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:** ALED 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 programs 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.