Department of Agricultural Leadership, Education, and Communications

http://alec.tamu.edu

Head: J. F. Elliot

Associate Head for Graduate Programs: T. Rutherford

Graduate Program Coordinator: Clarice Fulton

The Department of Agricultural Leadership, Education, and Communications offers graduate studies leading to the degrees of: Master of Agriculture in agricultural development, an online or campus program, Master of Education, Master of Science, and Doctor of Philosophy in agricultural leadership, education, and communications. A Doctor of Education in agricultural education is offered on campus and at a distance through a joint program with Texas Tech University.

Professionals completing these degrees work in a variety of contextual settings including agricultural communications/journalism, technology-enhanced learning, organizational and community leadership, extension education, teacher education, and international agricultural development.

Graduate students, in consultation with a graduate advisor, select areas of emphasis. Examples include agricultural communications, extension education, international agricultural development, leadership education theory and applications, instructional design and delivery, and teacher education.

Departmental faculty members maintain contact with professionals in their field. These contacts enable faculty members to teach and direct research in support of graduate programs with a current appreciation of the important and complex problems encountered by professional practitioners. For additional information about the graduate faculty and programs available in the department, or to set up a campus visit, contact the graduate program coordinator by email (cfulton@tamu.edu) or visit the website at http://alec.tamu.edu.

Degree Programs

The Department of Agricultural Leadership, Education and Communications at Texas A&M University is by far the largest program of its kind, and ranked as the second most distinguished program in agricultural education in the United States. Faculty members in the Department provide leadership to national and international organizations within the discipline. Graduate faculty members in the Department cluster into learning communities based primarily on the settings where we work. Students will benefit from the faculty members’ different professional interests, perspectives, and knowledge, and learn from their experience in the classroom.

Master's Programs

Three Master’s degree programs are available in the department for individuals interested in career areas such as a public relations account manager, communications coordinator, agricultural science teacher, sales representative, county extension agent, leadership consultant, social and public service, instructional designer, and international development specialist. Because of the diverse nature of these careers, degree plans will vary considerably and are generally unique for each individual. Your specific degree plan is developed through consultation with your graduate committee.

Master of Science

The Master of Science (MS), requires a minimum of 32 semester credit hours of coursework and a Thesis. Typically, 22 or more hours will be taken in the department; four of these hours will be credited for completing the thesis. Other coursework will be completed in supporting field(s) of your interest.

Supporting fields in the MS program may be in any academic area that contributes to a student’s academic or career objectives. Examples include agricultural leadership, agricultural communications, management, change management, adult education, research methods, psychology, and sociology.

Master of Education

Students whose career objectives include working in formal or informal education setting in agriculture seek the Master of Education: e.g., teaching agricultural sciences in a high school, working as an Extension educator, corporate training and development. The 36 semester credit hour program typically includes 18 to 24 hours in the department and one or more support areas.

Master of Agriculture

Students pursuing careers in fields such as instructional design, international agricultural development, agricultural leadership or rural community development might seek the Master of Agriculture in Agricultural Development. The program prepares individuals for leadership roles in education, natural resource management, cooperative extension service, and many other professional careers in agriculture and life sciences. The program is generally completed at a distance, however, individuals do have the option to complete the program on-campus. This is a non-thesis degree program that emphasizes the development of problem-solving skills involved in applying science and technology to benefit humanity.

This 36 semester credit hour program includes a required internship and a professional paper. The internship is a unique feature of the M.Ag program, whether pursued on-campus or at-a-distance. The internship is completed at the end of formal coursework, and involves either paid or unpaid employment in your area of interest. Planned in concert by the student, university adviser and business supervisor, the internship normally lasts from three to six months. The required professional paper is often a report of the internship experience.

For more information about each ALEC degree program, contact the graduate program coordinator, by email (cfulton@tamu.edu) or 979-862-7180.

Doctoral Programs

The Department offers three doctoral programs described below:

Doctor of Philosophy (PhD)

The Doctor of Philosophy is a specialized, research-oriented degree. Coursework gives the candidate a thorough and comprehensive knowledge in the field of study and methods of research. The program requires a minimum of 64 semester credit hours, including dissertation
research, beyond the master's degree. Without the master's degree, the program would include a minimum of 96 semester credit hours. The program prepares individuals for university faculty positions, public and corporate leadership roles in education, natural resource management, extension education, international development, and many other professional careers in agriculture and life sciences. Ordinarily, students pursuing the PhD choose supporting coursework closely aligned to their research interests and professional goals.

Doctor of Education (EdD)

The Doctor of Education is a campus-based professional degree designed to prepare a candidate for a position of leadership in the full range of educational settings, including public and private schools and colleges, business, government, industry, and international organizations. The program is designed for the practitioner; a graduate may be expected to fill instructional, supervisory, administrative, and policy positions in agricultural, educational, and corporate settings. Although substantively different from the PhD, the EdD requires equivalent admission qualifications, standards of scholarship and breadth and depth of study. A record of study and an internship are completed in this 64 semester credit hour program.

Joint Doctor of Education in Agricultural Education (Doc@Distance)

The Joint EdD in agricultural education is delivered at a distance with the Department of Agricultural Education and Communications at Texas Tech University. The program is designed for mid-career professionals. Student enter as members of a cohort, and advance together through the program over four years. Admission takes place every other year, in the odd-numbered years. Program graduates are providing leadership and direction a variety of instructional, supervisory, and administrative positions across the education and training professions. The admission process is different than our other degree programs. If you are interested in this program, contact the graduate program coordinator by email (cfulton@tamu.edu).

Entering doctoral studies is a long term commitment on the part of the student and the department. Individuals interested in the Doctor of Education degree program are strongly encouraged to schedule a visit to interview with faculty. If a visit cannot be arranged, applicants are encouraged to prepare a 3-5 minute video sharing general information about yourself, your professional work experience, the area of study you are interested in, and your long-term academic and professional goals.

For more information about our degree program, visit the website http://alec.tamu.edu/academics/distance-education/joint-edd-program/. To schedule a campus visit, contact the graduate program coordinator, by email (cfulton@tamu.edu) or phone, 979-862-7180.

Certificate Programs

The Department offers four certificate programs which will enable individuals to gain specific knowledge and skillsets: Advanced Pedagogy in Agriculture, Agriculture eLearning Development, Extension Education, and Leadership, Education, Theory, and Practice. The Advanced Pedagogy, Agriculture eLearning Development, and the Leadership certificates may be obtained at a distance by taking online courses.

Certificate in Advanced Pedagogy in Agriculture

A Certificate in Advanced Pedagogy in Agriculture is designed for graduate students to continue their education and develop professionally in pedagogy principles and delivery. This program is offered completely online, however some courses are also offered face to face. It provides flexibility for students to take courses in the manner that best fits their schedule. This certificate is appropriate for teachers, advisors, coaches, coordinators, and others who want to develop more advanced skills in working with youth in agriculture and related settings. Students are required to complete five courses (14 credit hours) to earn the certificate.

For more information to obtain the Advanced Pedagogy Certificate, please contact Clarice Fulton at cfulton@tamu.edu, or call 979-862-7180.

Certificate in Agriculture eLearning Development

The Agriculture eLearning Development certificate is an innovative program that prepares students and professionals to develop sophisticated eLearning courses and programs to serve the eTraining needs of both public and private sectors of agriculture. Students are required to complete five online courses (14 credit hours) to earn the certificate.

For more information to obtain the Agriculture eLearning Development Certificate, please contact Dr. Theresa Murphrey at t-murphrey@tamu.edu, or call 979-485-2749.

Certificate in Extension Education

A Certificate in Extension Education is an innovative program that prepares students with the unique knowledge and skills required to apply Extension education theory and put into practice these theories at any level in an organization. Students will gain a substantive foundation of Extension education theory, with the instructional focus on community situations and how to apply theories to all community situations. Students are required to complete five courses (14 credit hours) to earn the certificate.

For more information to obtain the Extension Education Certificate, please contact Clarice Fulton at cfulton@tamu.edu, or call 979-862-7180.

Certificate in Leadership Education, Theory, and Practice

The Leadership Education, Theory, and Practice Certificate will prepare students with the unique knowledge and skills required to apply leadership theory and put into practice these theories at any level in an organization. Students gain a substantive foundation of leadership theory, with the institutional focus on leadership situations and how to apply leadership theories to all professional organizations, including professional and civic. This emphasis consists of 12 credit hours.

For more information to obtain the Leadership Education Certificate, please contact Dr. Jennifer Strong at dr.jen@tamu.edu, (dr.jen@tamu.edu) or call 979-862-1423.

Certificate in International Agriculture and Natural Resource Management (IARM)

The College of Agriculture and Life Sciences offers an academic credit, transcripted certificate in conjunction with the departments in the college. Students seeking careers in international agriculture wishing to build experience and knowledge may choose from 5 focus areas:

- Human Capacity Development for International Agriculture, Development and Natural Resource Management
- Agricultural and Natural Resource Economic Trade and Policy
- Food Systems
- Natural Resources
• Agricultural and Natural Resource Development

IARM program participants must successfully complete 15-16 credit hours which includes 12 credit hours in one focus area and a 3 credit hour capstone course. For more information about this certificate, visit the college website (http://aglifesciences.tamu.edu/international-programs/students/international-degrees-certificates).

Faculty
Archer, Holli R, Assistant Professor
Ag Leadership, Educ & Comm
PHD, Texas A&M University, 2013

Boyd, Barry L, Associate Professor
Ag Leadership, Educ & Comm
PHD, Texas A&M University, 1991

Briers, Gary E, Professor
Ag Leadership, Educ & Comm
PHD, Iowa State University, 1978

Cummings, Scott, Professor & Extension Specialist
Ag Leadership, Educ & Comm
DPh, The University of Texas Health Science Center at Houston, 1995

Dooley, Kim E, Professor
Ag Leadership, Educ & Comm
PHD, Texas A&M University, 1995

Dromgoole, Darrell, Associate Professor & Extension Specialist
Ag Leadership, Educ & Comm
DED, Texas A&M University, 2007

Dunsford, Deborah W, Senior Lecturer
Ag Leadership, Educ & Comm
PHD, Texas A&M University, 1993

Elbert, Chanda D, Associate Professor
Ag Leadership, Educ & Comm
PHD, The Pennsylvania State University, 2000

Elliot, John F, Professor
Ag Leadership, Educ & Comm
PHD, The Ohio State University, 1988

Felton Odom, Summer R, Associate Professor
Ag Leadership, Educ & Comm
PHD, Texas A&M University, 2011

Hanagriff, Roger D, Instructional Associate Professor
Ag Leadership, Educ & Comm
PHD, Texas A&M University, 2002

Harlin, Julie F, Associate Professor
Ag Leadership, Educ & Comm
PHD, Oklahoma State University, 1999

McKim, Billy R, Associate Professor
Ag Leadership, Educ & Comm
PHD, Texas A&M University, 2010

Moore, Lori L, Associate Professor
Ag Leadership, Educ & Comm
PHD, University of Florida, 2003

Murphrey, Theresa P, Associate Professor
Ag Leadership, Educ & Comm
PHD, Texas A&M University, 1997

Murphy, Timothy H, Professor
Ag Leadership, Educ & Comm
PHD, Texas A&M University, 1995

Pina, Manuel, Associate Professor
Ag Leadership, Educ & Comm
PHD, Texas A&M University, 1978

Preston, Tammie M, Assistant Lecturer
Ag Leadership, Educ & Comm
PHD, Texas A&M University, 2014

Redwine, Tobin D, Assistant Professor
Ag Leadership, Educ & Comm
PHD, Texas A&M University, 2014

Ripley, Jeffrey, Assistant Professor & Extension Specialist
Ag Leadership, Educ & Comm
PHD, Texas A&M University, 2008

Rutherford, Tracy A, Professor
Ag Leadership, Educ & Comm
PHD, Texas A&M University, 1998

Shackelford, Philip, Assistant Professor & Extension Specialist
Ag Leadership, Educ & Comm
PHD, Texas A&M University, 2014

Strong Jr, Robert L, Associate Professor
Ag Leadership, Educ & Comm
PHD, University of Florida, 2010

Strong, Jennifer R, Associate Professor
Ag Leadership, Educ & Comm
PHD, Oklahoma State University, 2007

Wingenbach, Gary J, Professor
Ag Leadership, Educ & Comm
PHD, Iowa State University, 1995

Masters
• Master of Agriculture in Agricultural Development (http://catalog.tamu.edu/graduate/colleges-schools-interdisciplinary/agriculture-life-sciences/agricultural-leadership-education-communications/agricultural-development-agriculture-masters)

• Master of Education in Agricultural Leadership, Education, and Communication (http://catalog.tamu.edu/graduate/colleges-schools-interdisciplinary/agriculture-life-sciences/agricultural-leadership-education-communications/med)

• Master of Science in Agricultural Leadership, Education, and Communication (http://catalog.tamu.edu/graduate/colleges-schools-interdisciplinary/agriculture-life-sciences/agricultural-leadership-education-communications/ms)

Doctoral
• Doctor of Education in Agricultural Education (Campus Program) (http://catalog.tamu.edu/graduate/colleges-schools-interdisciplinary/agriculture-life-sciences/agricultural-leadership-education-communications/edd)
Certificates

The Department offers four certificate programs which will enable individuals to gain specific knowledge and skillsets: Advanced Pedagogy in Agriculture, Agriculture eLearning Development, Extension Education, and Leadership, Education, Theory, and Practice. The Advanced Pedagogy, eLearning Development, and the Leadership certificates may be obtained at a distance by taking online courses.

- Advanced Pedagogy in Agriculture Certificate (http://catalog.tamu.edu/graduate/colleges-schools-interdisciplinary/agriculture-life-sciences/agricultural-leadership-education-communications/advanced-pedagogy-agriculture-certificate)
- Agriculture eLearning Development Certificate (http://catalog.tamu.edu/graduate/colleges-schools-interdisciplinary/agriculture-life-sciences/agricultural-leadership-education-communications/agriculture-elearning-development-certificate)
- Extension Education Certificate (http://catalog.tamu.edu/graduate/colleges-schools-interdisciplinary/agriculture-life-sciences/agricultural-leadership-education-communications/extension-education-certificate)

Cost to Complete a Certificate

All certificates offered by the department may be completed as academic credit (active enrollment at Texas A&M University) or by Continuing Education. Cost for academic credit is based on Texas A&M University tuition and fees. Cost for continuing education credit is currently $525/course. In both cases, these costs do not include expenses related to required software or textbooks. A certificate completed through continuing education will not be listed on a university transcript, and many people prefer 'transcribed' certificate programs.

If an individual is not enrolled at Texas A&M University, they may complete a certificate, and "transcribe" the completion on a university transcript by enrolling at Texas A&M University through Non-Degree Seeking (G6) Admission status, and then enrolling in and completing the courses for academic credit.

For more information about completing a transcripted certificate program as a Non-Degree Seeking (G6) student, or a non-transcripted certificate through Continuing Education, please contact the graduate coordinator by email, cfulton@tamu.edu, or phone 979-862-7180.

Courses

ALEC 601 Advanced Methods in Agricultural Education
Credits 3.3 Lecture Hours.
Learning theories; techniques and procedures to enhance the teaching-learning process; methods to evaluate learning.

ALEC 602 Advanced Instructional Design in Agricultural Science
Credits 3.3 Lecture Hours.
Designing instruction to meet learning outcomes, motivate students, and evaluate objectives; learning theories and their impact on the teaching and learning process; choosing appropriate teaching methods for specific content; evaluating the teaching-learning process for improvement within the context of secondary agricultural science classrooms.
Prerequisites: Approval of instructor, graduate classification.

ALEC 603 Experiential Learning
Credits 3.3 Lecture Hours.
Theory and practice in facilitating learning from experiences in formal, informal, and non-formal settings; experiential learning in classroom/laboratory settings, guided inquiry, internships/externships, service learning, project-based learning, and outdoor/adventure learning.
Prerequisite: Graduate classification.

ALEC 604 Writing for Professional Publication
Credits 3.3 Lecture Hours.
Provides students in Agricultural and Extension Education with the skills necessary to compose research manuscripts, conference papers, and journal articles.
Prerequisites: Introductory research course and graduate classification.

ALEC 605 Facilitating Complete Secondary Agricultural Science Programs
Credits 3.3 Lecture Hours.
Theory and practice in facilitating secondary agricultural science programs that include classroom instruction, supervised experience, and youth leadership development. Designed for students preparing to teach agricultural science in Texas public schools.

ALEC 606 Foundations of Leadership Theory
Credits 3.3 Lecture Hours.
Theory and Practice of leadership theory foundational to leadership education. Focus on analysis of leadership theories and models; synthesis of leadership theory as a philosophy; and application of leadership theories in various professional settings.

ALEC 607 Youth Leadership Programs
Credits 3.3 Lecture Hours.
Methods and procedures of organizing and conducting youth leadership programs in school and non-school settings.
Prerequisite: Professional experience or approval of department head.

ALEC 608 Leadership of Volunteers
Credits 3.3 Lecture Hours.
Models of volunteerism; reasons for volunteers; assessment and evaluation techniques; task descriptions; organizational relationships.

ALEC 609 Learning Organizations
Credits 3.3 Lecture Hours.
Theory of instruction to support education in social systems language and archetypes; systems thinking theory including mental models; mastery, team learning, concept models of human organizations.
Prerequisites: ALED 340; graduate classification.

ALEC 610 Principles of Adult Education
Credits 3.3 Lecture Hours.
Identification of basic principles motivating adults to learn. Procedures to implement these principles in bringing about changes in adult behavior.
Prerequisite: Professional experience or approval of department head.
ALEC 611 Advanced Methods in Distance Education  
Credits 3. 3 Lecture Hours.  
Course design theory for synchronous and asynchronous instructional methodology; teaching and training models for distance education.

ALEC 612 Advanced Instructional Design for Online Learning  
Credits 3. 3 Lecture Hours.  
Emphasis on applying learning and teaching theory as the foundation for developing engaging online instruction; designed to pull together theory, concepts, and strategies for a broad understanding of the fundamentals of online learning from the conceptual stage to the development and delivery stages.  
Prerequisites: Majors only and graduate classification.

ALEC 613 Techniques in eLearning Development and Delivery  
Credits 3. 3 Lecture Hours.  
Provides the knowledge and skills necessary to develop and deliver effective online courses, training programs, and learning units; specific topics include: management of eLearning projects, needs assessment and audience analysis, creation and editing of documents, images, audio, and video.  
Prerequisites: Majors only and graduate classification.

ALEC 615 Philosophy of Agricultural Education  
Credits 3. 3 Lecture Hours.  
Historical and philosophical developments in education that brought about education in agriculture; ideas of individuals that culminated in agricultural education institutions and organizations.

ALEC 616 Facilitation of Leadership Programs  
Credits 3. 3 Lecture Hours.  
Investigate models to design leadership education programs; incorporate strategies to enhance the leadership education process; critically analyze leadership education research and group leadership education processes.  
Prerequisite: ALEC 340 or ALEC 606.

ALEC 617 Leadership in Organizational Culture and Ethics  
Credits 3. 3 Lecture Hours.  
Integration of organizational culture and ethical theories; implications and role of leaders in organizational culture and ethical situations; critical analysis of organizational culture and ethics in agricultural organizations.  
Prerequisite: Graduate classification.

ALEC 620 Instrumentation and Survey Research Methods  
Credits 3. 3 Lecture Hours.  
Principles, theories, techniques, and applications for developing survey questionnaires and conducting survey research in agriculture; developing questions; constructing instruments; implementing surveys; and reducing coverage and sampling errors.

ALEC 622 Data Collection, Analysis, and Interpretation in Research in ALEC  
Credits 3. 3 Lecture Hours.  
Data Collection, Analysis, and Interpretation in Research in Agricultural Leadership, Education, and Communications. Principles and techniques of data collection, analysis, and interpretation in agricultural leadership, education, and communications; interpretation and implications of findings/results in relation to current research; data analysis performed using statistical package software; collection, analysis, and interpretation to conform to published research in agricultural leadership, education, and communications.  
Prerequisite: Research methods and basic statistics courses.

ALEC 623 Survey of Evaluation Strategies for Agriculture  
Credits 3. 3 Lecture Hours.  
Designed to pull together theory, concepts, and strategies to give a broad understanding of the fundamentals of evaluation and to provide the knowledge and skills necessary to design and administer appropriate and effective evaluations.  
Prerequisite: Graduate classification.

ALEC 624 Developing Funded Research Projects  
Credits 3. 3 Lecture Hours.  
Students team with faculty mentor to develop a proposal for external funding from a federal agency; principles discussed to produce competitive proposals; proposal steps adapted to fit interests of the students and faculty.  
Prerequisite: Approval of instructor.

ALEC 625 Program Evaluation and Organizational Accountability  
Credits 3. 3 Lecture Hours.  
Examines the philosophy, methods, and issues of accountability and evaluation necessary to meet expectations of institutional mandates. Special emphasis on analytical tools and performance measures.  
Prerequisite: Professional experience or approval of department head.

ALEC 630 Guidance and Counseling for Rural Youth  
Credits 3. 3 Lecture Hours.  
Problems of youth with special attention given to rural youth; theories of vocational development reviewed and techniques and procedures developed to help youth make career choices.

ALEC 631 Development and Planning of Community Education Programs  
Credits 3. 3 Lecture Hours.  
Focuses on the principles, theories, techniques, and applications for developing and planning educational program in a community setting; program development strategies, focusing educational programming in relation to issues identified citizens will be developed and enhanced in this course.  
Prerequisite: Graduate classification.

ALEC 640 Methods of Technological Change  
Credits 3. 3 Lecture Hours.  
Dynamics of cultural change as theoretical framework for planned technological change; methods of planning and implementing change, its effects and how it can be predicted.

ALEC 644 The Agricultural Advisor in Developing Nations  
Credits 3. 3 Lecture Hours.  
Trends, conditions, critical incidents, techniques, roles and preparation affecting the success of persons desiring to provide technical assistance in projects of agricultural development by serving as agricultural advisors in developing nations, especially in cross-cultural settings.  
Prerequisite: Approval of instructor.

ALEC 645 Initiating, Managing and Monitoring Projects of International Agricultural Development  
Credits 3. 3 Lecture Hours.  
Origin of projects in agricultural development involving host governments; procedures in developing contracts with sponsors; duties and responsibilities of contract administrators, project leaders and the home institution; reporting systems, project reviews and evaluation procedures; procedures effective in managing projects.  
Prerequisite: ALEC 640 or approval of instructor.
**ALEC 646 Institutions Serving Agriculture in Developing Nations**  
Credits 3. 3 Lecture Hours.  
Comparisons among programs and functions, strengths and weaknesses, organization, and relationships of institutions and agencies in public sectors serving agriculture in developing nations; includes those responsible for agricultural extension, agricultural research, agrarian reform, price stabilization, agricultural credit and agricultural cooperatives.  
Prerequisite: Approval of instructor.

**ALEC 652 Images of Agriculture: Visual Communication Research**  
Credits 3. 3 Lecture Hours.  
Explore visual communication from theoretical, physiological, and interpretive perspectives as it applies to media images used to depict agriculture and agricultural issues; current research in visual communication and its application to agriculture; use of visual images in agricultural communication research.  
Prerequisite: ALEC 695 or introductory research methods.

**ALEC 681 Seminar**  
Credit 1. 1 Lecture Hour.  
Group study and discussion of current developments in agricultural education; research and legislation as they affect programs in teacher education, agricultural science and related areas of education.

**ALEC 684 Professional Internship**  
Credits 1 to 6. 1 to 6 Other Hours.  
On-the-job supervised experience program conducted in the area of the student's specialization.  
Prerequisites: Graduate classification.

**ALEC 685 Directed Studies**  
Credits 1 to 4. 1 to 4 Other Hours.  
Studies related to classroom, laboratory, supervised activities in agriculture, work experience, extension education and adult educational activities in agricultural programs.

**ALEC 689 Special Topics in...**  
Credits 1 to 4. 1 to 4 Lecture Hours.  
Selected topics in an identified area of agricultural education. May be repeated for credit.

**ALEC 690 Theory of Agricultural Education Research**  
Credits 3. 3 Lecture Hours.  
Theory and design of research problems in agricultural education; communication of research proposal and results of research; evaluation of current research of faculty and students; review of current research literature. May be taken three times for credit.  
Prerequisite: Approval of major advisor.

**ALEC 691 Research**  
Credits 1 to 23. 1 to 23 Other Hours.  
Initiation and completion of research for advanced degree.  
Prerequisite: Approval of department head.

**ALEC 692 Professional Study**  
Credits 1 to 23. 1 to 23 Other Hours.  
Approved professional study of project undertaken as the terminal requirement for degree of Doctor of Education; preparation of a record of study summarizing the rationale, procedure and results of the completed project.  
Prerequisite: Approval of major advisor.

**ALEC 693 Professional Study in Agricultural Leadership Education and Communications**  
Credits 1 to 3. 1 to 3 Other Hours.  
Approved professional paper undertaken as the requirement for the Master of Agriculture. May be taken more than once, but not to exceed 3 hours of credit toward a degree.  
Prerequisite: Graduate classification.

**ALEC 695 Frontiers in Research**  
Credits 3. 3 Lecture Hours.  
Basic concepts of quantitative and qualitative research; understanding the social science research process; using appropriate methods to address research problems; enabling students to effectively evaluate, consume, and communicate research findings.

**ALEC 696 Qualitative Research Methods**  
Credits 3. 3 Lecture Hours.  
Overview of qualitative research in agricultural education including conducting a literature review, writing a working hypothesis, keeping methodological and reflexive journals, developing data gathering tools, performing data analysis, ensuring trustworthiness measures, and writing a research manuscript.  
Prerequisites: ALEC 690 or ALEC 695 and graduate classification.