, and limited recognition of mentoring in promotion decisions reduce faculty willingness to expand research groups. Several faculty members cited infrastructure degradation (e.g., equipment maintenance delays) as limiting their capacity to support more students.

Implications for UMI Recommendations:

The survey strongly indicates that improving graduate student funding at VT requires addressing systemic constraints on funding, tuition, and planning. Faculty support the goal of strengthening graduate education, and many already include GRAs on grant proposals whenever possible. However, significant structural barriers inhibit growth.

To enhance graduate training capacity, the following recommendations may be considered:

- University-supported tuition mitigation (waivers, partial remissions, and reduced post-candidacy tuition).
- Transparent, multi-year GTA/GRA allocation frameworks communicated annually.
- Expanded first-year and bridge-funding pools to stabilize recruitment.
- Differentiated models for non-grant-intensive and geographically dispersed programs.
- Stronger recognition of mentoring in evaluation and promotion systems.
- Investment in research infrastructure to support research-intensive labs.

Together, these actions would significantly improve VT's ability to recruit, fund, and support high-quality graduate students across all colleges and disciplines, aligning graduate education with institutional strategic goals while reducing the financial and administrative burdens on faculty.

1. Overview.

The UMI committee conducted a faculty-wide survey to better understand how graduate students are funded across Virginia Tech. A total of 288 (146 Life Sciences (53%); 25 Engineering (9%), 23 Physical Sciences (8%), and 49 other (18%)) faculty responded, representing a wide range of colleges, programs, and disciplinary perspectives. The survey explored guiding principles for PhD funding, GTA/GRA allocation practices, inclusion of GRAs on grant budgets, and structural barriers impacting graduate training.

2. Respondent Overview.

Respondents were primarily faculty members, with representation from graduate program directors, department heads, and academic leaders. Responses spanned Life Sciences, Engineering, Physical Sciences, Social Sciences, Arts, Professional Programs, and ARECs. Most respondents were based in Blacksburg, with additional representation from Roanoke, Greater Washington DC Area, and remote/AREC sites.

3. Guiding Principles for PhD Funding.

Departments reported mixed models: prioritizing PhD over MS students, requiring advisors to show multiyear funding, relying heavily on GTAs to bridge funding gaps, or having no consistent policies at all. A common concern was the inability to guarantee four years of support, which often limits recruitment.

4. GTA Use and Allocation.

GTAs primarily support high-enrollment, high-intensity undergraduate courses. Allocation authority typically sits with department heads, graduate program directors, or teaching coordinators. Faculty frequently noted limited transparency and unpredictability in GTA allocations, hindering long-term planning for graduate recruitment.

5. GRA Funding Practices.

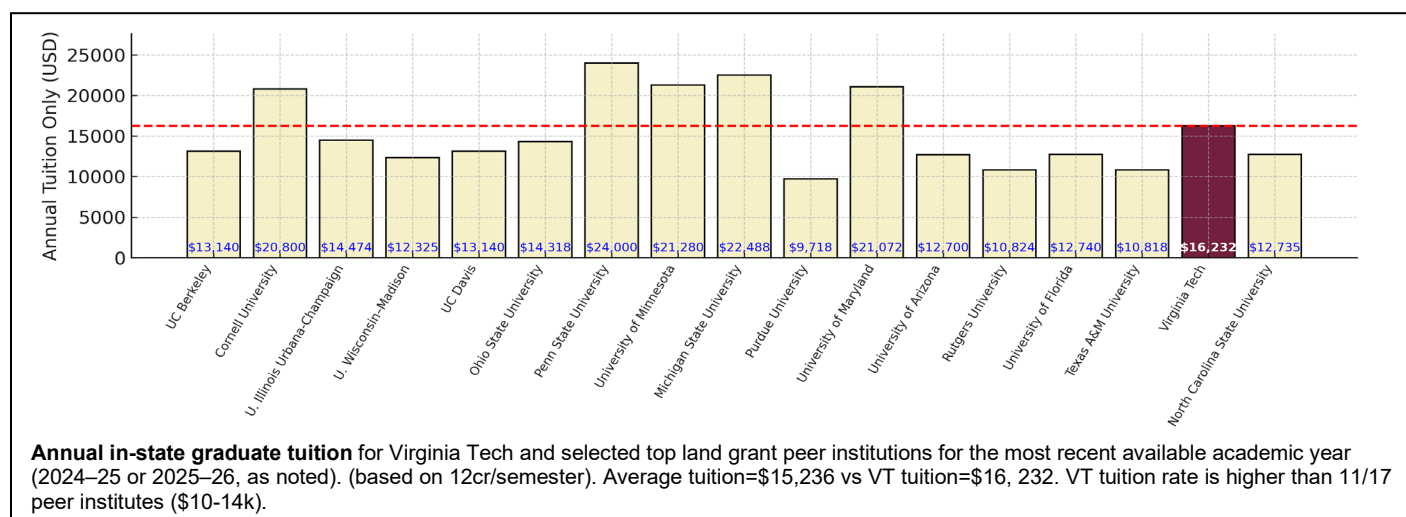
Most GRAs are supported by external grants. Faculty commonly budget GRAs on NSF, USDA, NIH, and industry proposals, though many noted that the full cost of a GRA, including stipend, tuition, fees, and fringe, can consume one-third or more of a typical grant. When GRAs are not budgeted, postdocs, technicians, undergraduates, and summer salary are the usual alternatives.

6. Barriers and Structural Challenges.

Cost is the dominant barrier, compounded by high tuition and fees (especially post-candidacy). Additional barriers include mentoring workload, space constraints, misalignment between grant and student timelines, and limited recognition of mentoring in tenure and promotion. Many faculty members noted that rising tuition and program fees make postdocs more cost-effective than GRAs.

7. Themes from Open-Ended Comments.

Key themes include high GRA costs, frustration with the tuition structure, lack of transparency in assistantship allocations, a mismatch between graduate enrollment goals and job market realities, discipline-specific needs, and concerns about the sustainability of PhD funding models. Several reported significant stress from the need to secure multi-year funding for every student. Based on peer Institutions' average tuition is \$15,236 vs VT's tuition of \$16,232 (See chart below).



Theme	Description
High Cost of GRAs	The combined cost of stipends, tuition, fees, and fringe benefits makes supporting PhD students challenging; it is often higher than supporting postdocs.
Tuition Structure	Strong concerns that tuition charges, especially after candidacy, discourage budgeting GRAs on grants. Tuition is perceived to be higher than at peer institutions.
Allocation Transparency	Faculty noted opaque and inconsistent GTA/GRA allocation processes across departments and colleges.
Recruitment Barriers	Inability to guarantee multiyear funding limits the ability to recruit high-quality graduate students.
Grant Timeline Constraints	Misalignment between grant deliverables and training timelines reduces the feasibility of including GRAs.
Discipline-Specific Needs	Arts, MFA, professional programs, and ARECs require alternative models due to limited grant funding or geographic constraints.
Infrastructure Limits	Space, equipment, and facility limitations hinder lab expansion and graduate training.
Mentoring Load & P&T Issues	A high advising workload and limited recognition in promotion decisions reduce the willingness to take on more students.
Psychological & Career Stress	Faculty reported significant stress around securing stable, multi-year funding for students.

Table 2. Key Themes from Faculty Comments

Implications for UMI Recommendations:

Findings support developing multi-year GTA/GRA allocation frameworks, exploring tuition mitigation (waivers, reduced post-candidacy tuition discount), continuing existing efforts by graduate school and MIT program for improving bridge funding structures, and tailoring PhD growth goals to training quality and career outcomes, as these are essential for sustainable expansion.

The UMI Committee was tasked with increasing the graduate student population across its campuses by 2,313 students, with an approximate 60:40 ratio of PGP to PhD students. Fiscally, the PGP population is expected to primarily generate tuition

revenue, while the addition of new PhD students will represent an initial investment until a steady state is reached with projected enrollment growth. **Our current estimates, based on university policies, show approximately \$36M in tuition and \$2M in fee revenue from PGP students, and an estimated investment of \$19-23M for new PhD students supported by E&G-funded GTAs. An additional investment of up to \$19-27M will be needed to support 462 new GRAs, based on various scenarios initially.** If implemented, the policy recommendations in this report will significantly change this figure, and the committee will develop budgetary recommendations for implementation in the Spring 2026 semester.

Section 1. Modernizing Graduate Funding and Policy Frameworks

The UMI Subcommittee on Updates to Existing Policies and PGP Programs was charged with reviewing and revising existing graduate education policies to ensure clarity, fairness, and financial sustainability. The primary focus areas include adding new procedures in **Policy 6210**, which governs the management of graduate assistantships (GA, GRA, GTA), including tuition remission, candidacy discounts, and partial TA appointments, for student-initiated proposals, to be aligned in future phases. The subcommittee's work aims to modernize university policy frameworks to create consistent, transparent, and equitable practices across colleges and departments. This is essential both for compliance with federal guidelines and for ensuring that Virginia Tech remains competitive in recruiting and retaining top graduate students.

I. Summary of Recommendations

- Fully implement candidacy status resolution (CGSP 2018-19D) in Policy 6210.
- Link candidacy status to remission by basing tuition waivers for assistantship- and fellowship-funded candidates on the reduced candidacy tuition, standardizing out-of-state differential rules, and explicitly recognizing the new candidacy status as full-time for international-student compliance.
- Update Policy 6210 to ensure uniform tuition and fee coverage across departments, raise and annually review minimum assistantship stipends to peer levels, and apply Board-approved stipend increases directly to each student's current paycheck, with narrowly defined exceptions.
- Ensure students on external fellowships are financially whole by offering partial assistantships or supplemental remission, clarifying cost-sharing formulas for unfunded tuition and fees, and adding a standalone procedure in policy 6210 so student-initiated funding is systematically supported rather than handled ad hoc.
- Restructure assistantships to include phased-in twelve-month appointments for students expected to work over summers and a built-in rest, sick, and parental leave policy, supported by common procedural language, baseline standards, and centralized tracking of remission and appointments across colleges.
- Develop and implement a comprehensive fee policy so that fee subsidies follow students when they move to and from externally funded GRAs or fellowships, and work with the Controller's office to structure comprehensive fees as a pre-tax line item where feasible under law, saving students money at no additional cost to the university.
- Examine the policy that requires the assistantship and tuition remission to be from the same type of fund.

II. Recommended Policy Changes

1. Candidacy Status and Tuition:

The Graduate Education Task Force (GETF) recommended a modified candidacy status that treats post-prelim doctoral students as full-time while they register for a reduced number of credits, with tuition aligned to roughly three credits per term

and a limited duration (defined in the past resolution as three years following the student's passing their preliminary examinations). This resolution was designed to mirror similar programs at many other universities. The principle is that students who have completed all graduate coursework place much less demand on university resources and should therefore qualify for reduced tuition while remaining enrolled full-time. The resolution sets the tuition after Candidacy status is achieved (post-prelim) at three credits, while the student would remain enrolled for 12 credits. The resolution has only been partially implemented. We recommend that the resolution be fully implemented to reduce tuition expenses for individual students, departments, and research grants, providing much-needed financial flexibility.

The proposal also addresses regulatory and visa-status implications. Current language for international students often equates full-time enrollment with 12 credit hours, so the revised policy would explicitly state that 3 dissertation credits constitute full-time status for candidates and would coordinate with the appropriate offices to ensure accurate federal reporting and student guidance. This can be done in consultation with Cranwell International Center. Candidacy provisions would be explained in plain language in departmental handbooks, offer letters, and assistantship contracts, so that students know, when they enter candidacy, how long it can last, what they will pay in tuition, and how remission interacts with the reduced-credit model.

2. Assistantship Stipends and Funding Mix:

The GETF report notes that Virginia Tech relies heavily on assistantships and lags aspirational peers in both fellowship availability and stipend competitiveness and therefore calls for increasing minimum assistantship stipends to peer levels, reviewing them annually, and expanding endowed and other non-assistantship funding streams to remain competitive and close the enrollment gap. The subcommittee carries this forward through proposed updates to Policy 6210 and related remission practices. We recommend uniform coverage of tuition and fees across departments and standardizing stipend levels to ensure comparable real support regardless of home unit. We also recommend revising the annual stipend adjustment process, so Board of Visitors-approved percentage increases apply directly to each student's current paycheck, regardless of funding source, with exceptions limited to cases where a student moves from a substantially higher-paid external grant or fellowship to a regular E&G line.

Stipend policy is explicitly tied to remission and fellowship support. Students who secure external fellowships often face lower stipends or weaker benefits than their assistantship-funded peers, a practice that is punitive and counterproductive. The subcommittee therefore recommends allowing partial assistantship appointments or supplemental remission for fellowship holders. Hence, their overall package is at least as strong as a standard assistantship, treating external funds as one component of a coordinated support package rather than a replacement that leaves students worse off.

The recommendations also emphasize maximizing GTA lines by lowering eligibility thresholds to qualify for benefits falling under partial GTA appointments, enabling departments to spread limited stipend funds across more students without ad hoc arrangements. Combined with higher university-wide minima and regular benchmarking to peers, this creates a strong floor with unit-level flexibility in allocating assistantship FTEs, provided transparency and fairness are maintained; stipend structures and raise mechanisms should be clearly described in policy language and appointment letters so students understand how their compensation is determined over time.

3. Support for Student-Initiated Funding and Fellowships:

The UMI committee urges Virginia Tech to strongly encourage student-initiated funding proposals and external fellowships. However, in the current model, students who win prestigious awards often receive lower stipends or fewer benefits than they would on assistantships.

Subcommittee recommendations translate this principle into adding a standalone procedure in Policy 6210, which governs student-initiated proposals. This procedure includes proposed remission language that would specify how tuition, fees, and health insurance are handled for students whose primary support comes from externally funded fellowships they obtain themselves, with the explicit goal that such students are “made financially whole” compared with peers on GTAs or GRAs at the same stage, using institutional matching, supplemental stipends, or partial assistantship appointments layered on top of fellowship stipends.

The recommendations further call for standard, transparent cost-sharing rules to cover university costs normally borne by centrally funded assistantships, specifying how remission will cover unfunded tuition or fees when a fellowship does not include them and how these rules interact with candidacy-status tuition. This reduces ad hoc decisions and protects students who pursue fellowships from unpredictable out-of-pocket charges, while clear procedural language and centralized tracking of remission and fellowship-related cost sharing enable units to plan budgets and students to understand the financial implications of accepting an award. Together, these measures move Virginia Tech toward a model in which student-initiated funding is actively supported, systematically supplemented, and fully integrated into graduate funding policy rather than treated as an exception.

4. Assistantship Structure, Leave, and Cross-Program Consistency:

The GETF identified uneven funding structures and limited non-salary supports as barriers to competitiveness and stressed that peers often provide coherent packages with predictable stipends, well-defined workloads, and supportive policies. Its broader message is that Virginia Tech must better align policies and practices across units to offer a consistent, attractive graduate experience.

At the policy-mechanics level, the subcommittee recommends updating Policy 6210 to transition toward twelve-month assistantship contracts for students expected to continue research or teaching over the summer, starting with PhD candidates and gradually extending to pre-candidacy and research master’s students. This is intended to provide predictable year-round income, eliminate summer funding gaps, and simplify payroll and contract administration while preserving departmental flexibility to offer other summer opportunities; eligibility criteria and expectations for summer duties would be clearly described in policy and departmental communications.

The recommendations also support including a minimum leave policy for graduate assistants within Policy 6210, covering rest, sick, and parental leave, to align graduate employment conditions more closely with those of full-time staff and faculty and to avoid reliance on informal, unit-specific practices. Additional procedural language would promote consistent application of 6210 across colleges and departments, including guidance on partial GTA appointments, program-level exceptions such as 9/12-month models tied to fieldwork or summer research, and standardized communication with external agencies that fund GRAs; these details would be shared proactively at the time of contract signing.

Recognizing variations in college-level funding models and administrative capacity, the subcommittee pairs these policy changes with an implementation framework that sets baseline standards (for example, what counts as full benefits, including health insurance, and minimum leave), allows documented exceptions where justified by program structure, and uses centralized tools for tracking remission, appointments, and funding sources. In combination with the GETF’s higher-level guidance on competitiveness and funding growth, these updates are intended to produce a more consistent and transparent assistantship experience across Virginia Tech, strengthening both equity and the university’s ability to recruit and retain graduate students.

5. Comprehensive Fees:

Graduate funding structures must be competitive and equitable, and fee and cost-of-attendance policies are central to that goal. The subcommittee’s proposed revisions to Policy 6210 already call for graduate assistant benefits that ensure uniform coverage of tuition and comprehensive fees across degree programs, noting that some academic units may currently cover comprehensive

fees (for all students, irrespective of funding source) while others may not, which creates direct inconsistencies in the real value of assistantship packages. A full review of these practices is warranted, and a comprehensive fee policy within the purview of shared governance is needed to ensure alignment with the committee's goals and the university's commitment to the fair treatment of graduate and professional students. The committee recommends developing such a policy. The committee also recommends that the payment of comprehensive fees be part of the standard assistantship compensation. This can be implemented through a pilot program, starting with doctoral candidates funded through external grants, then the remaining doctoral candidates, and finally the rest of the graduate student population. For students funded through external funds, this would add a 5% cost to the average assistantship; however, with the implementation of reduced tuition rates, it would still result in **approximately a net 20-30% reduction in the cost of the assistantship**.

The current comprehensive fee model creates inconsistencies. While all out-of-state and international students pay the Commonwealth Facility & Equipment Fee (\$302 per semester) out of pocket regardless of funding source, comprehensive fee components vary based on assistantship type, as well as the in-state vs out-of-state status of the student, resulting in some students paying approximately \$500 per semester in total comprehensive fees while others pay less. This disparity fails to recognize students who secure competitive external support. This contradicts the broader aim that students who obtain external fellowships or move onto grant funding should be at least financially whole relative to peers on centrally funded assistantships. The subcommittee therefore recommends that any comprehensive-fee subsidies attached to university assistantships should follow the student across equivalent graduate appointments or be replaced by an institutionally funded remission mechanism when the primary stipend comes from a grant or fellowship, keeping the real value of support stable across funding transitions and reinforcing the strategy of encouraging externally supported funding arrangements.

A second inequity arises from the extent to which fees are collected relative to taxes. Under the current model, the university pays the stipend, with tax withheld at source, and students then pay comprehensive fees from post-tax income. Treating the comprehensive fee as a pre-tax line item, analogous to certain pre-tax benefit deductions, so that the fee is taken out before income tax is calculated, would reduce taxable income and is estimated to save graduate students roughly \$100–200 per year without increasing the university's overall cost, since nominal stipend and fee levels would be unchanged. Presenting this as a no-cost adjustment that improves take-home resources for students aligns with the UMI committee's emphasis on more competitive, student-friendly funding policies. We recommend working with the guidelines provided by the Controller's office to implement such a policy change.

III. Addressing Implementation Challenges

Implementing these policy updates will require coordinated action, led by the Graduate School, across academic units and central offices (including the Controller's office, Bursar's office, Cranwell International Center, OSFA and OSP) to ensure consistent application, regulatory compliance, and fiscal sustainability. Key challenges include securing faculty and departmental buy-in for changes that affect grant planning and assistantship structures; updating administrative systems and workflows to support special-tuition-rate candidacy enrollment, standardized remission, and twelve-month appointments; ensuring alignment with federal, sponsor, and visa requirements; managing short-term costs through phased rollout and pilot programs; and communicating policy changes clearly so students and faculty understand funding transitions and expectations. Addressing these challenges through centralized guidance, shared tools, and transparent communication will be essential for successful adoption and equitable implementation.

IV. Summary

Modernizing graduate funding and policy frameworks is essential to Virginia Tech's ability to remain competitive, equitable, and financially sustainable as its graduate population grows. The recommendations in this section advance a more transparent and developmentally aligned model that links tuition, remission, assistantships, and fellowships to clearly defined stages of

doctoral training, while reducing ad hoc practices and cross-unit inconsistencies. By establishing a special-tuition-rate, time-limited candidacy status, standardizing tuition and comprehensive fee coverage, strengthening stipend competitiveness, fully supporting student-initiated fellowships, and aligning assistantship structures with the realities of year-round research and teaching, Virginia Tech can better protect students, support faculty mentors, and maximize the impact of internal and external funding. Addressing implementation challenges through phased rollout, centralized guidance, and clear communication will be critical to success.

Taken together, these updates position the university to use its resources more strategically, reduce financial barriers for graduate students, and create a funding environment that supports both research excellence and student well-being, advancing the goals of the University Mission Initiative and strengthening the long-term health of graduate education at Virginia Tech.

Section 2. Expanding Self-Funded Professional and Graduate Programs

Virginia Tech has the capacity to expand by 1387 self-funded Master's students, through Professionally-oriented Graduate Programs (PGPs), which would generate an estimated **\$36.5M in annualized tuition revenue**. This growth can be achieved primarily through scalable online, hybrid, and in-person programs, targeted investments, and instructional expansion in high-demand fields identified in consultation with university stakeholders. We recommend working with the established central **PGP Steering Committee** (led by Enrollment Management) to align investments in advising, instructional needs, and enrollment targets. The following recommendations are intended to call attention to the strongest near-term capacity for expansion, based on three primary criteria: (1) Demand, including programs for working professionals; (2) delivery modality (online/hybrid), and (3) existing institutional infrastructure (program maturity, online presence, lab space needs). For simplicity, the recommendations are grouped into three priorities to guide strategic prioritization of growth efforts.

I. Summary of Recommendations

To expand self-funded professional and graduate programs, Virginia Tech should pursue a coordinated growth strategy centered on scalable, workforce-aligned master's degrees delivered through online, hybrid, and flexible in-person modalities. The recommendations prioritize programs with strong market demand, delivery formats that minimize reliance on physical infrastructure, and existing institutional capacity, organized into three tiers to guide near- and mid-term investment. Working in partnership with the central PGP Steering Committee, the university should align enrollment targets with advising, instructional staffing, and digital infrastructure investments, while strategically leveraging the Greater Washington DC Area campuses to expand access, relieve housing pressure in Blacksburg, and advance statewide workforce and TTIP goals.

II. Recommended Policy Changes

Accordingly, we propose three prioritized categories of self-funded professional and Graduate Programs that reflect differing levels of scalability, infrastructure dependence, and strategic impact, guiding near-term expansion, targeted investment, and capacity-linked growth.

Priority 1:

Priority 1 programs represent the most immediately scalable Master's programs. These degrees are offered in fully online or hybrid formats and require little to no on-site lab infrastructure. They address rapidly expanding fields such as information technology, data analytics, leadership, and management. Because these programs are delivered primarily online or through flexible hybrid modalities, they can reach working professionals and mid-career learners who would not otherwise participate in on-campus graduate education. This offers the university a path to grow enrollment without additional housing, classroom, or laboratory space. Importantly, these programs operate with minimal facility constraints. Unlike lab-intensive programs, these programs rely on digital learning and synchronous or asynchronous lectures

that can be completed remotely or in partnership with employers. Priority 1 programs align with Virginia Tech's strengths in professional and technology-driven learning. They are well-positioned to serve as the university's strategic vehicle for graduate growth, expanding its reach, reputation, and societal impact without requiring significant new capital investment. Additionally, we recommend that priority 1 programs include the M.Eng. in Computer Science and Applications and the M.Eng. in Computer Engineering, both of which are TTIP-eligible (Tech Talent Investment Program).

Program	Delivery Format	Careers	Distinctions
<u>Master of Information Technology (VT-MIT)</u>	100% online (33 credit hours; 11 courses)	Data scientists and cybersecurity, software, and health IT	Ranked #4 nationally (#2 for veterans, U.S. News); asynchronous delivery; rolling admissions
<u>Online MBA</u>	Fully online option with optional hybrid residencies. Evening/Flex	Health and Tech management	Mature national platform supports large cohorts; designed for working professionals.
<u>MSBA – Business Analytics</u>	Primarily online with hybrid options	Data science, AI, and analytics across sectors	Modular courses and certificates support growth and employer partnerships
<u>Master of Natural Resources (MNR Online) and Executive MNR (XMNR)</u>	MNR = fully online; XMNR=hybrid DC-area residencies	Policy analyst, NR program managers, Climate resilience, environmental consultant, ESG analyst	Hybrid/online format targets
<u>Master of Public Administration (MPA) Online</u>	Fully online	Management, public project management, public affairs, grants management	Asynchronous courses and certificate integration
<u>Online Political Science (OLMA)</u>	Fully online	Policy Analyst, National Intelligence, Advocacy, Public Affairs, International coordination	Online flexibility
<u>Online Masters in Agriculture and Life Sciences</u>	Fully online	Agribusiness, extension, education, environmental science, animal/plant systems	Online flexibility, critical to VT employed extension agents, leadership track, will be onboarded as a PGP in summer 2026.

Table 3. Priority 1: Prime Expansion Candidates (High Demand + Online), Examples

Priority 2:

Priority 2 programs represent a partial online or hybrid format but have laboratory or project-based requirements. These programs are highly valuable to the defense, aerospace, energy, and manufacturing sectors, where Virginia Tech already maintains a national reputation for excellence. While not easily scalable like fully online programs, these degrees can grow, including by expanding hybrid offerings. Priority 2 programs already serve strong national markets and embody Virginia Tech's research strengths.

Table 4. Priority 2: High-Growth MS Programs (Technical, Lab Disciplines), Examples

Program	Delivery Format	Careers	Distinctions
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Systems Engineering	Online / Hybrid	Systems engineer, reliability engineer, defense systems analyst, aerospace integration engineer	Course-based curriculum adaptable to virtual project teams;
Aerospace Engineering	Primarily on-campus with select online courses Distance-learning/online MS option	Aerospace engineer, propulsion analyst, flight systems engineer, defense R&D engineer	Hybrid labs can support flexible professional tracks while maintaining research depth.
Mechanical Engineering	On-campus + VT Online options	Mechanical design engineer, advanced manufacturing engineer, automation/robotics engineer, energy systems engineer	Asynchronous modules and employer-sponsored projects expand access for working professionals.
Nuclear Engineering	Online / On-campus mix	Nuclear safety engineer, reactor operations analyst, radiation protection specialist, nuclear policy analyst	Small cohort size supports quality; scalability through online safety simulations and cross-university partnerships.
Industrial & Systems Engineering	Hybrid/Flexible Structure	Operations research analyst, logistics engineer, quality systems engineer, AI-enabled manufacturing specialist	Digital project environments allow for larger cohorts.

Table 4. Priority 2: High-Growth MS Programs (Technical, Lab Disciplines), Examples

Priority 3:

Priority 3 programs are critical to Virginia Tech's land-grant and translational mission, addressing societal needs in public health, life sciences, and environmental stewardship. Unlike Priorities 1 and 2, these disciplines depend on clinical, field, or laboratory settings that naturally constrain enrollment growth. They represent high-impact training and applied research outcomes that serve global health priorities. These programs should pursue measured, capacity-linked growth, focusing on partnerships that expand research fields or industry-sponsored sites, and on expanding hybrid learning models that preserve quality while extending reach. Priority 3 programs embody Virginia Tech's public-service and research mission. Their expansion should be guided by infrastructure readiness.

Program	Delivery Format	Careers	Distinctions
Master of Public Health (MPH)	Primarily on-campus with online courses	Public health analyst, epidemiology specialist, health program coordinator, community health strategist	Practicum-driven curriculum with strong regional health system ties;
Environmental and Forestry Sciences (CNRE)	Field and lab-based with hybrid potential	Forester, conservation scientist, environmental planner, natural resource manager.	Field-intensive training aligned with accreditation standards, remote sensing, and online field-prep modules.
Human Nutrition, Foods & Exercise (CALS)	On-campus with select hybrid courses	Clinical nutrition specialist, exercise physiologist, public health nutritionist, wellness program coordinator	Science-based curriculum requiring lab and clinical facilities; hybrid lecture delivery

Table 5. Priority 3 – Applied Professional Pathways (Resource-Intensive), Examples

Summary of Costs:

This analysis supports Virginia Tech’s strategic objective of expanding PGP graduate enrollment by 1,387 students, as outlined in the university’s long-range enrollment planning. The proposed approach prioritizes scalable professional programs and interdisciplinary innovation with an emphasis on workforce-aligned master’s education. The baseline scenario reflects what Virginia Tech can achieve under current faculty and infrastructure conditions, assuming more efficient use of existing online and hybrid platforms. Estimates representing achievable enrollment increases without adding new faculty lines or significant capital costs, as well as a consideration for expansion, are provided in **Table 6**. We define “Baseline Expansion” as the expansion using existing program resources, and “Enhanced Expansion” as the projected expansion to match the UMI’s target number of students, which will require investment in these programs.

Priority 1 programs, such as the Master of Information Technology, Online MBA, MS in Business Analytics, and the Master of Natural Resources, constitute the most immediately scalable portfolio. Because they already operate mature online infrastructure and asynchronous delivery models, enrollment could increase by roughly **400 students (800 with enhanced expansion)**, generating **approximately \$11.4M (\$22.9M with enhanced expansion)** in additional annual revenue from tuition and \$0.4M (\$0.8M) from fees, considering that most of these programs will be based in our campuses in the Greater Washington DC Area.

Priority 2 encompasses engineering and technical master’s programs that blend on-campus and hybrid delivery. These degrees face laboratory and faculty-load constraints but have high employer demand. With limited investment in course redesign and virtual lab environments, enrollment could rise by about **200 students (300 with enhanced expansion)**, yielding **approximately \$5.5M (\$8.3M with enhanced expansion)** in tuition and \$0.4M (\$0.6M) in fees, considering equal Blacksburg and Greater Washington DC Area campuses.

Priority 3 includes applied professional programs that align with Virginia Tech’s public-service mission but are inherently resource-intensive. Their potential increase of roughly **100 MS students (200 with enhanced expansion)** would contribute **approximately \$2.7M (\$5.3M with enhanced expansion)** in tuition and \$0.3M (\$0.7M) in fees from the Blacksburg campus, provided new practicum and hybrid pathways are implemented.

Collectively, the enhanced expansion would bring Virginia Tech’s existing master’s portfolio roughly 1,387 additional students and \$36.5M in annualized revenue from tuition and \$2.1M from fees, with an approximate split of 25:75 between the Blacksburg and the Greater Washington DC Area Campuses. Significantly, these investments also strengthen instructional

quality, advising infrastructure, and hybrid capacity, laying the foundation for new interdisciplinary master's degrees accessible to working professionals, including online (virtual) and hybrid options. Additionally, increasing the number of self-funded master's students on the Greater Washington, DC, Area campuses will prevent further aggravation of housing shortages for graduate and professional students in Blacksburg. Additionally, continued investment in the M.Eng. in Computer Science and Applications and the M.Eng. in Computer Engineering will further demonstrate Virginia Tech's commitment to the Tech Talent Investment Program (TTIP).

Priority	Baseline Expansion Capacity (no new investment)	Enhanced Expansion Capacity (with investment)	Key Investments Needed to Reach an Enhanced Level	Approximate Cost Range (3-year ramp)	Projected Annual Revenue (Enhanced Capacity)	Notes
Priority 1 – Programs <i>MIT, Online MBA, MSBA, MNR/XMNR, MPA Online, OLMA, CSA M.Eng., CPE M.Eng.</i>	+400 students	800 total	• 2–3 new full-time faculty equivalents (FTE) across Pamplin, CNRE, and CLAHS to handle new sections • +2 advising/support staff for online student success	\$0.8–1.2M/year	≈ \$22.9M / year	These programs (MIT, MBA, MNR, MPA) already operate at scale; marginal cost per student is low. The main limitation is faculty load and advising. The majority of these students will be based out of the Greater Washington DC Area campuses , also helping the Tech Talent Investment Program.
Priority 2 – Programs <i>Systems, Aerospace, Mechanical, Nuclear, Ocean, ISE</i>	+200 students	300 total	• 4–5 new faculty FTEs (shared across Eng. programs) for hybrid delivery	\$2–3M/year	≈ \$8.3M / year	The availability of teaching labs and project capacity constrains engineering programs. These students are equally distributed between Blacksburg and Greater Washington DC Area campuses.
Priority 3 – Programs <i>MPH, Environmental/Forestry Sciences, Biomedical & Vet Sci, HNFE, TBMH</i>	+100 students	200 total	• 2 clinical placement coordinators (Public Health + HNFE)	\$1–1.5M/year	≈ \$5.3M / year	These are mission-driven, not high-volume programs. These students will be primarily housed in the Blacksburg campus.
Total	≈ +700 students (current ceiling)	≈ +1,300 total students (enhanced)	—	≈ \$4–5.5M annual investment	≈ \$36.5M annualized revenue potential	Equivalent to ~85% of the incremental revenue (≈ \$30M net gain).

Table 6. Summary of Projected Revenue for Enhanced Expansion Scenario

Implementation Considerations:

To realize these expansion goals, we should adopt a coordinated strategy that integrates graduate enrollment management, VT Online marketing, and college-level instructional design support. We recommend working with the existing PGP Steering Committee and leveraging their experience to align investments in advising, digital infrastructure, and simulation technology with projected enrollment targets.

New Program Pipeline for Strategic Growth:

While existing programs can support additional master's students through enhanced capacity, new degree programs will be necessary to reach the full 1,600-student target. Proposed programs under development, including the Innovation Campus professional master's degrees, are designed to attract high-demand applicants in the health, data, and technology sectors. These programs will diversify revenue streams, strengthen VT's national competitiveness, and provide new professional pathways.

Additional:

Virginia Tech's **MS in Data Science (MSDS)**, launched in fall 2025, provides a new flexible master's program for working professionals in a variety of fields. The MSDS is designed to serve recent graduates and working professionals through two pathways: a Standard (full-time) MSDS and a Part-Time MSDS option. The full-time pathway is structured to complete the degree in 12–18 months, while the part-time format offers flexible pacing over two or more years, with course loads tailored to full-time employment. Both versions share a consistent curriculum that emphasizes applied data science, hands-on coursework, and instructor-led online delivery, supported by virtual office hours, team-based projects, and dedicated advising. The MSDS launch underscores Virginia Tech's broader capacity to deliver high-quality online graduate education through a structure that supports adult learners, employer-sponsored students, and geographically distributed cohorts. This model also illustrates an institutional pathway for expanding professionally oriented graduate education and informs how future master's programs can be positioned for success both locally and nationally. An addendum at the end of this section provides additional background and context for the PGP programs and was compiled in collaboration with the PGP Steering Committee and Enrollment Management.

Strategic Placement:

Virginia Tech should recognize that increasing the number of master's students on the Blacksburg campus will intensify an already serious housing and cost-of-living crisis for graduate and professional students. Blacksburg's rental market is at capacity, with limited affordable housing options, and further enrollment growth in town would intensify competition for scarce housing and basic resources. It would also increase competition for the limited number of GTA, GRA, and wage positions available, disproportionately affecting students without guaranteed funding. By contrast, expanding master's enrollment at the Greater Washington DC Area campuses shifts some enrollment growth away from the constrained Blacksburg environment. This approach would protect the well-being of current graduate students, reduce pressure on local infrastructure, and distribute funding and research opportunities more sustainably across campuses. Additionally, continued investment in the TTIP-eligible programs will advance Virginia Tech's obligation to the Commonwealth to grow the tech workforce.

III. Addressing Implementation Challenges:

Successfully scaling self-funded graduate programs will require careful coordination across enrollment management, colleges, and central support units to balance growth with quality and student experience. Key challenges include managing faculty instructional loads, expanding advising and student support capacity for larger online cohorts, ensuring consistent instructional design and assessment standards across modalities, and aligning marketing, admissions, and enrollment processes with realistic program capacity. In addition, growth must be sensitive to campus-specific constraints—particularly housing and cost-of-living pressures in Blacksburg—while ensuring that revenue reinvestment supports instructional quality, student success, and long-term sustainability rather than short-term enrollment gains.

IV. Summary

Expanding professionally oriented and self-funded master's programs represents one of the most immediate and sustainable pathways for Virginia Tech to grow graduate enrollment, generate significant tuition revenue, and strengthen its workforce impact. By prioritizing scalable online and hybrid programs, selectively expanding technical and applied degrees, and pursuing measured growth in resource-intensive, mission-critical fields, the university can add approximately 1,387 master's students and \$36.5M in annualized tuition revenue under the enhanced expansion scenario. These investments not only support the University Mission Initiative and Tech Talent Investment Program, but also lay the foundation for new interdisciplinary degrees, improved advising and instructional infrastructure, and a more balanced, resilient graduate education portfolio across campuses.

Section Addendum: PGP Additional Background and Context

Prepared by the PGP Enrollment Management Team

Defining PGPs:

At Virginia Tech, PGPs share a common set of defining characteristics that distinguish them from other graduate offerings. These programs consist exclusively of non-thesis master's degrees and exclude degrees that offer both thesis and non-thesis options. Their curricula emphasize current, in-demand knowledge and skills aligned with industry and market needs and incorporate applied learning experiences that reflect professional practice. Consistent with the university's land-grant mission, they prepare graduates to meet the employment needs of the Commonwealth, across the region, and beyond. Programs that require licensure for employment do not fall within the PGP framework.

The PGP Enrollment Management team is currently supporting the 15 master's degree programs that are outlined in Table A1. The team has also been working alongside college and program leadership to review the programs listed in Table A2 to determine their eligibility and interest in participating as PGPs.

Infrastructure and Support Framework:

As the PGP portfolio grew in strategic importance and scale, Virginia Tech established the PGP Enrollment Management team to provide coordinated, institution-wide support. The team advances a collaborative enrollment management approach that emphasizes partnership, transparency, and shared responsibility across academic and administrative units. Rather than directing admissions or academic decisions, the team works alongside faculty and academic leaders to support enrollment strategies that respond to market demand and student needs while preserving program autonomy. This approach ensures that enrollment efforts remain data-informed, student-centered, and responsive to an increasingly competitive graduate education market.

This framework enables the team to prioritize support for programs with significant institutional and workforce relevance without shifting academic ownership or decision-making authority. Within this context, the team has strengthened targeted support for the Master of Engineering (MEng) programs in Computer Science and Applications (CSA) and Computer Engineering (CPE), recognizing their importance to Virginia Tech's TTIP and the Institute for Advanced Computing. This example demonstrates how the enrollment management framework translates into focused, strategic support while respecting the distinct goals and governance of individual programs.

Coordinated and Collaborative Enrollment Management Strategy:

Strategic alignment for the PGP initiative is reinforced through the PGP Steering Committee. The committee grew out of the Graduate Strategic Enrollment Planning Committee (GSEP), which the provost charged with advancing professionally oriented graduate programs and developing recommendations to integrate these efforts into existing enrollment management efforts

and resource application plans. The GSEP group was comprised of over 50 administrators and program leaders from across the University, and it convened in Spring of 2023 with the following charge from Provost Clarke:

Virginia Tech aims to significantly enhance its competitive advantage in graduate and master's-level enrollment, with particular attention to sustainable growth in professionally oriented (non-research-based) master's programs and certificates over the next 3-5 years. In addition to moving responsibility for admitting students to these programs to the enrollment management group within the Provost's office, a Graduate Strategic Enrollment Planning (GSEP) group is being established. The objective of this group is to formulate a plan for marketing, recruiting, developing, and improving curricula; supporting data, systems, policies, and procedures; and developing appropriate funding models.

That committee's recommendations included the establishment of the PGP team within Enrollment Management, identifying the characteristics of PGPs, and naming potential PGPs at Virginia Tech. Now supported by the PGP Enrollment Management team, the Steering Committee provides an institutional perspective and strategic guidance that helps shape priorities and inform decision-making. This structure strengthens cross-campus collaboration and supports the development of plans, strategies, and a shared approach needed to sustain enrollment growth across PGPs while remaining aligned with the university's academic mission.

In November 2025, Provost Clarke and VP of Enrollment Management, Juan Espinoza, presented the graduate enrollment growth projections outlined in Table A3 to the Board of Visitors, which indicate significant and sustainable growth in PGPs for the next 8 years. The PGP Enrollment Management team is currently working to build a strategy and request necessary resources to support this growth initiative with a goal of finalizing that plan by the end of the spring semester.

Program	Delivery Format	Distinctions	Currently Receiving PGP Support
Master of Information Technology (MIT)	100% online	Ranked #4 nationally (#2 for veterans, U.S. News); asynchronous delivery	Yes
Master of Business Administration (MBA)	New, Flex MBA has a fully online option with optional hybrid residencies.	Mature national platform supports large cohorts; designed for working professionals.	Yes
Master of Science in Business Administration-Concentration in Business Analytics (MS)	Primarily online with hybrid options	Modular courses and certificates support growth and employer partnerships	Planned to onboard Spring 2026
Master of Science in Business Administration-Concentration in Hospitality & Tourism Management (MS)	In-person (DC area), evening-only courses, flexible course offerings		Planned to onboard Spring 2026
Master of Accounting and Information Systems (MACIS)	In-person, Blacksburg	Strong emphasis on data and analytics through the partnership with KPMG, which allows access to tools, technologies, and data sets designed by KPMG.	Planned to onboard Spring 2026
Master of Natural Resources (MNR)	Online = fully online;	Hybrid/online format targets. Study abroad opportunities in both formats.	Yes

<u>Online Format & Executive Format</u>	Executive Format = hybrid online with DC-area residencies		
Master of Public Administration (MPA)	Fully online option, optional in-person courses offered in Blacksburg, Richmond and DC area	Asynchronous courses and certificate integration	Yes
Master of Public and International Affairs (MPIA)	In-person, offered in Blacksburg and DC area		Yes
Master of Urban and Regional Planning (MURP)	In-person, offered in Blacksburg and DC area	#1 Urban and Regional Planning Program in the Greater Washington DC Area & Virginia	Yes
Master of Science in Data Science (MSDS)	Full-time in-person option in Blacksburg.	New program for Fall 2025.	Yes
Master of Engineering in Computer Science & Applications (MEng)	In-person (DC-area)	1 of 4 programs in the TTIP Agreement	Yes
Master of Engineering in Computer Engineering (MEng)	In-person (DC-area)	1 of 4 programs in the TTIP Agreement	Yes
Master of Science in Agriculture and Life Sciences (MS)	100% online		Planned to onboard Summer 2026
Master of Science in Agricultural & Applied Economics (MS)	100% online, asynchronous delivery	Fixed, per-credit tuition rate that is residency-neutral.	Yes
Master of Public Health (MPH)	In-person (Blacksburg) Full-time and part-time options	2 concentrations: infectious disease and public health education	Yes

Table A1. Current PGPs

Program
Master of Forestry in Forestry (MF)
Master of Forestry in Forest Products (MF)
Master of Engineering in Aerospace Engineering (MEng)
Master of Engineering in Biological Systems Engineering (MEng)
Master of Engineering in Electrical Engineering (MEng)
Master of Engineering Administration in Industrial & Systems Engineering (MEA)
Master of Engineering in Industrial & Systems Engineering (MEng)
Master of Engineering in Materials Science & Engineering (MEng)
Master of Engineering in Mechanical Engineering (MEng)
Master of Engineering in Mining Engineering (MEng)
Master of Engineering in Nuclear Engineering (MEng)
Master of Science in Systems Engineering (MS)

Table A2. Potential Future PGPs: These programs have been identified as potential PGPs and the Enrollment Management PGP team is in ongoing conversations with college and program leadership to make final determinations.

	2025	2026	2027	2028	2029	2030	2031	2032	2033
Projected Fall Total Graduate Enrollment	6,751	7,028	7,305	7,582	7,859	8,136	8,413	8,690	8,967
Projected Fall Masters Enrollment	3,486	3,652	3,818	3,985	4,151	4,317	4,483	4,649	4,815
Projected Fall Doctoral Enrollment	3,265	3,376	3,487	3,597	3,708	3,819	3,930	4,041	4,151
Total Number of New (Entering) Graduate Students- Fall	1,867	2,144	2,421	2,698	2,975	3,252	3,529	3,806	4,083
Number of New (Entering) Non-PGP Masters Students- Fall	975	976	976	976	976	976	976	976	976
Number of New (Entering) PGP Masters Students- Fall	445	611	777	944	1,110	1,276	1,442	1,608	1,774
Total Number of New (Entering) PhD Students- Fall	447	558	669	779	890	1,001	1,112	1,223	1,333
Growth Rate Over Prior Fall- Total Graduate	-5.30%	4.10%	3.94%	3.79%	3.65%	3.52%	3.40%	3.29%	3.19%
Growth Rate Over Prior Fall- Masters (PGP)	-8.91%	4.77%	4.55%	4.35%	4.17%	4.00%	3.85%	3.71%	3.57%
Growth Rate Over Prior Fall- Doctorate	-1.12%	3.39%	3.28%	3.18%	3.08%	2.99%	2.90%	2.82%	2.74%

Table A3. Graduate Enrollment Chart including Planned PGP Growth by Year (Assumption: Grow UG Enrollment to 35,867 and 4:1 UG to Grad Ratio)

Section 3. Expanding Graduate Teaching and Research Capacity

The UMI calls for a significant expansion of graduate education at Virginia Tech, with a particular focus on increasing doctoral training capacity while sustaining a strong master's portfolio. This expansion aims to move the university toward an undergraduate-to-graduate enrollment ratio of approximately 4:1, as undergraduate enrollment continues to rise. This will require a larger graduate student population, including substantial growth in Graduate Teaching Assistant (GTA) positions. Here, we charged a subcommittee to recommend how GTA and instructional teaching capacity should be expanded and allocated so that Virginia Tech can grow graduate enrollment, strengthen its research enterprise, and remain competitive with peer R1 institutions, without compromising the quality or scalability of undergraduate instruction.

Within this broader institutional transformation, GTAs are understood as both an instructional resource and a critical component of graduate students' research training and professional development. Our task is therefore not only to identify where additional GTAs are needed to meet teaching demand, but also to propose strategies that align new GTA lines with high-impact research domains and cross-cutting, high-growth areas identified in the UMI resolution. The following recommendations provide a principled, data-informed framework for expanding GTA capacity that reinforces Virginia Tech's strategic priorities in doctoral education, extramural research, and mission-driven undergraduate teaching.

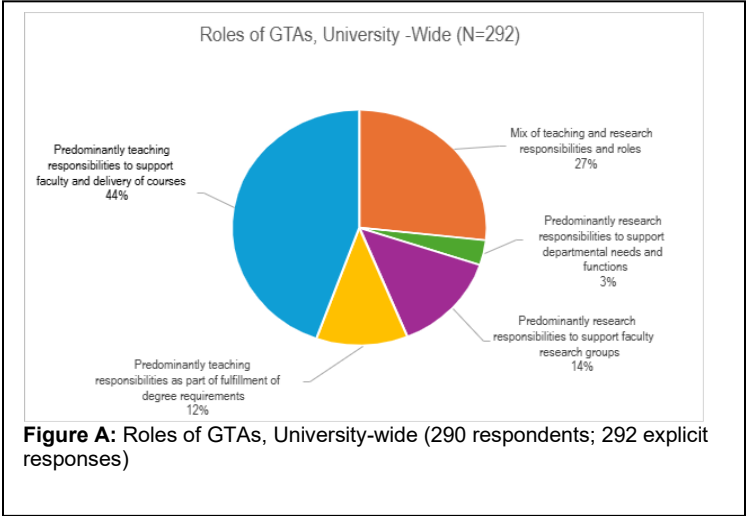
I. Summary.

To support Virginia Tech's graduate expansion goals and the target 4:1 undergraduate-to-graduate ratio, the subcommittee recommends a strategic expansion of Graduate Teaching Assistant (GTA) capacity that simultaneously strengthens instructional delivery and doctoral research training. New GTA lines should be allocated using transparent, data-informed

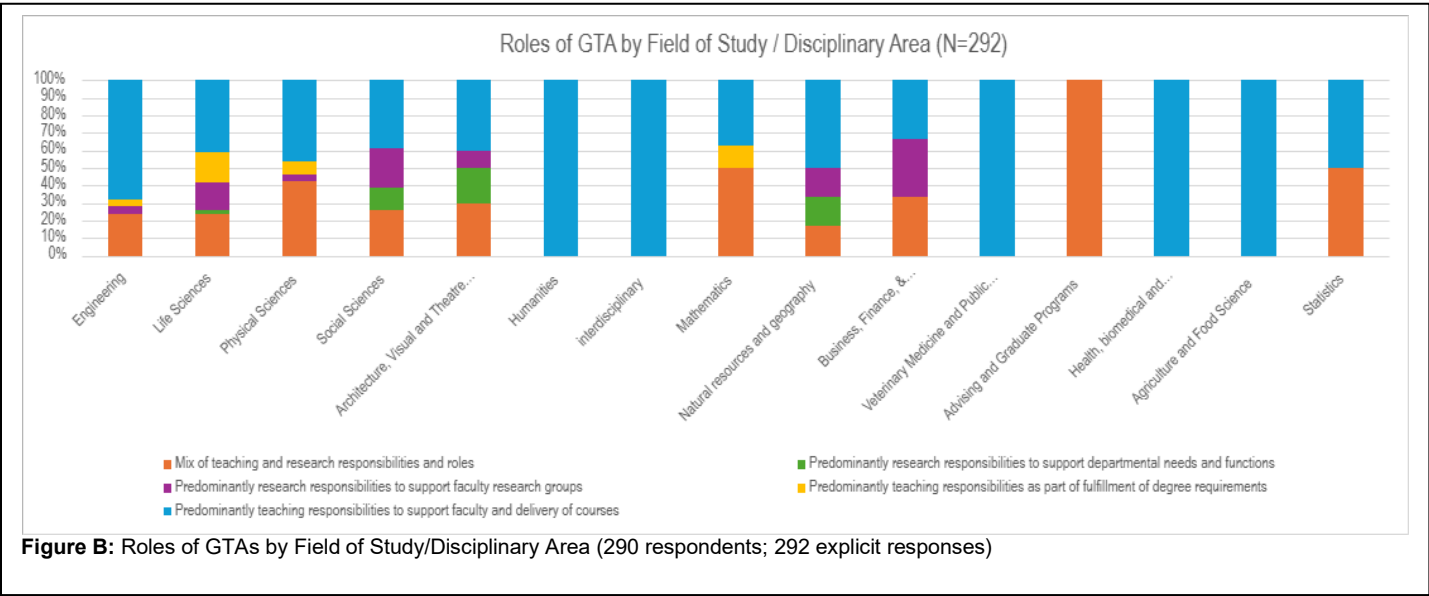
principles that prioritize high-enrollment undergraduate courses while deliberately supporting PhD growth in high-impact research domains aligned with UMI priorities.

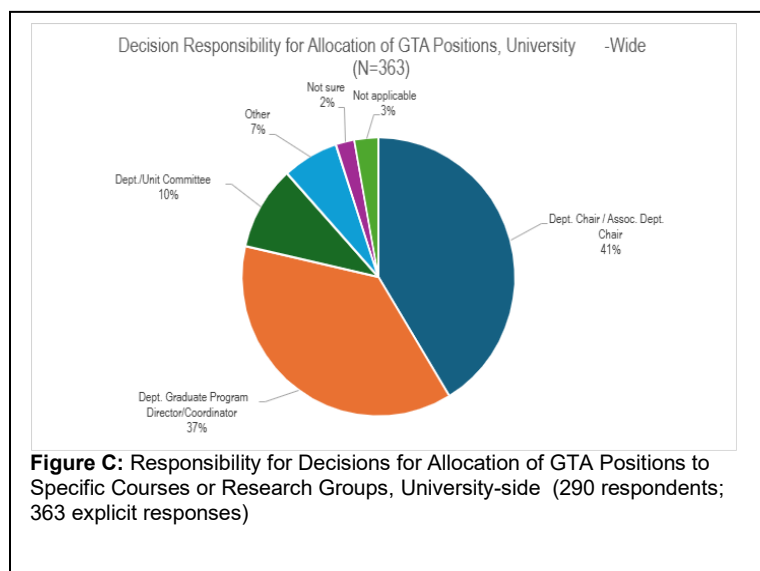
Current Benchmarking:

GTAs are overwhelmingly a teaching capacity tool, with secondary use for mixed roles and targeted research support. Across 290 respondents (292 explicit responses), GTAs are primarily used for teaching support. Nearly half of the responses (44%, 130 of 292) indicate that GTAs are “predominantly teaching to support faculty and delivery of courses.” A substantial share, 27% (78 of 292), report mixed teaching and research roles. Smaller but notable shares are research-oriented: 14% (40) “predominantly research to support faculty research groups,” 12% (34) “predominantly teaching as part of degree requirements,” and 3% (10) “predominantly research to support departmental needs.” (Figures A and B). Most GTA assignment authority sits with chairs and graduate leadership, with committee involvement less common and very little role for college-level or undergraduate leadership.

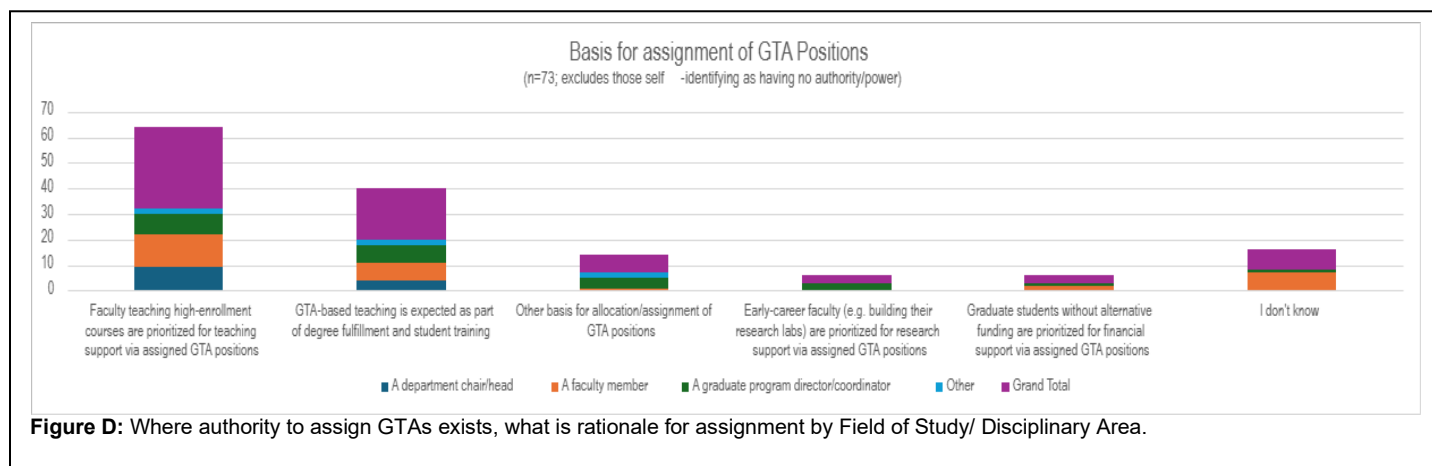


Decision-making authority is concentrated with Department Chairs or Associate Chairs (41%) and Graduate Program Directors or Coordinators (37%). Department or Unit Committees account for 12% of decisions. Remaining categories each comprise less than 6% individually: Other (7%), Not sure (2%), and Not applicable (3%). These figures are based on 363 explicit responses (Figure C).





subset of programs where GTA teaching is required and affects assignment (20 explicit responses), decision-making is split evenly among faculty members (35%), graduate program directors (35%), chairs (20%), and other roles (10%) (Figure F). It is also worth noting that a sizable share (10% of responses) suggests that GTA positions are assigned to a specific faculty member or research group, rather than to a course (39%) and/or to support multiple courses/faculty teaching needs (29%) (data not shown).



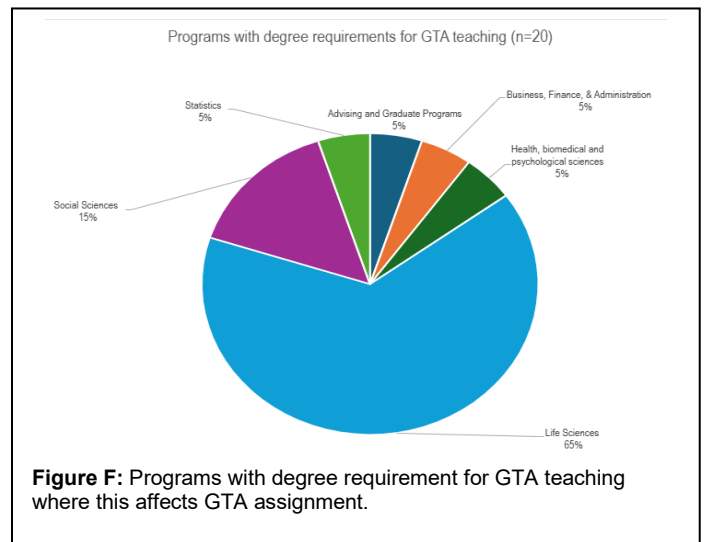
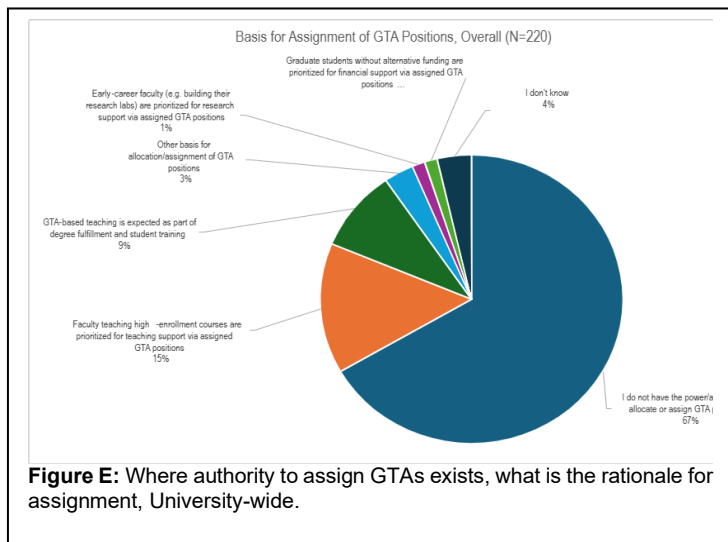
Where authority to assign GTA positions exists, course demand (enrollment and intensity) and programmatic training requirements most often guide GTA assignment. Many respondents lack personal authority over GTA allocations. Two-thirds (66%) report they do not have the authority to allocate or assign GTA positions (146 of 220). Among those citing rationales, high-enrollment courses are the leading basis (15%), followed by degree or training expectations (9%). Other bases are comparatively rare: “Other basis” (3%), early-career faculty (1%), and students without alternative funding (1%). Additionally, 3% report “don’t know.” (Figures D and E).

When GTA teaching is required for degree completion, faculty and graduate program directors share the decision-making role; chairs are less central in these cases. In the

II. Recommended Strategies

Our strategies for expanding GTA capacity should address both immediate instructional needs and the university's long-term goals for doctoral education and research growth. The first priority is to ensure that new GTA lines support high-enrollment, high-intensity undergraduate courses, enabling departments to sustain or expand offerings without overburdening faculty or existing graduate students. At the same time, a defined subset of GTA lines should be strategically positioned to support doctoral expansion in high-impact research domains, particularly when teaching assignments (such as labs, studios, and project-based courses) directly reinforce research skill development and align with extramural funding opportunities.

Within this framework, emphasis should be placed on PhD-granting programs and on colleges and departments that demonstrate both strong growth trajectories and clear alignment with the university's mission areas, such as AI and society, health, climate resilience, and interdisciplinary research. We recommend focusing on PhD-granting programs where teaching assistance also reinforces research skill development (e.g., lab instruction, project-based learning), expanding doctoral enrollment, not terminal Master's programs, and strengthening research training capacity tied to extramural funding.



To balance equity and impact, especially comparing STEM and non-STEM GTAs, allocation principles should include minimizing gaps between current and target GTA levels by college, giving additional weight to units with lower external research funding but strong growth or strategic relevance, and protecting GTAs from excessive workloads by explicitly accounting for differences in assignment types (e.g., large lecture vs. multiple lab sections). We also recommend explicitly enforcing the 20 hours/week ceiling for GTA assignments, including time spent in grading/designing teaching modules, office hours, and any other requirements of the GTA assignments.

The university should encourage the use of GTA lines as a bridge to externally funded graduate research positions, particularly in units with strong potential to convert teaching-supported students into grant-funded research assistants over time. This implies reserving a portion of new GTA lines as “seeded” positions in strategic research areas, enabling departments to plan GTA-to-GRA transitions as grant portfolios grow. Clear, principle-based guidelines for how colleges and departments propose and justify GTA growth, using data on enrollment, degree requirements, research activity, and strategic themes, will be essential for transparent, comparable, and aligned allocation decisions.

The goal of the committee was to recommend increasing the number of E&G-funded GTAs by 462. The committee recognizes that instructional models, class size, and GTA intensity vary substantially across colleges. Accordingly, we recommend that Enrollment Management and central academic leadership determine the specific weights and operational definitions of these

metrics, in consultation with college deans. Further, it is recommended that reserved allocations be directed to support faculty research groups or to specific initiatives.

Currently, centrally funded remission allocations use a college-level formula that has three major components:

1. A base allocation reflecting historical use patterns,
2. A targeted allocation supporting specific initiatives, and
3. An outcome-based component derived from the last three-year average of sponsored expenditures, the last seven years of citation counts, and the last three-year average of PhD completions.

Given the role of teaching assistantships in funding doctoral education, the PhD completions metric allows allocations to evolve with changes in doctoral enrollments over time, while the sponsored expenditure and citation metrics recognize how assistantships support research and scholarship, including by freeing up faculty time. At present, this formula determines allocations only at the college level, while each college applies its own internal methodology to distribute GTAs to departments. We recommend adding undergraduate enrollment, graduate enrollment, and the gap between current and target graduate student numbers (as shown in the last column) as explicit, separate metrics within the central formula, complementing the existing components. Incorporating these measures will better align GTA distribution with instructional demand and doctoral program growth, reduce teaching loads where they are highest, and improve Virginia Tech's undergraduate-to-graduate ratio relative to peer institutions.

III. Addressing Implementation Challenges

Implementing expanded GTA allocations will pose several structural and procedural challenges that must be addressed to ensure both effectiveness and fairness. One recurring issue is that students often seek funding outside their home units, which signals insufficient GTA lines within some departments, underutilized capacity in others, and potential misalignment between students' research goals and the units that employ them. This pattern can undermine faculty research agendas when students divert time and attention to secure short-term internal support, and it may limit the extent to which GTA roles function as intentional professional development aligned with degree objectives.

Another challenge arises from the broad range of programs that require GTA teaching as part of graduate degree progression. In these cases, simple metrics based on enrollment, credit hours, or course counts do not fully capture the need for GTA lines, because assignments must also be sequenced to provide required teaching experiences for students at appropriate stages in their programs. As a result, GTA allocation in such programs must be coordinated with graduate enrollment management and individual student progression plans, thereby increasing administrative complexity and potentially creating tension between meeting instructional demand and fulfilling degree requirements.

Clear communication and transparency are also critical implementation concerns. Departments and units need well-articulated policies that explain how GTA positions are prioritized and assigned, both to faculty who rely on GTA support and to graduate students who may be expected to seek funding beyond their primary program. When expectations and criteria are opaque, students may overinvest time in pursuing internal opportunities, and faculty may perceive allocations as inconsistent or inequitable. Establishing and disseminating transparent rules, timelines, and decision processes will be essential as GTA lines grow and become more strategically targeted.

To support sustainable workloads and protect GTAs' academic and research mission, we recommend introducing a new cap on teaching loads as an additional criterion, in addition to the existing contractual limit of 20 hours per week. In practice, this means defining explicit upper bounds on the number and type of instructional responsibilities a GTA can hold, such as limits on total teaching hours, number of distinct course sections, Instructor of Record assignments, or combined grading and

instructional duties, so that assignments remain pedagogically effective and compatible with timely degree completion. This teaching-load cap should be consistently applied across units, with flexibility only where justified by documented differences in assignment structure (e.g., comparing a single large lecture-support role to multiple smaller lab or discussion sections). It should be incorporated into departmental planning and allocation decisions as a formal constraint rather than an informal guideline.

Investment:

Adding 462 new E&G-funded GTAs on the Blacksburg campus will require an annual investment of **\$19-23M**, assuming all new GTAs are allocated to the Blacksburg campus. However, it is important to note that if the committee's policy recommendations on tuition structure for PhD students are implemented, this investment would decrease sharply (by approximately 30-50%, based on the distribution of GTAs by candidacy status, assuming revenue loss from the modified tuition rates is accounted for). A more detailed budgetary analysis will follow in the committee's recommendations for Spring 2026.

IV. Summary

The UMI Subcommittee, charged with expanding GTAs and instructional capacity, begins by assessing the current state, which shows that GTAs are used primarily for teaching, with decision authority concentrated at the department level and significant variation in how assignments are rationalized and managed. Our recommended strategies prioritize GTAs for high-enrollment, high-intensity courses while also reserving lines to enable doctoral expansion in high-impact research domains aligned with institutional priorities. The principles behind these recommendations emphasize minimizing gaps between current and target GTA levels, supporting high-growth programs, and leveraging GTAs to bridge to externally funded research positions. Implementation challenges include cross-unit funding dependencies, program complexity in which teaching is a degree requirement, and the need for transparent allocation policies. We also recommend adding a formal cap on teaching loads to protect GTA academic progress and ensure equitable, sustainable GTA assignments.

Section 4. Strengthening Externally Funded PhD Pipelines and Philanthropic Graduate Endowments

The UMI Subcommittee on Externally Funded PhDs (Subcommittee 4) was charged with developing recommendations to support growth in externally supported doctoral students as part of the university's goal to achieve a 4.0 FT Undergraduate: Graduate ratio, requiring the addition of approximately 2,313 graduate students. This number is expected to include 20% externally funded PhD students or ~**462 extramurally funded PhDs**.

Externally funded PhD programs remain a powerful driver of graduate growth and research distinction. Still, the future of doctoral education also demands flexible pathways that support working professionals and embed students within industry innovation ecosystems. Strengthening Virginia Tech's competitiveness for federal training grants and individual fellowships provides a revenue-positive route to increasing PhD enrollment, but equally important is building structured, co-funded research partnerships with companies seeking doctoral-level talent. Together, these models expand the university's training capacity, diversify funding sources, accelerate workforce impact, and position Virginia Tech as a national leader in next-generation doctoral education, serving both traditional full-time scholars and experienced professionals advancing their careers through research-intensive programs.

I. Summary of Recommendations

To expand Virginia Tech's externally supported PhD population to meet graduate growth targets, the subcommittee recommends a coordinated strategy to strengthen federal training and fellowship pipelines, scale industry-integrated doctoral pathways, and build philanthropic endowments to provide durable, flexible support. The recommendations emphasize reducing administrative friction, creating incentives that shift more PhD support onto external sources, and modernizing policies to enable equitable, transparent funding and tracking across colleges.

- **Expand federal training grants and individual fellowships** by centralizing administrative support, offering seed/matching funds, and embedding fellowship-writing into early graduate training.
- **Develop industry-integrated doctoral pathways (pilot in Greater Washington DC Area)** using standardized MOUs and co-funded tuition/stipend models to create a scalable, employer-supported PhD pipeline.
- **Create a centralized Graduate Bridge and Incentive Fund** to cover early funding gaps and reward students/PIs for external fellowship submissions and awards.
- **Align Advancement to build philanthropic graduate endowments** that provide flexible fellowship support and matching funds tied to major training and research priorities.
- **Modernize policy and infrastructure** (tuition/fee remission, appointment classification, dual-degree pathways, analytics dashboard) to ensure equity, compliance, and transparent tracking of external support.
- **Recruit high-impact externally funded research faculty** to grow PhD enrollment through established grant-supported trainee pipelines rapidly.

II. Recommended Strategies

1. Expand Federal Training and Individual Fellowship Seed Opportunities

A. Rationale:

Expanding externally funded PhD positions directly advances Virginia Tech's institutional goals for research excellence, graduate program growth, and national competitiveness. Increasing the proportion of students supported through federal training mechanisms (e.g., **NIH T32, T35, NSF NRT, DoD consortia**) and individual fellowships (e.g., **F31, GRFP, AHA, DoD**) strengthens research continuity, enhances student recruitment, and elevates the university's research profile. Currently, many VT doctoral students rely on department or faculty operating funds for support. Establishing a coordinated institutional framework for external training and fellowship support would diversify and stabilize graduate funding streams; enhance visibility in competitive programs, particularly for recruitment; improve student preparedness; and align with national priorities, including STEM workforce development, AI, climate resilience, and health technologies.

Current barriers include:

- Critical mass of well-funded (R01) investigators in related fields, requiring intention, resources, time to assemble and leadership willing to invest significant effort to support a strong training application and maintain it once awarded.
- Fragmented administrative support for training grants (ex/, institutional Provost support letters and supporting Tables needs, pre-reviews through peer programs)
- Fragmented administrative support for individual grants (ex/, institutional program support letters and supporting document needs, pre-reviews through peer programs or preliminary exam with committee member critiques, or limited availability of semester-long grant writing courses)
- Limited seed funding to support or incentivize PI-led proposal development.
- Lack of centralized tracking of externally funded PhDs
- Insufficient incentives for students and mentors to pursue external fellowships.
- Limitation on the number of grants awarded. NSF generally aims to distribute NRT training grants broadly across institutions; while there is no strict cap, in practice most universities receive no more than one to two awards at a time. Virginia Tech is already highly competitive in this space and currently falls within the upper range of NSF NRT support. Given the substantial administrative demands and comparatively modest return on investment, additional large-scale training initiatives may be pursued more strategically through NIH or other federal agencies that align more closely with VT's goal of global distinction.

B. Current Status/Benchmarking:

At present, relative to peers with mature medical centers and similar research scale, Virginia Tech maintains a slim portfolio of federal **T32 training grants**.

University of Pittsburgh – 41	University of Maryland – Baltimore – 3
Emory University – 11	George Washington University – 2
University of Alabama at Birmingham – 9	Georgetown University – 2
University of Florida – 7	West Virginia University – 4

Duke University – 6	Virginia Tech (Gohlke & Meng T32s) – 2
University of North Carolina – Chapel Hill – 44	Virginia Commonwealth University – 8
University of Kentucky – 5	University of Georgia – 1
University of Virginia – 16	University of Tennessee Health Science Center – 1
Penn State University – 3	North Carolina State University – 1
Wake Forest University Health Sciences – 12	Clemson University – 1

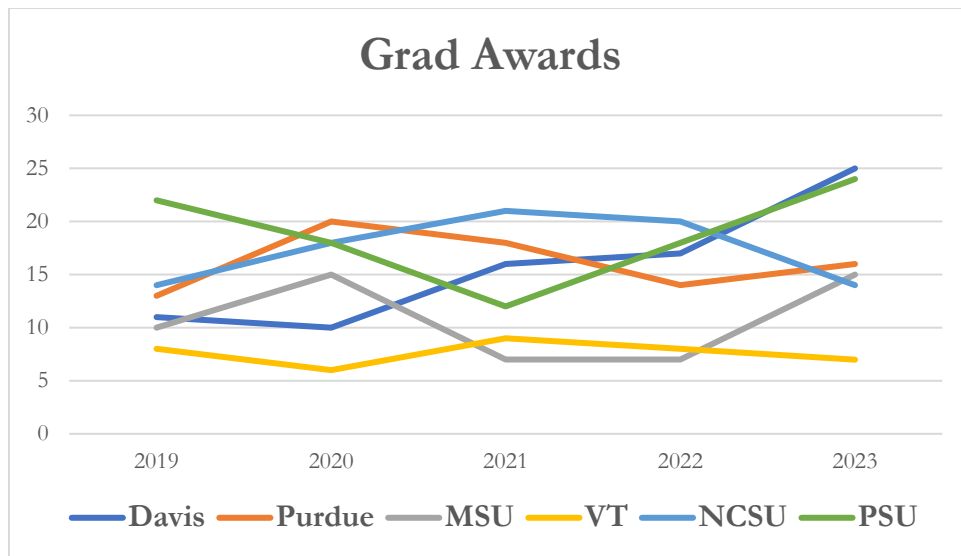
Peer benchmarking shows significant growth potential. While VT has a list (GEM, NSF, GRFP, Packard, Ford, etc.) of external student-initiated fellowship opportunities, no dedicated page for training grant opportunities currently exists. However, limited submission opportunities that include training (T32, ESTEEMED R25, etc.) are offered through OVPRI. Additional concerns raised by most PIs of current training grants include the need for extensive administrative support during both the submission and execution of awarded grants. These include consolidating large tables for submission, quarterly reporting, PI mentoring, managing fellowship funds, covering required travel to the annual meeting, and establishing recruiting and admissions processes. Training grants do not provide funds for administrative support. Clear policy on whether the home department/college of the PI is responsible or could be managed by a central graduate training grants office (see below).

❖ **Virginia Tech’s existing Federally Funded Training Awards include:**

- NIH T32 awards in Biomedical Sciences, PIs in the College of Veterinary Medicine:
 - i. ***Animal Model Research for Veterinarians (AMRV)***
 - ii. ***Rural Environmental Health (REH).***
- NIH T35, PI in College of Veterinary Medicine:
 - i. ***Summer Veterinary Student Research Program (SVSRP)***
- NSF Research Traineeship (NRT) program, FLSI:
 - i. ***Convergence at the Interfaces of Policy, Data Science, Environmental Science, and Engineering for Combating Antimicrobial Resistance (CIP-CAR-NRT)***
 - ii. ***CyberCorps: Scholarship for Service (SFS)-Currently Paused***
- DoD & National Security (scholarship for service), Hume Center
 - i. ***DoD Cyber Service Academy Scholarship (DoD-CySP)-Currently Paused***

❖ **Virginia Tech’s existing Externally Funded Individual Fellowship Awards are not centrally tracked. The survey revealed 28 self-reported grants from unknown agencies.**

- NIH, NRSA F31 fellowships (3 currently listed NIH reporter-2025).
- NSF, GRFP fellowships (7 listed from NSF database-2023). As of 2023, VT was lagging behind peers in NSF awards:



- Foundation fellowships (not tracked, unable to find update-to-date Information).

Virginia Tech does not currently have a comprehensive dataset on externally funded PhD students, making it difficult to establish a clear baseline for future growth projections. VT does have online opportunities for existing fellowships available through the Graduate School [landing page](#). Many of our peer institutes incentivize student grant applicants, e.g., by a \$500 award from their graduate school for students who apply for individual fellowships and a \$1000 award for those who are awarded a grant (see below 3B).

C. Recommended Actions:

Expand Federal Training and Individual Fellowship Opportunities

1. Centralized Administrative Support.

Establish a **Graduate Training Grants Office** or designate dedicated staff within ORI and/or the Graduate School to support T32, NRT, and other training proposals. Functions include proposal templates, budgets, data tables, institutional letters, and reporting compliance. Resource requirement: 1 FTE program or grants coordinator.

2. Training Grant and Individual Fellowship Seed & Matching Fund Program

- Training grants: Create a grant development fund offering administrative support (ex/ in coordination with FLSI VT-FAST) and an administrative supplement for proposal development. This should be considered a long-term investment with a 1–2-year timeline and offered to the lead PIs (\$5–10k incentive). Target areas could include research training in high-growth domains that align with VT's Global distinction aspirations.
- Individual fellowships: Offer 0.25 GRA for all fellowship awardees to cover the stipend shortfall (e.g., NIH provides \$28,224k/year in stipend + 60% requested tuition and fees capped at \$16,000/year), health subsidies, and a student bonus stipend. This process was developed and implemented by the TBMH graduate program in 2021, including an MOU among TBMH, the student mentor, and the mentor's home department, which split the cost of a 0.25 GRA position three ways. A similar approach could be adopted

by the Graduate School as a University-wide policy, implemented through central funds, to ensure a consistent process across programs.

3. Institutionalize Fellowship Writing into Graduate Curriculum.

Integrate fellowship-style proposal writing into early graduate training and recommend using a grant-style preliminary exam for students planning to submit external fellowships. Expand existing Grant Writing Boot Camps and develop discipline-specific sections across colleges. Assign GTA support to increase capacity beyond the current student cap for each course. Grant-writing support is provided through initiatives such as the Graduate School's Grant Writing Boot Camp, the BMVS/CHEM/FS **grant writing Fall course** (20-student cap), and the **GRFP preparation course** (50-student cap; which is currently not planned to be offered in the near future).

However, course capacity and coverage remain limited.

- Propose the addition of a BMVS grant writing section in the Spring Biomedical Science
- Provide incentives for the GRFP and additional grant writing course development; additional instructors needed for all proposed courses
- Offer additional grant writing courses in specific disciplines (Ex/, Engineering, CALS, SoN)
- These additions to grant writing courses will require GTA support and program buy-in. As incentives for developing new grant-writing courses or expanding the sections and capacity of BMVS/FS/CHEM 5094, the instructor of record could be offered course leadership payments or the allocation of yearly GTA support assigned to one of their graduate students.

D. Metrics of Success:

- Increase externally funded PhD students by 25–30% within five years. Example: Current externally funded students through self-reporting through the UMI survey are 28
- Increase multi-investigator training grant submissions by 30% within five years.
- Support seed funds for at least three new major (T32/NRT-level) training grant submissions within 3-5 years.
- Addition of several grant writing courses with appropriate enrollment
- Increase individual fellowship submissions by 20% and funded awards by 10% annually.
- Improve VT's national ranking for federally funded graduate training programs.

2. Develop Industry-Integrated Doctoral Pathways.

Establishing Industry-Integrated Doctoral Pathways positions Virginia Tech as a leader in applied doctoral education that bridges academia and the private sector, advancing our goal of reimagining the graduate education experience and supporting a new role for academia in providing advanced degrees to working professionals. The following proposed programs would allow PhD candidates to conduct research directly aligned with corporate innovation goals, with joint support from university mentors and industry sponsors. This approach diversifies graduate funding sources, enhances student career readiness, and strengthens Virginia Tech's engagement with high-growth industries, including but not limited to biotechnology, defense, artificial intelligence, and business administration. In addition, efforts to build consortia with industry will likely fuel our university's basic science efforts.

A. Rationale:

Nationally, universities are recognizing the value of integrating industry experience into doctoral training. Traditional PhD pathways rely heavily on federal grants, which can limit applied research and workforce alignment. Industry-integrated doctoral models expand funding streams, provide experiential learning, and create sustainable partnerships with employers seeking advanced R&D expertise.

For Virginia Tech, this initiative supports multiple institutional priorities:

- Expanding externally funded PhD positions without additional institutional stipends.
- Strengthening research collaborations with industry sectors already engaged, for example, through Virginia Tech's educational efforts in the Academic Building I (AB1) and the Greater Washington DC Area, which is poised to partner with Colleges such as Engineering, Pamplin Business, FBRI, etc.
- Enhancing workforce impact and doctoral placement outcomes.

Aligning with the University Mission Initiative's goals for strategic growth and advancing the educational experience of the professional graduate student.

B. Current Status / Benchmarking:

Several entities have successfully implemented scalable, industry-integrated PhD programs:

- **Northeastern (NE) University** – Industry PhD Program: Companies fund employees or newly recruited doctoral fellows who conduct research aligned with company priorities under dual mentorship. **The employer fully covers tuition and stipend**, while Northeastern provides academic guidance and oversight of the degree. (Source: <https://phd.northeastern.edu/industry-and-experiential-phd-program/>).
 - In coordination with industry partners in Boston, NY, Philadelphia, NE, their “Experiential PhD” creates mutual value by connecting academic expertise with industry. There are currently **120 PhD** partnerships; this opportunity represents a collaborative model that provides the next generation of research leaders. [Experiential PhD | PhD Graduate Education at Northeastern University](#). *This could supply a sufficient pipeline of industry-embedded doctoral training opportunities for VT, particularly as we expand graduate enrollment and seek diversified career pathways for our students.*
 - The DC (Innovation) Campus, given its proximity to federal agencies, tech firms, and research-intensive companies in the DC-Northern Virginia ecosystem, may be an ideal location (AB1) to build and launch a comparable program.
 - Additional co-op style graduate programs (LEADERS Program), which may supply funding for an experiential component of the PhD, alleviating the PI of a semester or two of costs.
- **UIDP (University-Industry Demonstration Partnership)**: The UIDP and NSF launched a national initiative to expand STEM PhD funding streams through new university–industry collaborations and co-funded fellowships. (Source: <https://uidp.org/strengthen-and-modernize-u-i-partnerships/uidp-launches-nsf-funded-initiative-to-expand-stem-ph-d-funding-streams/>)

These examples may provide clear IP frameworks, co-funding policies, mentorship alignment, and administrative oversight to advance industry-embedded graduate programs at VT, yielding durable partnerships and consistent financial returns while producing job-ready professionals.

C. Recommended Actions:

1. Launch a Pilot “VT Industry-Integrated PhD” Program (FY26–FY28)

Begin with 3–4 thematic research anchors aligned with Virginia Tech’s research strengths: (*AI & Autonomous Systems; One Health & Veterinary Biotechnology; Climate Resilience & Sustainability; and National Security & Defense Technologies-redraft with what makes sense*). Recruit industry partners through existing corporate engagement offices (Advancement, LINK + LICENSE + LAUNCH, Fralin, and Innovation Campus). Pilot 10–15 co-funded doctoral students in Year 1 with 50–50 cost share between VT and the sponsoring company. However, companies often want to fully pay interns as leverage to secure IP and ensure safe behavior.

2. Develop Formal Partnership Agreements (MOUs)

Create standardized Memoranda of Understanding (MOUs) outlining tuition and stipend cost-sharing models, joint IP ownership and publication rights, co-supervision guidelines, boundaries to avoid conflicts of interest and uphold scholarly integrity, data confidentiality, and remote work protocols. Include flexibility for remote doctoral engagement, particularly for mid-career industry professionals pursuing part-time PhDs.

3. Establish Governance and Support Infrastructure

Centralize program oversight within the Graduate School and Office of Research and Innovation. Dedicate a Corporate Fellowship Liaison (shared between Advancement and ORI) to coordinate partnership agreements, compliance, and student support. Create an Advisory Board of corporate R&D leaders and academic chairs to ensure research relevance and mutual benefit. Need to look at possible governance changes

4. Funding and Incentive Model

Industry partners cover at least 50% of tuition and stipend, with VT matching existing GRA funds or Bridge Fund allocations. VT provides full tuition remission after candidacy to incentivize continued enrollment and partnership renewal. Explore naming opportunities for companies sponsoring multi-student cohorts or thematic Research Hubs.

D. Metrics of Success:

- Number of active industry-sponsored doctoral students (target: 40–60 by Year 5).
- Total industry funding committed to PhD support (target: \$4–6M cumulative by Year 5).
- Number of active MOUs and corporate partnership renewals (target: 10+ participating companies).
- Graduate employment outcomes within partner industries (placement >90%).
- Publications, patents, or applied technologies arising from joint doctoral projects.

3. Create a Centralized Bridge and Incentive Fund

A. Rationale:

A centralized Bridge and Incentive Fund operated through the Graduate School that would enable Virginia Tech to expand its externally funded PhD population while mitigating the financial and administrative barriers faced by faculty and students

during the early stages of grant acquisition. By providing temporary support for graduate stipends and tuition and offering structured incentives for principal investigators (PIs) who successfully transition students to external funding, the university can accelerate graduate enrollment growth, improve grant competitiveness, and stabilize research continuity. Priority should be given to new investigators and to those who consistently demonstrate funding transitions.

Currently, the path from PhD recruitment to sustained external funding varies widely across departments and colleges. Many promising doctoral students experience funding gaps between admission and the start of sponsored projects, which disproportionately affect new faculty, interdisciplinary teams, and first-generation PhD students.

A Centralized Bridge and Incentive Fund would serve as a financial catalyst to (1) support top doctoral recruits while external proposals are pending, (2) reward faculty who incorporate student funding into grants, and (3) encourage transparent, equitable practices in tuition and stipend budgeting. This initiative directly supports Virginia Tech's strategic priorities for research growth, student success, and graduate program expansion. It also advances the goals of the University Mission Initiative (UMI) by reducing financial risk for faculty during proposal ramp-up and aligning institutional investment with measurable external returns.

Key motivations include:

- Enabling continuous PhD enrollment growth without immediate dependence on external awards.
- Improving faculty competitiveness in NIH, NSF, DoD, and USDA training programs.
- Creating consistent policies around tuition remission and departmental cost-sharing.

B. Current Status/Benchmarking:

Bridge funding: Virginia Tech currently maintains several decentralized mechanisms for graduate bridge or cost-share funding (e.g., Graduate School Assistantship Supplements, college-level GRA pools, and ad hoc tuition support). However, there is no unified or transparent process for bridge funding requests or for tracking PI contributions toward student support.

Incentives: Peer institutions have implemented structured models that Virginia Tech could emulate:

- **Penn State** operates a Graduate Matching Incentive Program, *Graduate School Grant-In-Aid (GIA)*, which allows the Graduate School to consider requests for tuition to match stipends derived from external grants when the sponsor prohibits tuition expenses. *Graduate Fellowship Incentive Program:* The external award must provide a minimum of \$45,000 total support (stipend, tuition, insurance) to qualify for the stipend bonus. The incentive will be distributed equally over the 12-month appointment. The stipend of any student receiving a qualifying external fellowship will be supplemented by an additional 5 percent (approximately) of the current standard student stipend. If the fellowship exceeds 105 percent of the current student stipend (e.g., an NSF fellowship), the student receives the entire award. Please note that the PI/mentor will provide supplemental funds to the student from the cost savings realized from the student receiving the fellowship.
- **Weill Cornell Graduate School Fellowship Award:** WCGS issues an additional "Fellowship Award" to each student who receives a fellowship, scholarship, or grant from an external funding agency's competitive award program. Student receives up to \$5,000 per year, depending on the fellowship award amount.
- **University of Alabama at Birmingham – Individual Fellowship Incentive Program.** Designed to motivate graduate students to apply for external individual fellowships (e.g., NSF, NIH NRSA). Students receive a \$500 award upon submission of a competitive external fellowship application. If the award is funded, stipend supplementation is provided: smaller awards are supplemented to meet the base stipend plus ~\$1,500/year, while larger awards (e.g., NSF) require no supplement.

- **Brown University:** Incentive Program for Doctoral Students. Doctoral students who secure external fellowships receive institutional supplements depending on the award amount. If the external fellowship equals or exceeds 111.11% of the base stipend, the student receives the full award. If it is less, the Graduate School supplements up to that threshold. Tuition, health, and insurance are provided when not covered externally.
- **University of Utah:** Graduate Student Fellowship Incentive Program. Graduate students awarded a qualifying external fellowship (minimum stipend ~\$18,000/year) receive a \$3,000 annual supplement for the duration of the fellowship. The fellowship must be an independent award, not part of a training grant.
- **University of Texas at San Antonio:** Graduate School Fellowship Incentive Program. Encourages students and mentors to submit strong external fellowship applications. Students submitting eligible applications ($\geq$ \$18,000/year for 2+ years) receive a \$1,000 incentive; mentors also receive \$1,000 to support research or graduate-education expenses. Awards are limited to one per student.
- **The University at Buffalo** structures its STEM Ph.D. programs such that they enroll for 12 or more credit hours when taking classes before they pass qualifying exams. Once qualifying exams are passed, students enroll for a reduced number of credits to reflect that they are no longer attending classes

Benchmarking indicates that centralizing these efforts leads to higher external funding conversion rates and improved retention of high-potential students who might otherwise defer or withdraw due to financial constraints.

C. Recommended Actions:

1. Establish a Centralized Graduate Bridge and Incentive Fund

- Expand the existing Graduate Research Assistant (GRA) Bridge Funding Pool or select IGEP scholarships aimed at supporting 1–2 years of stipend and tuition for promising PhD candidates while faculty ramp up new external funding or support student submission of individual fellowship. Allocate funds through competitive nominations managed jointly by the Graduate School and OVPRI. Consideration should be given to new investigators, multi-PI training teams, and interdisciplinary hires. Funding to support 40–60 GRA students annually at partial or full support levels.
 - Funding for this support may also come from the allocated GTA lines reserved for strategic growth in research domains (See allocation of GTAs).
- Policies should be updated to include incentives for grant submissions (\$500 to the student) and awards (\$1000), including the 0.25 GRA supplement, as performed currently by TBMH program, to cover any stipend and tuition shortfall. This supplement also allows the student to qualify for health subsidies.
- Use for tuition coverage if external agencies do not cover.

2. Incentive Structures for Principal Investigators

- Provide additional tuition discount following candidacy status, as recommended by the GETF report, so that PhD candidates would have reduced cost of tuition equivalent to 3 credits when registered for 12. **This discount would only apply to students on GA, GTA, and GRA.

- Implement a “2-for-3” model, where if a PI funds two students fully, the university funds the third student’s tuition or stipend at 100%.
- Currently, VT requires PIs to include tuition in all external grant budgets. However, if sponsor restrictions prevent this, departments may assume tuition responsibility by accessing the **CBIF**.

3. Administrative Oversight and Tracking

- Develop a **university-wide tracking system** through improved communication between the graduate program and the Graduate School to monitor all externally submitted or funded fellowships. If \$1,000 in incentives is provided per student awarded, the Graduate School may also use this process for reporting by including an automated survey prompt during the incentive payout.
- Encourage self-reporting of applications and awards using the new automated survey prompt, whose link can be added to the landing page for fellowship opportunities. Alternatively, graduate program directors or officials who provide the institutional environment and commitment to training letters for the application may complete the automated survey.
- Coordinate with the Bursar’s Office and Controller to address compliance and cost-allocation policies regarding tuition coverage and indirect costs.

4. Funding Model and Governance

- The fund should be co-managed by the Graduate School, Office of Research and Innovation, and the Office of Budget and Financial Planning, with clear guidelines for eligibility, reporting, and ROI evaluation. Annual reporting should include student outcomes, grant conversion rates, and total institutional return on investment (ROI).

D. Metrics of Success:

- Increase in externally funded PhD students supported within five years (target: +20–25%).
- Reduction in student attrition due to funding gaps (target: <5% attrition among bridge-funded students).
- Growth in the number of proposals to agencies that allow inclusion of full graduate tuition (target: 90% of new federal submissions).
- Improved faculty participation in cost-sharing and student mentorship (tracked through incentive utilization).
- Demonstrated ROI: At least a 2:1 ratio of external dollars secured relative to bridge or incentive fund investment.

4. Align Philanthropy and Advancement for Graduate Endowments.

Building a robust pipeline of externally funded PhDs requires complementary investment from private philanthropy and corporate partnerships. Aligning University Advancement activities with graduate education priorities creates a sustainable funding model that strengthens Virginia Tech's research mission while expanding opportunities for graduate student support. Endowed fellowships, corporate-sponsored training partnerships, and donor-funded **"Global Impact Graduate fellowships"** can amplify the impact of federally sponsored programs, provide flexible matching funds, and ensure long-term program stability.

A. Rationale:

Philanthropic investment in graduate education is a key differentiator for top research universities. Endowed fellowships and graduate training funds enhance student recruitment and retention while signaling institutional commitment to enhancing the graduate education experience. For Virginia Tech, strategic alignment between Graduate School priorities, Research and Innovation, and University Advancement can also increase competitiveness for external funding and support cross-disciplinary research themes central to the university's mission of global distinction.

Currently, endowment efforts often focus on undergraduate scholarships or general faculty support. Few targeted endowments exist to sustain PhD training or provide matching funds for federal training grants. By intentionally linking Advancement activities with sponsored program priorities, Virginia Tech can create a scalable, long-term mechanism to grow its externally funded PhD population.

Current barriers include:

- Limited coordination between Advancement and Academic units on graduate-focused giving.
- Lack of dedicated staff pursuing graduate philanthropy.
- Need for improved visibility of graduate student success stories in donor engagement materials.

B. Current Status/Benchmarking:

Virginia Tech has established a small but growing portfolio of endowed graduate fellowships through college-level and university-wide campaigns. Current emphasis on *global impact graduate fellowships*, *dissertation completion grants*, *recruiting funds for Top-up recruiting*, and *experiential learning*. However, these are not yet systematically tied to externally funded PhD initiatives or major research thrusts.

Peer institutions such as Purdue University, Georgia Tech, and the University of Michigan have integrated Advancement and Research offices to create co-funded graduate training endowments, where donor gifts serve as matching funds for federal training grants or as sustaining support for interdisciplinary graduate programs. Examples include:

- Purdue University's College of Engineering established Graduate Research Impact Endowments, pairing donor funds with NSF or DoD consortia to sustain training cohorts.
- Georgia Tech's Innovators Fellowship Program combines philanthropic and corporate sponsorship to fund students in data science and sustainability.
- University of Michigan's Rackham Graduate School maintains dedicated advancement staff focusing solely on graduate student support and named fellowship programs.

Benchmarking these examples suggests that embedding graduate philanthropy within Advancement’s strategic giving portfolio could elevate Virginia Tech’s ability to attract both donors and external research sponsors.

C. Recommended Actions:

1. Establish a Strategic Partnership with University Advancement

- Create a **Graduate Advancement Task Force** with representatives from Advancement, Research and Innovation, and the Graduate School to identify high-impact philanthropic opportunities aligned with externally funded research programs. Dedicate an Advancement Liaison for Graduate Education to cultivate donor relationships and corporate gifts linked to PhD training pipelines. Integrate graduate success metrics and research outcomes into Advancement materials to elevate visibility among alumni and corporate partners.

2. Develop “VT Graduate Hubs” in Key Research Areas

- Create a university-supported framework for graduate hubs to be developed in priority research and training areas identified collaboratively by the Provost’s Office, ORI, and the colleges, reflecting our efforts in global distinction. These areas may integrate endowed fellowships with federally funded or industry-supported training programs. Use donor and corporate gifts to fund flexible fellowships, seed training cohorts, or provide cost share for major training proposals. Encourage colleges and institutes to propose additional hubs tied to their strategic strengths. These hubs may serve as additional recruiting tools to help donors identify specific areas of interest for investment.

3. Create Donor-Supported Graduate Endowment Models

- Launch a campaign for Graduate Endowed Fellowships with tiered giving options (\$100K+, \$500K+, \$1M+) tied to each VT graduate hub or global distinction graduate fellowships. Structure endowments to complement federal fellowships, supporting tuition, fellowship submission awards (\$500, etc), research expenses, or professional development for students on external funding.

D. Metrics of Success:

- Number of new endowed graduate fellowships established (target: 200+ within five years).
- Total philanthropic funding secured for graduate support (target: \$10M cumulative by FY28).
- Integration of Advancement partnerships in the submission of at least three major externally funded training programs (e.g., T32, NRT, DoD consortia).
- Growth in student support diversity, measured by the share of PhD students supported by a combination of external and endowed funds.

5. Policy and Structural Adjustments.

To sustain graduate growth and fully leverage external, philanthropic, and industry partnerships, Virginia Tech must modernize several institutional policies governing tuition, student classification, and data transparency. These updates are essential to ensure equitable funding practices, consistent administrative procedures, and accurate tracking of graduate research activity across colleges.

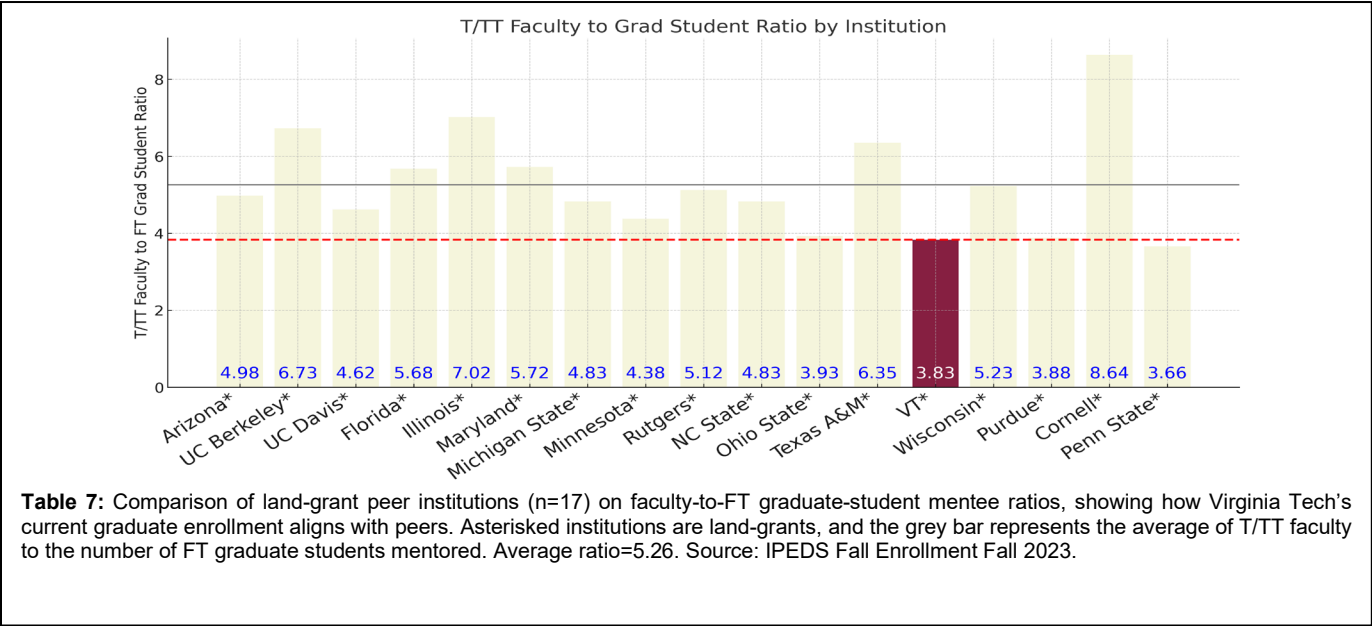
- **Tuition and Fee Policy.** The university should establish a unified tuition remission policy that applies consistently across colleges and funding sources. Current discrepancies in how tuition is handled for foundation-supported or partially funded students create inequities and administrative complexity. A clarified policy defining when tuition is covered by grants, departments, or central funds will enhance compliance, budgeting accuracy, and transparency for faculty and students.
- **Student Classification and Support.** Graduate students should be consistently classified as 12- or 9-month appointees to standardize access to benefits, emergency support, and continuous funding eligibility. This adjustment will provide more predictable financial security for students while simplifying departmental payroll and reporting systems.
- **Professional Pathways.** Virginia Tech should formally recognize *professional dual-degree students*, such as MD-PhD, DVM-PhD, and MPH-PhD candidates, as integral members of the graduate enterprise with their own classification and seamless enrollment. This recognition expands eligibility for institutional and external funding mechanisms, encourages interdisciplinary training, and better integrates health and biomedical research programs within the broader graduate framework.
- **Tracking and Transparency.** To support data-driven decision-making, the university should create a **Graduate Research Analytics Dashboard** to consolidate data on external funding sources, student outcomes, and unit-level enrollment trends. This tool would provide leadership with a clear picture of graduate growth trajectories and return on investment, enabling more strategic allocation of resources and incentives. This dashboard should include samples of previously funded grants to provide a playbook and motivation for students, PIs, and departments.

6. Targeted Recruitment Initiative for High-Impact Research Faculty.

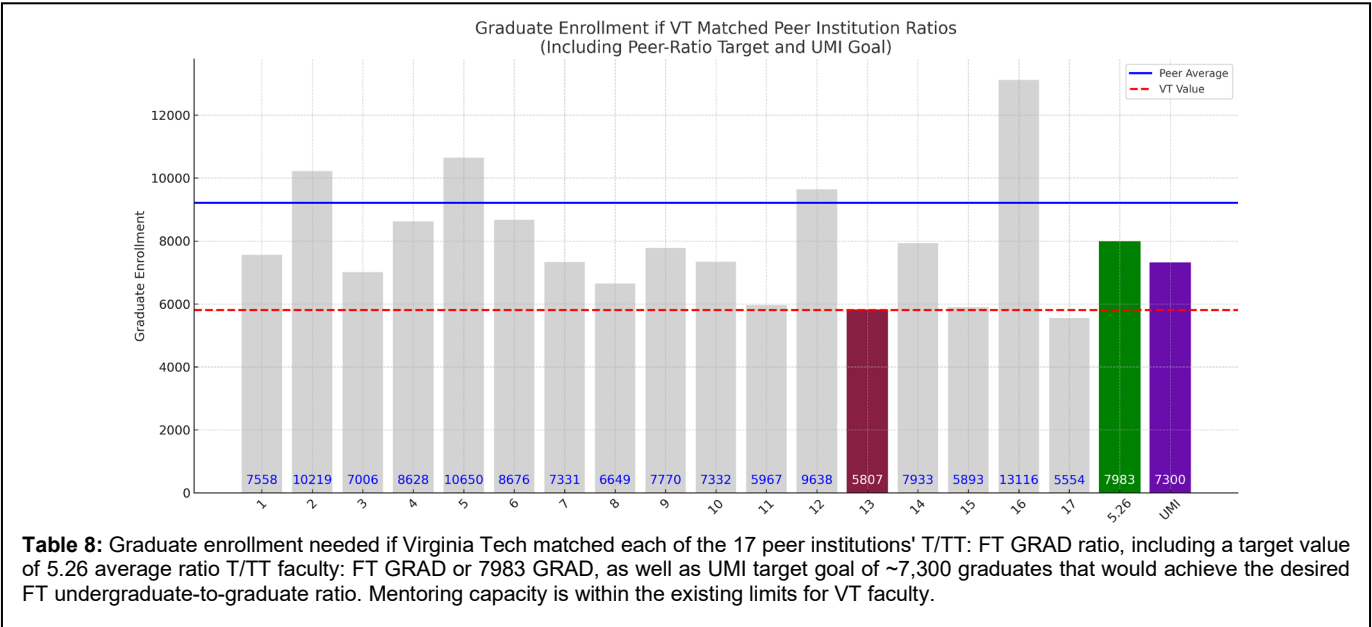
To accelerate graduate student growth and strengthen Virginia Tech's national research profile, we recommend establishing a centrally supported recruitment initiative aimed at early- and mid-career faculty with demonstrated capacity to lead large, externally funded research teams. National mobility trends, including shifts in state policies that have prompted movement among newly tenured faculty at peer institutions or government agencies, present a timely opportunity for Virginia Tech to attract high-caliber investigators who are actively seeking environments aligned with their scholarly and personal values. This initiative would focus on recruiting approximately 10–20 high-impact researchers across strategically selected fields. These individuals typically lead large research groups and rely on external funding for most of their trainee support. As such, they offer a highly efficient mechanism for expanding graduate enrollment without creating ongoing financial obligations for the university. These faculty would also enhance interdisciplinary capacity, elevate research competitiveness, deepen graduate mentoring, and improve positioning for major multi-PI and center-level grants. A centrally funded package for faculty recruitment, including laboratory space, start-up resources, and bridging support, would constitute an investment that yields returns quickly through increased graduate enrollment and a strengthened VT reputation. This strategically timed initiative leverages current national trends to advance Virginia Tech's long-term goals in graduate education and research excellence.

Space and faculty capacity:
Faculty capacity to mentor new grad students:

Analysis of peer institutions shows an average ratio of 5.26 full-time graduate students per tenured/tenure-track (T/TT) faculty member (Table 7). Virginia Tech's current ratio of 1:3.83 indicates that VT mentors *fewer* graduate students per T/TT faculty member than its peers. Graduate enrollment needed to match our peer institutes is 5807 (Table 8). With the necessary research space, assistantship funding, and program infrastructure in place, there is ample mentoring capacity to support graduate



expansion, as indicated by peer comparisons.



Graduate Space Capacity Analysis (ASF Scenarios)

Table 9 presents an analysis of Virginia Tech graduate and professional student capacity using two nationally defensible lower-bound planning assumptions for assignable square footage (ASF) per student: 450 ASF and 500 ASF. These scenarios represent plausible minimums and illustrate how enrollment projections vary with space-planning assumptions for research-intensive colleges.

College	Current Enrollment	Current ASF / Student	Total ASF	Max Students @450 ASF	Max Students @500 ASF	Additional Students @450 ASF	Additional Students @500 ASF
CALS	460	550	253000	562	506	102	46
COE	2314	550	1272700	2828	2545	514	231
COS	673	550	370150	822	740	149	67
Vet Med	639 (Grad + Professional)	850	543150	1207	1086	568	447
Carillion & M454 FBRI	213 (Grad + Professional)	1355	288615	641	577	428	364
TOTAL	4299	—	2727615	6061	5455	1762	1156

Table 9: Student capacity to assigned ASF

Interpretation:

Even modest adjustments to minimum ASF assumptions materially alter projected enrollment capacity. Under a 450 ASF-per-student scenario, the space assessment indicates a theoretical system-wide capacity increase of approximately 1,762 students. Increasing the minimum to 500 ASF reduces this estimate to approximately 1,156 students, underscoring the sensitivity of enrollment projections to space-planning assumptions and the importance of discipline-specific benchmarks for realistic graduate growth planning.

III. Addressing Implementation Challenges.

Achieving sustained growth in Virginia Tech's graduate programs, particularly in externally funded and industry-integrated PhD pathways, will require careful attention to several structural and operational challenges. These issues are not unique to Virginia Tech but reflect broader pressures across the national landscape of graduate education, including financial constraints, faculty workload, and evolving student demographics. The following challenges were discussed in broad terms and will require continued collaboration with relevant stakeholders beyond what the UMI committee can recommend.

Challenge	Recommended Action
Heavy reliance on federal grants	Diversify with corporate partnerships and endowed scholarships
Faculty bandwidth	Provide teaching release or summer salary supplements for PIs leading large training grants
Graduate student costs	Use co-funded models (50/50 split among PI, college, or industry sponsor)
International student dependency	Create domestic recruitment incentives through industry and training partnerships
Operational inefficiencies (Bursar, student fees)	Review fee structures, eligibility policies for graduate student emergency funds, access to services and resources during their assistantship

Governance Policies	The Commission on Graduate and Professional Studies and Policies will conduct an in-depth review of policy requirements that may inhibit flexibility of types of PhDs and make policy change revisions as deemed academically appropriate.
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A few closing thoughts on the challenges discussed in the UMI subcommittee on expanding externally funded students, and some practical ideas worth carrying forward:

Faculty Bandwidth and Administrative Load: Faculty time is one of the most significant bottlenecks in launching and sustaining large-scale training initiatives. To incentivize participation, Virginia Tech could provide targeted teaching release, summer salary supplements, or administrative support for principal investigators who lead major training, teaching, or proposal-writing courses, or support their student fellowship proposals. Centralized grant administration and shared staff resources could further reduce proposal preparation burdens while improving compliance and reporting quality.

Graduate Student Cost Structures: The cost of graduate education, particularly stipends, tuition, and fees, poses an ongoing challenge for both faculty and colleges. Implementing *co-funded models*, in which costs are shared among the PI, the college, and an external sponsor (e.g., 50/50 or 2-for-3 tuition remission models), will increase flexibility and scalability. This approach ties institutional investment directly to grant productivity and student outcomes, aligning incentives across units.

International Student Dependency: To balance the portfolio, the university should expand domestic recruitment pipelines through partnerships with industry, federal agencies, and professional master's programs that can serve as feeder programs for PhD pathways. These partnerships will help grow U.S.-based talent in critical STEM and health research areas.

Operational Inefficiencies and Student Fee Policies: Current inconsistencies in tuition, fee, and emergency fund eligibility create barriers for both students and faculty sponsors. The university should conduct a *comprehensive review of fee structures and bursar policies* to ensure graduate students, particularly those on external or industry-funded appointments, retain access to emergency support, health insurance, and essential campus services. Streamlining these policies will improve equity, retention, and student well-being while enhancing administrative efficiency.

IV. Summary.

By broadening its portfolio of externally funded PhD programs and embracing emerging industry-aligned doctoral education models, Virginia Tech can position itself at the forefront of modern graduate training. Federal fellowships, training grants, and foundation awards will continue to provide a stable and prestigious funding base. Still, the next era of growth also hinges on our ability to create flexible pathways that meet the needs of working professionals and industry partners seeking doctoral-level research expertise. Integrating these approaches diversifies funding streams, enhances the university's impact on the STEM and health workforce, and strengthens our competitiveness in high-growth research domains. This dual strategy not only advances VT's Global Distinction goals but also reimagines the university's role in cultivating the next generation of innovators, scholars, and industry-embedded research leaders.