HERBERT COLLEGE OF AGRICULTURE
All Changes Effective Fall 2023

I. COURSE CHANGES

DEPARTMENT OF AGRICULTURAL LEADERSHIP, EDUCATION AND COMMUNICATIONS

(ALEC) Agricultural Leadership, Education and Communications

ADD

ALEC 600 Doctoral Research and Dissertation (3 - 15)
Grading Restriction: P/NP only.  
Repeatability: May be repeated.  
Registration Restriction(s): Minimum student level – graduate.

Rationale: The ALEC department will add 600-level courses for the Ph.D. program. Impact on other units: None. Financial impact: Minimum as 1.0 teaching FTE have been recently added to the department.

ALEC 612 Diffusion of Innovations (3). Will focus on the diffusion of innovations model posited and formalized by Everett M. Rogers to facilitate the student’s understanding of change as a socio-cultural-technical process. Special attention will be given to case studies and other examples of innovation, diffusion, and change that are especially applicable to the agriculture, food, fiber, and natural resources systems, as well as society at large. In addition, the course will emphasize the student’s role as a change agent both now and in their future professional life.

Rationale: The ALEC department will add 600-level courses for the Ph.D. program. Impact on other units: None. Financial impact: Minimum as 1.0 teaching FTE have been recently added to the department.

ALEC 613 Strategies for Success as a University Faculty Member (3) Roles and responsibilities of university faculty members in agriculture and natural resources; performance expectations; strategies for successful tenure and promotion; planning and executing teaching, research, and extension programs based upon formal position assignments.

Rationale: The ALEC department will add 600-level courses for the Ph.D. program. Impact on other units: None. Financial impact: Minimum as 1.0 teaching FTE have been recently added to the department.

ALEC 630 Special Topics in Agricultural Leadership, Education and Communications (1-3) Current issues.
Repeatability: May be repeated. Maximum 9 hours.
Registration Permission: Consent of instructor.

Rationale: The ALEC department will add 600-level courses for the Ph.D. program. Impact on other units: None. Financial impact: Minimum as 1.0 teaching FTE have been recently added to the department.

ALEC 693 Special Problems in Agricultural Leadership, Education and Communications (1-4) Special research and/or special reports based on supervised independent study.
Repeatability: May be repeated. Maximum 6 hours.
Registration Permission: Consent of instructor.

Rationale: The ALEC department will add 600-level courses for the Ph.D. program. Impact on other units: None. Financial impact: Minimum as 1.0 teaching FTE have been recently added to the department.
II. PROGRAM CHANGES

DEPARTMENT OF AGRICULTURAL LEADERSHIP, EDUCATION AND COMMUNICATIONS

ADD NEW MAJOR AND DEGREE

Major: Agricultural Leadership, Education and Communication
Degree: Doctor of Philosophy

In the 2023-2024 Graduate Catalog, add heading, text, and requirements for the Doctor of Philosophy degree with a major in Agricultural Leadership, Education and Communications (pending THEC approval).

Agricultural Leadership, Education and Communication Major – Doctor of Philosophy (Ph.D.)

*This program is pending approval from the Tennessee Higher Education Commission. Students will be admitted to the major and degree only after THEC approves the program.

The Herbert College of Agriculture offers the Doctor of Philosophy degree (Ph.D.) in Agricultural Leadership, Education and Communication. The proposed Ph.D. program will better meet the needs of qualified candidates in the areas of teaching and learning, leadership, communications, youth development, and Extension. The proposed will enable the delivery of excellent focused education along with in-depth research, leading to more rigorous student training, higher student attainment, and greater research productivity.

As one of the eight departments in the Herbert College of Agriculture, the mission of ALEC is to serve Tennesseans, our nation, and the world by: equipping current and future generations of educators, leaders, and communicators through agriculture; establishing strategic partnerships with communities and industry; seeking solutions through scholarship; and developing and delivering innovative outreach and Extension programs that deliver Real. Life. Solutions. The department fulfills its mission through innovative research, knowledge-based outreach, and excellence in teaching, while adhering to core values of integrity, equality, and respect. The proposed Ph.D. program will further the mission of UT, Knoxville, Herbert College of Agriculture, and of ALEC by providing graduate training in the high-need career paths in the nationally recognized disciplines of teaching and learning, leadership, communications, youth development, and Extension thereby enhancing higher education opportunities and research productivity of the department and of UTK.

Agricultural Leadership, Education and Communication Major, PhD

A Doctor of Philosophy degree with a major in Agricultural Leadership, Education and Communication in the Department of Agricultural Leadership, Education and Communications (ALEC). Coursework in teaching and learning, leadership, communications, youth development, Extension, research methods, and statistics will serve as the basis for this degree program. See the ALEC Department’s website for a listing of faculty and their specific research focus areas.

Campus Code
   Knoxville Campus
   Distance Education Campus

Admissions Standards/Procedures

To the Office of Graduate Admissions submit an online application, application fee, and official transcripts. The online application procedure will also direct the applicant to submit an updated resume, three letters of reference (or three Graduate Rating Forms) from persons capable of assessing the applicant’s suitability for graduate work, and a statement of professional goals, research interests, and reasons for applying to ALEC. In the statement letter and application, the area of interest and desired major professor must be indicated.

The Graduate Record Examination (GRE) is recommended but not required for admission to the program. Scores from the general GRE test are given different weights by various faculty advisors, so applicants are encouraged to directly contact their desired faculty advisor to determine the importance of this indicator to the success of their application.

Academic Standards
- Students must assume responsibility for knowledge and compliance with Graduate School and department requirements in their degree program, as described in the current Graduate Catalog and ALEC’s Graduate Student Handbook.
- If research progress for the dissertation is deemed insufficient, the major advisor in consultation with the graduate committee may recommend probation with specific goals set for a specified time or termination.
- The student’s program of study must be approved by their advisory committee and must comply with the requirements of the Graduate Council.
- See the Degree Program Requirements/Doctoral Degree section in the Academic Policies and Requirements for Graduate Students section for additional information.
Concurrent Master’s Degree Program
In exceptional cases where an individual is admitted to the PhD program having a BS, the individual will be encouraged to complete a MS degree in the continuum of PhD program efforts. Currently enrolled UT doctoral students who plan to complete the master’s degree while maintaining enrollment in the doctoral program must submit a Request for Concurrent Master’s Degree form to the Graduate School two weeks prior to the deadline for submission of the graduation application for the master’s degree. To earn the concurrent master’s degree all requirements must be met at the University of Tennessee.

Credit Hours Required
- 48 graduate credit hours beyond the Master’s degree, or
- 72 graduate credit hours beyond the baccalaureate degree

Required Courses
- Of the required graduate credit hours, 48 must be in courses numbered greater than 500 (including 24 credit hours of course ALEC 600; e.g., ALEC 510-593, ALEC 612-693)
- 6 credit hours of courses at the University of Tennessee, Knoxville, numbered greater than 600 (e.g., ALEC 612-693)
- A minimum of 12 credit hours of courses in graduate level research methods and statistics (e.g., STAT 537, STAT 538, CCI 611, CCI 631, CCI 635, ESM 559, ELPS 615, ELPS 616)
- 24 credit hours of ALEC 600
- See the Degree Program Requirements/Doctoral Degree section in the Academic Policies and Requirements for Graduate Students section for additional information.

Non-Course Requirements
- The student and the major professor will select a minimum of three additional faculty, holding the rank of assistant professor or above, to serve on the student’s doctoral committee. The major professor and two committee members must be approved to direct doctoral research by the Graduate Council. At least one member of the committee must be from outside the department. The doctoral committee must be formalized by the end of the second semester of graduate study.
- Research Ethics training is required, which may be achieved through (CITI RCR) training, as evidenced by presenting a valid CITI RCR certificate to the EPP Director of Graduate Studies or their designee.
- Satisfactory preparation of a written dissertation proposal and an oral defense to the student’s committee are required. These must be completed before enrollment in ALEC 600. The candidate will be tested on his/her knowledge of the proposed dissertation.
- Each doctoral student must pass a comprehensive examination as required by the Graduate Council. Both written and oral sections of the comprehensive examination must be passed. Successful completion indicates that, in the judgment of the faculty, the doctoral student can think analytically and creatively, has a comprehensive knowledge of the field and the specialty, knows how to use academic resources, and is deemed capable of completing the dissertation.
- Satisfactory preparation of a written dissertation and passing an oral defense of the dissertation to the student’s doctoral committee are required.

Rationale:
In August 2016, the ALEC Department underwent a comprehensive external review. The review team was asked to address, among other items, the potential for a Ph.D. program in the department. In its report, the review team concluded:

Pursue research FTE’s for the department. This will enhance the unit in several ways. It could strengthen the graduate program; allow greater participation in grants; provide recognition of ALEC’s contribution to the research mission of UTIA; increase resources, collaboration, and accountability for scholarship; and enhance the department’s national and international reputation. Develop a timeline for adding a PhD program. This is a longer term but achievable goal. The department has an opportunity to develop a unique program focused on extension education and youth development.

Follow-up discussion with UT/UTIA administrators has also encouraged the initiation of a Ph.D. program in the department, which was also identified during the department’s strategic planning session held in 2020. Based on the 2016 review and 2020 strategic planning session, the ALEC department began the beginning processes of developing the LON. In August 2021, the ALEC department underwent another comprehensive external review, which strongly supported the Ph.D. initiative. In addition to the external reviews and strategic planning session, program design, course requirements and delivery, implementation dates, demand and need for the program, student recruitment strategies, and similar aspects of the new program have been discussed with peers, prospective students, and external constituency groups. These individuals are supportive and enthusiastic about the new program. A feasibility study was assessed by reviewing current literature related to ALEC and surveying former students and regional and state employees working in ALEC related professions.

School-Based Agricultural Education
One area of need is school-based agricultural education as there is a strong need for agricultural education programs throughout the country. The National Agricultural Education Supply and Demand Study (Smith, Lawver, & Foster, 2021) documented:

As of September 15, 2020, state supervisors reported a total of 8,486 high school-based agricultural education programs employing 13,253.5 teachers. Of the total number of teachers, 1,476 were considered new hires in school-based agricultural education (SBAE). Additional teachers were still needed to meet demand in school-based agricultural education; state supervisors reported 51 full-time and 2 part-time vacancies as of September 15, 2020. Further, substantial growth and expansion in school-based agricultural education occurred in 2020-2021 with 242 new positions and 140 new programs added. Despite program growth, 31 states reported a loss of programs or positions. A total of 77 positions were lost and 50 programs closed. Respondents reported a
total of 673 school-based agricultural educators who taught in the 2019-2020 school year would not be returning to the classroom in 2020-2021.

One reason school-based agricultural education teachers do not return to the classroom is compensation, as higher salaries can be found within and outside of the agriculture industry with the skills ALEC graduates possess. Typically, certified teachers are paid based on years of experience and degrees held. An ALEC Ph.D. would complement our master’s degree and provide an additional opportunity for certified school-based agricultural education teachers to advance their professional skills and compensation value as a classroom teacher. The potential for higher compensation may encourage more school-based agricultural education teachers to remain in the classroom. This is relevant, because according to the National Academies of Sciences, school-based agricultural education is one key element to facing the complicated set of problems and opportunities before us as climate change and the “growing world population exerts a looming pressure on the global food supply.”

Current and Former Student Interest in a Ph.D. Program in ALEC
The Ph.D. program will be the only Ph.D. program in Tennessee with emphasis in Agricultural Leadership, Education, and Communication. The other programs in Tennessee only offer Bachelor of Science and Master of Science degree programs. The department receives approximately 20 requests per year about the opportunity to complete a Ph.D. in the department. These inquiries come from within Tennessee and from various individuals in the southeast. In order to substantiate the requests, a survey was sent out to former and current ALEC MS students related to the need for a Ph.D. program. The results can be found in Table 1 listed below. In addition, open-ended comments related to the Ph.D. program were requested and a representative sample of those comments can be found in Table 2. Overall, current and former students agreed a Ph.D. program in ALEC is warranted and needed.

Table 1.
Interest in Ph.D. Program in the Department of Agricultural Leadership, Education and Communications (ALEC) from Current and Former Students

<table>
<thead>
<tr>
<th>Item</th>
<th>Total</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I believe UT should offer a doctoral program in ALEC.</td>
<td>79</td>
<td>1.3% (1)</td>
<td>0.0% (0)</td>
<td>17.7% (14)</td>
<td>12.7% (10)</td>
<td>68.4% (54)</td>
</tr>
<tr>
<td>I would be interested in learning more about this program.</td>
<td>79</td>
<td>2.5% (2)</td>
<td>3.8% (3)</td>
<td>12.7% (10)</td>
<td>30.4% (24)</td>
<td>50.6% (40)</td>
</tr>
<tr>
<td>I think others I know would be interested in exploring this program.</td>
<td>79</td>
<td>1.3% (1)</td>
<td>1.3% (1)</td>
<td>20.3% (16)</td>
<td>32.9% (26)</td>
<td>44.3% (35)</td>
</tr>
<tr>
<td>A new doctoral program at UTIA would raise UT Knoxville's visibility.</td>
<td>79</td>
<td>1.3% (1)</td>
<td>2.5% (2)</td>
<td>8.9% (7)</td>
<td>26.6% (21)</td>
<td>60.8% (48)</td>
</tr>
<tr>
<td>If offered, I believe this program would be successful.</td>
<td>79</td>
<td>1.3% (1)</td>
<td>1.3% (1)</td>
<td>17.7% (14)</td>
<td>24.1% (19)</td>
<td>55.7% (44)</td>
</tr>
</tbody>
</table>

Table 2.
Sample of Written Comments from Current and Former Students on a PhD Program in the Department of Agricultural Leadership, Education and Communications

By offering these terminal degrees, I feel the ALEC reach will be broadened throughout the state and region allowing students to be more active and more immersed in research-based initiatives.

It is necessary at an R1 university.

Having an accessible doctoral program at the flagship campus within the state would make higher education more easily available to lower SES students.

Program should have an on-line option to attract potential students from around the world.

I might get my PhD if offered.

Leadership, education and communication are important to agriculture and need experts to help advance the agriculture industry. A new PhD program will help do that.

This program would be a major asset to ALEC students that want to further their studies in their specific interest concentrations (ex. ag leadership, ag education, ag extension education, ag communications, etc.).

Local and Regional Need/Demand
The Bureau of Labor Statistics (BLS) provides estimates of occupational employment and annual wages based on data collected from employers. In the U.S. in 2019, the median wage for workers with an agriculture degree is $52,000 and 42% of those employed are in occupations requiring at least a bachelor’s degree, and 27% of those employed have an advanced degree. While the metrics do not address the specific fields in agricultural leadership, education, and communications, there are many occupations, both existing and developing, that require the understanding of how agriculture and natural resources impact lives through the quality and abundance of our food supply, personal health, the environment, the economy, and national security. Continued education, research, innovation, and leadership development in the areas of agriculture and natural resources directly impacts our local and regional economy. Therefore, the Ph.D. program in ALEC can provide an opportunity to educate individuals for education and leadership positions to help meet the local and regional demand in agriculture and natural resources and related occupations.

Employer Need/Demand
The demand for graduates in this field exceeds the annual production of graduates from existing programs. Over the last year, there have been several new hires of assistant professors and the demand for more assistant professors is growing due to increases in
retirements. According to Employment Opportunities for College Graduates report, there will be a 10.8% increase in the U.S. labor force between 2012-2022 due to job growth and openings from retirements. Also, according to a report commissioned by the United States Department of Agriculture, approximately 56% of all food, agriculture, renewable natural resources and the environment-related position openings between 2020-2025 are expected to be in education, communication, government services, management, and business. Therefore, it is imperative to continue to educate and develop our future workforce, because there are excellent job opportunities in teaching, research, and administration in private and public sectors, universities, public schools, community colleges, and agricultural and related industries. A survey conducted of several regional and state employees in Tennessee (e.g., Extension agents, County Extension Directors, UT staff, UT administrators, agricultural education teachers) revealed that a Ph.D. in ALEC would be extremely beneficial to the workforce and is needed (see Table 3). In addition, employers provided written comments related to the needs and benefits of having a Ph.D. program in ALEC (see Table 4).

Table 3.
Interest in a Ph.D. Program in the Department of Agricultural Leadership, Education and Communications (ALEC) from Employers

<table>
<thead>
<tr>
<th>Item</th>
<th>Total</th>
<th>Strongly Agree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I believe UT should offer a doctoral program in ALEC.</td>
<td>113</td>
<td>1.8% (2)</td>
<td>0.0% (0)</td>
<td>19.5% (22)</td>
<td>28.3% (32)</td>
<td>50.4% (57)</td>
</tr>
<tr>
<td>I would be interested in learning more about this program.</td>
<td>113</td>
<td>5.3% (6)</td>
<td>9.7% (11)</td>
<td>23.9% (27)</td>
<td>21.2% (24)</td>
<td>39.8% (45)</td>
</tr>
<tr>
<td>I think others I know would be interested in exploring this program.</td>
<td>113</td>
<td>4.4% (5)</td>
<td>0.9% (1)</td>
<td>14.2% (16)</td>
<td>47.8% (54)</td>
<td>32.7% (37)</td>
</tr>
<tr>
<td>A new doctoral program at UTIA would raise UT Knoxville's visibility.</td>
<td>113</td>
<td>2.7% (3)</td>
<td>1.8% (2)</td>
<td>15.9% (18)</td>
<td>35.4% (40)</td>
<td>44.3% (50)</td>
</tr>
<tr>
<td>If offered, I believe this program would be successful.</td>
<td>113</td>
<td>1.8% (2)</td>
<td>0.0% (0)</td>
<td>16.8% (19)</td>
<td>40.7% (46)</td>
<td>40.7% (46)</td>
</tr>
</tbody>
</table>

Table 4.
Sample of Written Comments from Employers on the Needs and Benefits of a Ph.D. Program in the Department of Agricultural Leadership, Education and Communications

- If implemented, it would enable the organization an opportunity to dive deeper into leadership concepts which would improve Extension.
- It would be great to have research based to help move ALEC and extension to a more forward thinking.
- This doctoral degree could boost the reputation for UTIA. This would also boost the reputation of Extension Agents and Agriculture teachers in Tennessee. The program should provide an opportunity for well-rounded development in youth development, FCS, Agriculture, and community and economic development.
- I have personally been waiting to see something like this for the past 10+ years. The ability for this program to attract quality candidates and to supplement currently established programs is much needed.
- A PhD program would be such a positive impact for agricultural knowledge across not only the state of Tennessee, but across the nation. Even though I live in Ohio, I have had nothing but positive interactions through my Master’s program at UT. If a PhD were possible to be received at UT I would definitely be applying. Also, if by chance the PhD were somehow feasible to be completed online, I feel it would breed nothing but success for the University of Tennessee.
- As a current extension agent who has thought of getting my PhD I would absolutely be interested if it was offered in ALEC.
- I personally hope to obtain a PhD in ALEC, however, with no current program I was disappointed as I’d like to stay in my current position while obtaining it.

State of Tennessee Marketing-Related Job Posting Data (Emsi)
Within the scope of Agricultural and Extension Education Services (ALEC CIP Code Title), the most posted job titles and occupations in the southeast region of the United States include Extension Agents, Order Management Specialists, Smart Home Experts, County Extension Agents, Extension Agricultural Agents, Youth Development Professional and Family and Consumer Science Teachers (Emsi Q1 Data Set, March 2022). Of the southeastern states, Tennessee has had the highest number of job postings in the field of Agricultural and Extension Education Services and the most sought out skills include leadership, communications, management, planning, and research. The University of Tennessee, Knoxville, currently ranks fourth among the top regional institutions supplying the labor market with workers employed in the occupations above (Emsi Q1 Data Set, March 2022). With the additional program, the University of Tennessee will be in a stronger position to prepare a greater number of individuals to supply the demonstrated need.

Economic Value of College Majors
Georgetown University’s Economic Value of College Majors database reports wages for individuals as a function of educational degrees attained. Wage data for individual employees with “general agriculture” degrees are reported in Table 5 as a function of degree type (i.e., bachelor’s versus graduate) and region (national vs. TN state data). As the table reveals, compared to those with a bachelor’s degree only, median wages for an individual with a graduate degree in agriculture are 28.3% ($15,000) higher nationwide. This wage premium is indicative of the value employers place on the skills individuals with advanced agriculture degrees bring to their jobs and thus offers evidence of employer need for such skills.
Table 5.
Wages for General Agriculture Employees with a Bachelor's versus Graduate Degree

<table>
<thead>
<tr>
<th></th>
<th>National Wages</th>
<th>State of Tennessee Wages</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>25th Percentile</td>
<td>Median</td>
</tr>
<tr>
<td>Bachelor's Degree</td>
<td>$37,000</td>
<td>$53,000</td>
</tr>
<tr>
<td>Graduate Degree</td>
<td>$45,000</td>
<td>$68,000</td>
</tr>
</tbody>
</table>

Future Sustainable Need

The proposed Ph.D. program will target middle and high school agricultural education and science teachers, community college educators, agribusiness professionals, Extension agents, communication specialists, administrators, and agency directors. These target groups will be sought in Tennessee and throughout the United States. Not all of these individuals would be interested in coming to the Knoxville campus as a full-time student; however, they will have the option to complete the degree by utilizing a hybrid approach consisting of online and on-campus courses. With the increasing availability of online courses at UT, all but two required courses can currently be completed online, and we envision offering a completely online option as more online courses become available. An online completion option will complement ALEC’s online BS and MS programs and increase access to higher education in Tennessee and create additional opportunities for distressed counties and underserved communities by allowing individuals to stay employed during their Ph.D. program.

Impact on other units:
There are no programs in the same CIP classification at the same degree level offered at any other public institutions in Tennessee, nor are there similar programs within UT Knoxville. The proposed program will be offered only at the University of Tennessee, Knoxville. The proposed program will provide equal opportunity to all students irrespective of color, race, gender, or national origin.

Financial impact:
Financial costs will be minimal as the ALEC department has acquired adequate resources and faculty to administer the Ph.D. program.