



CASNR 2020

**A Strategic Plan for the
College of Agricultural
Sciences and Natural
Resources**

November 2013

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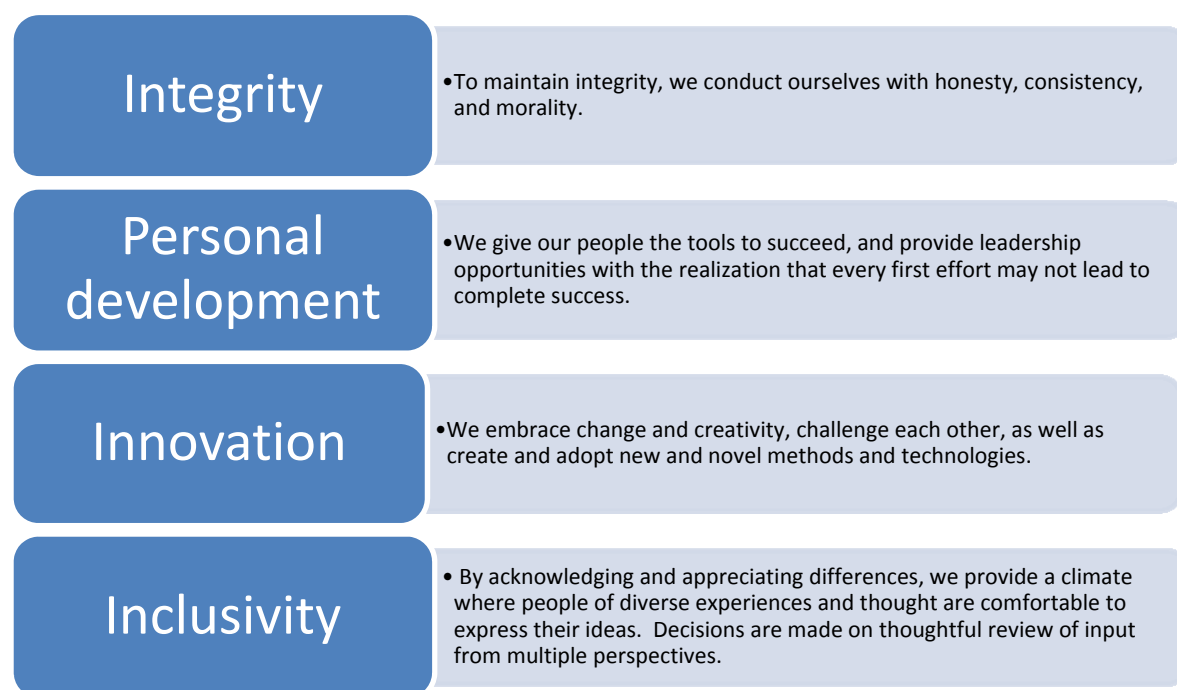
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Mission

The College of Agricultural Sciences and Natural Resources 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.

Values

The values of the CASNR's faculty, staff and students are core to our operational conduct and decision-making.



Vision

Our vision is to graduate students who are sought-after for their potential to solve state, national, and global agricultural and natural resource challenges for improved food security, health, energy, and a better environment.

CASNR Today

Our college, like many across the nation, is at a crossroads as obtaining a college education becomes increasingly important for employment as well as personal growth. Over the last six years, our student population has increased 40%. The composition of our student body, however, consists increasingly of urban and suburban students with little background, and in some cases, interest, in conventional agricultural production. Society is seeking growth and prosperity in sustainable ways that maintain our economic strength, food security, and health, while safeguarding and improving our natural environment. Our educational work in agricultural and natural resources positions the college as a vital

component of the University of Tennessee, Knoxville (UTK) and an essential part of its land-grant mission. CASNR enjoys a solid alliance with research and extension as one of the educational components of the University of Tennessee Institute of Agriculture (UTIA). We are unique among Tennessee colleges as our faculty develop the research-based information used in our classrooms and by other colleges. Many of those research questions and opportunities are identified by UTIA Extension personnel who also use the information to advance education outside the borders of the campus and throughout the state of Tennessee. Our college provides students with a broad education, which develops communication and critical thinking skills and professional behaviors. At the same time, our students learn focused skill sets that enable them to succeed either in a career path in their major or from a suite of other interdisciplinary career opportunities as CASNR alumni.

Trends in Higher Education

State and federal formula funds for public colleges and universities have been on a steady decline for over 10 years with no sign of stabilizing or improving. Tuition increases have made up part of the decrease, though public support for tuition to entirely offset public funding losses is increasingly slim. Grant and gift funds are becoming a progressively larger portion of the budget, but those funds are typically tied to very specific desired outcomes and cannot be relied upon to support the long-term personnel or programs needed for a college. Ultimately, cuts in university personnel, programs and services must be made to accommodate the remainder of the formula funding deficits. Hence, colleges nationwide have compensated by specializing to provide high quality in fewer areas of educational focus.

Technology has become an important component of higher education and its development outpaces the adaptive abilities of most instructors and the infrastructure of bricks-and-mortar higher education. Distance education using computer and other audio-visual technology is becoming adopted to some extent at public colleges. The utility and desirability of such technology is mixed, and UT has recently reduced its support for its use as part of the curriculum, with the idea that individual units will appropriately develop such technology as best fits their areas of education. Some private, for-profit colleges such as the University of Phoenix have thoroughly embraced the technology, resulting in huge student populations. Students themselves are increasingly using an expanding variety of technologies, which blur the line between traditional education and social networking.

Students with agricultural backgrounds comprise an increasingly smaller proportion of CASNR's students, especially those interested in pursuing careers in production agriculture. The rise in student numbers for our college stems from urban and suburban students who enter the college for many reasons. These include a desire to have a smaller college-type experience with faculty advising, to those having interest in areas such as pre-professional, environmental, and agri-business programs. Students increasingly want opportunities to have international experiences at moderate cost and time, and more interaction with other colleges on the campus.

Publicly-supported colleges are being held increasingly more accountable to the public, while few people realize the complexity of sources, expenses, and regulations tied to university budgets. Students at for-profit colleges based on distance-education have a higher default rate on loans (G. Blumenstyk, *Chronicle Higher Ed.*, Dec. Feb. 4, 2011), and these institutions are often criticized for not supplying employable skill development. State funding in Tennessee is impacted by performance measures including retention and completion rates. It may only be a matter of time before public funding to

higher education becomes tightly tied to career placement, even though the intent of the education we provide has always been a mixture of career and personal growth. Indeed, compliance with the Department of Education requires accreditors to include standards addressing “job placement rates” (ACICS, 2011). CASNR surveys indicate employers want innovative students with good communication skills who have strong work ethics and are willing to be team members. Cross-discipline training is desirable, along with math, science, and accounting skills coupled with analytic ability. Results of a study commissioned by The Accrediting Council for Independent Colleges and Schools (ACICS) and published in December 2011 noted the output of college-educated workers has failed to keep pace with industry’s needs since 1990. Of particular importance was the idea that college programs too often fail to align with employer’s needs for specific skills. In the summer of 2011, CASNR participated in a national survey aimed at discovering the soft skills that employers are seeding in new graduates. The data from students, alumni, faculty, and employers identified the soft skills needed for successful transition from college to employment. Communication was identified as the most important soft skill by all groups surveyed with decision making/problem solving ranking a close second.

As the need for college education increases, older adults (non-traditional) are returning to college to earn degrees. Increasingly, the student body is attending part-time, as both traditional and non-traditional students are maintaining part or full-time jobs. Such students are less likely to participate in extracurricular activities that may be important for personal and professional growth.

Internationalization of the student body is slowly increasing. Most growth appears to be at the graduate level, which can be complicated as international students may have different cultures and expectations than students raised in the US. Opportunities to attract graduate students are escalating as globalization occurs, but at the same time, are hindered by federal and university regulations.

Overview of CASNR 2020 Strategic Goals



Dean's Office/CASNR

- Improve communications
- Engage alumni and stakeholders
- Develop alternative revenue streams



Undergraduate Education

- Cultivate strong communication skills
- Cultivate critical thinking skills
- Graduate students who can acquire, integrate and apply discipline knowledge
- Increase retention and 6 year graduation rates

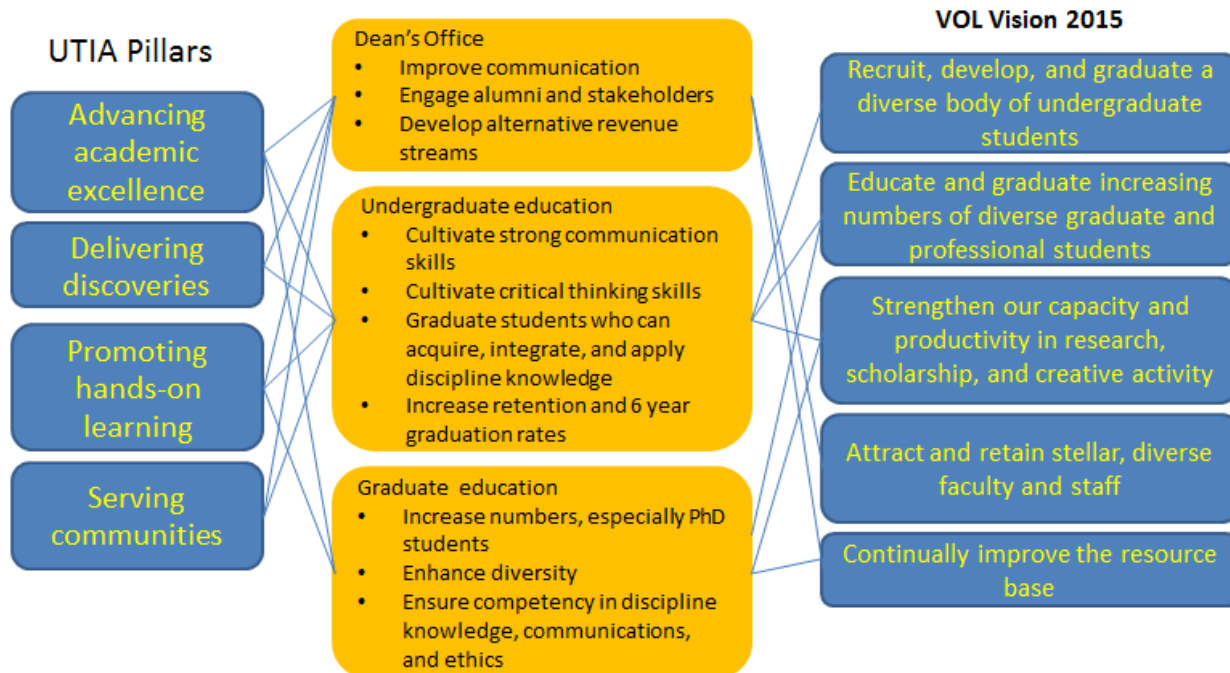


Graduate Education

- Increase numbers, especially PhD students
- Enhance diversity
- Ensure proficiency in discipline knowledge, communication, and ethics

Interrelatedness of CASNR Goals with Top 25 and UTIA Pillars

Relationship between the CASNR 2020 goals and 1) the Pillars that guide the University of Tennessee Institute of Agriculture and 2) the goals of the University of Tennessee's VOL Vision 2015: The Pursuit of the Top 25.



Qualities Important in our Graduates

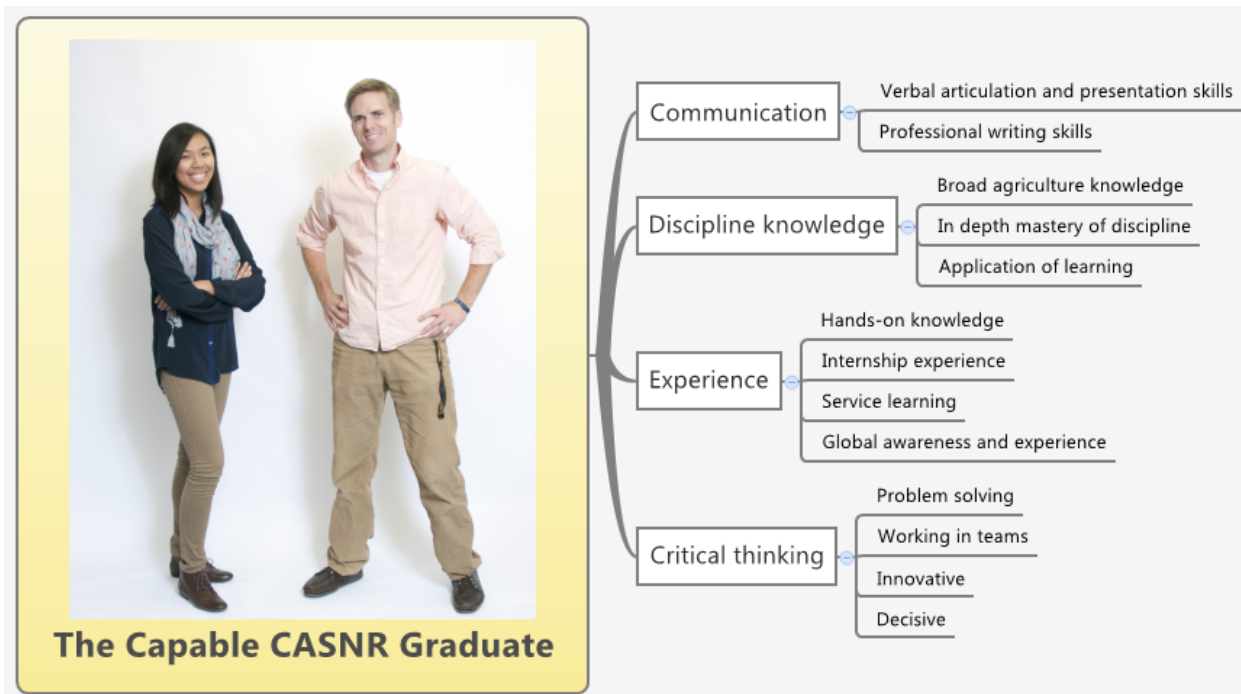


Table 1. CASNR Strategic Plan Goals, Strategies, and Tactics

| Level & Goals | Strategies | Tactics | Assessment |
|---------------------------------------|---|--|--|
| Dean's Office/CASNR | | | |
| Improve communications | Develop multiple means to enhance communication within UTIA | <ul style="list-style-type: none"> • Develop a college e-newsletter • Install electronic bulletin board outside dean's office and use it to post current news/events • Annual State of the College Address | Actual implementation and continuance |
| | Improve communication with campus administration | <ul style="list-style-type: none"> • CASNR dean will have monthly meetings with Provost's office • CASNR dean and dean's staff will engage in more campus initiatives and events | Implementation and continuance Annual reports of activity |
| | Improve communication outside of UT | <ul style="list-style-type: none"> • Distribute e-newsletter to alumni and FUTIAWA members • Improve website for potential students, especially transfer students • CASNR dean and staff will attend more agriculture-industry events, such as field days, Farm Bureau meetings, etc. | Implementation and continuance Implementation Annual reports of events attended and activity |
| Engage alumni and stakeholders | Work with UTIA Office Institutional Advancement | <ul style="list-style-type: none"> • Attend more agriculture-industry events • Utilize annual Alumni award every year • Develop Friend of CASNR Award | Annual reports of activity Implementation Implementation |

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| | Involve alumni and stakeholders in educational mission | <ul style="list-style-type: none"> • Develop a College Advisory Board • Invite alumni and stakeholders to visit classrooms • Solicit feedback on readiness of CASNR graduates for the workplace | <p>Implementation Implementation</p> <p>Post Career Fair Survey</p> |
| Develop alternate revenue streams | Take advantage of existing campus opportunities | <ul style="list-style-type: none"> • Summer school instruction • Specialized summer workshops | <p>Number of courses offered Number of workshops</p> |
| | Work within UTIA structure | <ul style="list-style-type: none"> • Encourage teaching grants which will bring in IDC | Increase in teaching grants submitted and IDC |
| | Work with Office Institutional Advancement | <ul style="list-style-type: none"> • Attend donor meetings with OIA staff • Work with OIA to identify specific opportunities and priorities | <p>Implementation of visits Meetings with OIA each semester to update</p> |
| Undergraduate Education | | | |
| Cultivate strong communication skills | Emphasize written and oral communication in courses and extracurricular activities | <ul style="list-style-type: none"> • Promote participation in student competitions: e.g. professional society bowls and competitions • Encourage/fund/reward attending and presenting at professional meetings • Increase CASNR WC courses • Provide faculty incentives for teaching WC courses | Draw information on gains from departments that are measuring similar goals. |
| | Publicize information received from employers/alumni on the importance of communication skills | <ul style="list-style-type: none"> • Emphasize communication skills in college orientation sessions • Increase emphasis on communication skills in career placement preparation | Implementation and continuance |

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| <p>Cultivate critical thinking skills</p> <p><i>(Through enhanced quality and effectiveness of classroom instruction and academic advising)</i></p> | <p>Institutionalize experiential learning</p> | <ul style="list-style-type: none"> • Encourage more problem-based approaches in courses • Require at least one experiential learning course of every graduate¹ • Secure support to enable faculty to teach more lab courses and take more field trips • Promote increased faculty and student participation in undergraduate honors courses • Provide a professional teaching workshop on how to integrate critical thinking and problem-solving into the learning experience | <p>Incorporated the California Critical Thinking Skills Test (CCTST) for FTFTF into new student orientation and retest students before graduation to see gains.</p> <p>Develop a one hour required online capstone course for CASNR students where they take the CCTST and proved assessment data on this and all planning goals².</p> |
| | <p>Increase UG research participation</p> | <ul style="list-style-type: none"> • Create additional research experience for undergraduates (REU) opportunities (faculty) and increase participation by students • Link REU participation to courses that provide training in research fundamentals, where appropriate • Develop funding strategies to support undergraduate research; funds should be available both for faculty mentors and student | <p>Increase in the numbers of students doing undergraduate research and participating in EURéCA</p> |
| <p>Ensure students acquire, integrate and apply discipline knowledge</p> <p><i>(Equip graduates with the strong practical skills, and understanding of their theoretical underpinnings, to be successful professionals in their field)</i></p> | <p>Institutionalize experiential learning</p> | <ul style="list-style-type: none"> • Require at least one experiential learning course of every graduate • Secure support to enable faculty to teach more lab courses and take more field trips • Increase engagement of private sector and government professionals in interacting with our students through alumni and professional organizations | <p>Draw information on gains from departments that are measuring similar goals.</p> |

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| | Promote adoption of innovative instructional delivery methods | <ul style="list-style-type: none"> • Sponsor a mini-grant through TTLC • Support CASNR faculty initiatives through ad hoc seed grant support • Provide support for writing grant proposals and publications on teaching scholarship | Increase in number of successful teaching grants |
| Increase retention and 6 year graduation rate | <p>Enhance sense of community and connection for CASNR students</p> <p>Minimize required course bottlenecks</p> <p>Use strong advising relationships to address threats to retention</p> | <ul style="list-style-type: none"> • Expand learning community • Coordinate timing of course offerings to eliminate overlapping required courses • Offer key courses in summer • Provide expanded guidance for advisors on retention issues • Encourage departments to develop a course in which upper division students peer-mentor lower division students | Increase in retention and graduation rates for the college |
| Graduate Education | | | |
| Increase numbers, especially PhD students | <ul style="list-style-type: none"> • Enhance Recruiting Efforts | <ul style="list-style-type: none"> • Establish 5-year BS/MS degree programs to streamline education process and build partnerships with other colleges/universities • Become more proactive in recruiting international students and establishing long-term ties to international universities (e.g., student exchanges, faculty/scientist exchanges) • Encourage international efforts through enhanced administrative support • Review and adopt best recruiting methods from other universities | Increase in numbers of graduate students |
| Enhance diversity | | | |

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| | <ul style="list-style-type: none"> • Increase Support | <ul style="list-style-type: none"> • Become more proactive in recruiting fully funded international students • Seek tuition support for graduate students from Graduate School • Encourage graduate students to compete for nationally funded fellowships • Encourage faculty/staff to write salaries into grants, using state funds for tuition when funding agency disallows tuition | Increase in number of graduate students on support |
| | <ul style="list-style-type: none"> • Encourage faculty to add and mentor PhD students | <ul style="list-style-type: none"> • Provide funds from departmental IDC share to cover tuition if matched by stipend provided on research grants • Instill expectation of doctoral student mentorship for advancement in rank | Increase in number of doctoral students |
| Ensure competency in professional knowledge, communication, and ethics | <ul style="list-style-type: none"> • Enhance Quality of Programs | <ul style="list-style-type: none"> • Assess departmental expectations at annual review and during periodic program review • Assess and publicize graduate placement, publications and presentations, • Enhance education in presentations, publications, grants writing • Improve graduate course offerings throughout CASNR • Review and revise curriculum for efficiency and desirability of courses • Revitalize PSI program³ | Exit interviews with graduates Placement and publication rates Successful disaggregation of PSI |

¹ CASNR develops a new (EL) designation for classes that contain 15 hours or more of a service learning component. Experiential learning is defined as learning through reflection on doing with a focus on the learning process for the individual. For experiential learning to be effective, the following elements must exist:

- The learner must be willing to be actively involved in the experience
- The learner must be able to reflect on the experience;
- The learner must possess and use analytical skills to conceptualize the experience; and
- The learner must possess decision-making and problem solving skills in order to use the new ideas gained from the experience

Itin, C. M. (1999). Reasserting the Philosophy of Experiential Education as a Vehicle for Change in the 21st Century. *The Journal of Experiential Education* 22(2), 91-98.

² Course to be administered by CASNR –Coordinator for Student Life and Diversity

³ Maintenance of PSI program came from subgroup composed of D. Hodges, S. Zivanovic, E. Bernard. CASNR Review indicates PSI PhD program needs revitalization, thus the tactic would be to disaggregate the PSI program into three new Ph.D. programs specific for Environmental & Soil Sciences, Plant Sciences, and Entomology & Plant Pathology.

Appendix A - Membership of the CASNR Strategic Planning Committee

Agricultural Leadership, Education, and Communications: Dr. Carrie Stephens
 Agricultural Resources and Economics: Dr. Bill Park
 Animal Science: Dr. J. Lannett Edwards, Dr. Cheryl Kojima
 Biosystems Engineering: Dr. Eric Drumm
 Entomology and Plant Pathology: Dr. Ernest Bernard, Dr. Kim Gwinn
 Food Science and Technology: Dr. Lana Zivanovic
 Forestry, Wildlife and Fisheries: Dr. Keith Belli, Dr. Donald Hodges, Dr. Richard Strange
 Plant Sciences: Dr. Oz Augé, Mr. Andy Pulte
 CASNR: Dr. Theresa Cooper, Ms. Emily Gray, Dr. John Stier, Dr. Brent Lamons
 Graduate students: Mr. Alex McLemore, Mr. Mathew Halter
 Undergraduate students: Mr. Grant Davis, Ms. Lindsay Rochelle
 Communications and Marketing: Mr. Doug Edlund
 Facilitator: Mitch Owen, Mitchen Co.

Appendix B - Process for Development of Strategic Plan

Mitchen Company was hired as a consultant to initiate the strategic planning process for CASNR in autumn 2011. A committee composed of faculty, staff, graduate and undergraduate students was assembled for planning. The group identified common values. Stakeholder groups (employers, parents, alumni, students, and faculty/staff) were surveyed to determine the qualities desired from the College, including student learning outcomes. Additional data on initiatives from other Top 25 schools were reviewed, as well as economic history and projections for higher education. A vision statement was developed followed by review of the existing College mission statement. Three macrogoals were identified, followed by microgoals. These goals were vetted by the College personnel during January to March of 2012 and were augmented by listening sessions by the Dean's office at various faculty meetings.

Strategic planning was temporarily put on hold in March 2012 when the College began preparation for its 5 year review so that results from the 5 year review could be used incorporated into the final strategic plan.

The 5 year review was completed in late summer 2012. The review team's document was shared with the College in September 2012. The review was used by the committee to revise the strategic plan during 2013, ensuring its alignment with campus Top 25 strategies and initiatives. For example, the review indicated the vision of becoming a premier top 10 land grant college was too elevated, and needed to be reduced in order to avoid matching CASNR with other colleges which have a broader purview (e.g., a life sciences component) and resources (e.g., biological research and extension components directed by the college dean).