Summary

The College of Agricultural Sciences and Natural Resources (CASNR) underwent its last external review July 16-17, 2012, after which its dean, Caula A. Beyl, was reappointed for an additional five-year term. In June of 2018, the college was renamed the Herbert College of Agriculture to recognize and honor the endowment of Jim and Judi Herbert, generous supporters of the college and the University of Tennessee. This external review will serve as a timely and holistic means to do the following:

1. Review progress made in the last five years in enrollment growth, efficiency, advising, programs, and student development,
2. Serve as a basis for potential reappointment of its dean,
3. Provide broad-based input emerging from the UTIA strategic planning process just completed to develop a new strategic plan for the Herbert College.
4. Define the College’s role in supporting the strategic plans of both UTK and UTIA,
5. Reaffirm the College’s commitment to experiential learning in support of the university’s Quality Enhancement Plan,
6. Identify areas to strengthen and opportunities to develop in the upcoming five years, particularly in view of the additional resources provided by the Herbert endowment.

The feedback received at the conclusion of this external review will be used to help shape Herbert College 2025, a new strategic plan for the college.

Note: Most of the events and data contained in this document occurred while the college name was still the College of Agricultural Sciences and Natural Resources and so is referred to as such with the acronym CASNR. The college is referred to as the Herbert College of Agriculture or the College when discussing those data or events that occurred after the change of name in June.
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Mission and History

The mission of the college is the following:

_The Herbert College of Agriculture educates and prepares students for leading personally-satisfying lives as productive members of society with emphasis on careers in the agricultural, environmental, life, and social sciences._

Agriculture has been a part of the curriculum at the University of Tennessee since 1871 and has been offered under different structures including the Department of Agriculture, School of Agriculture, College of Agriculture, College of Agriculture and Home Economics, and in 1991, the College of Agricultural Sciences and Natural Resources (CASNR). In June of 2018, the college underwent its most recent name change to the Herbert College of Agriculture in recognition of the generosity of Jim and Judi Herbert. Caula Beyl joined the college as dean in 2007. At the time, the college was under the leadership of Mary Albrecht, Associate Dean, and she reported to the Vice President of the University of Tennessee Institute of Agriculture, Dr. Joe DiPietro, who had assumed his position only one year before that. Dr. Beyl was the first dean of the new leadership team hired by Dr. DiPietro. When she was hired, she was given three primary tasks: 1) increase the enrollment to more than one thousand undergraduate students, 2) raise the visibility of the college across campus, and 3) bring in new revenue to support programs and students. When the College underwent its last external review in 2012, recommendations included enhancing communication, strengthening graduate education, strategizing with the development team, and clarifying our expectations for experiential learning as part of the CASNR student experience (Appendix A).

Personnel and Organizational Chart

Since the last college review, there have been some changes in the dean’s staff. Approximately three years ago, Amy Stover, assumed the role of CASNR Budget Director, a level of authority consistent with other colleges at the University of Tennessee Knoxville (UTK) and the other deans’ offices within UTIA. The additional oversight of budgets and active management of anticipated budget expenditures has aided the College to be more efficient with the resources allocated to it and facilitated longer term planning.

The College still uses faculty for the roles of Coordinator for the Undergraduate Research and Honors Programs (Dr. Kim Gwinn) and Coordinator of Technology for the Herbert College (Dr. Joanne Logan). The Coordinator of Study Abroad and International Programs, Dr. Adam Willcox, assumed the role when Dr. David Ostermeier retired and he serves as a member of the UT Programs Abroad Committee, charged with reviewing all new UT study abroad courses; was appointed as Global Studies Faculty Associate in 2017; and was also invited to and serve on three ad hoc committees in 2017 (undergraduate Fulbright through the UT Office of National Scholarships and Fellows, the external faculty review panel for the UT College of Architecture and Design faculty-led programs, and a UT Programs Abroad Office search committee).
With the formal adoption of the Advising 2020 plan by the university, the College received central funding for the hiring of three professional advisors initially and in 2018, received authorization to add a fourth professional advisor. The college has long held a tradition of faculty advising and the addition of professional advisors to aid faculty frees them to engage in more meaningful discipline advising and mentorship. Two of these professional advisors have been placed in Animal Science and one in Forestry, Wildlife, and Fisheries. Placement of the first three professional advisors was predicated upon enrollment and projected growth with the fourth advisor assigned to Biosystems Engineering and Soil Science and just hired in August of this year. This professional advising team is coordinated by Brent Lamons who was promoted to Director for Advising and Student Success in recognition of his expanded role. Our first Coordinator for Student Life and Diversity Programs, Craig Pickett, left the university for a professional career opportunity and Sharon Couch was hired in January 2018 to serve in that role. Our recruitment coordinator has left for a position with the Tennessee Department of Agriculture and our Career/Alumni Coordinator has retired leaving the college with two vacancies that need to be filled. The current organizational chart is below:

**Recruitment Activity and Strategies**

Since 2002, CASNR had been conducting its own recruiting activities. The College faced a persistent decline in enrollment from 1995 (1127 undergraduate students) to 2002 (877 undergraduate students), which prompted the college administration at that time to hire a recruiter. That recruiter held the position until 2006 with mixed results. However, in 2007 when Caula Beyl joined UT as dean of the College, one of her first priorities was to develop a holistic,
proactive recruitment model (Beyl et al., 2016)\(^1\). Since that time, the College’s enrollment has grown to new heights, with 1477 undergraduate students in the fall of 2017 and an expectation of exceeding 1500 within the next couple of years.

The growth in enrollment in the College can be attributed in part to the various approaches used for recruitment of undergraduates into its programs:

**The College Ag Ambassador Program.** The AgAmbassadors are exceptional students in the College chosen and hired by the Dean’s office to assist in recruitment and outreach efforts. This group is led by student officers elected by their peers, with the Program Coordinator for Recruitment serving as the advisor to the group. These engaging students travel to college fairs, host campus tours, and represent the college at various events on campus.

**Campus Visit Program.** During the 2017 calendar year, the College hosted approximately 175 personalized campus visits for prospective students. These visits included a tour with an AgAmbassador, and a one-on-one meeting with a faculty or staff member to help answer their questions. We also hosted more than 10 school groups on our campus, ranging in age from middle school through seniors in high school. Some of these visits consisted of something as simple as a campus tour, while others were intricate, day-long field trips. In all, over 500 middle and high school students visited our campus to learn more about agricultural and natural resource disciplines through our campus visit program alone.

**TACRAO College Fairs.** CASNR was represented by either Kyle Hensley, Program Coordinator for Recruitment, or by one or more AgAmbassadors at 65% (75 individual opportunities) of the Tennessee Association of Collegiate Registrars and Admissions Officers (TACRAO) sanctioned college fairs across the state. These included individual high school fairs, large metro area fairs in Knoxville, Nashville, and Memphis, and Community College Transfer Fairs.

**State and National FFA Convention.** UT and the College have been well-represented at the National FFA Convention, where over 65,000 FFA members and advisors gathered in Indianapolis, Indiana. The College had visually appealing booth space that included an eye-catching orange and white checkerboard floor and a Tennessee tailgate tent. College staff interacted with over 2,000 students from across the country. The College was also present at the State of Tennessee FFA Convention in March in Gatlinburg. There, more than 3,000 Tennessee high school students attended to participate in workshops, sessions, and learn about opportunities beyond high school. At this event, over 500 prospective students and alumni were engaged in conversation and educated about our agriculture and natural resources programs, opportunities, and careers.

**Individual High School Visits.** In addition to the TACRAO college fairs, the College has also had the opportunity to visit with high schools via other mechanisms, including career fairs and FFA chapter meetings. In 2017, College staff and/or AgAmbassadors visited approximately 22 high schools across the state of Tennessee.

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Strengthening Relations with Community Colleges. During the year, the College has put increasing emphasis on continuing to build relationships with community colleges to help address the changing higher education environment due to the Tennessee Promise. We attend transfer fairs at Pellissippi State, Roane State, Chattanooga State, Cleveland State and Walters State. We also work closely with representatives from the Office of Undergraduate Admissions who work specifically with the transfer student population.

Collaboration with AGR. The dean has met individually with representatives from AGR about recruitment activity and has met with AGR advisors frequently on issues of recruitment, perception, and communication. We share lists of freshmen so that these incoming students may be aware of the opportunities and benefits that exist with joining this agriculture fraternity.

Utilization of Social Media. Recognizing the importance of social media in the lives of prospective students, the College utilizes several social media accounts to maintain lines of communications with interested students. These include accounts on Facebook, Twitter, and Instagram.

Tennessee 4-H Roundup. This event brings together over 350 high school students, many of whom are best and brightest in their area of interest. Roundup is currently on a rotation between the UTK and UT Martin campuses, spending two years in Knoxville and one year in Martin. When Roundup is held in Knoxville, the College of Agriculture participates in the College Showcase where students can choose a UT academic unit to visit. During this showcase, we invite departments to participate in a browse session, while also having activities for the students to undertake. We also provide t-shirts for students who attend our college showcase and sponsor a dance for all attendees. Roundup is an extremely beneficial event for us and is relatively cost effective. Each Roundup requires several days of planning from the Recruitment Coordinator and the showcase requires 3-4 hours for departmental faculty and staff and the College AgAmbassadors.

In 2017, Roundup was held on the campus of UT Martin. However, the College was still represented through a sponsored luncheon for all rising seniors. During the luncheon, students who were about to start their senior year were invited to a special luncheon with a meal provided just for them, where they heard a presentation from the Recruitment Coordinator.

Admissions Office Recruiting Events. In partnership with the Office of Undergraduate Admissions, the College participates in several of the on campus recruiting activities. These include the following:

- Rocky-Top Tailgate (multiple dates)
- Scholars Invitational (multiple dates)
- Big Orange Preview (multiple dates)
- New Vol Roll Call
- Sneak Peak
Financial Aid from the College

The Scholarship Committee and Process Used. Students must complete and submit scholarship application forms online by February 1 each year. Prior to this deadline, the College and various departments usually send out numerous reminders to students. Applications are generally available to the College in late February-early March. After the college receives the applications, the College’s Scholarship Committee, consisting of 6 faculty and staff members, convene to evaluate the applications. Members of the scholarship committee represent each academic department with an undergraduate program and are themselves experienced instructors and advisors. The committee generally meets for at least 2 hours on MWF each week from the time the applications are received to approximately the second week in April. Each of the approximately 1000 (300 first-time freshmen and 700 returning and transfer students) applications received are examined carefully. Each scholarship fund has different criteria set by the donors and the committee must ensure that each application is matched with the appropriate scholarship. After all that is done, awards are made and the College Business Manager then enters the data for each award. Award letters are generated for each student and sent to the permanent address as indicated on the completed application form. The award information is then transmitted to the Office of Financial Aid to ensure that the appropriate funds are credited to the students’ account.

In many cases, the agreements with scholarship donors are somewhat restrictive, further complicating disbursement of funds to eligible students. The level of flexibility available to the scholarship committee to allocate funds efficiently is seriously restricted by very narrow criteria for recipients specified in the original agreements under which the funds were gifted to the College. This difficulty generally occurs with older scholarship accounts because Development staff have worked hard to ensure that more recently established scholarship accounts are less restricted.

The balance between funding for new students and funding for returning students is largely controlled by demand for funds determined by the relative number of applications from the two groups. This balance influences the emphasis on use of funds for recruiting new students versus use for retaining returning students. The College Scholarship Committee’s philosophy has been to direct most of the available funding to returning students because they are “known quantities” in terms of their academic performance, contributions to the college community, as well as financial need. The committee also uses a philosophy of “spreading the wealth” to try to ensure that as many deserving applicants as possible receive awards.

Scholarship Awards and Awardees. In 2017-18, a total of $962,769 was awarded to 755 students, which represented more than one half of our undergraduate population in the college. At the graduate level, $62,000 was awarded to 17 students. Over the last five years, the amount of scholarship aid has ranged from in the high seven hundred thousands, to nearly one million dollars of aid. Scholarship decisions are made by the College Scholarship Committee consisting of one representative from each department. Traditionally, the committee has prided itself on
reading every single scholarship application in its entirety and assiduously matching deserving students with the corresponding scholarship aid. The two following graphs show the amount of scholarship aid and number of students impacted by that aid for undergraduate and graduate students.

**Growth in Enrollment**

The widely recognized demand for graduates in the agricultural sciences, aggressive recruitment, and heightened statewide visibility has helped to foster excellent enrollment growth in the college at the undergraduate level. Recruiting graduate students and increasing graduate
enrollment has been more challenging and reflects the need for additional graduate teaching and research assistantships to make us competitive.

**Undergraduate Enrollment**

Over the last nine years, the undergraduate enrollment in the college has grown despite challenges due to increased external competition for students, the decline in numbers of graduating high school seniors, and the uncertain impact of Tennessee Promise although there is some indication from the enrollment pattern since 2015 that this growth is beginning to stabilize and level out just under 1500 undergraduate students. With increased recruitment activity being conducted among the regional two-year colleges, we experienced an increase in number in fall semester of 2017 relative to the previous fall. For example, the College has cultivated a partnership with NSCC for the Herbert College of Agriculture to be one of their students’ preferred destinations. The collaboration with NSCC administrators focuses on advertisement and curriculum planning. The College already has a similar collaborative relationship with Pellissippi Community College with respect to our Construction Science program and plans are underway to facilitate transfer of their students into Forestry disciplines.
Graduate Enrollment

Sustaining graduate enrollment both at the MS level (in blue) and the PhD level (in red) has been challenging and several factors have contributed to this situation.

First, the level of support provided by our graduate assistantships is quite modest in comparison with peer institutions. In the past, efforts have been made by the UTK Chancellor to provide top-off funds in recognition of the low level of stipends, to aid in recruitment and retention of talented graduate students.

Second, Graduate Research Assistantships are coupled with an out-of-state tuition waiver, but the tuition must still be paid, and many federal sources of grant funds disallow tuition payment. Of our graduate student population, 54.9% are supported on graduate research assistantships by faculty who are active in sustaining research grant support. About 37.3% of our graduate students are on their own support with no assistantship funds or tuition waivers, and only 7.8% are on graduate teaching assistantships. Research in the Institute of Agriculture is under the leadership of an AgResearch dean and discretionary funds that could support graduate research assistantships from the AgResearch budget are under that dean’s direct control. Over the past ten years, the financial support relegated to graduate research assistantships has declined relative to the support allocated to postdoctoral and technician positions. With a national search currently underway for a new AgResearch dean, emphasis could be placed in the future on better support of graduate student education from AgResearch funds.
Third, the availability of Graduate Teaching Assistantships (GTAs) is severely constrained and the College has received no new allotment of GTAs in the last eleven years despite notable increases in undergraduate enrollment and the fact that our curriculum is highly experiential with both laboratories and hands-on activities that often necessitate a great deal of faculty time to both set up, teach, and dismantle.

### Satisfaction, Retention and Graduation Metrics

Retention is a function of many aspects of student life including factors such as engagement, satisfaction with the college experience, academic success, social adjustment, quality of advising, and financial means.

The College is fortunate to have a large assortment of activities, clubs, and organizations that students can join to increase their levels of engagement and begin to develop a network of others with similar interests to provide a broad range of peer support. The complete list of around thirty can be found on the College web site at the following link: [https://ag.tennessee.edu/herbert/Pages/-Get-InVOLved-with-CASNR-Clubs,-Organizations,-and-Societies-.aspx](https://ag.tennessee.edu/herbert/Pages/-Get-InVOLved-with-CASNR-Clubs,-Organizations,-and-Societies-.aspx)

Student satisfaction with the CASNR experience contributes to the strong connection that students have with the agriculture campus. In student satisfaction surveys conducted in September of 2017, nearly all (95%) of students who took the survey were satisfied with the decision to attend the college (Appendix B). They rated their coursework to be ‘rigorous, experiential, and relevant to their future career plans and identified academic advising as a strength as well as the community/family feel.

A similar response was found with graduate students who were also surveyed for student satisfaction in September of 2017. Most of the graduate students surveyed (89%) indicated...
satisfaction with the decision to attend the College (Appendix C). The vast majority (98%) responded positively about gaining relevant research experience and 86% viewed their graduate experience as relevant to professional goals with positive responses on instruction (88%), communication skill development (85%), and professional networking (75%). Faculty advisors was noted as a strength.

Retention for first time freshmen cohorts from academic years 2013 to 2016 for the College relative to the university average are indicated in the table below.

<table>
<thead>
<tr>
<th>Academic Year Cohort</th>
<th>CASNR</th>
<th>University</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>88.0%</td>
<td>83.5%</td>
</tr>
<tr>
<td>2014</td>
<td>84.1%</td>
<td>82.6%</td>
</tr>
<tr>
<td>2015</td>
<td>85.8%</td>
<td>83.4%</td>
</tr>
<tr>
<td>2016</td>
<td>83.0%</td>
<td>80.0%</td>
</tr>
</tbody>
</table>

Over the last four years, the retention rate of first time freshmen admitted to the College has been higher than that of those reflected in the university average.

The 6-year graduation rates for the College as a whole and its eight departments for 2009 to 2011 cohorts are indicated in the table below:

<table>
<thead>
<tr>
<th>Department</th>
<th>2009 Cohort</th>
<th>2010 Cohort</th>
<th>2011 Cohort</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>FT FTF 6 Yr Grad</td>
<td>FT FTF 6 Yr Grad</td>
<td>FT FTF 6 Yr Grad</td>
</tr>
<tr>
<td>COLLEGE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agr Leadership, Educ, Comm</td>
<td>139 62.6%</td>
<td>160 66.7%</td>
<td>195 69.2%</td>
</tr>
<tr>
<td>Agricultural/Resource Econ</td>
<td>4 75.0%</td>
<td>3 33.3%</td>
<td>5 80.0%</td>
</tr>
<tr>
<td>Agriculture/Natural Resources</td>
<td>14 78.6%</td>
<td>15 66.7%</td>
<td>5 100.0%</td>
</tr>
<tr>
<td>Animal Science</td>
<td>5 80.0%</td>
<td>9 66.7%</td>
<td>6 83.3%</td>
</tr>
<tr>
<td>Biosystems Engr/Soil Science</td>
<td>86 57.6%</td>
<td>94 68.1%</td>
<td>102 69.6%</td>
</tr>
<tr>
<td>Food Science</td>
<td>18 61.1%</td>
<td>17 64.7%</td>
<td>11 63.8%</td>
</tr>
<tr>
<td>Forestry, Wildlife/Fisheries</td>
<td>15 73.3%</td>
<td>18 77.8%</td>
<td>25 84.0%</td>
</tr>
<tr>
<td>Plant Sciences</td>
<td>14 64.3%</td>
<td>16 50.0%</td>
<td>23 43.5%</td>
</tr>
<tr>
<td></td>
<td>3 0.0%</td>
<td>8 75.0%</td>
<td>8 62.5%</td>
</tr>
</tbody>
</table>

The rising trend for the overall college graduation rate from 62.6% to 69.2% is encouraging and reflects the attention paid to assuring the academic success and progression of our students.

We attribute some of this success to the close advising relationships developed between our students and their faculty advisors. Another factor in this success is the leadership of our Coordinator of Student Life and Diversity Programs and the tremendous amount of effort invested in programs to promote college success such as the College of Agriculture Living Learning Community and the attention paid to advising effectiveness. Along with the strong satisfaction of students in the College with their experience, there is a generally positive outlook most likely aided by the strong job market for our graduates and the need to have a positive
impact on the world. This desire has been expressed by many of our students as one of the reasons that they chose the College and this desire is fulfilled by majoring in agriculture and natural resource careers, allowing graduates of the College to help feed the world and safeguard the environment.

As student numbers have increased, it has become more difficult for faculty to engage in the aspects of advising that they are most suited for and much of their time is taken up with the administrative facets of advising. Implementation of the hybrid advising model in the College with the addition of four professional advisors (two assigned to Animal Science, one in Forestry Wildlife and Fisheries, and one in Biosystems Engineering and Soil Science) has provided the opportunity to refine the advising approach in the College (Appendix D). More information concerning the improvements in advising is detailed in a later section of this review. These professional student success advisors housed within academic departments focus on student success strategies, programming, intrusive advising, and interdepartmental early alert for at-risk students. They are also able to focus on policy affecting students, procedural changes, and available university support services that students can use. Faculty, on the other hand, are able to devote more time to professional development and experiential learning, focusing on the more high value aspects of student advising. The professional advisors provide continuity of advising for other areas such as course selection, financial and health consulting, and data tracking and assessment. In this new hybrid approach to advising, the roles of faculty advisors versus professional advisors was at first a difficult concept for faculty to accept because the role of academic advisor has been a long valued tradition within the college. With clarification of the respective roles (Appendix E) and the assurance that the faculty role is valued, relevant and more necessary than ever, the concerns of many faculty have been alleviated.

**Educational Programs**

This section of the review summarizes existing programs and provides links to the program information for each, describes new programs developed or underway that have occurred since the last review, and discusses any procedural changes instituted. Program offerings are supported by an extensive array of services and resources provided by the University of Tennessee Library and particularly the Pendergrass Agriculture Library (Appendix F).

**Academic Programs in the College: 2013-2018**

The College has 10 undergraduate majors and approximately 35 concentrations (http://catalog.utk.edu/content.php?catoid=22&navoid=2736). Concentrations are increasingly being added for various reasons, and the College is nearing the point at which departments will need to evaluate the appropriateness and viability of each concentration. For example, Agricultural & Resource Economics recently added four additional concentrations to its Food and Agricultural Business major. Each major offers a minor in that discipline. The Department of Entomology and Plant Pathology also offers an undergraduate minor even though it does not offer a major. Most minors have little to no participation. One exception to this is the minor in Forestry and Wildlife & Fisheries Science, because the curriculum for each major was developed with the intention of requiring courses that also lead to a minor in the corollary discipline. The College also has good participation (e.g., 30+ students) in two interdisciplinary minors, the
Watershed Minor and the International Agriculture and Natural Resources minor. The Watershed Minor is an intercollegiate minor with participation of over 50 faculty from more than 12 departments from five colleges with administration through the College (https://ag.tennessee.edu/watershedminor/Pages/undergraduateminor.aspx). A graduate-level watershed minor also exists.

Most undergraduate programs are experiencing modest to moderate growth. Food Science, due in part to loss of key faculty and elimination of popular concentrations, has experienced a reduction in enrollment over 40% in the past five years. Enrollments in Forestry went from a nearly unsustainable 47 in 2013 to a sustainable 83 in 2017. Plant Science enrollments are reduced nationally, while UT’s enrollment has stayed relatively stable despite annual fluctuations. College investment in Plant Sciences and some other units exceeds that on a per capita basis compared to some departments. Recruitment efforts and faculty line reallocations are ongoing to better “right-size” College investments with departmental needs.

While no new undergraduate majors have been developed for at least six years, a new major in Construction Science and Agricultural Systems is being created from several concentrations currently residing under the Environmental and Soil Science major. The Construction Science concentration has undergone rapid growth since its inception about six years ago, and now has close to 90 undergraduates. The discipline is solid, with excellent career placement due to strong relationships between a key faculty member and the construction industry in the Southeast. With the approval of the full university, THEC, and Board of Trustee, the concentration became a full-fledged program in the fall 2018.

In the past two years, the Departments of Animal Science, Food Science, Agricultural & Resource Economics, and Biosystems Engineering and Soil Science have added 5 year accelerated BS/MS programs or concentrations (depending on the department) to recruit and retain high quality students. The College has worked diligently with the Registrar’s office and the Graduate School to develop appropriate protocols and procedures, which are codified by the Academic Policy Committees. It is too early to tell if these programs will have a significant impact on recruitment or participation in the 5-year programs.

At the graduate level, the College offers a Master of Science degree in each department. In ALEC, most of the MS students participate in the online program, which seems to be important for a variety of working professionals, including county extension agents. The College also jointly funds the Master of Landscape Architecture (MLA) degree, which is administered by the College of Architecture and Design. The PhD degree is available to students in all departments except ALEC. Two of the degree programs are shared by two departments to meet TN Higher Education Commission requirements.

The chimeric Plants, Soils and Insects PhD program (shared by three departments) was separated in 2015 to produce two more cohesive and sensible doctoral programs. One is in Entomology
and Plant Pathology and the other one, Plant, Soil, and Environmental Sciences, is shared by Plant Sciences and Biosystems Engineering and Soil Science.

Several of the College’s degree programs are accredited by specific accrediting agencies: Forestry, Biosystems Engineering, and the MLA program. The Wildlife and Fisheries Management concentration received accreditation by the Society of American Foresters in 2018. The Construction Science program plans to seek accreditation within the next two years. The College needs to be mindful of individual accreditations as such accreditation brings unique costs. The University receives some funding from the state for each accredited program, yet the funds are not passed along to the College.

**Procedural Changes since 2012**

The College has instituted several major changes in its academic programs procedures since 2012. Beginning in 2013, all majors were required to develop student learning outcomes, collect data annually, and use data assessments to inform curriculum changes due to accreditation requirements of the university. To reduce the number of under-enrolled or never-taught courses, the College began requiring in 2014-15 the following items for new course proposals: an identified faculty member to teach the course and a course syllabus. Increasing emphasis is being placed on having departments evaluate the need and financial aspects of each new course proposal. A developing challenge will be for the College to consider implementing rules or guidelines for further new programs and courses that require new or additional investment in a situation where no extra resources are provided to the College for such new programs or courses.

**Mid- and Full-cycle Reviews of Existing Programs**

This section elaborates on findings and suggestions emerging from both mid-cycle and full cycle academic program reviews that have occurred during the same time frame. Full cycle reviews as mandated by the Tennessee Higher Education Commission occur every ten years with mid-cycle reviews occurring halfway through that cycle (at about five years) and primarily deal with progress toward implementation of recommendations made during the full cycle reviews. The College has also called for voluntary reviews of other facets of the dean’s office as a means of obtaining external feedback and improving function of such areas of student life as the scholarship process within the college and the Honors Program. The following table summarizes the program reviews that have occurred since 2012, the program strengths, and recommendations made for each program.

**Agricultural and Resource Economics (AREC) Mid-Cycle Review.** The review was held from December 9-10, 2013. Strengths that emerged from the program review included the increase in student numbers, the notable individual attention given to students and resources that were available to them, and creation of the new natural resources and economics major. Also noted were the laudable recognition of faculty receiving local awards. Suggestions for improvement included recruiting particularly minority students, promoting study abroad, collecting better data on job placement and alumni, and offering an Excel course to teaching financial and logical
functions to students. With respect to faculty, it was suggested that all future faculty hires should be split appointments and there should be increased focus on attaining regional and national awards for faculty. The review team also suggested development of a doctoral program in conjunction with the Department of Economics and developing an external advisory group for the department.

**Biosystems Engineering and Soil Science (BESS) Full-Cycle Review.** The review was held from February 3-5, 2014. Strengths included the strong growth in undergraduate enrollment over the last 12 years and healthy enrollment in the graduate degree programs. Students expressed their approval of the educational environment, research and internship opportunities, and healthy student-faculty relationships. Curricula were deemed rigorous with adequate hands-on training and focus on real-world problems. Construction Science was a particular strength and served an important industry need. Needs specified were additional faculty and GTA support. Also noted was the need for data from alumni and employers to improve the program offerings and suggested was providing incentives for faculty to mentor graduate students, particularly PhD students.

**Animal Science (AS) Full-Cycle Review.** The review was held from April 22-24, 2014. One strength that also emerged as a challenge was the tremendous growth in undergraduate enrollment. Other strengths included, the enthusiasm and excitement of the faculty, staff and students in the family atmosphere of the department, strong and progressive leadership, excellent stakeholder support, and good resources/facilities. The team recommended increasing graduate student numbers and providing hard-funded teaching assistantships, hiring of additional faculty, addition of a meat processing facility, and increasing staff support of faculty.

**Plant Science (PS) Full-Cycle Review.** The review was held from September 15-17, 2014. Strengths that emerged from the program review included the many options inherent in the concentrations available to students, hands-on learning, family atmosphere, the experiential learning (internships that all students complete and availability of undergraduate research opportunities), and broad graduate student professional experiences. The review team recommended completion of the strategic planning process, development of a more focused and comprehensive recruitment plan, reinvigoration of the undergraduate student club to feature professional development and team building, and formation of a graduate student association.

**Agricultural Leadership, Education and Communication (ALEC) Mid-Cycle Review.** The review was held from August 18-19, 2016. Strengths that emerged from the program review included the restructuring of the department, collegiality and positive relationships in the department, the increase in rigor, growth in the communications area due to an excellent new hire, and redesign of the curriculum into coherent programs of study with relevant outcomes. Suggestions for improvement included pursuit of research FTEs, assessing the potential for a PhD program in ALEC, development of an advisory council, and developing a plan to get faculty and staff in a single location with communal space for students.
**Food Science (FS) Mid-Cycle Review.** The review was held from December 8-9, 2016. Strengths noted were the hiring of talented new faculty, advising by the faculty, diversity of the student population, and the facilities including the new teaching laboratories. The team noted that the unexpected departure of key faculty has inhibited the offering of important Food Chemistry, Food Engineering, and Food Analysis laboratories deemed vital. It was suggested that teaching FTEs be distributed among faculty instead of concentrated on a very few faculty. They suggested offering more graduate level courses, obtaining GTAs to help with laboratory classes, and secure one additional FTE from the Provost’s Office to support teaching.

**Forestry, Wildlife and Fisheries (FWF) Full-Cycle Review.** The full cycle review of FWF was held April 4-6, 2017. The review team was pleased with the recruitment strategy, assessment of student learning outcomes, and feedback from students indicating their positive view of the experiential nature of the curriculum and dedication of the faculty. They praised the commitment to advising, support of student clubs and introductory courses, and support by the College of underrepresented student matriculation and success. The team suggested increased funding be allocated for teaching assistant positions so that experiential labs sections could increase in size and use of more department resources in lieu of fees to cover class expenses. They also indicated how important it was to complete academic planning so that future hires maintain the balance between traditional strengths while expanding into new horizons. Lastly, they noted that it was important to departmental cohesiveness to be housed in one location.

**Entomology and Plant Pathology Mid-Cycle Review.** The mid-cycle review of EPP was held October 26-27, 2017. The review team noted that the department had implemented many suggestions from the 2011 review and used a SWOT approach to develop a new strategic plan. They also noted that the MS program in EPP appeared to have a stable and sustainable number of students. They suggested developing a faculty staffing plan in anticipation of retirements and rewarding service in the department and college promotion process. Additional suggestions included revising/replacing EPP 201, resurrecting a med-vet course, looking at an undergraduate minor, rethink the graduate curriculum, and assessing the market for a non-thesis graduate degree. Concern was raised for finding ways to support graduate students and increasing student credit hour generation to make a strong case for allocation of GTAs to the department.

**New Academic Programs**
The new PhD Program in Entomology, Plant Pathology, and Nematology was approved by THEC in 2015, making this one of only two doctoral degrees offered in the U.S. with a focus possible in Nematology. To date, we have had four graduates. Dr. Elizabeth Benton (SDIPM concentration) graduated in spring 2016 and is an assistant professor of forestry at the University of Georgia. Dr. Qunkang (Ken) Cheng (BGMI concentration) and Dr. Sandesh Shrestha (BGMI concentration) graduated in spring 2017. Ken is a post-doc at Oregon State University, and Sandesh is a post-doc at Kansas State University. Dr. Gary Phillips completed his degree in fall 2017. Gary is continuing to work in our nematology lab and plans to teach an undergraduate
course in Forensic Entomology this year. We currently have 9 students enrolled in the PhD program, and have accepted 5 more for the coming fall semester.

**Construction Science** is now a discrete program. Due to the excellent growth as well as existing and prospective demand for its graduates, the construction science concentration within the Environmental and Soil Science major became a new Bachelor of Science in Construction Science and Agricultural Systems degree in fall of 2018, with the new major will going into effect Fall 2019.

**Student Workforce Preparation and Placement**

The job market for graduates with agriculture degrees has been excellent in the last several years and the placement of our students has also been aided by strong visibility of the college with stakeholders across the state and active engagement of alumni coming back for career fair events and sharing their experiences as agriculture professionals with students in the classroom. The following activities have served to help graduates obtain positions after graduation.

**International Production and Processing Expo.** In late January each year, students (accompanied by Emily Gray and Mary Mahoney) have participated in the College Student Career Program (CSCP) held in conjunction with the International Production and Processing Expo in Atlanta. The CSCP, sponsored by the US Poultry Association, brings in approximately 30 companies to interview students for full-time jobs and internships. Student participation has grown from 19 in 2013 to 31 in 2017. The number of interviews for students has grown from 87 in 2013 to 160 in 2017. Interviews in 2017 resulted in 21 full-time job offers and 15 internship offers at the event. Top companies interviewing the College’s students were Tyson Foods, Wayne Farms, Rose Acre Farms, Sanderson Farms, Purdue, and Pilgrim’s Pride. In addition to interviewing, students can experience the largest annual international gathering of feed, meat, and poultry people, technology, and services. Overall, there are more than 31,000 attendees from 130 countries representing the industries at the Expo. Students network with company representatives on the Expo floor, and several students have had the opportunity to interview informally with these companies as well.

**Resume Doctor Workshop.** Each fall, staff from the UT Center for Career Development, along with Emily Gray, Director of Career Services for the College, provide one-on-one comments and suggestions for improving student resumes and offer additional career-related advice and materials. Undergraduate and graduate student participation has grown to over 40 students per year. For eight years, the Tennessee chapter of Gamma Sigma Delta has sponsored the event by providing pizza and soft drinks. Many positive comments have been received by students about the helpfulness of the event in preparing them for the annual Herbert College of Agriculture Career Fair.

**College of Agriculture Career Fair.** Participation in the College Career Fair annually averages about 35 employers and 350 students. Opportunities for jobs, internships and graduate programs
of study are displayed by organizations including Case Farms, Cobb-Vantress, Farm Credit Mid America, JBS, Pictsweet, River Valley AgCredit, Tennessee Farmer’s Cooperative, Tyson Foods, and UGA Extension. In addition, multiple USDA organizations and Tennessee state organizations participate. Positive feedback has routinely been received from employers regarding our students being professional, well-prepared, and good fits for jobs/internships in their organizations.

**Employers on Campus.** Each year, several alumni and/or employers come on campus to interact with students through classroom visits, information/networking events, presentations to student organizations, and interviews. Some of the companies who have made campus visits in the past five years include EJ Gallo, JBS, Alltech, BrightView Landscapes, EFC Systems, AgriCorps, Weyerhaeuser, Monsanto, Kentucky Equine Management Internship, Farm Credit Mid America, Tyson Foods, and Tennessee Farmer’s Cooperative. Emily Gray works with company representative as well as College faculty and staff to coordinate successful visits to campus for these employers interested in hiring our very capable students.

**Employability Skills Survey.** In 2011, the College participated in a national Soft Skills Survey entitled “Comparative Analysis of Soft Skills: What is Important for New Graduates” conducted in conjunction with the Association of Public and Land Grant Universities (APLU). This year, the College has been asked to take part in a follow-up study “Employability Skills Survey” to be conducted in 2018 in conjunction with APLU and Michigan State University. The new survey examines employability skills that have been identified as important and for which graduates across the nation were found to be underprepared. The survey will be sent to current students, alumni, faculty, and employers and feedback will be used to strengthen our curricular content.

**Communication with Students.** The Herbert College of Agriculture Student News provides weekly updates concerning College-specific events, programs, scholarships, internships/job postings, student organizations and study abroad opportunities throughout the academic year. Students receive the newsletter via email on Mondays. Input for the newsletter is provided by various individuals and groups and collected/organized into the email. A recent picture of our students is included each week. At the request of students who value this communication, the Mabel’s Cafeteria menu has been added.

**Placement Data for Graduates.** Our most recent first-destination data for B.S. graduates shows 30% employed full time, 33% going to graduate school, 27% seeking employment, and the balance split between military service, employed part time, and out of the job market. Information on career placement relies mainly on self-reporting by graduates via a survey. These data are supplemented by information obtained by departmental faculty and advisors. Efforts to obtain reliable and comprehensive data include multiple emails to seniors requesting that they complete the survey, placement of computers at the graduation practice to encourage students to complete and/or update the survey, follow-up emails after graduation, and phone calls to graduates. These various strategies have resulted in a significant increase in data collected in recent years to approximately 65% of graduates reporting, up from 28% in 2013. Reported
starting salaries have ranged from an average of $33,000 to $50,000. The data obtained most likely underrepresents the success of our students in getting employment in their fields because of the challenges in gathering current information and the fact that many first destination jobs are not necessarily the most desired or discipline-specific.

**Student Success Stories.** Alumni spotlights on the College website highlight success stories of alumni of the college. Data and pictures are requested of graduates and posted to the website. Currently, 28 alumni spotlights have appeared on the website and change each time the page is refreshed. Requests continue to be sent to alumni for inclusion of their stories.

**Construction Science Career Fair.** The first Construction Science Career Fair was held in 2013 with 13 companies and 30 students participating. In 2016, growth of the fair necessitated separating it from the Herbert College of Agriculture Career Fair and it was relocated to the Brehm Arena. Approximately 85 construction science students participated in 2017 with 45 construction companies and 3 construction organizations participating. Companies attended from as far away as Baltimore, MD; Kansas City, MO; Salt Lake City, UT; New York, NY; and Atlanta, GA. The program continues to grow and experience success in placing interns and graduates in the industry. For example, all fall 2017 graduates received or were negotiating offers by graduation and salaries reported were quite lucrative. Correspondingly, internship opportunities were plentiful, and students had no problems choosing excellent locations for their experiential learning.

**Advising and Student Success**

One of the strengths of advising in the College has been the long tradition of faculty advising and this is valued by both faculty and the students who benefit from it. As enrollments have increased, the concomitant burden of time devoted to advising by faculty increased at the same time and it has become increasingly difficult for faculty to stay abreast of changes and to invest enough time in this important activity. With the formal adoption of the Advising 2020 plan by UTK, funding was provided to the College initially for three professional advisor positions. Since that time, an additional advising position was approved and assigned to the College to get us closer to the desired ratio of 300 students to one professional advisor. The first position was targeted for Animal Science, the College program with the largest enrollment. Two applicants were interviewed for the position in Animal Science and neither met with the approval of the committee and department. The search was then reopened for Animal Science and one was initiated for the position assigned to Forestry, Wildlife, and Fisheries. The third position was originally assigned to Food Science however, based upon enrollment declines and current faculty advising loads, the position was moved to Animal Science. A fourth professional advisor has just been hired for Biosystems Engineering and Soil Science. With the supervision of professional advisors and the expanded role of advising in the College, the Director of Advising was promoted to Director of Advising and Student Success in January of 2018.
Process Improvements. The process used to elicit a change of major in the College was revised and a new major declaration form was adopted. A standardized College petition policy was also drafted and formally adopted. The online petition process was initially developed last year and beta-tested in one department; since that time, two additional departments have been brought into the online petition process. During 2016, an online faculty advising guide was developed and made available for faculty. In response to feedback from students, faculty, and parents; College student support staff revised the College orientation experience for students stressing experiential learning opportunities including international experiences and the many resources available to promote student success. The Dean was featured in a videotaped message of welcome to all incoming students.

Student Success Activity. The Director of Advising for the College 1) has conducted several student success workshops for students who have been placed on academic probation to retain those students at risk and 2) collaborated with the Office of Multicultural Student Life to create a tutoring program for the Herbert College of Agriculture students.

Engagement and Training of Faculty and Staff. A highly proactive approach has been taken to increase the engagement of faculty in the advising process, including 1) the initiation of a College Faculty Learning Community focused on intentional advising, 2) the creation of a Faculty Taskforce on Undergraduate Mentoring and Engagement, and 3) delivery of several faculty development workshops. Staff members in each department are often a forgotten component of those that impact student lives and success. Targeted training was provided by the College’s Director of Advising to student service support staff.

Service within the College and across UTK. The College’s Advising Director also helped with the migration of the online petition database and forms from the old SharePoint platform to Office 365. At the state level, College advising staff helped to create partnerships with and develop transfer transition guides for prospective College majors coming from three regional TBR institutions. This effort is still underway. The College also participates in discussion of the statewide dual credit initiative.

Honors and Undergraduate Research

The College Honors Program
The vision of the College Honors program is to produce innovative leaders who will shape the future of food, agricultural, natural resource, and human sciences (FANHS). The program provides opportunities for challenge and enrichment while maintaining a scholarly community of highest integrity. Its mission focuses on developing an environment to create a culture of academic inquiry that fosters academic and social development of these academically elite students. The community is based on a culture of enriched robust academic inquiry achieved by challenging courses, opportunities for experiential learning, cultural and leadership, and mentoring by College faculty.
The percentage of Agriculture students in the university-wide honors program closely mirrors the percentage of students in the college: Haslam (7% of students are enrolled in College majors); Chancellor’s Honors (4%); Leadership (6%); and 1794 (5%).

Approximately 80% of Honors students who graduate with College majors attend graduate or professional school. The majority of the remainder of the graduates have been placed in FANHS-related careers.

Honors Program Review Recommendations and Implementation

The College Honors Program Review occurred late in 2015 (December 3-4) and based on recommendations emerging from that review, a College-specific Honors program has now developed focused on advanced scholarship in Food, Agricultural, Natural resource, and Human Sciences (FANHS) to fully prepare students to meet professional challenges. Proposed was a College Honors consisting of a combination of coursework (18h), a 2-semester capstone project, and activities in at least two of the five Global Enrichment Challenges and Opportunities (GECOs) in the Food, Agricultural, Natural Resources, and Human Sciences. The GECO Areas are Research, International Study, Leadership, Extension, and Service. Each GECO has several appropriate co-curricular activities, which are assigned point values of one to three. Students must earn at least four GECO points. To support the course infrastructure needed to fully develop this program, the program has been awarded a USDA-Higher Education Challenge Grant, “Developing HONORS (Higher Order Networks, Opportunities, Resources and Skills) through Faculty Engagement and Experiential Learning. The goals of the project are: 1) to engage faculty and provide resources for incorporation of higher order and critical thinking into courses; 2) to develop honors courses and develop materials for co-curricular activities that will emphasize 21st century soft skill development; 3) to effectively and appropriately assess the program and student development; and 4) to increase the numbers of minority students in the College-HP. The honors minor has been approved by the Undergraduate Curriculum Committee, both at the college and university.
level, and has been approved by the Undergraduate Council. The next anticipated approval will be from the Faculty Senate.

Also recommended by the review team was focus on long term development funding with the assistance of the UTIA Office for Institutional Advancement in finding donors interested in funding honors opportunities. To further that end, the Honors Advisory Council includes not only the Office for Institutional Advancement but also leading friends of UTIA in all aspects of program planning. A third recommendation that emerged was to improve marketing and visibility of the program; this is anticipated to be an ongoing and long-term activity.

**USDA Higher Education Challenge Grant**

The overall objective of the grant is to “create a new, peer-reviewed model for honors programming that helps students develop higher-order thinking and team skills, academic networks, and opportunities to engage in research, leadership, international, and/or Extension activities”. Products of the grant include new honors programming, training modules on higher order thinking, recruitment strategies and materials to increase minority participation, and new honors courses. Faculty focus groups have been conducted and program strengths and weaknesses as well barriers to Honors have been identified.

**Undergraduate Research**

Interest in undergraduate research extends well beyond the honors programs. Each department in the College has an undergraduate course that focuses on research and/or development outside the classroom. For many students, participation in Experiences in Undergraduate Research and Creative Achievement (EURēCA) is their first opportunity to present their research to others. Participation in EURēCA by Herbert College of Agriculture students has increased each year. In 2017, thirty-seven College students competed in EURēCA. The College Division had twenty-two projects, and three projects from Biosystems Engineering competed in the College of Engineering competition. College students also presented.
research at national and regional professional society meetings. The numbers below indicate how many students and projects from the College participated in EURēCA.

Because participation in EURēCA has now become ingrained into the culture of the College, Gamma Sigma Delta (the agricultural honorary society), sponsors a second showing of EURēCA posters each year, held in conjunction with the spring meeting of the organization. This has allowed more College faculty, students, and staff to view the posters and interact with the students. Student participation is this event has been high, with about 75% of the EURēCA presenters participating. In addition to students who participate in the Herbert College of Agriculture division, students from Biosystems Engineering routinely compete in the Engineering Division of EURēCA. College students have been recognized with award winning entries in each division over the past five years. In Fall of 2017, Gamma Sigma Delta sponsored its first Fall Research Competition, allowing students in research-intensive courses to showcase their results.

Student participation in undergraduate research far exceeds the numbers of students that present research at EURēCA but capturing numbers of student researchers is difficult. Each department has an undergraduate research course(s), but numbers of students in these courses are fewer than the numbers of students engaged in undergraduate research. In extensive interviews, faculty in the Department of Entomology and Plant Pathology reported forty-nine students engaged in undergraduate research, but enrollment in the undergraduate research course exceeded three only once during the five-year period. Underreporting of undergraduate research is being addressed by the Office of Undergraduate Research and the advisory council has requested that this information be included in the faculty reporting forms so that it might be better captured.

**Student Life**

Student life in the Herbert College of Agriculture is rich and varied. We pride ourselves in having opportunities for students to engage fully in the university and college culture no matter what their interests are. The following events and activities supported student life in the College:

*The College Student Involvement Fair.* In September for the 3rd year in a row, the College hosted a student organization fair specifically for its own students. This year’s fair featured over 20 student organizations throughout the Ag campus, representing special interest groups, professional development organizations, agricultural honor societies, and competitive/judging teams from various departments. We had over 450 undergraduate and graduate Herbert College students attend this year’s event. In terms of student organizations, the Ag Campus continues to
flourish, with our college supporting almost 35 student organizations, societies, and teams. A new organization (the Paws Small Animal Club) was launched in the spring of 2017.

**The College/4-H Fall Festival.** For the 3rd year in a row in October, the College partnered with Collegiate 4-H to host the College/4-H Fall Festival. The festival provides UTIA faculty/staff and their families with a fun evening of candy, costumes and games. Twenty student organizations and offices participated in the 2016 festival, and over 100 guests (faculty, staff, and children) attended the successful event.

**The College Scholarship Banquet.** The College garnered feedback from students, parents, donors, and previous attendees of its scholarship banquet to extensively revamp its annual scholarship banquet. In November, the College successfully implemented the extensively revamped 2016 Scholarship Banquet to positive reviews from participants and attendees alike. This year’s program featured a revised concept, placing greater emphasis on the success of our students. During the course of the evening, special “Thank You” videos showcased gratitude from students directly to our generous donors. In addition, the evening featured games, photo stations, and special tribute to our graduating seniors.

**The College Living Learning Program.** The College had 63 students (21 male and 42 female) in the Living Learning Community (fall 2017 to spring 2018 academic year) and over the course of the fall semester, students gained information on a wealth of topics including internships, international agricultural experiences, academic success, scholarships, and success planning for the future. In addition, students participated in various community service projects, both in Knoxville and across East Tennessee. During fall, the the College LLC students volunteered at the annual Happy Halloween Festival (Knoxville), Young Williams Animal Shelter, the Knoxville Zoo, Ridin’ High Therapeutic Riding Center, the Shriner Circus, the UT Gardens, Ponderosa Farm, the Knoxville Humane Society, the YWCA East Location, and the Ronald McDonald House of Knoxville. In addition, students participated in field trips throughout East Tennessee to learn more about the agricultural industry. During the fall semester, the LLC students went to the Lost Sea of Adventure (Philadelphia, PA), the Color Wheel Farm, and the Knoxville Zoo. Because it has been
judged the most engaged LLC on campus, for the fall 2016/Spring 2017 academic year, the College LLC was given the honor of relocating to one of the two new residence halls on the main campus, Building White. The new facility provided our College LLC students with larger bedrooms, a more spacious common area for programming, tutoring spaces, hallway kitchens, and multipurpose space for studying, group meetings and social events.

**Support for Student Competitions**

The College has provided travel support for various student groups attending competitions throughout the year, such as the Wildlife Conclave and the Dairy Competition, for students attending professional meetings, and for those engaging in international experiences. To enhance the skills of our graduate students, the College has hosted two intensive communication skills boot camps for up to 18 students at a time. The College has also started holding annual 3 Minute Thesis competitions each January in 2017 for graduate students. Cash prizes are awarded to the top three presenters.

**QEP Experiential Learning**

The College has long held experiential learning as a core value to help retain and graduate students who are well-prepared to enter careers or post-graduate work. Some specialized programs are extramurally funded, such as the Farm Credit Scholars program (instituted in 2012) that provides multi-year scholarships of $4,000, internships, and travel exposure to undergraduates. The Herbert Scholars Program (established in 2017 by Jim and Judi Herbert) subsidizes students on out-of-town high value internship experiences coupling research and industry. The first Gibbs Scholar was selected in 2017 and received support to do applied research on improving water use management in poultry production to lower production costs. The endowment to support experiential learning was established by Jerry L. Gibbs.

Other achievements are integrated broadly across our curriculum. Every major has a 499 Undergraduate Research option (instituted in 2015) and gives credits for internships. Internships are required by some programs. Our teaching workload formula includes undergraduate research mentorship. In 2015, the College initiated an undergraduate research mentorship award to complement the award to undergraduates involved in research. It is also common for students to participate in laboratory or field research as hourly employees. Participation in national competitions occurs in many majors and includes such experiences as ‘turfgrass bowls’ at the Golf Industry Show and Sports Turf Managers Conference, the Wildlife Conclave, the intercollegiate Equestrian Club, ASABE design competitions, and judging teams for Soil Science, Dairy, Horse, Livestock, and Agricultural Marketing.

**International activities**

International activities within the college primarily follow a two-pronged approach. The first is focused on undergraduates with the goal of achieving participation in international experiences, trips, study abroad, or internships by 30% of the graduating class. The second area of focus deals
with the continued commitment to the China Scholars program, funded in part by the China Scholarship Council for a living stipend, UTK in the form of waivers of out-of-state tuition, and by faculty with tuition support.

**UTIA Student International Experiences**

In the 2016-2017 academic year, participation in UTIA Student International Experiences grew substantially and took the form of College faculty-led study-abroad programs, large enrollment increases in the International Education and Natural Resources Minor, and an increase in the already strong Herbert College of Agriculture student participation in study abroad.

**Student Participation in Study Abroad.**

During the 2016-17 academic year, 62 College undergraduate and 6 graduate students participated in study abroad, showing an increase in College students undertaking this international experience. This growth is likely the result of new initiatives by UTIA Smith International Center and the Herbert College of Agriculture that have included promoting study abroad at all first-year orientations, increasing the number of lower division classes visited to 15, and initiating an [International Ambassadors](#) student group. We have also relaunched the student international agriculture club [IAAS](#); College students attended the national summit last year in Iowa and plan to attend this year’s summit at Clemson. Here on campus, IAAS hosts bi-weekly international celebrations focusing on a country or region with food and guest discussions.

**Faculty-led programs.** In 2017, Dr. Mike Smith in the Department of Animal Science led his final Jamaica Mini-term course. Although our longest-running study-abroad course will be missed, College faculty developed four new study abroad trips with destinations in Australia, Guatemala, Japan, and Costa Rica.

**Summer Mini-term 2017**
- Glorious Gardens of Spain and Portugal, Associate Professor Garry Menendez and Brad Collett
- Jamaica Study Tour, Dr. Michael Smith
- Tropical Wildlife Ecology, Conservation, and Field Methods in Belize, and Drs. Adam and Emma Willcox
- Water and Civilizations in the Dominican Republic, Dr. Joanne Logan
- Viticulture and Enology in Cortana, Italy, Dr. David Lockwood (through University of Georgia)

**Spring 2018**
- Plants, Parks and People: From the Smokies to San Jose, Drs. Andy Pulte and Adam Willcox (Chancellor’s Honors 200-level seminar; trip to Costa Rica)
• Food, Agriculture and Natural Resource Challenges in Guatemala (Drs. David Ader and Amanda Kaeser)

**Summer Mini-term 2018**
• Glorious Gardens of Austria and Slovenia, Associate Professor Garry Menendez and Brad Collett
• Tropical Wildlife Ecology, Conservation, and Field Methods in Belize, and Drs. Adam and Emma Willcox
• Animal Agriculture and Culture in Japan, Dr. Cheryl Kojima
• Developing Global Leaders Down Under, Dr. Carrie Stephens
• Water and Civilizations in the Dominican Republic, Dr. Joanne Logan
• Viticulture and Enology in Cortana, Italy, Dr. David Lockwood (through University of Georgia)

**Minor in International Agriculture and Natural Resources**
Reports from SERA indicated only two students had been awarded the Minor in International Agriculture and Natural Resources prior to 2016. With wholesale curriculum revisions in the 2015-2016 catalog and increased promotion, the minor has now grown to 48 students as of January 2018. Dr. Adam Willcox advises all students in the Minor as well as promotes it at all College first-year orientations and in 15 undergraduate course sessions in the Herbert College of Agriculture and other UTK courses.

**International Courses at UT**
The introductory Minor course, AGNR 180 Global Dynamics-Food, Biodiversity, and the Environment was designated a Social Science General Education course, one of only two in the College, and is also cross-listed in ALEC majors. With the new designation, enrollment has expanded to 66 students. Dr. Adam Willcox is instructor of record with contributions from Drs. Tom Gill and Dave Ader. The two Minor capstone courses AGNR 480 How to Feed the World and FWF 420 International Natural Resource Issues taught by Drs. John Stier and Adam Willcox respectively, have continued. FWF 420, is cross-listed for Forestry, Wildlife and Fisheries majors and minors; the Sustainability major and minor; and Global Studies major and minor. AGNR 480 is cross-listed in the Nutrition major.

**Peace Corps Prep Program**
Dr. Willcox has led the effort to develop the UT Peace Corps Prep certification program that is intended to make our graduating seniors more competitive for Peace Corps Volunteer positions. This program was approved in April of 2018. Dr. Willcox will coordinate the Peace Corps Prep program through an agreement with the UT Center for International Education. The Peace Corps Prep Coordinator will have responsibilities to design, promote, and launch the program. Once
students are enrolled, he will advise all Peace Corps Prep students, coordinate program revisions, and report progress to the Associate Deans and the US Peace Corps.

**Grants that Support International Undergraduate Research and Education**

Dr. Willcox and his team of seven additional faculty from the Universities of Tennessee and Florida were awarded a 3-year $281,236 grant from the USDA NIFA for Research and Extension Experiences for Undergraduates (REEU) in Belize. This is the first ever USDA NIFA REEU award to focus on international agriculture and natural resources research. After a competitive and rigorous recruitment and selection process, in summer 2017, seven undergraduate fellows from UT, North Carolina State University, University of Florida, and State University of New York completed research projects in the Vaca Forest Reserve in Belize, with several presenting results at international scientific conferences.

Dr. Christopher Stripling has worked with us to develop and submit a USDA NIFA Higher Education Challenge grant proposal to increase faculty capacity to integrate experiential learning and critical thinking into study abroad courses. Although unsuccessful in the 2017 cycle, the proposal was reviewed very positively with few critiques. Dr. Stripling intends to resubmit in the 2018 cycle.

**China Programs**

The College works closely with UT AgResearch and UTK on the China Scholars Program (https://ag.tennessee.edu/china/Pages/default.aspx). A UTK-UTIA Oversight committee is chaired by CASNR’s Associate Dean, who also serves as the program manager. Critical to the program’s success is coordination by Dr. Joe Zhuang, whom the College has partnered with AgResearch to place into a tenure-track position. The China Scholars Program has brought 22 PhD students to UT in the past three years from three Chinese Universities (Nanjing University, China Agricultural University, and Chinese Academy of Sciences-Institute for Applied Ecology). The first cohort of students has now entered dissertator status. Fifteen faculty mentors are involved representing two departments in Tickle College of Engineering (10 students) and five Herbert College of Agriculture departments (12 students). The College hosts annual meetings of the students and faculty. The program was highlighted in a full session of the 10th annual US-China EcoPartnership Conference in Yixing, China in 2016. The China Scholarship Council (CSC) views this program as their marquee example for such collaborations. In recognition of its success, the CSC awarded a second program to UT in 2017, allowing us to recruit from any Chinese university for a wide variety of programs. We are calling this program the China Vols program and are identifying several target universities in conjunction with UT to efficiently build long-term collaborations.

The China Scholars Program was renewed and revised this year by the CSC. The program was expanded to support up to 15 new PhD students annually. Nanjing Agricultural University and the entire set of Chinese Academy of Sciences campuses were added to the program. UTIA and UTK faculty and staff will visit China several times this year for PhD and undergraduate student recruitment and faculty collaborations. One special challenge is having departments in other
colleges provide the in-state tuition necessary to host students. A lesser challenge is addressing some graduate school requirements resulting in the need to pay for superfluous credit hours which also deters participation by faculty advisors.

**Diversity Efforts**

**Faculty Diversity**
Attaining a diverse faculty is very difficult in agriculture and the natural resources because there are so few individuals from underrepresented groups available in these disciplines with doctoral degrees. This difficulty is exacerbated by 1) the need to align the priorities of both AgResearch or Extension with those of the College because the majority of our faculty have split appointments, 2) reaching agreement with respect to the percentage appointments for teaching versus research/extension, and then 3) moving forward to a national search for and reaching this very small pool of potential candidates. There is intense competition for talented minority doctoral degree holders and industry is very strong competitor for them, one with better resources and one that can move more quickly to effect a hire. We are also hampered by the constraint of having to wait for retirements or separations to liberate recurring dollars for new faculty searches, but Extension and AgResearch do not suffer that constraint so they are often ‘ready’ to move ahead on a faculty search at a time when the College cannot come up any funds to buy a percentage of the faculty member’s time for teaching. When potential candidates have been identified through the Future Faculty Program hosted by the university, we have been unable to hire even very talented candidates due to the lack of recurring dollars to reallocate to the effort.

**Student Diversity and Success**
From 2009 until 2014, the College was successful in increasing the percentage of underrepresented student from 7.5% to 15%. Since that time the College has declined 13.1% due in part to changes in curriculum and enrollment in Food Science, the major with the largest percentage of underrepresented students. Although still less than the corresponding percentage of those in UTK, this is a notable achievement considering the historical negative perceptions of agriculture among minority populations. More impressive perhaps is the ability of the College through intensive mentoring, targeted student life
programming, and faculty advising to retain underrepresented minority students at a rate higher than that for UTK from 2012 until 2017.

The Herbert College of Agriculture participates in four programs specifically focused on fostering success of underrepresented students; these are the Intercollegiate Summer Bridge Program; Science, Technology, Engineering, Agriculture, and Mathematics (STEAM) First-Year Minority Mentoring Program; the Tennessee Louis Stokes Alliance for Minority Participation Program; and Minorities in Agriculture, Natural Resources, and Related Sciences. Details of our participation in each follow.

**Intercollegiate Summer Bridge Program**

In 2014, CASNR, Arts and Sciences, and Engineering joined forces and created the Intercollegiate Summer Bridge Program to focus on providing a transitional program of study from high school to the university for underrepresented students with STEM-based academic interests. The free 3-week live-in experience offers students an overview of chemistry and pre-calculus as well as an introduction to college life. Students participate in weekly labs, as well as evening study hall in Hodges Library. Target participants are underrepresented incoming STEM freshman with ACT Math Scores ranging from 20-25 (CASNR and A&S) and 25-27 for Engineering. Each year, we see dramatic improvements between their pre-test to post-test scores in chemistry and pre-calculus. With the massive success of the program, CASNR will continue to collaborate with the Tickle College of Engineering and Arts & Sciences to provide underrepresented STEM students with essential academic and professional skills. In Fall of 2017, CASNR had 4 students participate in this program.

**Science, Technology, Engineering, Agriculture, and Mathematics First-Year Minority Mentoring Program**

Although the Office of Multicultural Student Life had a successful transition/mentoring program (MMP – the Minority Mentoring Program) for the general campus, for many years, CASNR lacked a version geared towards future success in agriculture and STEM. The Tickle College of Engineering came together with CASNR to create the S.T.E.A.M. First-Year Minority Mentoring Program in the fall of 2014 to provide first-year underrepresented STEM students with skills for academic and professional success. With over 70 participants each academic year, students complete professional development assignments including the creation of resumes, attending
career fairs, mandatory study hall with their mentors, and attending student success workshops. In Fall of 2017, 11 of the participants were those from CASNR.

CASNR and the Tennessee Louis Stokes Alliance for Minority Participation Program
CASNR has participated in the Tennessee Louis Stokes Alliance for Minority Participation (TLSAMP) Program for several years. In fall of 2017, in this state-wide initiative under the auspices of the National Science Foundation, 18 CASNR underrepresented freshmen and sophomores participated in a “Junior Development Program,” where they took monthly workshops on professional development topics (resumes, networking, personal statements, international opportunities, succeeding at conferences, interviewing skills, etc.). CASNR was well represented with 21 juniors and seniors participating in the “Graduate Development Program,” where they took a free semester-long GRE preparation course.

The UT Chapter of MANRRS (Minorities in Agriculture, Natural Resources and Related Sciences)
The MANRRS (Minorities in Agriculture, Natural Resources and Related Sciences) national organization is a vital source of networking and professional development for underrepresented students and professionals within the agricultural industry. CASNR has been the home of the UT Chapter for over 20 years. As a result of their efforts (both on campus and throughout the community), the UT Chapter of MANRRS has been recognized as a “Chapter of Excellence” from the national organization in 2014, 2015, and 2016. In the last several years, the UT Chapter has sent students to the national conferences to participate in three days of professional development workshops, special seminars on leadership development, and career fairs/employment interviews. In September of 2016, the UT Chapter of MANRRS sent 14 students to the regional conference in Atlanta, GA. The Vice President of the UT Chapter won 2nd place in the regional impromptu contest (competing against twenty other students from across the southeast). In fall of 2017, the UT chapter of MANRRS had grown to 50 members. The current President of the national MANRRS is a PhD alumna of the College.

Herbert College of Agriculture Budget
All of our annual budget is provided by the UTK Provost and the budget for the College in FY19 totaled $6,440,555. Of that total, 79.1% ($5,094,316) supports the teaching effort in our eight departments. Another 16.7% ($1,075,499) supports the dean’s office staff and the professional advising positions embedded within the departments. As part of UTIA, we are ‘taxed’ 4.2% ($270,740) to provide recurring funding to the UTIA support units such as Marketing and Communications, Information Technology Services, General Services, and International Programs.
Approximately 98% of our budget consists of salaries (administrative, faculty, professional, clerical, and GTA) and 2% is operating. The Herbert College of Agriculture receives no additional financial support from any other sources except for advancement funds raised. We also receive no supplemental support from F&A garnered from funded teaching proposals because all funded proposals that emerge from UTIA faculty, even those proposals that are related and focus solely on the academic mission, are administered by AgResearch who have sole control of the resulting F&A and its disposition. As such, we also depend heavily on salary savings to help fund unanticipated mandates, faculty searches, and other needs.

For at least the last 10-11 years, the university has followed a historical, incremental budget model to allocate base budgets to the colleges. From FY13 to FY18, our annual base budget increased from $5,254,222 to $6,103,304, an increase of 16.2%. The increase in base budget did not result in any increase of recurring support for additional teaching FTEs. The difference was solely due to 1) across the board and merit increases approved centrally, 2) salary increases of existing faculty as a result of promotion and tenure, and 3) the additional of four new professional student advisor positions assigned to the College with the implementation of the UTK Advising 2020 strategic plan. In addition, the College has six recurrent SIF-funded lecturers supported on a non-recurring basis who must be requested each year even though some have been in place for as long as eight years.

The College has faced challenges with respect to the history of support, the existing budget model, and recently enacted policies. The budget has essentially remained static over the last ten years despite significant increases in enrollment at the undergraduate level. A new budget model needs to be explored to obtain parity in funding for colleges with respect to dollars spent per student. This year, Academic Affairs has taken back centrally 10% of the salary of any faculty who have left the College or retired as a preliminary means of reallocating and/or supporting cluster hires. This has unfortunately resulted in a loss of recurring budget and in effect a decrease in annual budget for the Herbert College. Before these vacant positions can be filled, we must obtain permission from Academic Affairs. Because the majority of our faculty have joint appointments, when faculty vacancies occur due to retirements or separations, if we do not have the freedom or autonomy to refill these positions quickly, we inadvertently hamper the
effectiveness of the other units under the direction of the Chancellor of UTIA (AgResearch and Extension) with whom we share these positions.

**Fiscal Efficiency**

Efficiency is using the teaching resources allocated to CASNR and now the Herbert College of Agriculture has not only been a goal; it has been a necessity. In the case of the College, the teaching effort is supported by a separate budget than the research or extension missions and because most of the faculty have split appointments with well-defined percentage allocations for the mission areas assigned, we have been able to determine how well actual workloads align with budgeted workload in the case of teaching and the academic mission support.

**Faculty Workload Policy**

In 2011, the CASNR Dean appointed an *ad hoc* “Teaching Workload Committee” tasked with the job of developing an algorithm to capture all the facets of teaching responsibilities and assign to them a tentative weight with respect to workload burden. Calculation of the actual workload includes hours per week per credit hour derived from a standard load of 12 credit hours per week for a 100% teaching load and a 40-hour work week. This equates to 3.33 hours of effort per credit hour of course. Additional effort is allocated for new preparations, studio, web or distance education, and an enrollment adjustment is made for 1 additional hour per week for every 25 students over a base level of 50 students. An additional adjustment is made for those faculty teaching labs because, in the vast majority of cases, our faculty must set up and teach their own laboratories. Faculty in the College advise not only graduate students but in many cases, have a heavy load of undergraduate advisees as well. Additional workload credit is given for advising undergraduates, mentoring MS and PhD students, serving on graduate student committees, serving as the faculty advisor to a student organization, conducting summer orientation sessions, serving as undergraduate coordinator or graduate coordinator for the department, and serving as a chair or a member of academic committees classified as time-intensive or not. Annually, the teaching workload spreadsheet is populated with the last year’s 14-day enrollment reports to capture actual teaching and responsible party and then sent to department heads who add advising students and organizations, undergraduate research, orientation, graduate student mentorship and service on teaching related committees.

The rationale for developing a workload formula was that, without any quantitative means for evaluating workloads, we could not determine whether the investment in an individual’s teaching appointment was correlated with their actual performance and output. This method of capturing the workload and comparing it to the budgeted allocation was a necessary prelude before the next step of reallocation teaching FTEs among existing faculty could be taken with the goal of maximizing teaching efficiency.
Alignment of Teaching Responsibilities with Appointment

When the spreadsheet is filled out for each faculty member in the department, the calculated workload is then compared to the workload expected from the budgeted FTE teaching percentage for each faculty member. Most efficient use of the teaching FTEs would result in a perfect correlation of the two numbers. After examining the result of the algorithm for all faculty in the department, the department head has the freedom to adjust the percentage appointment ±10% without requiring approval of the deans to gain better alignment with the actual workload. The figure to the right represents a comparison between the mean calculated workloads in 2016-17 and the mean budgeted workloads for all eight departments in the College. There was a linear correlation of 0.975, which is a positive reflection of how well this process works to align actual teaching loads with expectations relative to actual budgeted teaching percentage.

Efficiency with Respect to Credit Hour Production, Majors, and Graduates per FTE

Undergraduate enrollment growth has been steady and concomitant with that growth has been an 18.7% (five-year) increase in undergraduate student credit hour production. When this is normalized against tenure track FTEs (which have not increased appreciably in the last ten years), it is readily apparent that the College is a wise investment of university teaching resources.

The College is the second most efficient among all those at UTK in delivering education as measured by student credit hour production per full-time FTE, and third most efficient with respect to number of majors per full-time FTE. This is a clear measure of return on investment!
For the size of its faculty, the College produces an admirable number of graduates with bachelor’s degrees and compared among all of the colleges, it has the second highest number of graduates produced per teaching FTE inclusive of lecturers.

<table>
<thead>
<tr>
<th>Ratio of Graduates to Total Number of Teaching Faculty (5-Year Average)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<tr>
<td>----------------------</td>
</tr>
<tr>
<td>Agri Sci &amp; Natural Resources*</td>
</tr>
<tr>
<td>Architecture and Design</td>
</tr>
<tr>
<td>Arts &amp; Sciences</td>
</tr>
<tr>
<td>Business Administration</td>
</tr>
<tr>
<td>Communication &amp; Information</td>
</tr>
<tr>
<td>Educ, Health, Human Sciences</td>
</tr>
<tr>
<td>Engineering</td>
</tr>
<tr>
<td>Nursing</td>
</tr>
<tr>
<td>Social Work</td>
</tr>
</tbody>
</table>

*Faculty body count adjusted to FTEs for CASNR to reflect split appointments

The Provost’s investments in tenure-track lines pay off well because the College is able to leverage funding for tenure-track faculty with AgResearch and/or UT Extension. Consequently, for an investment of 35 tenure track faculty, the College advises roughly 240-280 graduate students in a year. The vast majority of the graduate students complete theses or dissertations, which then result in national presentations and research manuscripts. These tenure track faculty write grants that support graduate research assistants. These metrics aid in VolVision and recognition of university research. The credit hour tuition and fees brought in from these grant dollars translate to over $2,800,000 in graduate tuition brought into UTK (assuming 250 graduate students at in-state tuition not counting summer semester).
Advancement Activity and Outreach to Alumni

Fundraising effort has involved working closely with UTIA Advancement staff and expanded outreach to and engagement with alumni has been an important part.

Fundraising for the College

Working with Advancement staff and making more frequent stewardship visits across the state, participating more visibly at various advancement events, as well as personally briefing student call center participants has resulted in an increase in the effectiveness of our fundraising efforts. The totals received and number of donors have now increased for the fourth consecutive year. Other evidence of fundraising effectiveness is provided with the following:

- Senior Gifts raised $1,164 representing 60 new senior donors.
- The CASNR Big Orange Give goal for FY2017 was $15,000. In one day we achieved 157% of that goal and raised $23,550.
- In FY 2017, 513 donors gave $47,139 to the College Fund for Agricultural Sciences and Natural Resources, a source of undesignated funds within the college. This is a 12.5% increase over the previous year.
- Gifts exceeding $1.5 million were received for the CASNR endowment in FY2017, bringing our total endowment market value to $28.6 million at the close of the fiscal year. This is a 12.4% increase over FY2016.
- In FY2017, 553 CASNR Students received $1.01 million dollars scholarships donated by private donors.
- The initial class of Herbert Scholars were selected and placed nationally and around the globe (Guatemala and Costa Rica).
- In FY 2017, another $300,000 was added to the Bruce C. and Cleo G. Cox Scholarship Fund making it one of the top ten funded scholarship endowments in the college.
- In FY 2017, a CASNR graduate documented one of the largest bequests in the College’s history from a former student. Total benefit for students and faculty exceeded $7M.
- In 2018, as a result of a large gift from UT alumni, Jim and Judi Herbert, the college was renamed to the Herbert College of Agriculture.
CASNR Offers its First Honorary Doctorate Degree

Jim Herbert, Class of ’62, was the recipient of the first honorary doctorate degree ever awarded by the College of Agricultural Sciences and Natural Resources in its history during the December 2016 university commencement celebration. He gave the commencement address at the UTK-wide ceremony and earlier in the same year, the College was privileged to have him give the commencement address at its college commencement in May.

Transition to the Herbert College of Agriculture

The Herbert College of Agriculture, named for distinguished alumni Jim and Judi Herbert, is the new name for the College of Agricultural Sciences and Natural Resources. The change was officially approved by the Board of Trustees at a specially called meeting on April 17. The Herbert College of Agriculture is the third named college in the University of Tennessee’s 224-year history and only the second land-grant agricultural college in the nation to be named from a philanthropic gift. Tentative plans for the proceeds of the endowment include enhancement of experiential learning programs for students and faculty and investment in one-time initiatives that can provide real-life experience to students through agricultural entrepreneurship.

Conclusion

It is fitting that the renaming of the college and the opportunities that emerge with the endowment, the 50th anniversary of the Institute of Agriculture, and the UTIA new strategic plan occur at the same time as the external review of the College. We look forward to the feedback that we will receive and it will be used to launch a new Herbert College 2025 Strategic Plan.
Appendices

Appendix A – Action Plan in Response to CASNR 2012 Program Review

The CASNR Program Review was conducted in July of 2012 and there were several aspects of the college that were lauded including advising, scholarships, recruitment and enrollment growth, and success in attaining greater diversity. Four areas were identified for improvement. These are listed below with the specific action plans for each.

<table>
<thead>
<tr>
<th>Category</th>
<th>Action Plan</th>
</tr>
</thead>
</table>
| **Communication Issues** | **Communication with UTK** | • Beyl met with Provost Martin on December 5 to determine the best way to keep her up-to-date and engaged with CASNR events, progression toward Top 25 goals, and needs. Aside from periodic email communication, Beyl will be meeting with Provost Martin monthly and using that time to keep her informed.  
• CASNR will be distributing an e-newsletter each semester to all the administrators at UTK to more widely share major events and accomplishments broadly across the campus. |
| | **Internal to UTIA** | • CASNR Chronicle will be distributed throughout UTIA to all on the list serve and to alumni and friends as well.  
• IT will be assisting us with putting material onto the electronic board just outside of the dean’s office. We expect content to include information on the CASNR Ambassadors, CASNR Dean’s scholars, undergraduate research, student award winners, and upcoming events and workshops. |
| | **Visibility in TN** | • Attend Farm Bureau events and use the opportunity to set up a CASNR booth with students in attendance  
• Presentations at UTIA Regional Advisory Meetings  
• Attend 4H and FFA state events |
| | **Recruitment** | • In addition to electronic media, enhance the personal touch  
• Where contacts are referred to CASNR, follow-up with a phone call indicating our interest  
• Award McClanahan scholarships at high school awards ceremonies in person to enhance visibility and awareness of CASNR as a destination of choice |
| | **Graduate Education** | • A Graduate task force committee has been assembled to develop a best practices document for the mentor/advisee relationship, tracking and documenting progression of graduate students, and assessment of graduate student training  
• Enhance section in CASNR 2020 on graduate training  
• Include graduate student spotlight in CASNR Chronicle |
<p>| | <strong>PSI PhD Program evaluation</strong> | • Obtain data on individual concentrations of last 5 years of PSI doctoral recipients |</p>
<table>
<thead>
<tr>
<th>Development</th>
<th>Structure of shared graduate programs</th>
<th>Strengthen CASNR 2020 with respect to graduate programs</th>
<th>Strategy session with development team</th>
</tr>
</thead>
</table>
| - Appoint committee to look at options for the PSI program  
- Committee to evaluate option for developing a new more descriptive name for the program  
- Committee to explore possibility of disaggregating PSI doctoral program into three individual programs | - Obtain data on productivity of shared programs and how many of the graduate advisors were CASNR faculty  
- Discuss shared doctoral credit issue with Provost  
- Assess competition of shared programs with in-college doctoral programs | - Add goals specific to graduate program  
- Revise document to include graduate perspective in all relevant sections  
- Articulate expected learning outcomes for graduate training as well as undergraduate training | - Capitalize on the strong affinity that our alumni have with the “Ag Campus” and look for opportunities to engage them in the advancement process (alumni functions, philanthropy, recognition, etc.)  
- Clearly communicate CASNR’s top five advancement initiatives to the development team  
- Provide the System Annual Programs Office with accurate and timely information, updated scripts, and being proactive to maximize its capacity to deliver our message to alumni on our behalf.  
- Be more proactive about sharing what is happening in CASNR with alumni through the CASNR Chronicle, Christmas Card PowerPoint, and periodic announcements placed on the web page.  
- Work with the Office of Institutional Advancement to helping connect with alumni and students as partners with CASNR to attract, retain, and steward student and alumni relationships...” teaching our alumni-in-residence how to be alumni”.  
- Look for opportunities to involve students, especially student leaders as key connecting points for future alumni engagement.  
- Tell the stories about how donor funds have helped students be successful.  
- In early 2013, the Advancement Office will have a person who is responsible for stewardship of donors and CASNR can help that person connect donors to the program areas that they support.  
- Engage development to be a part of donor/student interactions (such as the annual scholarship recognition banquet) |
| Role of alumni | • Schedule training on advancement for our faculty and administrators.
• Help student groups interested in raising funds gain appropriate development training.
• The Dean or Asst Dean will attend NAADA in June of 2013 and take part in high-level deans’ track |
| Revive the alumni award using both input from Keith Barber and the department heads to identify potential candidates
• Engage alumni for fully in the classroom for guest lecturer presentations
• Invite an alum each year to give a presentation at the CASNR graduation in Spring
• Distribute the CASNR Chronicle via the alumni list serve
• Possibly recognize an alum on AgDay |
| Experiential Learning for Undergraduates | Define expectations for experiential learning |
• Articulate specific learning outcomes for undergraduates that define experiential learning in terms of hands-on activity within the classroom, internships, service learning, travel to professional meetings and competitions, and international opportunities
• Stimulate innovation for experiential learning using the CASNR Innovative Grants Program
• Seek development funding to support student experiential learning |
| Articulate expectations for experiential learning internally and externally |
• Incorporate specific learning outcomes for undergraduate and graduate students into the CASNR 2020 strategic plan
• Document expected learning outcomes for both undergraduate and graduate students on the CASNR webpage |
Appendix B - Undergraduate Student Experience Survey

College of Agriculture Sciences and Natural Resources

UNDERGRADUATE STUDENT EXPERIENCE SURVEY
An undergraduate student experience survey was conducted in September 2017 at the College of Agricultural Sciences and Natural Resources (CASNR) to support the UTIA strategic planning effort. The survey was voluntary and all CASNR students were sent a series of emails inviting them to participate. Teaching faculty were also asked to invite students to participate. The outcomes and key themes are summarized below.

RESPONSE HIGHLIGHTS
- High proportion of in-state students and students from suburban environments
- Specific professions, programs, or general passions cited as reasons for enrolling in CASNR
- Nearly all (95%) of respondents are satisfied with decision to attend CASNR
- Nearly one-fourth of students participated in FFA or 4-H in high school
- Coursework is considered to be rigorous, experiential, and relevant to future career plans
- Vast majority (92%) rate quality of instruction as outstanding or good
- Respondents identify academic advising and experiential learning as highly impactful to their education; however, participation rates in experiential learning programs are lower
- When respondents contemplated leaving, it was often linked to financial reasons
- Community (size and family feel), experience learning and faculty/staff noted as CASNR strengths
- Parking/transportation, class size/offerings, and academic support are themes for improvement

STUDENT PROFILE
178 students completed the survey, representing about 11% of undergraduate enrollment, and spanning academic levels.

What is Your Year in School?

<table>
<thead>
<tr>
<th>Year</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Year</td>
<td>29%</td>
</tr>
<tr>
<td>Sophomore</td>
<td>15%</td>
</tr>
<tr>
<td>Junior</td>
<td>20%</td>
</tr>
<tr>
<td>Senior</td>
<td>36%</td>
</tr>
</tbody>
</table>

The majority (81%) of students were from Tennessee with 53% from the eastern region, 37% from the middle region, and 11% from the western region.

Where Are You From?

<table>
<thead>
<tr>
<th>Location</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tennessee</td>
<td>81%</td>
</tr>
<tr>
<td>Out of State</td>
<td>19%</td>
</tr>
</tbody>
</table>

The largest proportion of survey respondents were from suburban, non-farm environments. However, a combined 44% of respondents were from farm and/or rural environments.

Which Describes Your Home Environment Prior to Attending UT?

<table>
<thead>
<tr>
<th>Environment</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban</td>
<td>9%</td>
</tr>
<tr>
<td>Suburban, non-farm</td>
<td>48%</td>
</tr>
<tr>
<td>Rural, non-farm</td>
<td>23%</td>
</tr>
<tr>
<td>Farm</td>
<td>20%</td>
</tr>
</tbody>
</table>
CHOOSING CASNR

Respondents typically chose CASNR as a first-time student from high school. However, one-fourth of survey respondents joined as transfers from another institution.

Which of the following describes your path to CASNR?

<table>
<thead>
<tr>
<th>Enrolled as a First-Time Freshmen</th>
<th>Enrolled as a Transfer Student</th>
<th>Enrolled from Another UTK College</th>
</tr>
</thead>
<tbody>
<tr>
<td>67%</td>
<td>25%</td>
<td>8%</td>
</tr>
</tbody>
</table>

Survey participants were given the opportunity to describe in their own words why they decided to enroll in CASNR. The responses aligned with the following themes:

- **Profession (33%)** – Students enrolled with a specific professional goal in mind. A veterinary career was most frequently cited.
- **Programs (33%)** – Students were attracted to a specific program with no explicit professional goal identified.
- **General Passion (18%)** – Students expressed a passion for agriculture, animals or the environment.
- **Family/Agriculture Background (10%)** – Students noted a family background in agriculture or experience in FFA or 4-H.
- **Other (10%)** – Other reasons included the UTK campus, experience with CASNR faculty or staff, and value/availability of in-state financial aid.

Animal science majors comprised 42% of respondents, approximating current enrollment patterns.

What is your major at CASNR?

- Animal Science: 42%
- Food and Agricultural Business: 10%
- Wildlife & Fisheries Science: 10%
- Environmental and Soil Sciences: 9%
- Agriculture Leadership, Education: 8%
- Food Science: 8%
- Biosystems Engineering: 3%
- Plant Sciences: 3%
- Forestry: 2%
- Other: 2%
- Dual Major: 1%
- Natural Resource & Environmental: 1%
- Exploratory: 1%
OVERALL STUDENT SATISFACTION

95% of respondents are satisfied with their decision to enroll in CASNR.

You are satisfied with your decision to enroll in CANR and would do so again if you had it to do over.

<table>
<thead>
<tr>
<th>Strongly agree, 74%</th>
<th>Somewhat agree, 21%</th>
</tr>
</thead>
</table>

Note: Neither Agree Nor Disagree = 2%, Somewhat Disagree = 3%, Strongly Disagree = 1%

HIGH SCHOOL PREPARATION

43 of the 178 respondents (24%) participated in Future Farmers of America (FFA) and 37 (20%) participated in 4-H as high school students.

In which of the following organizations were you active in high school (check all that apply):

- FFA
- 4-H
- Other Club
- DECA

Of the students who participated in 4-H or FFA, 73% noted a positive impact in their decision to pursue a degree in agriculture or natural sciences.

Your participation in 4-H or FFA positively influenced your decision to pursue a degree in agriculture sciences or natural resources.

<table>
<thead>
<tr>
<th>Strongly agree, 59%</th>
<th>Somewhat agree, 19%</th>
<th>Neither agree/disagree, 14%</th>
</tr>
</thead>
</table>

Note: Somewhat Disagree = 3%, Strongly Disagree = 5%

Most (68%) respondents felt that their high school education prepared them for academic success. However, 25% of respondents did not feel adequately prepared for college.

Your high school education adequately prepared you for academic success.

<table>
<thead>
<tr>
<th>Strongly agree, 32%</th>
<th>Somewhat agree, 36%</th>
<th>Neither agree, 7%</th>
<th>Somewhat disagree, 14%</th>
<th>Strongly disagree, 11%</th>
</tr>
</thead>
</table>
ACADEMIC EXPERIENCE

81% of survey respondents report GPAs exceeding 3.0. These numbers may indicate response bias in the survey with higher response rates among strong academic performers.

Your current GPA falls within which of the following ranges?

<table>
<thead>
<tr>
<th>GPA Range</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.0 to 4.0</td>
<td>81%</td>
</tr>
<tr>
<td>2.75 to 2.99</td>
<td>7%</td>
</tr>
<tr>
<td>2.5 to 2.74</td>
<td>6%</td>
</tr>
<tr>
<td>2.0 to 2.45</td>
<td>6%</td>
</tr>
</tbody>
</table>

Survey respondents note that coursework is relevant to future professional ambitions and academically rigorous. Respondents also responded positively to understanding future career options and gaining essential hands-on experience to be successful in their chosen fields.

The courses required for your major are relevant to your future career and/or graduate education plans.

<table>
<thead>
<tr>
<th>Response</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly agree</td>
<td>41%</td>
</tr>
<tr>
<td>Somewhat agree</td>
<td>48%</td>
</tr>
<tr>
<td>Neither Agree Nor Disagree</td>
<td>5%</td>
</tr>
<tr>
<td>Somewhat Disagree</td>
<td>5%</td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>1%</td>
</tr>
</tbody>
</table>

The courses taught by CASNR faculty are academically rigorous.

<table>
<thead>
<tr>
<th>Response</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly agree</td>
<td>41%</td>
</tr>
<tr>
<td>Somewhat agree</td>
<td>45%</td>
</tr>
<tr>
<td>Neither Agree Nor Disagree</td>
<td>13%</td>
</tr>
<tr>
<td>Somewhat Disagree</td>
<td>4%</td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>1%</td>
</tr>
</tbody>
</table>

You have a clear understanding of your career options.

<table>
<thead>
<tr>
<th>Response</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly agree</td>
<td>39%</td>
</tr>
<tr>
<td>Somewhat agree</td>
<td>49%</td>
</tr>
<tr>
<td>Neither Agree Nor Disagree</td>
<td>6%</td>
</tr>
<tr>
<td>Somewhat Disagree</td>
<td>6%</td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>1%</td>
</tr>
</tbody>
</table>

You are gaining the hands-on experience you need to be successful in your chosen career or graduate education experience.

<table>
<thead>
<tr>
<th>Response</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly agree</td>
<td>43%</td>
</tr>
<tr>
<td>Somewhat agree</td>
<td>37%</td>
</tr>
<tr>
<td>Neither Agree Nor Disagree</td>
<td>13%</td>
</tr>
<tr>
<td>Somewhat Disagree</td>
<td>6%</td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>1%</td>
</tr>
</tbody>
</table>
92\% of survey respondents rated the quality of instruction at CASNR as outstanding or good.

*How would you describe the overall quality of instruction by CASNR faculty?*

- Outstanding: 51\%
- Good: 41\%
- Fair: 6\%
- Poor: 1\%

Most respondents appear to know where to go for academic help and support. However, respondents did not rate the related services high in the student experience section of the survey.

*Do you know where to go for help if you struggle academically?*

- Yes – 82\%
- No – 18\%

**STUDENT EXPERIENCE/ EXPERIENCE-BASED LEARNING**

More than half of respondents have participated in a club or organization at CASNR.

*Are you or have you been an active member in a CASNR club or organization?*

- Yes – 60\%
- No – 40\%

Most frequently cited organizations were Collegiate FFA, Block and Bridle, Pre-Veterinary Association, Poultry Club, 4-H, Wildlife and Fisheries Society, Food Science Club, CASNR Ambassadors, Ag Business Club, Turf Club, Dairy Club, Judging Team, Sigma Alpha, and the Equestrian Team.
Survey respondents were asked to indicate participation in 8 different programs and services. They were also asked to characterize the impact of those programs and services on their education.

Since questions relate to the student experience and persistence, we removed responses from first year respondents for this portion of the survey.

The chart below shows the programs and services plotted against participation rates and percentage of students rating the program or service as extremely helpful to their education.

How would you characterize the impact of each of the following programs and services have had on your education while you have been enrolled in a program at CASNR?

- **Academic Advising**: Advising had the highest participation rate and highest percentage of students identifying the service as extremely helpful.
- **Experience-Based Learning**: Services and programs related to experience learning typically had lower participation rates. However, respondents who did participate rated the experience as extremely helpful.
- **Student Success and Career Services**: Services provided in conjunction with UTK main campus (academic coaching, tutoring and career services) had lower participation and student impact ratings.
To understand potential areas of challenge in the student experience at CASNR, nine questionnaire items were used to break the population into three groups based on response options: “never made me want to leave,” “made me consider leaving but was resolved,” or “led me to sit out for at least one semester.” Students were then categorized as stayers (never considered leaving), contemplators (considered leaving at some point), or returners (left and returned) based on the questions.

Overall, the study showed relatively low levels of “contemplation” with less than 30% of respondents contemplating leaving at some point in their academic career for the reasons identified.

Respondents that considered leaving, or left and returned, identified financial reasons as a main driver, citing “trouble paying the bills.” 26% of respondents contemplated leaving due to challenges adjusting to academic demands, while 23% experienced challenges with finding a “fit.”

Some respondents also noted that mental health issues had led them to contemplate leaving or sit out for at least one semester.

<table>
<thead>
<tr>
<th></th>
<th>Stayers</th>
<th>Contemplators</th>
<th>Returners</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Financial</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trouble paying bills</td>
<td>68%</td>
<td>27%</td>
<td>5%</td>
</tr>
<tr>
<td>Lost Hope scholarship</td>
<td>84%</td>
<td>11%</td>
<td>4%</td>
</tr>
<tr>
<td>Lost other financial aid</td>
<td>80%</td>
<td>15%</td>
<td>5%</td>
</tr>
<tr>
<td><strong>Academic</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Difficulty adjusting to academic demands</td>
<td>72%</td>
<td>20%</td>
<td>2%</td>
</tr>
<tr>
<td>Faculty did not support me</td>
<td>80%</td>
<td>20%</td>
<td>--</td>
</tr>
<tr>
<td>Wanted a major not at UT</td>
<td>91%</td>
<td>9%</td>
<td>--</td>
</tr>
<tr>
<td><strong>Fit</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Felt like I didn’t fit in</td>
<td>76%</td>
<td>23%</td>
<td>2%</td>
</tr>
<tr>
<td>Homesick</td>
<td>91%</td>
<td>9%</td>
<td>--</td>
</tr>
<tr>
<td>Wanted to be closer to home</td>
<td>91%</td>
<td>9%</td>
<td>--</td>
</tr>
</tbody>
</table>
WHAT IS THE BEST THING ABOUT BEING A STUDENT AT CASNR?

Survey participants were asked to describe in their own words “the best thing about being a student at CASNR.” Responses fell into the following thematic categories:

- **Community (55%)** – Respondents overwhelmingly identified the sense of community contributing to a positive student experience at CASNR. Of those who identified community in their response, 44% specifically noted that they liked the size of the CASNR campus and 28% noted a sense of family and collegiality.

- **Learning Experience (22%)** – Respondents were positive on the learning experience at CASNR, especially the “hands-on” opportunities offered as part of the academic experience.

- **Faculty and Staff (16%)** – Respondents described faculty, staff and advisors that cared about their success. Students also noted the accomplishments and accessibility of faculty.

- **Other (7%)** – Respondents were positive about the campus infrastructure and resources on CASNR.

**STUDENT VOICE: WHAT’S THE BEST THING ABOUT CASNR?**

- “The professors and students within the CASNR program are a cut above the rest.”

- “Community, hands-down. I am part of an amazing family.”

- “Having a small, close-knit community, but still all the resources of a large research institution.”

- “I think CASNR provides some resources that are more specialized such as the Pendergrass library.”

- “The community is very close, and having a separate and very beautiful campus really gets me in the learning mindset. There are so many study and career-related resources available specifically to us, and the staff really cares that we are getting the best education possible.”

- “Whether it is something you want to do after undergraduate or not, it’s hands on, fun, educational, ...
HOW COULD THE CASNR STUDENT EXPERIENCE BE IMPROVED?

Student participants were asked to describe in their own words “how could the CASNR student experience be improved?” Responses fell into the following thematic categories:

- **Parking and Transportation (24%)** – Respondents frequently noted challenges with parking and transportation associated with CASNR. Students feel the lack of parking often makes it difficult to make it to class on time and causes other inconveniences, especially for commuter students.

- **Class Size and Offerings (24%)** – As an area for improvement, respondents recommended offering more opportunities for smaller courses. Respondents also offered specific suggestions around offerings and curriculum requirements to make the coursework more relevant.

- **Academic Support and Advising (19%)** – Respondents suggested more emphasis on academic support and quality advising. Respondents frequently noted the need to support students with a non-farm background and offer encouragement for students in rigorous and competitive fields such as pre-veterinary medicine. Respondents also noted specific areas for improvement in academic advising.

- **Student Experience (10%)** – Respondents suggested hosting more campus events to support the CASNR student experience.

- **Facilities (7%)** – Respondents recommended improvement in physical infrastructure, including more spaces to connect across campus.

- **Other** – Respondents also noted opportunities for improvement in career support, financial support for students, diversity and inclusion, marketing/communications, and establishing connections with UTK.

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**STUDENT VOICE: IMPROVEMENT OPPORTUNITIES**

“There is a huge disconnect and division between students who have an agriculture background versus those who are from city backgrounds or transfer here internationally.”

“I think we also need more spaces where students can hang out and study. Other than Pendergrass, the study room in Brehm or Mabel’s there aren’t any spaces for students to go.”

“The Ag campus itself could be improved by adding a parking garage, more places to eat, and updating the transit system. Parking is certainly the most important issue of these three. It is often difficult to find parking and make it to class on time. I regularly have to park on the main campus and ride the bus over because both commuter lots are full.”

“There also needs to be a bigger presence in the career services section of CASNR.”
Appendix C - Graduate Student Experience Survey

College of Agriculture Sciences and Natural Resources

GRADUATE STUDENT EXPERIENCE SURVEY
A graduate student experience survey was conducted in September 2017 at the College of Agricultural Sciences and Natural Resources (CASNR) to support the UTIA strategic planning effort. The survey was voluntary and all CASNR students were sent a series of emails inviting them to participate. Teaching faculty were also asked to invite students to participate. The outcomes and key themes are summarized below.

RESPONSE HIGHLIGHTS
- Mixed balance of Tennessee, out-of-state and international students; most from urban environments
- 89% of students indicated satisfaction with decision to attend CASNR
- Students identified financial support, faculty, and specific programs as reasons to enroll in CASNR
- Mixed views on competitiveness of graduate financial support; 54% students who received multiple offers during recruitment indicated that CASNR’s offer was competitive, but 33% disagreed
- 98% of students responded positively to gaining relevant research experience; relevance of teaching experience yielded a less enthusiastic positive response at 54%
- 86% viewed their graduate experience as relevant to professional goals with positive responses on instruction (88%), communication skill development (85%), and professional networking (75%)
- Faculty/advisors and research experience frequently noted as CASNR strengths
- Graduate student financial support and professional networking/career development identified as areas for improvement

STUDENT PROFILE
A total of 77 CASNR graduate students completed surveys, representing 29% of graduate enrollment and spanning academic levels.

Tennessee students were largest percentage of respondents, but a combined 51% were from out-of-state or international students. Of Tennessee students, 62% were from the eastern region, 24% from the middle region, and 15% from the western region.

Where Are You From?

| Tennessee, 49% | Out of State, 25% | International, 26% |

The largest percentage of respondents came from urban environments. However, a combined 41% of respondents were from farm and/or rural environments.

Which Describes Your Home Environment Prior to Attending UT?

| Urban, non-farm, 30% | Suburban, non-farm, 29% | Rural, non-farm, 24% | Farm, 17% |
CHOOSING CASNR FOR GRADUATE EDUCATION

Survey participants were given the opportunity to describe in their own words why they decided to enroll in CASNR as a graduate student.

The responses aligned with the following themes:

- **Assistantship (21%)** – An assistantship or offer of financial support
- **Faculty (19%)** – The opportunity to work with a faculty member, either known to the student from previous experience or due to a national reputation in an area of study
- **Profession (15%)** – Advancement in a current profession or ambition to enter a specific profession
- **Program (15%)** – Graduate students enrolled for a specific program offered at CASNR
- **Research Interests (13%)** – Opportunities to pursue specific research interests
- **Other** – Other reasons for enrollment included family/agriculture background, positive CASNR undergraduate experience, international recruitment programs, and location.

The highest percentage of respondents completed undergraduate degrees at the University of Tennessee. Students also hailed from a wide variety of schools in the United States and abroad.

<table>
<thead>
<tr>
<th>Institution</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>University of Tennessee</td>
<td>18</td>
<td>18%</td>
</tr>
<tr>
<td>International University</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mississippi State University</td>
<td>2</td>
<td>2%</td>
</tr>
<tr>
<td>University of Florida</td>
<td>2</td>
<td>2%</td>
</tr>
<tr>
<td>University of Virginia</td>
<td>2</td>
<td>2%</td>
</tr>
<tr>
<td>Berry College</td>
<td>1</td>
<td>1%</td>
</tr>
<tr>
<td>Carnegie-Mellon University</td>
<td>1</td>
<td>1%</td>
</tr>
<tr>
<td>Carson-Newman College</td>
<td>1</td>
<td>1%</td>
</tr>
<tr>
<td>Grinnell College</td>
<td>1</td>
<td>1%</td>
</tr>
<tr>
<td>Hope College</td>
<td>1</td>
<td>1%</td>
</tr>
<tr>
<td>Knox College</td>
<td>1</td>
<td>1%</td>
</tr>
<tr>
<td>Lincoln Memorial University</td>
<td>1</td>
<td>1%</td>
</tr>
<tr>
<td>Murray State</td>
<td>1</td>
<td>1%</td>
</tr>
<tr>
<td>Rochester Institute of Technology</td>
<td>1</td>
<td>1%</td>
</tr>
<tr>
<td>Southern University</td>
<td>1</td>
<td>1%</td>
</tr>
<tr>
<td>University of Arkansas</td>
<td>1</td>
<td>1%</td>
</tr>
<tr>
<td>University of Massachusetts, Amherst</td>
<td>1</td>
<td>1%</td>
</tr>
<tr>
<td>University of Missouri</td>
<td>1</td>
<td>1%</td>
</tr>
</tbody>
</table>

STUDENT VOICE: WHY CASNR?

“Major professor with funding, and the research his lab was conducting was of interest to me.”

“The opportunity to work with my BESS advisor was the main reason I decided to pursue my PhD at UT.”

“For my undergraduate degree, I studied microbiology and chemistry, so enrolling in a Food Science graduate program was a perfect applied science route to further my knowledge.”

“Was offered an assistantship.”

“Offer of assistantship to work on research of importance to planet earth and (faculty).”

“Connection to a mentor professor/assistantship.”

OVERALL STUDENT SATISFACTION
89% of respondents were satisfied with their decision to enroll in CASNR.

You are satisfied with your decision to enroll in CANR and would do so again if you had it to do over.

![Survey Results](image)

Note: Neither Agree Nor Disagree = 5%, Somewhat Disagree = 4%, Strongly Disagree = 2%

**FINANCIAL SUPPORT**

For students who received financial support for graduate education, the most frequent type was a graduate research assistantship.

*From which sources have you received financial support for your graduate education in CASNR (check all that apply):*

- Graduate Research Assistantship
- Scholarship or Fellowship from a source other than CASNR or the UT Graduate School
- Scholarship or Fellowship from the UT Graduate School
- Graduate Teaching Assistantship
- Scholarship or Fellowship from CASNR

Nearly one-third of respondents received offers from one or more other schools before choosing to enroll in CASNR. Students were split on the competitiveness of graduate financial support packages. 56% indicated that the offer from CASNR was competitive with other offers. One-third felt the offer was less competitive than others received, but still enrolled.

*Did you receive offers of financial support to enroll in one or more other graduate programs during the recruitment process?*

Yes – 35%

No – 65%

*The full package of financial support you received to enroll in your CASNR graduate program was competitive with the offers you received to enroll in other graduate programs.*

![Survey Results](image)
ACADEMIC EXPERIENCE

Survey respondents included both masters and doctoral students with representation across a diverse mix of programs.

The survey evaluated the student experience across the teaching, research, and outreach mission areas. Students were offered the opportunity to for students to designate “not relevant to my chosen career.” Outcomes show that students are extremely satisfied with their research experience with positive responses from 98% of students. While both teaching and research had overall satisfactory feedback, students were less enthusiastic in these areas than research. In comparison to research, teaching yielded a 54% positive response and outreach and engagement had a 75% positive response.

You are gaining the teaching experience you need to be successful in your chosen career.

<table>
<thead>
<tr>
<th>Strongly agree, 25%</th>
<th>Somewhat agree, 29%</th>
<th>Neither agree nor disagree, 11%</th>
</tr>
</thead>
</table>

Note: Somewhat Disagree = 10%, Strongly Disagree = 8%, Not Relevant to Career = 6%

You are gaining the research experience you need to be successful in your chosen career.

<table>
<thead>
<tr>
<th>Strongly agree, 65%</th>
<th>Somewhat agree, 33%</th>
</tr>
</thead>
</table>

Note: Neither Agree/Disagree = 2%, Somewhat or Strongly Disagree, Not Relevant to Career = 0%

You are gaining the engagement or outreach experience you need to be successful in your chosen career.

<table>
<thead>
<tr>
<th>Strongly agree, 38%</th>
<th>Somewhat agree, 37%</th>
</tr>
</thead>
</table>

Note: Neither Agree/Disagree = 6%, Somewhat Disagree = 6%, Strongly Disagree = 1%, Not Relevant to Career = 2%
The survey reviewed student satisfaction in terms of relevancy to professional goals. 86% of survey respondents indicated that their programs were relevant to future career and graduate education plans. 88% of students were positive on the support and guidance from major advisors. Students were also satisfied with the communication and professional networking skills with 85% and 75% positive response, respectively.

The courses required for your program are relevant to your future career and graduate education plans.

<table>
<thead>
<tr>
<th>Strongly agree, 41%</th>
<th>Somewhat agree, 45%</th>
</tr>
</thead>
</table>

Note: Neither Agree/Disagree = 6%, Somewhat Disagree = 6%, Strongly Disagree = 2%

You receive effective training, guidance, and support from your major advisor.

<table>
<thead>
<tr>
<th>Strongly agree, 59%</th>
<th>Somewhat agree, 29%</th>
</tr>
</thead>
</table>

Note: Neither Agree/Disagree = 8%, Somewhat Disagree = 2%, Strongly Disagree = 2%

You are gaining the communication skills you need to be successful in your chosen career.

<table>
<thead>
<tr>
<th>Strongly agree, 48%</th>
<th>Somewhat agree, 37%</th>
</tr>
</thead>
</table>

Note: Neither Agree/Disagree = 6%, Somewhat Disagree = 6%, Strongly Disagree = 4%

You are gaining the professional networking skills you need to be successful in your chosen career.

<table>
<thead>
<tr>
<th>Strongly agree, 31%</th>
<th>Somewhat agree, 44%</th>
</tr>
</thead>
</table>

Note: Neither Agree/Disagree = 12%, Somewhat Disagree = 8%, Strongly Disagree = 6%
BENEFITS OF THE CASNR GRADUATE STUDENT EXPERIENCE

Survey participants were asked to describe in their own words “what have been the most important benefits related to your CASNR graduate student experience.”

Responses fell into the following thematic categories:

- **Faculty and Advisors (30%)** – Students most frequently noted the importance of faculty and advisors as benefits. Many comments focus on the quality of faculty and effectiveness of advisors.

- **Research Experience (27%)** – Students also mentioned the importance of research experience. When describing the experience, many noted the hands-on nature of the research.

- **Other** – Students noted the importance of assistantships and financial support to their graduate student experience. Other comments related to:
  - Community/sense of collaboration
  - Opportunity to build communication skills
  - Conferences and professional networking
  - Positive comments on facilities and available resources
  - Opportunity for international exposure

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STUDENT VOICE: BENEFITS OF GRADUATE STUDENT EXPERIENCE

“The advising I get from my major professor, and the opportunity to gain research experience working in his lab, is the most important benefit I receive as a graduate student.”

“The most important benefits are experience developing a research project, learning effective teaching and public speaking skills through workshops and presentation opportunities, developing effective proposal writing skills, and learning opportunities from the very good faculty.”

“Having a great advisor who pushes me to learn and also being able to network and meet new people in the agriculture industry.”

“The community and close connections of faculty members.”

“The library system at UT is incredible.”
HOW COULD THE CASNR STUDENT EXPERIENCE BE IMPROVED?

Student participants were asked to describe in their own words “how could the CASNR graduate student experience be improved?”

Responses fell into the following thematic categories:

- **Funding/Financial Support (22%)** – Students most frequently cited the need for increased funding, financial support, or scholarships for graduate students.
- **Professional Development/Career Networking (17%)** – A frequent theme was the need for increased focus on professional development and career networking. Respondents recommended additional opportunities to connect with other graduate students, increased attention for professional development, and support for conference participation.
- **Program Specific (17%)** – Students offered recommendations related to specific programs and courses.
- **Other** – Students also noted opportunities for improvements in parking and transportation, additional teaching opportunities, upgrading of campus facilities, and support for diversity and inclusion programming among other recommendations.

**STUDENT VOICE: IMPROVEMENT OPPORTUNITIES**

“I think there is not enough focus on graduate student education in CASNR compared to the undergraduate students. Funding for graduate student assistantships and teaching assistants needs to be increased, which would allow faculty to be more competitive in recruiting top graduate students.”

“A higher focus on graduate education, opportunities for scholarships, chance to exhibit graduate work.”

“I would enjoy seeing a directory of students to increase networking among peers. Seeing their professions, hobbies, or research interests could help engage students in agricultural activities.”

“PARKING, always PARKING. If I can’t come and go to and from research plots and to visit growers and other professionals, it makes for an unnecessarily exhausting and stressful day.”
Appendix D - Student Success, Retention, and Graduation in CASNR

Overview:

CASNR’s approach to student success is holistic in nature. The personal, interpersonal, academic, and professional growth of our students is central to CASNR’s student success philosophy. CASNR promotes a learning environment that is inclusive, engaging, and transformational.

The integration of formal and informal learning experiences is necessary as learning and development occur inside and outside the classroom, especially in CASNR. Through many initiatives targeted at CASNR student success, we offer a wide range of essential services that address the needs of our prospective and current students. Some services and opportunities are provided to meet students’ basic needs, while others directly contribute to academic success, personal growth and career development.

In being strategic about student success, the following areas have been identified as being the biggest influencers of student success: transparency of process, policies and procedures, intentional advising/mentoring, innovative/impactful pedagogy, academic support, financial well-being and literacy, student programming and engagement, academic/intellectual engagement and data driven decision making. CASNR takes a developmental and a concentrated pedagogical approach to student success. CASNR wants more than just student success for our students, we want life success. To achieve that goal, CASNR is in the process of developing an innovative pedagogy for student growth and success that will create a community of excellence and pioneering best practice.

Student Success Advising and Faculty Mentoring

The centerpiece of CASNR’s commitment to holistic student success is advising and mentoring. Academic advising, in CASNR, historically has been built upon a faculty-based model. In this model, students had a faculty member as their major advisor from the time they enter the university until the time they graduate. By way of a university-wide assessment of advising programs in 2008, it was recommended that CASNR search and hire for a Director of Advising position. The Director of Advisor position, a new position for CASNR, was filled in August of 2012.

To understand the needs of faculty advisors, the college, and students, a deeper diagnostic self-study was conducted to understand the operationalization, impact, benefits, and limitations of CASNR’s advising program. The central areas focused on in the diagnostic assessments were the programs, Mission/ Roles/ Definitions, organizational structure, policy and procedures, and training and development. From the study, evidence of more faculty development as it related to advising and mentoring was needed, as well the development of more online advising resources (for faculty and students) to support student success. To address this need, an online student advising guide, CASNR advising syllabus, and online faculty advising guide were developed.
Both of these guides were built in collaboration with feedback from faculty advisors. An advising mission was developed through the help of faculty advisors, as well.\(^1\)

The structure of advising in CASNR has remained decentralized to help students localize their connection in going from the university, to college, to department, to individual advisor. Through the faculty needs assessments conducted, competencies for best practice advising were also identified. Student advising assessment data that was collected further validated these competencies as being highly valued by students.

Through the process of assessing the program, developing resources for students and faculty and program mission, ongoing close collaboration with faculty advisors, the complexity of faculty’s roles was very clear. This presented an opportunity to re-envision and develop a more strategic, hybridized version of advising that kept the hallmark of holistic student success, that faculty advising afforded, at the core. To further enhance the college’s commitment to holistic student success and development, CASNR added three Student Success Advisors. These positions are professional academic advisors who will be part of the Professional Advising Career Path at UTK and will be embedded within the departments of Animal Science and Forestry Wildlife and Fisheries. These positions are a part of the dean’s staff, but are unique in that they will be placed within each academic department and will be a part of the departmental culture.\(^2\)

These positions, within the new hybridized model, have responsibilities to advise students on appropriate courses for completion of the academic requirements for their majors, support students’ transition to college life, teach students about academic and career opportunities, advise on expectations and strategies for life skills and success beyond UT, and advise on CASNR and University General Education requirements. The Student Success Advisors are also expected to strengthen peer leadership efforts within the departments as they relate to student success and advising. These positions also have the responsibility of enhancing student’s connection to faculty. Faculty advising/mentoring will remain playing a very critical role in student success within CASNR perhaps, now more than ever.\(^3\) Student connection to faculty (and creating that connection early) is one of the biggest influences on student success, retention, and graduation. CASNR wishes to bolster faculty involvement in an even more meaningful way through more focused efforts related to faculty undergraduate mentorship and research engagement. These positions allow CASNR to more strategically approach the commitment to holistic student success here at UTK and beyond graduation.\(^4\)

**Student Success Assessment**

\(^1\)To assist with advancing cross-college collaboration and communication, the CASNR Faculty Advising Consortium was created. The mission and student advising resource page can be found here. The advising mission is in process of being revised with the new advising model for CASNR being implemented.

\(^2\)These professional advising positions were given through the funding model set forth by Advising 2020 efforts at the university level.

\(^3\)Please refer to the role breakdown found in the Appendices.

\(^4\)A Taskforce for UG Mentoring was established to clarify and distinguish between roles of student success advisors and faculty advisors/mentors (please refer to appendices)
Ongoing assessment efforts is key in measuring the impact of student success efforts in CASNR. In addition to assessing and examining the advising program in CASNR, in 2015, the CASNR honors program underwent an external review. This program review used CAS Professional Standards as a guide to develop the review the materials, objectives, and structure of the review.  

As it relates to student success metrics, CASNR is looking to understand, refine, and identify the fast cycle metrics that inform and shape retention. CASNR is taking a deeper dive into the anatomy of retention to understand what shapes it, i.e. what is retention made of? CASNR is looking to develop new student growth metrics. Many of these metrics are made up of qualitative data (interest, passion, level of engagement, level of effort, degree of adaptability) and difficult to quantify; however, CASNR is trying to do just this through PAL (Peer Advisor Leader) program in animal science.

There’s also concern and intention in innovating how CASNR understands how students define success, as well. As the student success programming evolves in CASNR, an effort is also underway to survey CASNR students and faculty to see how they define success. Also, a revamp of how assessment is done with regard to student success advising is being carried out at this time. An important part of helping students be successful is teaching them how to connect the dots, but we must first understand what the dots are.

**Focused Student Success and Retention Efforts**

CASNR strives to be a leader in innovative practice as it relates to student success programming and focused retention efforts. High impact programs that help with assist with student retention and growth are: CASNR’s Living Learning Community (voted as the most engaged LLC for 2014-2015), At-risk student interventions (e.g. workshops, strategic communications, uTrack outreach campaign), enhancement of international programs, and across-college first year courses within disciplines. Another form of programming on the rise in CASNR is peer mentoring programs targeted at building connections among CASNR students. These types of programs seek to cultivate not only student’s sense of belonging, but also help with student leadership development.

As it relates to academic support, CASNR has been partnering with the Office Multicultural Student Life to provide tutoring for CASNR students in Math, Chemistry, Biology, and ANSC 220. These tutors work out of Pendergrass Library on the Ag Campus to enhance the access CASNR students have to these academic support resources. CASNR has also developed and will continue to refine the system of strategic outreach and intentional advising for those students academically at-risk or on academic probation. Historically, the director of advising developed,

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delivered workshops on academic success, one-on-one meetings, and materials on success to students at-risk.

Transfer partner and student outreach is another important aspect of helping prospective transfer students with their academic preparedness of what to expect when they get here in CASNR. CASNR has developed transfer transition guides with community college partners as well as developed, in concert with community college faculty in certain cases, courses that will be articulated as direct equivalents here at UTK.

With regard to outreach, CASNR understands the importance of academic entrepreneurship to help bridge gaps with partner institutions and industry as well. An exceptional example of this is the Construction Science concentration within the Environmental Soil Science major. That program has built, on the front end prior to a student being admitted, an academic pipeline through PSCC in which the faculty at the community college are teaching the content that will help prospective students to the program be academically successful. On the back end of the program, similarly, a career pipeline has been established through partnering with industry, through the creation of internships, a concentration specific career fair that assist in placing graduates in the program once they graduate. Industry partners also donate to the program to help secure the return on their investment after seeing the quality of students we place in their respective companies. Academic and career readiness are essential for student success here at UTK and beyond. The construction science program in CASNR is an example of how this has been achieved in an academically entrepreneurial way.

Honors and UG Research is also very important to the student success mission in CASNR. Pushing our students to excel at the highest level academically, socially, and professionally is key to learning they can develop a love for lifelong learning. The honors program, after undergoing a program review, is revising the structure of the program and redefining what an honors experience in CASNR consists of.

Curriculum development is also crucially important to student success as well. The college developed an online college petition. This online petition increases efficiency and accountability of the petition submission process. It also allows departments to track the meaningfulness of the courses in their curriculum, potential bottle necks, track how curriculum is developing, and provides a data platform for assessing curricular changes.

Looking to and Beyond Graduation

The evolution of the advising model and student success mission wrought a change to the director of advising position. It became clear that the position had expanded to include, more broadly, student success. For this reason, the position changed title and scope was recently updated and is now, Director of Advising and Student Success.
A challenge to the continual evolution of CASNR’s student success advising model is being able to be fully staffed. Conversely, the new advising plan for UTK, Advising 2020, helps with the promotion of advising and mentoring as an integral, high impact, university activities.

Goals for the upcoming years will be the revitalization of the orientation programming for incoming students into CASNR, assessment and improvement for the first year and sophomore student experience in CASNR, revising the advising learning outcomes map to include/integrate faculty mentoring outcomes, more focused and intentional faculty development programming around issues related to student success and mentoring, developing an interdepartmental early alert or supplemental instruction for gateway courses, increasing academic support opportunities for CASNR students, and revising student success and undergraduate mentoring competencies.

The foundational aim is to sustain in providing faculty, staff, and students a continuity of care and support to foster persistence, progression, growth, graduation, and life success.
Appendix E - Roles of the CASNR Student Success Advisor and Faculty

STUDENT SUCCESS ADVISOR & FACULTY MENTOR/ADVISOR ROLES

STUDENT SUCCESS ADVISOR ROLE

Student success advisors foster holistic student success and persistence to graduation through intentional programming, meetings, and activities that cultivate various forms of student engagement. They do this through: a) assisting students in self-exploration in order to develop educational plans that are consistent with students’ aspirations, interests, strengths, and values; b) encouraging students’ holistic engagement with the college experiences (academically, socially, culturally, and professionally); c) developing a collaborative relationship with students, which allows them to engage in self-authorship, make meaning of their experiences, and assume responsibility for their futures; d) guiding students in critical reflection of academic, career, and life goals; e) guiding students through career and professional development opportunities available as well as campus support for the identification and exploration of experience learning, leadership, and career paths; and f) serving as a conduit for connecting students to faculty mentors/advisors.

STUDENT SUCCESS ADVISORS:

- Provide a substantive advising appointment as required for each student that includes positive, open-ended questions to allow students to explore their goals, interests, and concerns.
- Educate students about curricular requirements, academic standards, and academic milestones related to an intended/chosen academic program.
- Educate and provide feedback on college and general education petition trends to faculty/department.
- Conduct and coordinate graduation checks.
- Assist students in developing an academic plan through graduation.
- Assist students in transitioning into and out of major(s).
- Teach students how to assess their degree progress through graduation.
- Make referrals to campus resources, programs, and support systems that promote academic success and career development.
- Educate students on and create student engagement opportunities, campus support services, changing/declaring majors/minors, re-admission, transfer questions, scheduling classes.
- Explain university and college academic policies and procedures.
- Complete the petitioning process for students pursuing curriculum exceptions.
- Communicate in a timely manner with assigned advisees.
- Effectively utilize technology that supports advising practice (such as DARS, Banner, Grades First, Career Guides/Alumni database).
- Collaborate with, refer, and connect students to faculty mentors/advisors.
- Actively engage faculty in providing updates related to student success initiatives.
- Conduct first-year and transfer student orientation sessions.
- Foster and educate students on professionalism and professional behaviors.
- Meet with prospective students.
- Discuss and educate students on jobs and professions within the field.
- Participate in outreach activities such as speaking to classes, presenting programs in LLCs and residence halls, and supporting recruitment activities.
STUDENT SUCCESS ADVISOR & FACULTY MENTOR/ADVISOR ROLES

FACULTY MENTORING/ADVISING ROLE

Faculty members mentor students as an important component of their teaching. By serving as mentors, faculty provide effective guidance so students can maximize their educational opportunities and make critical decisions regarding education, career, and life goals. Faculty mentor students to help them become responsible citizens of their profession and the global community. The faculty mentor/advisor serves an integral role in fostering the student’s academic/intellectual engagement as well as promoting the student’s professional/career growth and connection.

FACULTY MENTORS/ADVISORS:

1. Discuss students’ career and personal goals and specific interest in the major.
2. Provide students with an understanding of the major discipline and its options and how they intersect with the students’ interests and goals.
3. Discuss content of major courses and how they connect to:
   - Prerequisite courses
   - Skill development
   - Career goals
   - Life goals
   - Graduate work
4. Discuss minors and elective courses that provide relevant connections to the student’s academic and career interests.
5. Meet with prospective students.
6. Reinforce the academic strategies necessary to be successful in the major and discuss available resources.
7. Discuss students’ opportunities related to the discipline and how they can fit within an academic plan. For example:
   - Undergraduate research
   - Experience learning
   - Honors concentrations
   - National scholarships and fellowships
   - Internship opportunities
   - Student organizations within the major
   - Study abroad opportunities related to the discipline
8. Discuss preparation for postgraduation goals:
   - Consulting with career consultant in Center for Career Development
   - Preparing for the GRE
   - Applying to graduate or professional schools
   - Reviewing resume or vitae
   - Requesting faculty recommendations
9. Collaborate with professional advisors on issues relevant to individual students.
10. Connect students with career networking and internship opportunities and assist students in building a professional network.

FACULTY MENTORS ARE NOT EXPECTED TO:

1. Develop comprehensive academic plans that include General Education requirements.
2. Possess comprehensive knowledge of all university resources (e.g., academic support, student life, financial aid, registration, etc.).
3. Regularly utilize IT student information systems (e.g., DARS, BANNER, uTrack).
4. Design and implement targeted retention and student success advising interventions.
5. Complete administrative duties related to processes such as financial aid, study abroad, and course petitioning.
6. Perform graduation checks for senior-level students.
7. Discuss academic policies and procedures.
8. Clear advising/registration holds.

1 There is a taskforce in CASNR composed of faculty from each department that is working on clarifying, specifying this role.
2 (Faculty Handbook, 2012, 2.22 Teaching)
Appendix F – Services and Resources Supporting the Herbert College of Agriculture

UNIVERSITY OF TENNESSEE, KNOXVILLE, LIBRARIES

SERVICES AND RESOURCES SUPPORTING THE HERBERT COLLEGE OF AGRICULTURE

JUNE 2018

The University Libraries of the University of Tennessee, Knoxville (UT), is a cornerstone of Tennessee’s oldest land-grant and primary research university. UT Libraries is ranked in the top 25 among public research libraries by the Association of Research Libraries. The UT Libraries participates in the teaching, research, and public service programs of the institution, and adheres to the following mission and vision.

MISSION STATEMENT: The University of Tennessee Libraries enrich and advance our community, the nation, and the world by providing expertise and leadership in accessing, creating, disseminating, and preserving knowledge.

VISION: The University of Tennessee Libraries is an indispensable partner to every member of the Volunteer community as they discover and advance knowledge, engage with society, and strive for excellence.

LIAISON ACTIVITIES

UT librarians are required to have an American Library Association-accredited master’s degree and comprehensive knowledge of library tools, in addition to expertise in their fields of specialization. Librarians have faculty rank and status, and must meet university requirements for tenure and promotion.

Isabella Baxter is the Agriculture Librarian and provides service and support for the Herbert College of Agriculture. She works closely with the college to provide library services and develop and manage collections that meet the curricular and research needs of faculty and students. Isabella Baxter works with college faculty to integrate information literacy and research skills into the curriculum, provides information literacy and research instruction, and conducts customized reference and research consultations through email, phone, chat, and individual and group appointments.

Isabella Baxter develops guides for each of the departments in the Herbert College of Agriculture (libr. utk.edu/Isabella_Baxter), which includes effective online learning tools and tutorials. She evaluates and acquires print and electronic collections and collaborates on collection needs with faculty and students in the Herbert College of Agriculture.

Library Representatives from each academic department serve as departmental liaisons to the Libraries. The Representatives communicate with Isabella Baxter as needed regarding library services and collections. The Herbert College of Agriculture faculty and students are encouraged to contact Isabella Baxter with requests and suggestions for services and resources.

A Student Advisory Committee, composed of student government officers as well as graduate and undergraduate students appointed by the academic deans, meets regularly with the Dean of Libraries to provide feedback and engage in discussions about library resources and services. The Library and Information Technology Committee of the UT Faculty Senate fulfills the same purpose for faculty interests.
LIBRARY SERVICES FOR STUDENTS AND FACULTY

Research Assistance

The Libraries’ website (lib.utk.edu) provides a gateway to library services for undergraduates, graduate students, faculty, and the community. The Pendergrass Agriculture and Veterinary Medicine Library’s webpage (lib.utk.edu/agvet) is the access point for library services, subject guides, and 38 databases related to agriculture. The website is available on a range of mobile devices. Pendergrass Library offers on-site and virtual use of its resources through outreach, services, and current technology. The Libraries is committed to providing access to library services and resources to all users. A wide range of services is available for individuals with disabilities (lib.utk.edu/info/disabilities).

Interlibrary Services and Document Delivery

Interlibrary Services (lib.utk.edu/ils) serves UT faculty, staff, and students by locating and delivering materials not held at UT’s libraries. Requested journal articles are usually delivered electronically when possible. A consortial arrangement for delivery of collection materials from Vanderbilt University and the University of Kentucky provides expedited access to materials held by these libraries. Users submit requests for materials via the online service, ILLiad, which is also used to place orders for other document delivery services such as Library Express and the Libraries’ Distance Education Services (lib.utk.edu/info/distance-ed).

Library Express (lib.utk.edu/request/library-express) delivers books and bound journals to users from the Libraries’ collections. Materials in Pendergrass and other UT Libraries can be delivered directly to faculty, staff, and graduate student offices across campus via Library Express. A Scan on Demand Service (lib.utk.edu/request/scans) allows patrons to receive emailed PDF files of articles or book chapters scanned from print and microfilm materials within the Libraries’ collection. These services are invaluable to researchers needing quick access to materials.

Library Express delivery, Scan on Demand PDF service, and interlibrary loans from libraries worldwide are available free of charge.

Resource Sharing

To enhance access to information and delivery of materials not locally owned, the Libraries seeks partnerships with other libraries via memberships and alliances. The UT Libraries is a member of the Association of Research Libraries (ARL), the Association of Southeastern Research Libraries (ASERL), and an affiliate member of the Northeast Research Libraries (NERL). As a participant of the OCLC Research Library Partnership Program, UT’s scholars are entitled to on-site access to the program’s global alliance of national and international member libraries plus expanded interlibrary services and special collections access. Through its membership with the Center for Research Libraries (CRL), UT researchers have access to the Center’s rich collection of specialized materials. The CRL catalog (catalog.crl.edu) is available through the Libraries’ homepage.

Data Curation and Scholarly Communication

UT Libraries is committed to helping researchers as both users and producers of data. Chris Eaker is the Libraries’ Data Curation Librarian. He helps UT Knoxville researchers navigate federal requirements for data management and sharing, and educates researchers in the skills needed to manage data well.

Rachel Caldwell serves as UT’s Scholarly Communication Librarian, providing consultations and expertise on topics such as copyright, assessing the impact of research, publishing in open access publications, and author rights. She maintains an array of helpful online research guides for students and researchers.

Both Chris Eaker and Rachel Caldwell have collaborated with the University of Tennessee Institute of Agriculture’s Office of Sponsored Programs to offer presentations on data management practices and scholarly communication to students, faculty, and staff at the Institute of Agriculture.
Digital Media Production

The Studio (lib.utk.edu/studio), located in the Commons on the second floor of Hodges Library, is the Libraries’ media production lab. It provides faculty and students the equipment, software, and instruction required for the creation of media-enhanced instructional products. Students and faculty have access to audio production rooms, video recording workstations, and an array of video and digital cameras, audio recorders, microphones, and software. Assistance is available on site, and users may also request in-depth, one-on-one consultations. Some production equipment and software is also available at Pendergrass Library.

FACILITIES

Campus libraries include the Webster C. Pendergrass Agriculture and Veterinary Medicine Library, the John C. Hodges Library (central library), the George F. Devine Music Library, located in the Natalie L. Haslam Music Center (lib.utk.edu/music), and the James D. Hoskins Library. Hoskins Library houses the University Archives material, the microform collection, the Storage Collection of over 390,000 volumes determined to be low-use materials, and a Storage and Map Reading Room (lib.utk.edu/request/storage). Access to the material in Hoskins Library is available through delivery via Library Express and a Storage Reading Room for on-site use.

The programs of the Herbert College of Agriculture have access to all of these resources and are supported primarily by the Webster C. Pendergrass Agriculture and Veterinary Medicine Library (lib.utk.edu/agvet).

Webster C. Pendergrass Agriculture and Veterinary Medicine Library

Webster C. Pendergrass Agriculture and Veterinary Medicine Library, UT’s largest branch library, occupies 16,000 square feet of the north wing of the Veterinary Medical Center, and houses most of the University Libraries’ collections for agriculture, including cultural and resource economics, natural and environmental sciences, food sciences, and veterinary medicine, with over 154,000 books, journals, CD/DVDs, and data sets. Over $300,000 is allocated annually to support purchase of books, videos, and continuations of journal subscriptions for agriculture and natural resources topics. The collection includes U.S. Department of Agriculture publications and agricultural experiment station and extension service publications.

Pendergrass Library was renovated during Summer 2018. Access to library resources and software is available on computer workstations; wireless internet access is also available throughout the library. The computer workstations were moved to an area that offers less glare from windows. The collaborative study area was moved to an area by a window bay and the group study rooms. New furniture was provided for both the computer lab and group study area. High definition monitors were installed in the five group study rooms, and more electrical outlets were installed in the library. This renovation increased support for learning and studying on the Institute of Agriculture’s campus.

Students may borrow laptops, cameras, GPS devices, and other equipment free of charge. Library staff offer expert technical support, 3-D printing services, and large format printing (libguides.utk.edu/ pendergrasstechnology). Assistance is also provided with two citation management software programs: EndNote (libguides.utk.edu/endnote) and Zotero (libguides.utk.edu/zotero). Tables and study carrels provide seating for 200. Five rooms may be reserved for meetings, group study, and practicing presentations. Pendergrass Library is a popular gathering place on the Agriculture Campus. Ample quiet study space is also provided.

Research assistance at Pendergrass Library is available 97.5 hours per week in the academic year and 45 hours in the summer for on-demand assistance and informal instruction. Library instruction tailored to specific topics or sources is available upon request for classes and student organizations. Course-specific research guides are created upon faculty request.
John C. Hodges Library

John C. Hodges Library houses materials of interest to faculty and students in the Herbert College of Agriculture. The building features faculty studies, graduate student carrels, study space for several thousand students, and the main print collections housed on floors three through six. Group viewing for classes is available in library classrooms or in a 150-seat auditorium.

The Public Services Desk is located at the Melrose Avenue entrance on the second floor of Hodges Library. The Commons (commons.utk.edu) on the second floor is a collaborative partnership between the Libraries, the Office of Information Technology, the Writing Center, Statistics Lab, Math Tutorial Center, and Student Success Center to deliver research, technology, and academic support services to students. Other services in the Commons include circulation and reserve services, computer support, and research assistance and consultation. Computer labs, loaner laptops, and student-centered spaces for learning, creating, and collaborating are also available. The Commons also houses the Libraries’ Studio.

During the Fall and Spring semesters, Hodges Library, including the Commons, is open continuously from 10:00 a.m. Sunday until midnight Friday and from 10:00 a.m. until midnight Saturday.

COLLECTIONS

The Libraries’ collections are housed in John C. Hodges Library, Webster Pendergrass Agriculture and Veterinary Medicine Library, George Devine Music Library, and James D. Hoskins Library. Items in each library are available for delivery to the other libraries or to offices. As of June 30, 2017, UT Libraries’ collection had over 3.3 million cataloged print volumes, 778,000 e-books, 141,744 electronic journal/serial titles, 94,463 video and film titles and 40,645 audio music titles. As a selective federal depository since 1907 and a State of Tennessee depository since 1977, the UT Libraries now selects materials primarily in digital format and provides access to about 30 percent of materials currently offered through the Federal Depository Library Program. Pendergrass Library receives nearly 100 percent of publications by the US Department of Agriculture.

The Libraries’ electronic access to its collections, including indexes, full-text databases, electronic journals, e-books, and streamed video, is provided through the campus network and to authorized off-campus users. The Libraries’ databases (libguides.utk.edu/databases) are listed by subject and type on the Libraries’ website. Databases of particular interest to the Herbert College of Agriculture are under “Agriculture.”

The Libraries’ electronic journal collection is accessible on the Libraries’ website by title or by subject. OneSearch, the Libraries’ discovery service/catalog also provides access to some database content, as well as many e-journals and e-books. Items in the Pendergrass Library’s teaching and research media collection (primarily DVDs, but also high-use or rare VHS titles) are available by call number in the stacks. An increasing number of titles are becoming available in streaming format via databases and the catalog (libguides.utk.edu/streaming). Links are available in the OneSearch record.

The Libraries’ Special Collections Department (lib.utk.edu/special) is located on the first floor of Hodges Library. Highlights of the department include extensive rare book and manuscript holdings on the Great Smoky Mountains, Tennessee history, Southeastern Native Americans, and selected Southern writers. The department includes the University Archives, which maintains the institutional legacy of the University and serves as the official repository for the University of Tennessee. Access to special collections material is enhanced by the creation of online finding aids and digitization of selected Special Collections materials.

The Libraries’ digital collections (digital.lib.utk.edu) offer open access to a variety of materials of interest to the academic community and to the general public, including several historical photograph and document collections related to the Great Smoky Mountains, Tennessee, Southern Appalachia, and the University of Tennessee. Newfound Press (newfoundpress.utk.edu), a library digital imprint,
was launched in 2005 as a demonstration of new forms of scholarship. The Libraries has partnered with the Office of Research and Engagement and the Office of the Provost to create Trace (trace.tennessee.edu), UT's digital archive which showcases and preserves published and unpublished works by university faculty, departments, programs, research centers, and institutes. Many Extension and AgResearch publications are available in Trace and in Special Collections, as are scanned versions of histories of the University and the Institute of Agriculture. Trace also includes the full text of UT theses and dissertations.

**COLLECTION DEVELOPMENT & MANAGEMENT**

The UT Libraries’ collections support the teaching, research, and public service needs of the University of Tennessee, Knoxville. Collections that UT Libraries makes available to its users include materials acquired by purchases or gifts of physical items and retained in the local collections; digital content obtained from vendors, publishers, and the university community; locally digitized materials; resources borrowed from other libraries; and open-access sources available via the Internet. Although print is still an important format for the Libraries’ collection, digital format is preferred to provide electronic access. The Libraries’ Research Collections Department ([lib.utk.edu/collections](http://lib.utk.edu/collections)) oversees the collection development and management program of the Libraries.

**Resource Allocations**

Each year funds are available for purchasing materials or access to support the mission of the Libraries and the University. Allocations are made by discipline for monographs, media material, periodicals, and serials, and are based on factors such as program strengths, curriculum initiatives, local demographics, and publishing trends. Liaison Librarians conduct collection analysis and outreach activities to support collection decisions. The University’s annual allocation for the collections budget has been over nine million dollars in recent years.

Approval plans totaling more than $700,000 enable the acquisition of monographs, both print and electronic, from university presses and U.S. trade publications. Liaison Librarians develop and maintain approval profiles for their subject areas. To supplement the approval plans, patron-driven acquisition (PDA) programs acquire electronic books and streamed media in all subject areas. Users access a PDA title in OneSearch and the title is purchased after a certain number of uses.

Beyond the approval plans and the PDA programs, approximately 10 percent of the collections budget is currently allocated for firm orders (one-time purchases such as monographs, microform, and media materials), and over 90 percent is allocated for periodical and serial subscriptions, the majority of which are in electronic format. More than half of the collections budget is allocated to large e-journal and e-book subscription packages and database subscriptions. The large package deals provide full-text access to current issues and back files of journals as well as thousands of e-books and streamed media titles. Publishers who supply the Libraries with large e-journal packages include Elsevier, JSTOR, Oxford University Press, Sage, Springer, Taylor & Francis, and Wiley.
LIBRARY EXPENDITURES

The table below summarizes library expenditures for Fiscal Years 2013-2017 for purchases for the Herbert College of Agriculture.

These figures are limited to subject-specific allocated budgets and do not include collection endowment dollars spent on behalf of the Herbert College of Agriculture. They also do not include dollars spent on patron-driven acquisitions, e-book subscription packages, databases, and e-journal packages, all of which affect the annual “Total Expenditures” for a discipline. The dollars spent from the firm order budget have declined in recent years due to the increase of patron-driven acquisitions and e-book packages.

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<th>Library Expenditures: Agricultural Materials</th>
<th>FY13</th>
<th>FY14</th>
<th>FY15</th>
<th>FY16</th>
<th>FY17</th>
<th>Total</th>
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<td>Approval Plan (print &amp; electronic U.S. university press &amp; trade publications)</td>
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<td>Firm Orders</td>
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<td>$20,942</td>
<td>$10,645</td>
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<td><strong>Total Expenditures for Agricultural Materials</strong> (rounded to whole dollars)</td>
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<td><strong>$111,018</strong></td>
<td><strong>$111,354</strong></td>
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</tr>
</tbody>
</table>

CONTACT INFORMATION

For more information, contact Isabella Baxter, Agricultural Sciences and Natural Resources Librarian, Pendergrass Agriculture and Veterinary Medicine Library, 974-8116 (ibaxterf@utk.edu), or Molly Royse, Head of Research Collections, 974-3652 (mroyse@utk.edu).