



Texas A&M University

Graduate Education in the College of Agriculture and Life Sciences

2022

This Texas A&M University (TAMU) College of Agriculture and Life Sciences (COALS) Graduate Education Options Report was developed through a deliberative process and stakeholder engagement. Faculty, staff, and students were directly engaged over two town halls (May 13 and 14, 2021) regarding the positive aspects of graduate education. A survey to departmental representatives of graduate studies was also conducted (received June 30, 2021) with questions over a multitude of topics in graduate education. The various components were integrated by the task force and edited by the entire group. Recommendations were developed from this information and 15 meetings of the task force.

Key recommendations are presented in order of priority. A thorough description of the overall research, findings, options and recommendations that the task force made are then presented in order of town hall and departmental survey questions.

Charge

To advance the [goals of the new Texas A&M Graduate and Professional School](#), support progress towards the key performance indicators, and to address numerous concerns brought to administration by faculty, a task force will be charged with developing an options report for the College that addresses policies and administration of graduate education including minimum stipend levels, funding commitment in offer letters, publication expectations, teaching assistant allocations/assignments at the college and departmental level, and graduate students serving as course instructors.

Key Recommendations

Overall, the task force recommends more tangible support for graduate students and policies designed to improve their well-being. This can largely be achieved through clear and written policies developed within departments that are readily accessible to all. Many of our highest priority recommendations reflect this goal or are aimed at reducing variability in graduate student support. We believe that enacting these recommendations will meaningfully improve the graduate education experience at Texas A&M University for current and future students, faculty and staff.

Highest priority recommendations to be implemented immediately:

- ***Establish and maintain a standing committee for graduate programs at the college level tasked with shared governance of graduate education across COALS. This committee would be composed of faculty, charged with evaluating and improving graduate programs, as well as leading activities and discussion forums for sharing best practices for graduate education across the college.***
 - ***The standing committee should be composed of faculty at all levels (Assistant, Associate and Full Professors), representatives from all agencies in fair proportions (AgriLife Research, AgriLife Extension, COALS, etc.), to also include off-campus representatives. Heads and Associate Heads should be in the minority of members.***

- ***Set a fair and just minimum stipend for graduate students in each department. A minimum stipend should exceed the amount needed for food assistance and ensure same pay for equal work within departments across the college. Where stipends need to be raised, some departments will need additional funds or else will have to eliminate positions for graduate students, and consideration is needed for grant funded students. This should not be an unfunded mandate by the college.***
- ***Funding was seen as the primary barrier for faculty attracting and recruiting the best students. Increased funding for graduate student education should be a priority for the College, including philanthropic giving specifically targeting graduate education gaps, needs and sustainability.***

High priority recommendations to implement within the next year:

- ***A graduate student handbook should be available from each department that documents and clarifies all policies and expectations, with information on available resources for students, faculty advisors, and graduate coordinators. The college should offer a template, in a format that can be easily updated annually, for department handbooks that includes college and university-level information to minimize departmental administrative burdens.***
- ***M.S. and Ph.D. graduate students in all departments should be required to provide yearly progress reports, reviewed by graduate committees. These should include forward-looking benchmarks. The task force believes this will improve retention, reduce time-to-degree, and increase productivity. These would also be useful for departmental reporting. COALS should help with integrated software for the collection of this data.***
- ***COALS should develop strategies to make faculty members and departments feel comfortable with multi-year offer letters. COALS should help departments develop transparent plans for backstopping funding gaps that can occur.***
- ***Ensure COALS departmental funding formulas for TA's and graduate education are transparent to all faculty, staff and students. COALS should involve faculty members in this effort to ensure shared governance while improving the allocation of funds to graduate education at both college and departmental levels. Departments should ensure that stipends for TAs are equitable and public.***
- ***Strategies should be developed that acknowledge differences to maximize the success of non-traditional students, including off-campus, employee degree, and later-life students.***

High priority recommendations to start planning within the next year:

- ***Key measures of success and productivity for graduate students should be identified by each department, clearly communicated in graduate handbooks, and collected annually in each student's report. These measures could include things like time to prelim, presentations,***

publications, key learning objectives, transferable (soft and tool) skills, or other measures, depending on what each department values and seeks to achieve.

- *COALS and departments should actively engage in recruiting events to attract graduate applications. Recruiting should be coordinated and extend beyond individual faculty members and individual departmental approaches.*
- *Departmental policies should be clarified regarding the rights of graduate students and the workplace expectations for graduate students. What constitutes workplace abuse of graduate students should be clearly articulated. Resources available to students that need help to deal with abuse, mental health, or other issues should be communicated frequently to faculty staff and students and be included in each department's graduate handbook.*
- *Intellectual growth, transferable skills, leadership, and teamwork development opportunities for graduate students should be encouraged and expanded. These should be connected to departmental graduate student success goals.*
- *COALS should seek to develop programs that financially support industry-internships by the industry paying the student through COALS so that they do not drop off payroll and lose insurance benefits while conducting the internship.*

I. Overall Information on Our Graduate Programs

Graduate student manuals should be required for all departments

Of the 15 departmental surveys received, 80% responded that they have a graduate student manual provided to students who enter their program, leaving 20% without such a manual. The contents of graduate student manuals varied greatly across the College in specificity. Most graduate manuals outlined specific policies and procedures required to progress through the various degree programs offered by the department.

Option 1: Keep the current system with variation among whether departments have manuals and what departments include in manuals. Those without manuals do not need them, those with manuals should keep them.

Option 2: Encourage all departments to maintain up-to-date graduate student manuals that are disseminated to all incoming graduate students and posted on departmental websites.

Option 3: Have COALs develop, maintain and update a graduate student manual template with standard University policies and procedures common to all programs but which departments can modify to include department-specific information.

Recommendation: The current system makes some graduate students unaware of the policies or expectations of their department. Information presented at orientations may become outdated, forgotten, or hard to find. The task force recommends at a minimum that each department should maintain and share an up-to-date graduate student manual with their students and faculty. The committee strongly encourages COALS to make a standard template for consistent TAMU and COALS policy information that is frequently updated (e.g. Title IX). Processes should be considered that would minimize the burden on graduate coordinators and faculty. We envision each department could customize the standard template to add their specific departmental level policies and procedures. The review frequency recommended is once per year with updates added as needed.

The areas of graduate education that departments feel they do well on differ and more opportunities for sharing this are needed.

When asked what areas of graduate education are done well by the departments, many areas were highlighted including emotional well-being, TA training and development, recruiting symposia, support for student travel and awards, annual evaluations of graduate students to track their progress, discipline-specific seminars and student led symposia. While several departments identified areas of graduate education they did well, several departments did not, but felt they could learn from others. Highlighting ideas for strengthening our graduate education programs across the College could help all departments learn from what others find that works well.

Recommendation: A cross-college standing graduate committee should be created to encourage continuous improvement of graduate experiences, policies and programs. All departments should be encouraged to share best practices they have implemented on graduate education with each other and maintain these best practices on a common platform or website. Opportunities for departments to share best practices should be provided through a social forum of some sort, organized by the standing committee. Having some plans and goals of setting policy from these forums might further enhance participation and prioritization. The COALS GPC meeting could also serve as a forum to share ideas across departments. Collecting the most innovative and positive outcome generating ideas from individual departments could provide fodder for external communication and graduate recruiting.

II. Student Recruitment and Retention, and Time-to-Degree

There are two stages to graduate student recruiting, the first is attracting students to apply to graduate school at Texas A&M University, the second is having graduate students who apply and are offered positions accept their offers. We found both attracting applicants and recruiting students to accept offered positions are handled differently by different departments.

The number and quality of graduate student applicants needs to be increased upstream for improved programs downstream

Attracting applicants can be passive, through research excellence of faculty and program reputation, or active, through promotion, marketing and events targeting undergraduates. The passive process is enhanced indirectly through activities that improve research, service, and extension reputation, such as faculty effort and laboratory space and capability, but is outside of the scope of this task force. Some departments recruitment efforts are only passive or non-existent, while other departments maintain active recruiting programs. Currently, most recruiting is done by individual departments and individual faculty who volunteer for these roles. This is leveraged through contacts at similar departments within the USA or international collaborations which may not increase diversity, equity, and inclusion (DEI). Most departments rely primarily on professional societies to advertise open positions in concert with meetings or on their job advertisement portals in addition to Departmental websites. Social media presence for departmental recruiting efforts has been negatively impacted by advising centralization. This may be remedied by uniform marketing materials made accessible to the departments specific to potential Graduate Students. Continued improvements and updates should be made to Departmental and College websites for the purpose of recruiting. It is perceived that active recruitment efforts by COALS are focused on the undergraduate level. Bringing prospective applicants to campus before they apply is an important strategy but is rarely used for graduate students.

Recommendation: A graduate student event, equivalent to Aggieland Saturday that exists for undergraduates, could increase the number of applicants who would apply to TAMU-COALS. TAMU-COALS is currently attending the Society for Advancement of Chicanos/Hispanics & Native Americans in Science (SACNAS) for recruiting applicants and this should continue. Other Universities and programs at TAMU are using a variety of recruiting strategies including bringing in Nobel Prize winning faculty and having departmental booths targeted at cross departmental recruitment. A wide range of successful recruitment activities have been developed by departments and the College to recruit students, including underrepresented students. These activities should be expanded college-wide including:

- Department of Agricultural Leadership, Education and Communications Graduate Student Symposium targeted towards undergraduates.
- Departments hosting virtual workshops with titles such as 'How to Apply to Graduate School'.
- Representation at national meetings for underrepresented students in agriculture (i.e., Society for Advancement of Chicanos/Hispanics and Native Americans in Science; Minorities in Agriculture, Natural Resources and Related Sciences; Cultivating Change Foundation; and Annual Biomedical Research Conference for Minority Students, etc.).
- Continued funding recruiting visits and expand waivers for application fees. Prioritizing these and other practices that reduce obstacles to application by underrepresented students.

Coordinated recruiting activities would improve the quality of graduate students and benefit COALS reputation

Once a desirable pool of applications is developed, faculty pre-select the best students to visit Texas A&M. It is important that these students gain a favorable impression both to successfully recruit them over our peer universities as well as to enhance the reputation of TAMU, COALS, our departments, and our faculty. The impressions made on these students will remain with them even if they don't end up joining TAMU. We at Texas A&M University need to work even harder to recruit students than universities with more ideal locations (e.g. mountains, oceans, cities). Current recruiting activities among the departments range from being coordinated by individual faculty for individual students (often without support from the department or COALs) to well organized recruiting events of numerous students. With the current system applicants may not receive a response from TAMU because faculty are not contacting the declined applicants, which negatively impacts the reputation of TAMU.

Option 1: Keep the current system of graduate recruiting, differing from faculty to faculty and across departments.

Option 2: Support coordinated and planned strategies for graduate recruiting across departments.

Option 3: COALS supported coordinated recruiting with resources, including staff support time, to enhance recruiting efforts.

Recommendations: Faculty should remain able to recruit and invite top applicants for their programs but relying solely on "passive recruiting" or "no recruiting" should be discouraged. In addition to leveraging the reputations of individual faculty members, the reputation of the department can be highlighted and leveraged in coordinated events enhancing morale. It is noted that excellent recruiting efforts are being practiced in some departments and interdisciplinary programs. The College could facilitate sharing of best practices across departments. COALS could devote a staff position and effort to a college-level graduate recruiter who works to increase the number and diversity of applications to the departments and support groups of departments in their specific recruiting activities, though funds might be better spent on students. Faculty members and departmental program coordinators need to understand who is responsible for responding to student enquiries and sending further information to match students to faculty members who may be interested. Such activities would aid the external perception of COALS and make graduate application more equitable to all. Opportunities to bring in cohorts for recruiting weeks, like a program similar to the recent "Life Sciences Recruiting Symposium" that included the Vice President for Research and other major speakers should be explored. Similarly, other activities currently conducted by departments to increase visibility and connections would increase applications and successful attraction of students.

Acceptance of offers by top applicants is negatively influenced by funding uncertainties

Costs to fund graduate students have and will continue to increase (see stipends Table 1 below). The biggest threat to existing recruitment efforts as seen by faculty and, in some cases departments, was uncertain funding and at some point, post-doctoral scholars will appear to be a better investment. When asked about barriers to implementing departmental policies and procedures for graduate education, funding rose to the top followed by centralization/re-organization. Funding is not only a barrier for increasing graduate student stipends but also for supporting presentations, publications and graduate student professional development. The requirement to provide long-term funding to PhD students in their offer letters as well as to pay their tuition/fees was seen as a barrier since most granting agencies do not fund 5-year projects. Grant funding cycles are often 2 to 3 years, which leaves a 4th or 5th year, required for some fields of study, unfunded. The topic of funding was discussed at length in our town halls.

The current system disincentivizes faculty to recruit the best students because of uncertainty in financial risk. The financial aspects are intertwined with the issues of multi-year support and stipend levels discussed in later sections. This will be a barrier to COALS realizing its ambitious goals of excellence.

Recommendation: More guarantees of support from COALS are needed to ensure faculty members feel comfortable and go through with recruiting the best. It was suggested that the College support grant writing and management for federal grant funding opportunities to recruit and train under-represented students to facilitate college-wide grant submissions. Several methods used at the Departmental level aiding in bridging the monetary or time-to-degree funding gaps should be applied more widely. These methods include sending fellowship information and/or traineeship offers from Graduate Professional Studies, the College, etc. to all applicants and a Departmental process to ensure students are nominated for fellowships and/or traineeships, etc.

The process of graduate admission differs by department; guidance on admissions processes might benefit some departments

Faculty may not admit students and COALS departments differ in the way they have in acceptance. Some departments have a committee of faculty that vote on all students while other departments only require petitioning if a student does not meet minimum requirements. There are advantages to departmental graduate admissions committees to screen students. However, in instances where students are not admitted unless they have faculty support, an admissions committee may not be necessary and increases faculty workloads. Departments (and IDPs) which accept graduate students as cohorts with rotations among faculty before choosing an advisor receive the largest benefit from the time and effort required by a graduate admissions committee. Leaving decisions of admission to a single person (e.g. faculty looking for a student) can lead to biases that do not necessarily serve the best interests of the student. Currently, the stop gap to prevent issues in most departments is the role of the Associate Department Head as graduate coordinator.

Option 1: Keep the current system where departments choose to coordinate graduate admissions or not.

Option 2: Require departments to have a graduate admissions committee with established criteria for acceptance of graduate applicants.

Recommendation: There are a few perceived drawbacks to the current system, but different drawbacks could be created by changing the current system. For example, a graduate admissions committee would increase workload for members of the committee but could be worth it to reduce biases and reliance on a single professor. The task force sees a graduate admission committee for each department as desirable but does not believe this should be required. Departments should discuss the benefits and drawbacks of such a committee.

Workplace abuse is a top concern among students and should be recognized by departments and proactively addressed

Departments do not view policies, including the individual faculty method of recruitment as contributing factors in potential for abuse of graduate students. From listening sessions and graduate student feedback, abuse is occurring, including but not limited to: verbal abuse, requiring excessive hours of work, taking data from students, not including students on publication co-author list, and other abuses. Graduate student abuse does not make TAMUS or COALS a “best place to work” as envisioned across our strategic plans and it is an increasing liability for the Texas A&M System, COALS, and individual departments. Departmental respondents indicated that graduate students should be aware of who to report abuse to; some departments actively engage students to communicate that they have avenues to express concerns. Avenues include the Associate Head, Department Head, Departmental Diversity and Inclusion Committee, or other mentors. This does not recognize that a power differential exists and not all students will be comfortable with reporting options. Most importantly, a gap remains between what departments perceive and what graduate students perceive and experience. This is especially true for foreign students who may be unfamiliar with the U.S. system.

A transparent location for departments to clarify where students can report abuse is in their Departmental Graduate Student Manual as well as at any orientations or yearly meetings. As stated earlier, a minority of departments do not have a Graduate Student Manual. Of the departments that have Graduate Student Manuals, none mention abuse and only one outlines how to contact the Ombuds Officer and their role. No departments outline the reporting procedures of abuse at the Departmental level. Supporting graduate students' mental health and wellness are crucial to retention, positive culture, productivity and the reputation of TAMUS and COALS.

Option 1: Require the definition of graduate student abuse be provided in departmental graduate student handbooks and specify where students can go for support.

Option 2: Option 1 and ask departments to provide solutions, such as professional development training including mentoring, clarifying expectations, etc.

Option 3: Option 1, 2, and use graduate student mentoring as a metric for evaluation of a faculty members' performance.

Recommendation: As the departments have not addressed the problem of communicating about graduate student abuse, the solution likely requires organization across the college or university. This could become a component of a COALS graduate student manual template with policies and procedures common to all departments as well as things each department can modify with department-specific information on the abuse policy. This template needs to include a formal process for what a graduate student should do if they experience abuse and resources in wellness areas. Clear, concise communication of expectations and a timeline (or milestones) are likely to not only result in increased retention, productivity, and ultimate success of graduate students, but also reduce abuse. Contracts/Agreements between students and Advisors to ensure transparent communication about expectations and roles/support is recommended, though the availability of the template form for this is not widely known among those who would benefit.

The National Institutes of Health also recommends uncoupling of the Chair and Advisor positions on students' thesis committees as one mechanism to address issues of sexual harassment and other modes of discrimination; this has been done successfully by one department in COALS. Yearly interviews of graduate students by their thesis committees in the absence of research advisors are also a measure taken to identify potential issues between students and research advisors. Hence, thesis committees become mediators between students and research advisors and can more effectively provide a constructive and independent perspective on students' progress and well-being. While such an approach would require a major culture change in COALS, it is worth discussing within each department.

Faculty mentoring training is also important. Until the recent Faculty Mentoring Academy there were few training opportunities. This program should be advertised to all faculty, including those outside of COALS, such as AgriLife Research and AgriLife Extension faculty so the opportunity is widely adopted. On-going professional development opportunities for mentorship best practices can be encouraged through mentorship awards and in faculty's own performance reviews with their supervisor. Training of mentors and mentees on opportunities, such as Individual Development Plans and Initiative for Maximizing Student Development, is suggested.

Annual reports by graduate students are known to improve retention, productivity, and time to degree

When asked whether departments collect annual reports on graduate student education, the majority indicated they do not. Most departments monitor graduate student performance and time-to-degree through Graduate Committee meetings, the timeframe for submissions to OGAPS for degree plan, the preliminary exam and proposal submission, and forms required by the student (Graduate Student Self-Evaluation Experiences and Scholarship; Graduate Student Self-Evaluation Learning Outcomes) and committee (Faculty Evaluation of

Graduate Student Learning Outcomes) at their thesis or dissertation defense. Most departments do not have a requirement for the frequency of committee meetings or the reporting of these meetings to the department. In a few departments, the progress of all students is monitored, and action plans are required when needed. This is coupled with probation and/or discussion of languishing graduate students occurs with faculty during the faculty member's annual evaluation.

Separately for TA's, as part of course evaluations they are evaluated by the students they teach. We know that these evaluations alone are a problematic way to evaluate and improve teaching. Annual evaluations and formalized feedback for graduate student TA's would provide graduate students with a better idea of where they were successful and where they can improve. The data shows that many departments do not have a formal annual evaluation procedure in place for TA's while some are working towards developing an annual evaluation plan.

Annual Performance Reviews of graduate students by their mentors, or Departmental equivalent, and a report of an Annual Graduate Committee Meeting provide information on students who are lagging so that remedial action can be taken. Another identified priority is on-going assessment of the ability of graduate students to meet the needs of stakeholders who will employ them. Three departments indicated they have annual graduate achievement reports that are completed between the student and their advisor to track annual student progress. The current system allows graduate students to slip through the cracks and could leave students wondering where they stand in their progress. Graduate students summarizing their activities, accomplishments, satisfaction, issues, goals and benchmarks in their graduate programs on a yearly basis would be good exercise for them. This may be a students' first experience with an annual performance review which aids in their job readiness skill set.

Option 1: Departments continue to make their own decisions about whether annual reports on graduate student progress should be required.

Option 2: Encourage all departments to adopt yearly annual evaluations of each graduate student, such as in Interfolio.

Option 3: Encourage all departments to have faculty mentors provide an annual report of their students.

Option 4: Have COALs develop a reporting mechanism and require departments to develop annual reports for graduate students within their departments.

Recommendation: The task force believes annual reports that are led by the student or at a minimum, include input from the student, can provide substantial benefits to all stakeholders, the department and increase overall transparency. Additional value for the student is added if they get committee feedback on their reports. The task force recognizes student reports also could increase faculty administrative burden. Requiring faculty advisors to do such reporting could be a demotivating factor. The task force recommends the students take the lead on authoring the report and faculty provide an analysis and comment on any report their students generate. This also includes meeting with, or at least sharing the report with the committee. A recommended best practice would be for the committee to meet with the student annually to go over their report.

For TA's, instructors or graduate coordinators should meet with the TA's at the end of each semester to go over feedback. Both semesters' feedback should be included in the student's annual report for the chair and the committee.

We believe departments are best positioned to know what the important outputs and outcomes are for their students and a one-size-fits all approach by COALs might be counterproductive. Having support from COALs to collect and compile student report information for departments could be valuable. Qualtrics survey's, SurveyMonkey, or Interfolio all might help in this regard but should be determined by departmental needs and COALs resources. Masters' students should have access to Interfolio (or similar) the same as PhD students. In summary, the task force believes that annual graduate student reports tailored by each department are valuable

and necessary for multiple reasons, departments should determine their content, but need help in the efficient collection and analysis of this data.

Centralization is perceived as a barrier to the best graduate education

Departments are still working through the centralization of graduate advising and reorganization that occurred in fall 2020. The centralization of advising has slowed progress on revision of graduate materials, which were previously handled by advisors, and has also decentralized many graduate education tasks (i.e., advising, recruiting, data gathering/compilation, assessment, scholarships/fellowships) resulting in inefficient and cumbersome management of the various aspects of graduate education within the departments. For example, it is not clear how departments will provide feedback on the Graduate Programs Advisors serving their department. This concern is discussed in other sections as well.

A focus on professional development is important to graduate student retention

Some departments report offering a professional development course in addition to a seminar to introduce concepts such as what a graduate committee is, peer-review publication interpretation, publication, presentation, along with topics related to professional development. An example of this is HORT 690 Theory of Research. The G.R.A.D. Aggies program offered through the Graduate and Professional School, Aggie Research Mentoring Program, and DeBaKey Executive Research Leadership Program should be promoted to COALS graduate students. The College's AgGIE (Agricultural Graduate Inclusive Excellence) Leadership Community focuses on cohorts of underrepresented students.

Graduate student clubs and other outlets to facilitate networking and community building are also important in professional development and should be encouraged. Cohort building was suggested to foster a sense of belonging, which is important to retention. Departmental travel grants aid graduate students in their training for presentations and networking at professional society meetings.

Option 1: Continue to encourage and fund innovative opportunities at the department level to provide opportunities for graduate student and faculty professional development and share best practices.

Option 2: Require departments to clarify their policy on professional development activities that are part of graduate student training, and those that are supplementary or encouraged in addition to these requirements.

Option 3: The College requires professional development of graduate students and faculty.

Recommendation: Option 2. Departments should clarify their expectations and policy on professional development activities that are part of graduate student training and those that are supplementary or encouraged. Opportunities to apply for travel grants should be promoted to graduate students and faculty. This should all be clearly listed in the graduate student manual.

Time-to-degree is monitored on an individualized student basis but strategies to normalize these would be valuable

Most departments monitor graduate student time-to-degree through graduate committee meetings, timeframe for submissions to OGAPS for degree plan, preliminary exam and proposal submission, and forms required by the student (Graduate Student Self-Evaluation Experiences and Scholarship; Graduate Student Self-Evaluation Learning Outcomes) and committee (Faculty Evaluation of Graduate Student Learning Outcomes) at their thesis or dissertation defense. Most departments do not have requirements for the frequency of committee meetings or the reporting of these meetings to the department. In a few departments, the progress of all students is actively monitored, and action plans are required when needed, coupled with probation and/or discussion of languishing graduate students occurs with faculty during the faculty member's annual evaluation.

Option 1: No change.

Option 2: Departments develop a process to formalize timelines, clearly communicate timelines to faculty and graduate students, and track progress.

Option 3: The College develops an umbrella process to formalize timelines, clearly communicate timelines to faculty and graduate students, and track progress.

Recommendation: Option 2 is preferred, and that these timelines are clarified in graduate student manuals. Annual student reports, if made available to graduate committees may help as a substitute when formal annual committee meetings are not held.

Non-traditional graduate students are a valuable but often overlooked group that need consideration, and in some cases accommodation.

Here we group, in no particular order, non-traditional students as 1) those that have had substantial time between undergraduate and graduate school, usually having worked professionally, 2) employees who are also graduate students, and 3) students with research projects off-campus, such as at Texas A&M AgriLife center and station facilities. Some students overlap these groups, but considerations should be examined for each separately.

Recruitment, retention and satisfaction of non-traditional students was a concern that surprised the Task Force. These students are often overlooked. Policy changes could have substantial impacts on improving the environment for our non-traditional students. For example, excused absences as related to childcare and full-time employment, and extended time-to-degree options. Current policies may be overly restrictive on the number of online courses that may be included in the degree plan. There is benefit to these students from increased availability of online courses. In the case of students with research projects off-campus, this could save tremendously on out-of-pocket costs since overlap in scheduling may require that they pay rent in two locations. Housing for students at AgriLife facilities is another solution. Availability of courses may be expanded through agreements with other System Universities which would be of high value for our non-traditional graduate students. For example, the scientific writing course at Tarleton State University and forage courses at Texas A&M University-Kingsville. Departmental promotion and tenure committees expect to see off-campus faculty supporting and co-chairing graduate students, but the time such students need to spend on-campus makes it a bad investment for center faculty. More consideration of these unique situations is needed and could increase both student numbers and success.

Recommendations: Nontraditional students should be treated equitably and policies should consider impact to this group. The task force believes this is an issue that needs to be addressed, but that it will require substantial effort to understand the many nuances of the existing policies and how best to modify such policies. Since this topic was outside of our charge we recommend it be addressed by the standing committee. A specific suggestion that could have major impact would be providing opportunities for off-campus students to take distance courses for their entire curriculum. We recognize that this would require changes by the Texas Higher Education Coordinating Board above the college level but also that COVID created opportunities and conditions for such changes to be considered.

III. Graduate Student Success and Productivity

Faculty Mentors and Graduate Advisory Committees are primarily responsible for mentoring graduate students to disseminate their scholarship prior to dissertation, including presentations, publications, outreach, and other activities. Departmental requirements for presentation and participation at departmental seminar series and public dissertation or thesis defense are present in a majority of departments. Graduate students are encouraged to be engaged with interdisciplinary seminar series and in department activities where it is appropriate, such as Extension field days and other public outreach events. Some Department Heads commit budget funds to graduate student travel for presentations at professional meetings which can be valuable. Some departments require (Ph.D.) or encourage (M.S. thesis option) students to submit articles for peer-reviewed publications before graduation. However, survey respondents strongly express that this is not feasible for some fields of study, including where research projects may span the entire time-to-degree. Faculty mentoring varies, so while a college level policy on graduate student publications could not be applied to departments due to the wide range of fields of study, a culture which encourages publication prior to graduation could be set by leadership.

Key measures of success and productivity for graduate students should be identified by each department and clearly communicated.

Before evaluating success and productivity of graduate students, key metrics of such success need to be identified by departments. Many such metrics could be similar to early career faculty members and include outputs, outcomes, and/or impacts. While current promotion and tenure guidelines point to diverse potential outputs and outcomes to report, we are aware of no similar guidelines for graduate students. Non-exhaustive examples may include:

Key required output examples:

- Course completion
- Graduate committee formation
- Thesis proposal
- Preliminary exams

Key non-required output examples:

- National meeting presentations
- Journal article submission (preprint servers like bioRxiv)

Non-required outcome examples:

- Awards
- Journal article acceptance
- Book contracts

Annual data on metrics like publications, presentations, awards, fellowships, grants for graduate students need to be collected and uniformly reported

Most departments report being proactive in collecting the requisite data towards graduate student success and productivity. In a few cases, data is easily available, for instance in departments that recently had an Academic Program Review. In most it is out of date or unavailable, but having annual student reports would benefit keeping such information up to date. This data is important to gauge not only individual students' success (and concerns) but the success of the overall graduate program.

Option 1: Keep the current system

Option 2: Encourage all departments to systematically collect data and maintain it systematically and electronically.

Option 3: COALS can devise a mechanism so that all the data is collected uniformly.

Recommendation: The departments can collect all this information from students as part of each student's annual review with a format decided on by departments and included in the graduate handbook. Information should be collected in an automated way, like through SurveyMonkey, Interfolio or another tool for ease by students, faculty, and departments. This data should be consolidated and entered in the departmental records in a way that it can be retrieved to use as benchmarks of progress in future years. Some of this data should be coordinated and common across the departments so they can be compared and then shared between departments transparently.

Incentivize graduate student productivity

To incentivize graduate student productivity, several departments give travel grants while others emphasize the importance of publications for getting departmental awards and other recognitions. Some departments do not offer travel grants, presumably due to funding constraints. Some departments nominate students for various awards to recognize their productivity. While some suggest monetary incentives for writing a manuscript, others thought that writing a manuscript is a natural expectation of graduate studies and should not be compensated.

Option 1: Keep the current system.

Option 2: All departments must incentivize graduate student productivity and take steps most appropriate for their discipline.

Option 3: COALS can provide resources needed by the departments to effectively incentivize graduate student productivity.

Recommendation: Departments should have some funds earmarked for graduate students' presentations at professional meetings besides what supervisors can provide. It is suggested that all departments offer travel grants to attend conferences as the students would have a chance to interact with peers and fellow researchers, which would enhance their expectations and norms. In addition, students should be encouraged to join scientific societies and strengthen their participation in the activities of the local chapters of the scientific societies. These departmental incentives should be mindful and supportive of students looking for non-academic careers (e.g. industry, government) who might require different types of activities.

Encourage intellectual growth, transferable skills, and/or leadership and teamwork development for graduate students

Some departments currently encourage growth and skills development of students beyond the research lab and work that their advisor requires. This growth and development is encouraged in a variety of ways: teaching assistant workshops, Seminar courses and departmental graduate association activities, teamwork and professional development courses, and collaborative efforts.

A formalized class in leadership and transferable skills (making students successful across their domain, also called soft skills or tool skills) development for graduate students in the College would also be beneficial. Dr. Dorothy Shippens' class on laboratory management is strong but limited to 15 students, Dr. Patricia Klein's Horticulture class and BAEN Theory of Research are other important examples. Additionally, a number of courses exist that emphasize writing grant proposals. Some students take leadership courses at the Mays

Business school but many of these classes are restricted to business majors, and all fill up quickly. Existing departmental course options for professional development are critical but are inconsistent across departments, class sizes are small, and many are unaware of what other departments offer and are available to outside departmental students in this area.

Option 1: Keep the current system.

Option 2: Departments should have or develop courses of their own to expose students to such issues.

Option 3: COALS could arrange with the Business School whereby the COALS students can be exposed to say a set of a few lectures on leadership and teamwork.

Recommendation:

A list of professional development courses across the college should be developed, highlighted and available to our students to determine where there are gaps. A multi-tier system should be considered where fundamentals are offered in a formalized class at the college level and/or the Business School with gaps filled in by the departments. Participation of graduate students in non-classroom career advancement activities should be strongly encouraged. This would include CTE workshops, seminars focused on intellectual and other growth, or other activities outside of classroom credit. Departments and supervisors are expected to emphasize that a balanced graduate education, covering not only the academics but other aspects like teamwork are a very important part of education. These types of activities should be identified and encouraged in each department's graduate handbook as well in the annual progress reports.

Interventions should be developed to help students that are falling behind or not meeting benchmarks

There is a wide variation in the adopted practices among departments to identify and deal with students falling behind, both proactively and after the fact. Some departments have formalized written procedures while others are on a case-by-case basis through the academic advisors. Some departments have academic probation for lack of research productivity. TAMU also tracks poor GPA for academic probation, but GPA is only one dimension of overall graduate student success.

Option 1: Keep the current situation and system.

Option 2: Departments adopt a mechanism to track when students are falling behind average time to degree and assess scientific and nonscientific reasons and take appropriate steps.

Option 3: COALS can mandate departments to provide data on the average time to degree and the steps taken to remedy this.

Recommendation: Annual evaluations shared with the graduate committee were again seen by the taskforce as the most crucial step in preventing and addressing students falling behind. We further recommend that annual assessments include goals, benchmarks, and action plans designed to enhance productivity and timely progress towards the degree and not only look at what has been accomplished. The documented procedure for faculty stop payment, dismissal including what steps, how students should be notified and improved should be in the graduate student handbook of each department. This protects both the student and the faculty member.

While OGAPs has dismissal policies, departmental policies can, if desired, be more stringent. Some departments have well documented policies and other departments may examine such policies and formulate their own. All departments should have documented processes for dismissing underperforming students based on productivity, progress, or assessment of knowledge. The graduate student coordinator, academic head and the supervisor are expected to participate in any such process.

Mental health and burn-out should be tracked and availability of services should be communicated frequently

The survey data shows that departments do not generally track mental health and burn out issues of graduate students. The task force believes this could be a problem if there are systematic issues, especially after COVID. Some believe that appropriate guidance is provided to those who need it, however the task force did not interact with anyone who has sought it, so our sample size was zero. Some feel the present practices are adequate, however, centralization has made these resources less front and center. Historically, graduate coordinators have been the first point of contact even though it does not fall under their job responsibility, but this differs by department.

Recommendation: Discussion and documentation on mental health by departments is needed. Annual report / individual development plan templates should include mental health. This template gives a framework for quarterly meetings/check ins with a mentee and mentor. Departmental handbooks and regular communication should make all resources known to students. The task force believes issues like mental health and burn out are best addressed by the University counseling services. However, towards this it can be a topic that can lead to stigmatization, since graduate students have little power. Faculty and administrators should proactively address and normalize these topics within COALS.

IV. Student Future employment

Target activities by departments and individual faculty to place graduates in great-fit jobs

Surveyed departments are typically involved in activities that provide students with help finding jobs after graduation. These activities range from sharing information about opportunities, providing recommendations and helping students connect with existing contacts, offering workshops, encouraging participation in internships, and organizing campus visits from industrial partners.

Several cultural/philosophical questions were raised regarding job placement. For some, the main emphasis of the department should be to prepare students as independent problem solvers. Preparation for a job search is the responsibility of individual students. In all departments, faculty members provide support in the form of recommendation letters and sharing of networking contacts. Hence, placement was not seen as a direct priority for faculty and a department should not be considered as an employment agency. Others welcome the idea of creative activities that would synergize with graduate training. Moreover, it was noted that faculty need to recognize that students often want to pursue careers outside academia. In other words, a student may follow paths that faculty are not familiar with (no quantitative data were collected, but the consensus seemed to be that a large fraction of COALS students pursue a career in industry or government instead of careers in academia). This point therefore raises the idea that, while “problem-solving training” should be a general approach that works to prepare students to any PhD-level jobs, faculty may have blind spots in terms of differences that may exist between the academic and industry worlds. Notably, departments do not seem to have a formal mechanism in place to assess whether the training provided prepares students to enter the workforce and to be successful in their careers. This points to areas of training that may constitute blind spots that, if not addressed, could put COALS PhD graduates at a disadvantage on the job market. The role played by successful job placement in regard to student moral, student recruiting, and University/College/Department prestige was not raised. Nonetheless, it is clear that these issues are interrelated.

Recommendation: The focus of PhD training programs is to prepare students intellectually and technically. Departments should be pro-active, engage with industry and non-academic partners with site visits, and develop job search workshops (e.g. resume writing, interview/communication courses). Departments should establish feedback mechanisms with non-academic partners. One example would consist of the formation of external advisory boards, possibly constituted of former students who have taken non-academic career paths. These advisory board members make recommendations based on the training and their experience in industry and government. COALS should support the formation of external advisory boards for each department with funds dedicated to site visits. Internships are seen as valuable, and COALS should seek to develop a competitive program that financially supports industry-internships by the industry, paying the student through COALS so that students do not drop off payroll and lose insurance benefits. Graduate Program Coordinators or similar positions within each department should be empowered to engage in job training/placement as part of their job duties, especially with COALS support.

V. Stipend levels, Fellowships, Offer Letters, Funding Commitments in offer letters, and “4-year packages”

Graduate Student Stipends and Graduate Student Teaching Assistantships in the College of Agriculture and Life Sciences

Our survey of stipend levels for master and doctoral students in the College of Agriculture and Life Sciences (COALS or College) revealed high variability in systems used by each department to support graduate students. Across the college, each department uses its own approach to managing a mix of principal investigator and department assistantships to support graduate students. Below we describe the variation among departments in how graduate students are typically supported as teaching assistants, the range of stipends, and disparities in pay.

Stipend levels for Graduate Assistants (teaching or research) should be transparent, and the issue of raising minimum stipends needs to be addressed

Stipends paid to GATs range from \$1450/month to \$2500/month for PhD students (Table v.1). We discuss graduate student stipends in terms of monthly amounts to avoid confusion about stipends paid during summer. An interesting finding was that two departments give doctoral students a raise when they advance to PhD candidacy: an incentive for timely progress. One department raises doctoral student stipends from \$1788 to \$2000. Another department raises stipends to \$1850/month in year 2 of the PhD program. Finally, another department pays all students \$2500/month for 12 months (\$30k/year) and allows students with external funding to request a raise, typically 10%, bringing the stipend up to \$33k/year (\$2750/month). The minimum pay for GARs is the same as for GATs and the PI may pay GARs more than the minimum. By university policy, tuition and fees are paid for PhD students, but not for master's students.

If the intent of GAR and GAT stipends is to enable a graduate student to live off their graduate student stipend, then it is clear that minimum stipends in some departments are too low. Besides the fundamental issue of living wages, low stipends create other unintended consequences. Low stipends make our programs less attractive to top graduate student recruits. Low stipends amplify the disparity in pay among graduate students both within and across departments. Low stipends also create challenges and conflicts in situations where it is not clear who is responsible for paying the differential between a low GAT stipend and mandated stipends in fellowships such as Merit Fellowships (\$2500/month).

Across the board, master's students are paid much less than PhD students, from \$125 to \$500 less per month, or 6% to 25% less depending on the department. Availability of funding for tuition and fees for master's students is also variable across departments. All departments indicated tuition and fees for master's students may be covered with funds controlled by the student's advisor, but this is not mandated. It is worth noting that master's students are paid less than doctoral students even if they have identical prior experience and GAT assignments. For example, a 1st year PhD student without a master's degree or teaching experience will make substantially more than a 1st year master's student with the same GAT assignment, even if the master's student has more professional experience. This is likely based on an assumption that M.S. students are less productive or under-qualified relative to any PhD student. However, we are not aware of any basis or systematic evidence for this belief.

At the forums on 13 and 14 May, 2021, questions surrounding stipends sparked considerable discussion. Some attendants at the forum were surprised by the low stipends paid by some departments. Some participants pointed out competitive students choose universities offering higher stipends and better multi-year packages. It was mentioned that a few departments set their rates by considering the rates at comparable universities, but we are not aware of any analyses used to support these decisions or how often these assessments are made. Some argued that the value of the degree is more important than just the financial angle, implying that it is okay to pay low wages for teaching and research - especially if paying more resulted in fewer graduate students. A

suggestion was made that teaching and research assistantships should clearly outline expectations of work expected, more granular than “20 hours per week”. Others pointed out that graduate students teaching labs and courses deserve a living wage. A couple of comments indicated that it would not be possible to implement significant raises for GATS with existing departmental budgets unless the number of GATs were reduced. This would interfere with delivery of the curricula and is a major concern.

Option 1: Continue a system by which departments set minimum GAT and GAR stipends without publicizing practices.

Option 2: COALS could provide a framework and forum for departments to discuss issues surrounding graduate student stipends on a regular basis, and disseminate policies, procedures, and expectations of work for each department in a graduate handbook.

Option 3: COALS could impose a structure on graduate stipends, specifically a reasonable minimum stipend that provides a living wage, along with the department’s and the college’s expectations for work.

Recommendation: Given the range of stipends for graduate students in our college who are performing similar duties, the issue of minimum stipends needs to be directly addressed. This will require sharing of information between departments and direct involvement in this issue by the college. For graduate students making low stipends this is an issue of fairness. For departments and the college, the outcome of establishing fair minimum stipends would likely improve all departments and all recruiting efforts. This recommendation should not become an unfunded mandate or unduly force departments to make sacrifices to their course offerings. Along with achieving more fair stipends and reducing the disparity in stipends across departments, the task force strongly recommends setting clear expectations for both GAT and GAR. For GAT, these expectations can be set by department and associate heads. For GAR, expectations are likely not defined in terms of working hours, but instead in terms of milestones and achievements, as determined by PI and thesis committee.

Summer Support

Systems and policies for supporting graduate students in summer are variable. Several departments offer 12-month assistantships and contracts. It is most common for PIs to transition GATs to GARs and pay them on their funded projects during summer. In terms of department policies, either tacit or explicit, most departments consider that graduate students will be employed as a GAR during the summer or as hourly student workers. Across the board, figuring out summer funding is up to the student and PI.

Option 1: Continue the system by which the PI and student plan for summer funding, while GATs teaching summer courses remain paid by the department.

Option 2: COALS could mandate summer stipends for graduate students. This option should be based on a plan that considers the vagaries in research funding over multiple years.

Recommendation: The task force recommends option 1, staying with the existing system, where PIs and students communicate with each other and plan for summer research funding. GATs teaching summer courses remain paid for by the department.

Disparities in stipends for equivalent duties are a large concern

To gather information on the degree to which disparities in stipends among student peers are addressed by departments, the task force asked for information on how departments manage, or ignore, different pay among graduate students, especially for equivalent duties and expectations. Stipends for graduate students can vary widely both among and within departments for graduate students performing similar duties. Most departments reported that workload is balanced for GATs when making teaching assignments. One department reevaluated

GAT workloads in 2021 to achieve balance and reallocate resources to ensure the appropriate number of GATs for the courses.

While all departments have a minimum stipend, several departments go further with more explicit policies, for example, "All students are guaranteed a base assistantship of \$30K plus full tuition/fees and a generous benefits package for at least 6 years, provided they remain in good academic standing. This is a 12-month appointment." That model matches or exceeds fellowship funding and addresses issues of "equal pay for equal work". One department informs students that their stipends "are all different based on their funding". Others defer to the PI to deal with disparities in pay among graduate students under their direction. In some departments, stipends are standardized, but students who are teaching as a match for a Merit fellowship may get paid more (see fellowships and offer letters below). Finally, one department referred to the minimum pay allowed, with the implication that the minimum pay is sufficient even if there are disparities in pay. One department reported that so far there have been no complaints, and another responded, "This [pay disparities] is an ongoing issue that needs to be resolved." At the forum, a graduate student commented, "Regarding difference in graduate student pay... we have to remember that \$200 is a large fraction of your income when you're only receiving \$1500 per month."

	Minimum Master's stipend	Minimum PhD stipend	Monthly pay difference M.Sc. and Ph.D.	% Diference Master's and Ph.D.	Monthly difference from a \$30k/year stipend
Minimum among depts	\$ 1,300.00	\$ 1,450.00	\$ 125.00	6%	\$ 1,050.00
Maximum among depts	\$ 2,042.00	\$ 2,500.00	\$ 500.00	25%	\$ -
Median among depts	\$ 1,500.00	\$ 1,900.00	\$ 200.00	12%	\$ 600.00

Option 1: Accept that some graduate students make more than others in the same department even if they have the same workload and are in the same program.

Option 2: Reduce disparities in pay by raising minimum stipends for GATs and GARs paid within a department.

Recommendation: The task force recognizes there may always be differences in how much a graduate student is paid within a department. For example, a student on a Ford Foundation Fellowship or NSF Fellowship will have a bigger stipend than most. The problem of disparity in pay arises when graduate students that are doing the same work do not get paid the same. To address this, the task force recommends Option 2, raising minimum stipends for GATs and GARs to a level that makes differences in pay easy to understand by everyone. The policy on stipends should be available. At the same time, departments should make explicit offers to graduate students that include workload requirements and expectations.

Department and principal investigator support Dr. Dionel Avilés '53 and Dr. James Johnson '67 Fellows is working but Merit Fellows approach needs to be revisited by COALS / TAMU

Recipients of external fellowships like Ford Foundation, NSF-GRFP, and other competitive fellowships are paid more than peers because they won an external competitive fellowship. It is important to note that when these fellowships end, the student's fellowship is over and s/he receives department and PI support at the

departmental rate. In other words, gets the same pay for the same work as the other graduate students after the fellowship.

Recipients of Dr. Avilés and Dr. Johnson Fellowships receive a \$20k/year fellowship for 4 years with a guaranteed match in the form of a 25% FTE GAT or GAR. With this arrangement, Avilés-Johnson Fellows are paid for their teaching at the same rate as other GATs and GARs in their department.

Most departments indicated the PI is expected to cover the match for Avilés-Johnson Fellows, but the answers also indicated it is not unusual for Avilés-Johnson Fellows to serve as GATs. So long as a 50% GAT or GAR is at least \$2000/month, Avilés-Johnson Fellows earn ~\$28k/year over 9 months when teaching one lab section (25% GAT).

Option 1: Retain the current arrangement for Dr. Avilés and Dr. Johnson Fellowships.

Recommendation: The funding system for Dr. Avilés and Dr. Johnson Fellowships seems to be working and we recommend Option 1 for the Dr. Avilés and Dr. Johnson Fellowships.

The system for Merit Fellowships is different. Merit Fellowships have caused much consternation among departments and PIs because of the financial commitment during years 2-4. Merit Fellows receive one year of stipend amounting to \$2500/month (\$30k/y) with a written guarantee of \$2500/month for an additional three years. Only one department pays a minimum stipend of \$2500/month. The minimum stipend in more than half the departments is less than \$2000, >\$500/month less than a Merit Fellow's guaranteed stipend (Table v.1). Thus, for departments with low stipends, Merit Fellowships are problematic for departments and PIs. This difference in stipends produces a situation where in years 2-4 after the \$30k funding, Merit Fellows usually make significantly more than their peers just because they got a fellowship that paid for one year.

The Merit Fellowship Program is beneficial because it attracts top students that benefit the Fellow, the PI, the department, and the college. If there are barriers to having Merit Fellows, this is a problem for COALS and GPS. When asked how departments satisfy the requirements for Merit Fellowships, 10 departments indicated it is the sole responsibility of the PI. One department indicated it will help with finances when necessary. One department reported that Merit Fellowships "were a significant challenge, and they were trying to figure it out". One department stated they simply do not nominate students for Merit Fellowships [because of the financial commitment].

The system of supporting Merit Fellows raises questions:

- Is the Merit Fellowship essentially a \$30k supplement to the PI's grants?
- How is it justifiable that a Merit Fellow earn \$2500/month while working as a GAT or GAR during years 2-4 while other GATS and GARs make 20-35% less for the same workload?
- Who is responsible for the pay differential when a Merit Fellow is working as a GAT?
- What happens if a PI does not have the grant money in years 3 or 4?

The above questions are taken seriously by faculty who are thinking of nominating recruits for Merit Fellowships. Few can *guarantee* they are able to pay a graduate student \$30k/year 3 or 4 years from now. It is because of these questions that some PIs and at least one entire department simply do not nominate students for Merit Fellowships. This seems to be working against the incentive to recruit top students. One of the major goals of Merit Fellowships is to be a tool to attract top students that otherwise might be lost to peer universities. To our knowledge there has been no analysis that shows the salary level in years 2, 3, or 4 *per se* has been the driver of recruitment and retention. It is just as likely that a guarantee of 4 or 5 years of support is the attractor of top recruits. Especially if minimum stipend levels are appropriate.

Option 1: Keep the current system for the Merit Fellowship Program in place and let faculty and departments struggle with support for Merit Fellows.

Option 2: Make it clear that the purpose of the Merit Fellowship is to help the PI recruit a good student, and essentially save \$30k from their grant. In other words, if support of \$30k/year in years 2,3,4 is expected to come

solely from the PI's funds, then it should be made clear that the Merit Fellowship largely serves as support to the PI.

Option 3: Departments and the College develop an improved strategy to attract and support Merit Fellows.

Option 4: Raise GAT stipends to a level close enough to \$2500/month that the difference between Merit Fellow pay and non-fellows does not cause conflict.

Recommendation:

We recommend the college and GPS review the requirement that Merit Fellows make a specified dollar amount in the out-years, taking into account the information we have gathered. We fully support the 4-year offer to Merit Fellows. We recommend that Merit Fellowships be treated as the recruiting tool they are meant to be and offered the outstanding fellowship of \$30k for one year, with a guarantee of 3 or 4 additional years of support at the department level. This modification should result in more nominations from our college. If minimum stipends for 50% FTE GATs and GARs are raised, as we have recommended above, the offer will still be attractive and competitive. The college should also conduct an overall assessment of how Merit fellowships have worked. This could be based on a survey that includes past Merit fellows.

Multi-year Offers to Incoming Graduate Students

Texas A&M University and our college is encouraging 4- or 5-year offers to recruit top graduate students. Our survey revealed 7 departments make 4- or 5-year offer letters and 6 departments do not. One department guarantees two years of support, and the remainder is the responsibility of the PI. One department only makes 4-year offers to top-ranked applicants. Another department offers a GAT for year 1, then requires commitment from the PI for 5 more years.

At the two forums held on 13 and 14 May, 2021, several faculty members expressed angst and concern over making signed commitments to students for 4 years. In short, it is a tall order for a PI to have guaranteed funding for 4 years for multiple students, especially considering the diversity of fields of research in the college. Some faculty members said they might prefer to have a postdoc rather than committing four years of funding to an incoming graduate student; feeling that hiring postdocs would be much more productive and without the long-term commitment. This works against most of our college and departmental goals.

Other comments revolved around the complexities of multi-year funding. A professor said, "I treat my students as a business partner and show them what the costs are and what the resources are. They keep track of costs and help me with the proposal writing process, that gives some buy in and critical training I think." Another insightful comment brought up the idea of shared responsibility with the student: "...the easiest place to start is by removing this idea of "ownership" of the student by the PI. PIs are paying, but they are not the sole warden of a student's success."

Option 1: Allow departments to determine if they want to make 4-year offers. Departments should track how their students have been supported throughout their time as graduate students and use these data to formulate risk assessments for graduate student support.

Option 2: The college could mandate that all incoming graduate students receive 4-year offers at the department level of support through a combination of GAR and GAT with a COALS backstop

Recommendation: It is clear that the best practice for our graduate programs is to offer 4 or more years of support. Doing so is key to attracting the best PhD students. Many faculty and departments remain concerned that they cannot commit to these offers because of uncertainty of the future when these are treated as contracts. We strongly recommend COALS and the University create some mechanism of insurance and backstopping these situations to be used on a case-by-case basis. Such a policy should also prevent PIs and departments from gaming what should be a support system for unusual circumstances. Multi-year offers should

make it clear the support package includes a mix of fellowship, GAR, and GAT funding. These offers need to be linked to expectations for satisfactory progress as laid out in written policies. Departments should foster mentoring of students in grantsmanship and allow PhD students to have shared responsibility for some of their support during their years in graduate school.

VI. Allocation of Teaching Assistantships and Graduate Student Instructors-of-record

Graduate Teaching Assistantships

Naturally, the number of teaching assistantships (Graduate Assistant Teaching; GAT) varies among departments, based on enrollment, number of lab courses, and historical institutional inertia, *along with other determinants*. Of the 15 departments, one reported it does not have any GATs -- all its graduate students are supported on research (GARs). Another reported the number of GATs was "variable". In another department essentially all students are GARs but may shift to GATs when the student is assisting a lab class.

In descending order, eight departments reported the number of courses with GATs was: 25; 22 (with an additional 11 undergraduate graders); 16; 10; 6; 6; 5; 3. Most departments were able to provide a list of courses that carry GATs (three departments replied this information was available but did not provide it). We noted that because of restructuring of departments, all the courses carrying GATs may not have been listed. Based on the reporting, it seems departments count GATs as either the number of sections that use a teaching assistant, the number of courses that employ teaching assistants, or the number of assistantships per year or per semester. As such, it was difficult to determine how many individual students are employed as 50% FTE GATs in a typical year.

Across the college almost all GATs are 50% FTE appointments (20 h/week). Most departments have zero or one 25% FTE GAT, but one department uses eight 25% GATs as the match to support fellowship recipients. Other departments also reported that 25% FTE GATs are usually only used to match fellowships for PhD students. In several departments when a master's student is employed 25% FTE, additional funding for the student is up to the PI (major advisor).

The allocation of teaching assistantship supporting funds to departments by COALS should be made transparent

Departments in the college have different needs for GATs because of enrollment and course offerings. Moreover, departments' needs and demands for GATs change over time. The task force understands that in some departments it is common to use GATs as graders, where in other departments GATs only serve as laboratory teaching assistants who lead lab sections. Budgetary constraints in some departments limit use of GATs to lab sections, where in others there are funds for GATs to serve as graders for one large course. Thus, it seems the use of GATs and the support for GATs may not be equal among departments across the college.

It remains unclear to the Task Force and all participants how the college makes decisions for GAT allocation to the departments. To what degree is historical inertia (i.e., "We've always done it this way and had GAT funds.") By what process does the college assess departments' needs for GATs? How often does the college re-assess needs for GATs among departments?

Recommendation: We believe the college should make the formulas for all graduate dollars clear and transparent to all departments. How often is allocation to departments re-assessed, and by what process? This is critical for faculty and departmental leadership to work to improve their graduate dollars and therefore help COALS objectives.

Allocation of Teaching Assistantships: Roles of Department, Instructor, and Qualifications

How GATs are allocated within departments varies from decisions made by the Associate Department Head and Department Head, decision by committee, or decision by course instructor. Of the 15 departments in the college, 9 have written policies for qualifications and allocation of GATs. Course instructors may give input and make requests in assigning GATs in all but 3 departments. Instructors and principal investigators can request or

recommend individuals to serve as GATs. One department included that the instructor may reject applicants as well as make recommendations. Departments differ in how GATs are allocated because of the diversity of disciplines, courses, and instructional methods across departments.

Option 1: Continue a decentralized department-by-department system of policies and procedures related to GATs.

Option 2: COALS provides a forum for departments to discuss best practices for allocation of GATs.

Option 3: COALS imposes basic guidelines on coordination of GATs to ensure fair and just allocation of departmental resources.

Recommendation: Departments should share how they allocate GATs so that best practices can be seen and used by all. Given differences in how GATs are allocated and used in course instruction, the task force believes sharing of policies and practices can lead to improvements in departments and the College as a whole. Additionally, making these policies public (e.g. in a college-wide graduate handbook) would improve transparency and allow incoming graduate coordinators and faculty a better idea of what is possible. This exchange of information would also allow better and more transparent evaluation of changing needs for GAT positions across departments.

Graduate students are very infrequently the instructor of record across COALS graduate programs

Graduate programs administered within COALS departments differ with respect to the assignment of graduate assistants as instructors of record (IOR) for various undergraduate and/or graduate courses. However, departmental procedures for the assignment and funding of graduate teaching assistantships do follow some common criteria, such as the requirement for a student to possess the M.S. degree in order to be named an IOR, per university policy.

The majority, but not all, of departments responded that at least on rare occasion (including when a critical teaching need demanded additional instructors necessarily drawn from graduate students), graduate assistants are able to hold IOR status for various courses. In some instances, departments assigned IOR to late-stage PhD students in instances where faculty are not available (e.g., on FDL, Fulbright). The practice is applied on a case-by-case/as needed basis. All GATs serving as IOR were reported by departments to be required to possess at least the M.S. degree for departments assigning graduate students as IOR for departmental courses.

A large majority of departments indicated that never more than 2 courses, or alternatively never more than 5% of semester-offered courses, were routinely taught by graduate student IORs. However, one department reported graduate student IORs could teach as high as 20% of semester-offered courses. Additionally, one other department responded that sometimes due to extraneous factors (i.e., multiple faculty retirements depleting pool of available faculty to teach for a period of time), more than the 1-2 courses per semester may be taught by graduate students functioning as the IOR.

Recommendation: The task force recommends departments continue the practice of utilizing PhD candidates or M.S. degree-holding GATs IOR only when faculty are not available because of approved commitments. This allows departmental graduate program administrators to manage course offerings and fulfill teaching needs as needed with GATs in IOR-type positions. No pattern was identified where graduate students were routinely serving as IOR, but it remains a useful option as a backstop in rare cases. The task force recommends that graduate students only be employed as IOR in the rare cases when no faculty are available to serve as the IOR. In cases where a graduate student may need to stand-in for a faculty member, departments should have a transparent process for selecting the Instructor and need to pay them at the appropriate level - as Instructors would be (except on a 30% effort if teaching one 3-hour course, not a 100% effort). Graduate students serving as IOR's should not be paid as GAT's.

No departments identified a problem with “ghost instructors” but may not have awareness of this situation.

Ghost Instructor refers to use of graduate students or other guest lecturers delivering the majority of course content. Ghost instructors are not listed as instructors and are not appropriately remunerated for their teaching. Departments reported knowledge of faculty wishing to give graduate students opportunities to improve teaching skills, and allowing graduates to provide one or two lectures per semester for this reason. However, it can be viewed as problematic if a faculty member is relying on ghost instructors for their course. Fortunately, we did not identify ghost instructors as a systemic problem. However, there also does not seem to be a system that would track use of graduate students and guest lecturers to the extent that would qualify as a ghost instructor. Professors act with considerable autonomy, and departments may ignore use of graduate students as “ghost instructors”. College guidelines on minimum teaching load per academic semester and policies about graduate student abuse align with the practice of discouraging ghost instructors and non-credentialed instructors.

Recommendation: We recommend that departments be made aware that ghost instructor situations can arise and this practice is discouraged. Graduate handbooks should include an explanation of what ghost instructors are so that students can understand if they are being used as ghost instructors and know what to do about it. The task force recommends the college provide departments with a guideline that can be adopted by departments to provide expectations of graduate students, supervising faculty, and graduate program advisors/leadership. This will provide for a standard approach across all departments to use in determining whether an event of ghost instruction has occurred and what administrative responses are due. Policies should be in place for disincentivizing ghost instruction.

Summary

Across the college, departments do not regularly assign graduate students as course IOR except on a case-by-case/as-needed basis, and only amongst Ph.D. degree students. Departments generally prefer not to assign graduate students as IOR for various courses and resort to this teaching resource only when necessary

VII. Financial sustainability of graduate programs?

The overwhelming majority of town hall comments were concerned that financial sustainability of graduate programs should not be a consideration of the college. The task force agrees that although a graduate program should clearly not be hemorrhaging funds, the departments, who have the most knowledge of their graduate program and the long-term trajectory of such programs, should make this decision based on multiple factors beyond simply financial sustainability. Nevertheless, to make recommendations and provide options to address financial sustainability of graduate programs, as tasked, we included several questions that graduate coordinators and business offices answered.

The source of graduate students funding varied dramatically by department

From our survey results there were approximately 581 PhD students reported across the college by 13 departments (min = 14, max = 90, median = 41). Of these, 233 GARs and GATs were paid by departments (min = 4, max = 26, median = 20). Another 71.5 PhD students were paid by an out of department scholarship (min = 0, max = 40, median = 3.5). Surprisingly, 69 PhD students were self-funded, (min = 0 or 1, max = 19, median = 5) although for at least one department this was unknown. This leaves approximately 160 PhD students unknown in terms of funding source. One possibility is that these students are on individual faculty grants. Another possibility is that some students are counted across departments and that the college has less than 581 PhD graduate students. Indeed four of the departments count interdisciplinary students in their totals. However, this number of 581 PhD students was less than what is available on [https://dars.tamu.edu/Student/Preliminary-Enrollment-\(1\)](https://dars.tamu.edu/Student/Preliminary-Enrollment-(1)) (666 – F20, 648 – F21), but that metric included all 15 departments.

From our survey results there were approximately 292 M.S. students reported across the college by 13 departments (min = 2, max = 55, median = 19.5). Of these, 114 students were paid by departments (min = 0, max = 29, median = 6). Another 163 were self-funded, (min = 0 or 1, max = 35, median = 10) although for one department self-funding was unknown. This leaves approximately 15 students unknown in terms of funding source. One possibility is that these students are on individual faculty grants. Another possibility is that some students are counted across departments and that the college has less than 292 M.S. students. When asked how many of these students are considered “in the department” 167 were accounted for, although it is not clear that every department understood the question. However, this number of 292 M.S. students was far less than what it says on [https://dars.tamu.edu/Student/Preliminary-Enrollment-\(1\)](https://dars.tamu.edu/Student/Preliminary-Enrollment-(1)) (408 – F20, 440 – F21), again potentially due to only 13 department responses.

The discrepancies in these numbers and across departments make it hard to understand where differences between departments lie, and also if some students have gotten lost in the process.

Option 1: Accept the numbers of students and their source of funding is unknowable and do the best we can.

Option 2: Develop a system of reporting on funding sources for students. This might require more bureaucracy and administrative paperwork. It is also possible these numbers are already being reported differently into different systems.

Recommendation: Evaluate how graduate students are currently being reported each semester. This too could be a component of the annual review, with only annual review reporting students are counted.

The faculty to student ratio varied dramatically by department

From our survey results, when asked how many faculty members are in the department, we have little clarity. Only six departments answered this question for a total of 177 faculty. However, when asked about Tenure Track Faculty, 11 Departments responded with 189 faculty (min 6, max 40, median 11). For graduate faculty adloc'd and promoted by the Department, 8 Departments responded that there were 259 faculty (min 10, max 84, median 27). As for the ability to chair or co-chair students there were 297 faculty across 9 Departments (min 10, max 84, median 34). It is important to highlight that Tenure Track faculty are not responsible for all of the

graduate student training, and that the number of faculty promoted by departments is similar to the number who are able to chair or co-chair students. Some Departments appear to be much more aggressive than others adding non-tenure track members to the graduate faculty which likely increases the financial viability of their programs. None of the numbers obtained correspond to Texas A&M's faculty COALS count of 256 <https://dars.tamu.edu/Faculty/files/OSU-Faculty-Salary-Report-Fall-2020.aspx>

Department expenditures on graduate students remain unclear

The estimated average research expenditures for graduate student stipends and tuition were highly variable and the data obtained were not comparable. Two departments estimated spending around \$2 million, the others answered per student, which ranged from \$32,000 for an M.S. to \$43,000 for a PhD.

Similarly, it was not clear how many semesters a PhD student is funded by research and fellowships. The smallest was 2, the largest was 10 semesters. However, although multiple departments fully fund students for the duration of their studies, one department's average is 6.5 years, meaning 13 semesters would be funded on average for that department. Thus, it can be confidently said that there are two main components to the cost of graduate funding from start to graduation, one is stipend and the other is length. Both differ by departments.

Departments rely on TAs to teach and increase graduate numbers but to different extents

In terms of TAs there is again very wide variability between departments. In some departments all students are required to serve for two semesters as a TA, other departments cap the number of TA semesters to 8 or 9, while one department does not have TAs.

When asked about income from the departmental graduate program, there seemed to be no consistency on mechanisms of tracking or reporting. Two departments stated they did not know, while others did not respond, which we assume to mean that they did not know. One department stated clearly they received "\$519,105 in differential tuition funds; \$296,744 in University Authorized Tuition—This may be calculated using weighted credit hours; it is also used for departmental training. We also receive \$182,476 to help support our graduate student stipends." One department receives \$50k another \$100k as a TA budget from COALS. One mentions only \$12,388 for graduate enhancement funds. One department gets \$200/semester credit hour for distance and continuing education. This made it impossible for the task force to understand and compare departments TA support and how that effects their financial viability.

Option 1: Accept that this is a messy system with poor data and each department has it figured out how best to maximize value for its students.

Option 2: COALS provide a public accounting of funding incoming to each graduate program each year while departments provide a public accounting of their TA stipends and number of students on TA. This would increase transparency.

Recommendation: Option 2. Faculty, staff, and students could work to increase funding for TAs in their departments if they knew how and why this funding was allocated in the way that it is.

Departments believe that they would have more and better graduate students if there was a sustainable source of funding from COALS

University requirements for four years of funding provide substantial anxiety among both PIs and departments that typically fund students only on three-year project grants. Past college fellowship programs were regarded favorably for commitments to supporting students (such as in "high-priority areas" a few years back). Money for assistantships was considered a high priority for how COALS can help maintain financial sustainability of

graduate programs. At least one department prefers a fixed amount based on needs, while most others seemed to prefer assistantships, backstopping grants and support beyond stipends and tuition.

Departments look to COALs to provide equitable support for assistantships

Departments do not feel that TAs and assistantships are provided equitably and transparently across the college based on needs. In some cases, faculty are using GARs from grants to help TA courses but funding agencies do not cover these costs. This concerned the committee.

Departments look to COALs to backstop PI's grant funds

Departments continue to provide a TA budget, graduate enhancement funds, continue Excellence Fellowship and other College Fellowship programs and possibly provide graduate student bridge funding when a PI grant ends and they don't have funds to support the student. One mechanism would be to return discretionary budget dollars to the department so that the department can support research faculty in maintaining viable programs rather than cannibalizing graduate student positions.

Support beyond stipends and tuition are also needed to maintain graduate program excellence.

One department thought that support for student recruitment, student conference travel and other program operating costs would be most helpful. Another department thought covering student's tuition, fees and medical would be the most helpful because not all funding agencies cover this.

Option 1: Keep the current fragmented system and do not publicize it.

Option 2: COALS makes the funding for graduate student training research and teaching public and transparent. Invest in faculty shared governance models for how such funding is distributed and managed at the College and department levels.

Option 3: COALS administration dictates each department's graduate student funding support and how it is distributed within the departments.

Recommendation: The task force recommends setting up a system of shared faculty-governance made of Departmental representatives as an advisory committee to recommend the best way to use graduate dollars (recruitment, bridge funding, professional development of existing students, TA's, etc.) at the college level and to make recommendations at the department level.

VIII. Other ideas for improvement

Departmental survey respondents largely believe that their departments are doing well, but few have or use data to objectively evaluate this

Survey respondents (many graduate coordinators or associate heads, depending on department) mostly believed their departments were doing well in graduate education. A few were enthused about changes they had implemented in the last few years and excited about the progress. A few had new coordinators who were unsure how their departments were doing. To justify and support positive feelings, some relied on national rankings to determine how they were doing, others used demand from industry and high employment rates of their M.S. and Ph.D. graduates. Some coordinators used graduate stipends, publications / presentations and happiness as key metrics. Some coordinators had concerns that their facilities were not up-to-snuff for graduate training. One department was concerned that different expectations for COALS/Extension/Research are resulting in poor mentoring, low publications, and demoralization of their graduate students.

Recommendation: The task force recommends each department identify their own key metrics of “success” in graduate training and publicize these among faculty, students and in the graduate student handbook. These should include aspects of outcomes (e.g. job placement, awards, citations, national rankings), outputs (presentations, publications, grant proposals written), morale (happiness, satisfaction), and competitiveness (stipends compared to peers, ability to attract the best students, work life balance). Progress on these should be publicized to the department and department stakeholders annually. The college should provide staff and automation to assist.

Other improvement ideas

Through an open-ended survey question, department graduate coordinators were asked what other barriers they were experiencing and/or ideas that they had for improvement.

Improve automation of data collection, record keeping, and report generation

At least one department believed they are asked for different reports from multiple entities that require similar sets of measures. A standing graduate education committee on graduate education could be useful to identify all reports requested of departments each year and how to streamline these.

Increase tenure-track faculty able to serve as graduate chairs

One department said their barrier is that there were not enough TT faculty available to serve or willing to serve as graduate chairs.

Recommendation: The task force discovered through our survey results that other departments have handled this by increasing non-TT faculty as graduate chairs. Based on survey results (section 7 above), as a college, we have at least 297 faculty able to serve as chairs (189 TT). We have 873 graduate students across departments, suggesting each faculty is mentoring 2.9 (or 4.6 if TT only) graduate students. This varies substantially from department to department. It is unclear what the ratios at our peer universities are.

Expectation of student's productivity are not in line across agencies

Different agency (TAMUS, AgriLife Research, AgriLife Extension, Forest Service, TVMDL, etc.) expectations for productivity differ. One department felt that we need to bring productivity/promotion standards for all agencies into alignment.

Recommendation: The task force believes this is primarily a “within department” issue that will be best solved by having a standing committee on graduate education that meets regularly and a graduate handbook that sets expectations.

Funding for graduate students was consistently listed as one of the biggest barriers

As discussed in the financial stability for graduate students, having a lack of funding has been consistently listed as one of the biggest barriers by departmental survey respondents. Also, a lack of graduate teaching assistants has been problematic for multiple departments. The need for making multi-year offers has pushed some professors to resort to only master's students and/or postdoctoral scholars in lieu of doctoral students. The stipends of COALS assistantships are lower than those across TAMU and peer institutions, which has caused us to lose good candidates to other institutions. This barrier in-turn causes students to need more financially. Graduate coordinators believe financial support is needed from the University and College.

Recommendation: The task force recognizes that more money might not always be possible from the University and College. Making transparent the amount of money available and encouraging faculty governance for how it is distributed would likely increase equity and morale as well as improve our departmental planning.

Out-of-state tuition is a barrier for self-funded and distance graduate students

Student numbers would likely be increased if more students could obtain in-state tuition, specifically those who are self-funded and not Texas residents. For self-funded students this could potentially cause inequality since two students, one on assistantship and one not, would be paying different amounts. However, for distance students and those off campus they are not able to take advantage of the facilities or activities at Texas A&M and so a tuition break (such as in-state) could both increase student numbers and could do so without creating additional inequity. Distance education is a potentially new source of revenue for COALS and for departments. The HORT/SCSC distance Plant Breeding M.S. / Ph.D. is an opportunity other departments could mimic. The request that these students be charged in-state tuition seems reasonable as these students do not use on-campus services. However, out of state tuition is mandated by a state house bill and not something the Graduate school or COALs has any control over.

Recommendation: The University and COALS should work with state legislatures to reduce this barrier to self funded student's as well as others in distance education degrees since this issue is caused by a state mandate.

Program coordinators need more training and better coordinated support

At least one graduate program coordinator who identified as being a new employee in the role, indicated there were numerous activity deadlines due in a short period of time. The lack of program coordinator training and resources available to complete these activities was a barrier. The administrative component of a graduate program has an advising component and many non-advising duties. Similarly, a new barrier was created by splitting the many administrative duties among several staff members, which made the management of the program cumbersome. A single point of contact for advising and programmatic support is ideal.

Recommendation: COALS should offer training or at a minimum a website with resources to help individuals new to the role. COALS and departments should work on incorporating program coordinator information into departmental graduate handbooks to make transitions easier.

More institutional support for recruitment and retention of URM students

Departments believe that they can always use more institutional support for recruitment and retention of under-represented minority (URM) students.

Recommendation: COALS should encourage and support URM coordination in recruiting. This could be that each department has a point person for a few different schools that they work on behalf of the college (e.g. leverage existing relationships to broaden college-wide coverage) or have one or two professionals at the College level who are dedicated to recruiting and retention of such students across all departments.

More faculty to ensure viability of programs and TA opportunities for graduate students

Many faculty retirements or departures are occurring, minimizing training capabilities for graduate students and teaching; they have not been filled. There is also a need for more opportunities for students to teach.

Recommendation: Transparency and faculty governance would minimize these concerns. There are finite pools of funding and these decisions can be made across faculty and departments.

Time to graduation should be improved

Time to graduation, especially at the doctoral level, is a concern. In most instances, the reason(s) are student-driven; however, sometimes, professors should assume some responsibility. Measures have to be taken to identify at-risk students early to propose remedial interventions.

Recommendation: Encouraging departments to develop metrics of success in graduate education and applying these to annual reviews of students seems likely to improve time to graduation; however the task force is aware of no objective data to confirm this. A standing committee on graduate education could help provide long-term guidance and evidence-based recommendations.

Research funding for students

Research funding for students is available from many sources and graduate students should be mentored in applying for all sorts of opportunities. Grant writing by students improves all aspects of graduate education and job marketability. Demonstrated ability to win grants is valuable for early career scientists on the academic job market.

Recommendation: PIs, departments, and the college should broadly advertise programs that students are eligible to apply for. If COALS financial resources for graduate education is made transparent and involves faculty governance of a standing committee, they could better evaluate if such a program would be more effective for recruitment and retention than increasing stipends, TA-ships, or travel funding.

COVID-19

One department believed that they were making steady progress on graduate education under the previous program coordinator. Unfortunately, Covid-19 delayed or halted any significant progress in this area. They are just beginning to implement projects that were developed and planned pre-covid and they are now able to utilize information gained from ongoing conversations with faculty and graduate students.

Recommendation: Having an up-to-date graduate handbook with the planned direction for graduate education within each department would be useful. COALS providing flexibility for resiliency is critical.

The Task Force background

To advance the [goals of the new Texas A&M Graduate and Professional School](#), support progress towards the key performance indicators, and to address numerous concerns brought to administration by faculty, a task force will be charged with developing an options report for the College that addresses policies and administration of graduate education including minimum stipend levels, funding commitment in offer letters, publication expectations, teaching assistant allocations/assignments at the college and departmental level, and graduate students serving as course instructors.

The Task Force Charge

The College Policies for Graduate Education Task Force will develop an options report with recommendations for the College that addresses college-level policies and administration of graduate education. Examination of peer data and benchmarks from other AAU and land-grant universities should be an important component in the process. Areas of concern are student recruitment, student success and productivity, student time to degree, stipend levels — including minimum stipends and funding commitments in offer letters — policies related to teaching assistantships and their allocation, graduate students serving as instructor of record, and the overall financial sustainability of the graduate programs. The committee is encouraged to recommend new and/or improved college-wide policies that will improve all of our graduate programs, as well as best practices that may be specific to a subset of disciplinary programs (e.g., life sciences, social sciences). The committee is also encouraged to consider making recommendations related to financing of graduate programs, including the size of our doctoral and master's programs, the overall value of supporting master's programs that do not generate income and/or fill a workforce need, and innovative solutions to increase the financial sustainability of the graduate programs.

The Task Force Team

NAME	Role	UNIT	EMAIL
Seth Murray	Fellow	SCSC	sethmurray@tamu.edu
Patricia Klein	Ex officio & Provide Staff	HORT	pklein@tamu.edu
Jean-Philippe Pellois	Member	BCBP	pellois@tamu.edu
Robert Strong Jr.	Member	ALEC	r-strong@tamu.edu
Matt Taylor	Member (Ag Caucus)	ANSC	matt_taylor@tamu.edu
Jamie Foster	Member	Corpus Christi Research & Extension Center	jamie.foster@ag.tamu.edu
Lee Fitzgerald	Member	ECCB	lfitzgerald@tamu.edu
Girish Agarwal	Member (Distinguished Prof.)	BAEN	girish.agarwal@tamu.edu
Bruce Hanik	Member (Grad Student)	RPTS	bhanik@tamu.edu