Agricultural and Extension Education (AEE)

AEE 101 Introduction to Career and Technical Education (1 credit hours)
Overview of career and technical education programs, objectives, and outcomes in secondary schools. Philosophy of career and technical education and how career and technical education programs fit into the overall mission of secondary education. Mission of agricultural education, major program objectives, and introduction to the curricula taught within the state. Roles and responsibilities of CTE teachers with specific emphasis on agricultural education teachers’ roles and responsibilities. Historical context of agricultural education and other career and technical education programs, including major legislation affecting development of career and technical education.

Typically offered in Fall only

AEE 103 Fundamentals of Agricultural and Extension Education (1 credit hours)
Introduction to the scope, purpose, and objectives of university education with an emphasis on agricultural education, extension education, and agricultural communications. Students will explore College and departmental resources, academic policies and procedures, the agricultural industry, career opportunities, and current trends and issues in agriculture. Cannot receive credit for both AEE 103 and ALS 103

Typically offered in Fall only

AEE 141 Computer Applications in the Agricultural Institute (2 credit hours)
Introduction to computing concepts and the computing infrastructure in the Agricultural Institute. Use of computing hardware and software to perform common tasks, explore networked computer resources and solve problems associated with the various curricula in the Agricultural Institute.

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Typically offered in Spring only

AEE 206 Introduction to Teaching Agriculture (3 credit hours)
Introduction to teaching agricultural education in middle and secondary schools and collaborative efforts for teaching agricultural education to adults as rural community situations dictate. Field experiences include three hours per week of structured observations of classroom teachers, teacher assistant activities, and reflections of the experience.

Typically offered in Fall only

AEE 208/ANS 208/PB 208 Agricultural Biotechnology: Issues and Implications (3 credit hours)
Trends and issues of agricultural biotechnology in today's society are addressed while covering the basic biological science behind the technology. Applications of and policy issues associated with plant, animal, and environmental biotechnology used in the agricultural industry are examined from an interdisciplinary approach.

Prerequisite: (BIO 105 or BIO 115 or BIO 181 or BIO 183)
GEP Interdisciplinary Perspectives

Typically offered in Spring and Summer

AEE 226 Computer Applications and Information Technology in Agricultural & Extension Ed (3 credit hours)
Use of computers and commercial produced agricultural software; the computer as a management tool; agricultural occupational applications of the computer; a multimedia instructional tool in agricultural classrooms and training situations; use of technology for processing information and imaging; network access; and electronic communications.

Typically offered in Fall and Spring

AEE 230 Introduction to Cooperative Extension (3 credit hours)
This course is designed for all students who are interested pursuing a career with the cooperative extension service. An introduction to the cooperative extension mission, philosophy, history, organization, structure, administration, program areas, extension program development, extension teaching and delivery methods, and the involvement and use of volunteers. Students are expected to provide their own transportation for outside of class activities and assignments.

Typically offered in Fall only

AEE 303 Administration and Supervision of Student Organizations (3 credit hours)
Principles and techniques for organizing, administering and supervising student organization activities.

Prerequisite: AEE 206
Typically offered in Spring only

AEE 311 Communication Methods and Media (3 credit hours)
Foundations of agricultural communications. Technologies of agricultural communication and the systematic approach to the development of agricultural communication materials. Development of applied skills in design, production, evaluation, and dissemination of information unique to agricultural sciences and media.

Prerequisite: ENG 101
Typically offered in Fall and Spring

AEE 322 Experiential Learning in Agriculture (3 credit hours)
Planning, organizing, implementing, supervising and evaluating Supervised Agricultural Experience (SAE) programs in agriculture.

Prerequisite: AEE 206
Typically offered in Fall only

AEE 323 Leadership Development in Agriculture and Life Sciences (3 credit hours)
AEE 323 is designed to introduce you to the awesome complexity of leadership. Leadership educators believe that leadership can be learned. In this course, we study leadership theory to help us understand our leadership potential, the potential of others, and the impact great leadership can have on people, organizations, and society. We separate skills you gain from going out and doing leadership (the do) from theories that provide foundations for leadership (the think). Effective leadership is important in all contexts, including food and agriculture. We believe it is ESSENTIAL that effective leaders both THINK and DO!

GEP Social Sciences

Typically offered in Fall and Spring
AEE 325 Planning and Delivering Non-Formal Education (3 credit hours)
Adult learning theory and practice, including planning non-formal educational programs for adults, methods of instructional delivery, effective use of instructional technology, marketing educational programs, and evaluation of educational outcomes. Microteaching (practice teaching presentations) and group presentations required as part of laboratory assignments.

Typically offered in Fall only

AEE 326 Teaching Diverse Learners in AED (3 credit hours)
Legislation and issues regarding diverse learners in middle and high school agricultural education are examined. Discussion and practice in planning and facilitating teaching strategies to help those with special needs in an agricultural setting are emphasized. Techniques to integrate reading and writing into the curriculum are identified and practiced. Field trips are required.

Prerequisite: AEE 206; Junior standing; and AED Majors only
Typically offered in Spring only

AEE 327 Conducting Summer Programs in Agricultural Education (1 credit hour)
Field experience emphasizing summer agricultural education programs. Individualized instruction for students during supervised agricultural experience visits and youth organization activities. Professional development and program improvement activities.

Prerequisite: AEE 206, AEE 303, AEE 322, and Corequisite of AEE 426
Typically offered in Fall only

AEE 327 Personal Leadership Development in Agriculture and Life Sciences (3 credit hours)
This course focuses on the development of each student’s capacity to lead in ways that reflect their values and to address big, messy challenges through leadership. Students will examine human behavior through the lenses of authentic and adaptive leadership and work to develop their own capacity for authentic and adaptive leadership. They will apply critical and creative thinking processes to analyze adaptive challenges and develop potential solutions in the realms of agriculture, food, and natural resources.

GEP Social Sciences
Typically offered in Spring only

AEE 360 Developing Team Leadership in Agriculture and Life Sciences (3 credit hours)
Students in this course will study the impact of organized teams and team leaders on the development of agricultural organizations. Principles and techniques involved in creating, organizing and directing teams will be explored. Students will develop skills in team decision-making and communication. Topics of discussion will include: components of a group and team, relationships of group and team members, effectiveness of groups and teams, and communication within groups and teams. This course is designed for students who are interested in positions of leadership and who want to learn more about making the groups and teams they work with more effective.

Prerequisite: AEE 323-Leadership Development in Agriculture
Typically offered in Fall only

AEE 423 Practicum in Agricultural Extension/Industry (8 credit hours)
Participation in professional work experiences in preparation for effective leadership positions in the Cooperative Extension Service or the agribusiness industry.

Prerequisite: AEE 230, AEE 325, and Corequisite of AEE 490
Typically offered in Spring and Summer

AEE 424 Planning Agricultural Educational Programs (3 credit hours)
Principles of program planning applied to educational programs in agriculture; includes theory and field experiences in planning, organizing, and evaluating high school and adult education programs.

Prerequisite: AEE(ED) 426, Corequisite: AEE(ED) 427
Typically offered in Spring only

AEE 426 Methods of Teaching Agriculture (3 credit hours)
Discussion and practice in planning and presenting instruction in agriculture in formal and informal settings. Principles and application of approaches to teaching and organizing instruction, motivating students, developing instructional objectives, selecting and using teaching techniques, evaluating instruction, and managing classroom and laboratory instruction.

Prerequisite: Junior standing.
Typically offered in Fall only

AEE 427 Student Teaching in Agriculture (8 credit hours)
Skills and techniques involved in teaching vocational agriculture through practice in a public school setting with concurrent on-campus seminars.

Prerequisite: AEE (ED) 426; Admission to Professional Semester, Corequisite: AEE (ED) 490, AEE (ED) 424;
Typically offered in Spring only

AEE 433/AEE 533 Leadership and Management of Volunteers in Agricultural and Extension Education (3 credit hours)
This course is intended to prepare students to be effective managers of volunteer programs. Theory will be emphasized in the course because it is essential to be grounded in theory in order to apply it. Major topics of the course will include, but are not limited to: volunteer recruitment, training, evaluation and reward. Students will be required to be active in and outside of class sessions, including a 20-hour field experience. Students must provide their own transportation for field trips and outside of class activities. Cannot receive credit for both AEE 433 and 533.

Prerequisite: Junior standing
Typically offered in Fall only

AEE 435 Professional Presentations in Agricultural Organizations (3 credit hours)
This course teaches effective listening strategies, communication strategies, interpersonal skills and presentation strategies essential for use in today's workplace. AEE 435 includes strategies and techniques for effective presentations in the food, agricultural, natural resources, as well as other professions, with emphasis on oral and visual presentation techniques. Presentation skills and strategies for formal and informal situations including conferences, poster presentations along with leadership, conflict resolution, interviewing, negotiation, and group communication theory and strategies will be discussed. Restricted to CALS students; Jr or Sr level status required.

Typically offered in Fall and Spring
AEE 460 Organizational Leadership Development in Agriculture and Life Sciences (3 credit hours)
This course focuses on the impact of effective leadership in organizations in both theory and practice. Students will examine the major theories and studies that are most relevant and informative with the regard to leadership in organizations. Students will develop skills in decision-making, management of organizations, and ethical leadership related to agricultural organizations.
Prerequisite: AEE 323-Leadership Development in Agriculture
Typically offered in Spring only

AEE 478 Advanced Issues in Extension Education (3 credit hours)
Advanced issues and trends contributing to the administration, organization, and structure of extension education in a changing world. Senior standing required.
Prerequisite: AEE 230
Typically offered in Spring only

AEE 490 Seminar in Agricultural and Extension Education (3 credit hours)
Capstone experience in Leadership in Agricultural and Life Sciences for Agricultural Sciences majors. Students will apply theories and concepts from their leadership courses to a planned leadership experience. Reflection on and documentation of intentional leadership experiences will lead to a final presentation in the course of leadership lessons learned and areas for continued development.
Prerequisite: Senior Standing and students in 11AGSBS and 11EXTEDBS
Typically offered in Fall, Spring, and Summer

AEE 491 Seminar in Agricultural Education (1 credit hours)
This course helps students analyze the opportunities and challenges facing teachers of agriculture as they prepare for their careers. Topics include balancing work and professional life as a teacher, portfolio assessments of teachers and programs, classroom management, teacher liability, and preparation for the job search in agricultural education.
Corequisites: AEE 424 and AEE 427
Typically offered in Spring only

AEE 492 External Learning Experience in Agricultural and Extension Education (1-6 credit hours)
Learning experience within an academic framework that utilizes facilities and resources external to the campus. Contact and arrangements with prospective employers initiated by the student and approved by the faculty adviser, prospective employer, and the departmental teaching coordinator prior to the experience. Not intended for teaching licensure for students in AEE.
Prerequisite: Sophomore standing
Typically offered in Fall and Spring

AEE 493 Special Problems in Agriculture and Extension Education (1-6 credit hours)
A learning experience in agriculture and extension education within an academic framework that utilizes departmental campus facilities and resources. Arrangements must be initiated by the student and approved by a faculty adviser and the departmental teaching coordinator. Not intended for teacher licensure for students in AEE.
Prerequisite: Sophomore standing
Typically offered in Fall, Spring, and Summer

AEE 495 Special Topics in Agricultural and Extension Education (1-3 credit hours)
Offered as needed to present material not normally available in regular course offerings or for offerings of new courses on a trial basis.
Typically offered in Fall, Spring, and Summer

AEE 501 Foundations Of Agricultural and Extension Education (3 credit hours)
Development and organization of agricultural and extension education in America from colonial times to the present. Emphasis on role of societal and scientific changes, the federal government and philosophy on evolution of agricultural and extension education.
Typically offered in Fall and Summer

AEE 503 Youth Program Management (3 credit hours)
Research, theory and principles of youth organization management. Analysis of youth development models and application of leadership theory in a youth organization. Using evaluation models to assess the effectiveness of major youth organization. Web-based course.
Typically offered in Spring only

AEE 505 Trends and Issues in Agricultural and Extension Education (3 credit hours)
Trends and Issues in Agricultural and Extension Education. Analysis and appraisal of current trends, problems and issues in Agricultural and Extension Education. May include but not limited to scientific, political, demographic, social, educational, technological, and environmental trends and issues that will contribute to the future structure and operation of agricultural and extension education in the United States.
Typically offered in Spring only

AEE 507 Comparative Agricultural and Extension Education (3 credit hours)
Organization and operation of formal and nonformal agricultural education and extension systems in the United States and in other countries. Field trip required - cost approx. $175.00.
Typically offered in Fall only

AEE 521 Program Planning in Agricultural and Extension Education (3 credit hours)
Consideration of the need for planning programs in education; objectives and evaluation of community programs; use of advisory group; organization and use of facilities.
Prerequisite: Graduate standing or PBS status
Typically offered in Fall only

AEE 522 Occupational Experience in Agriculture (3 credit hours)
A major and critical element in all programs of vocational education is provision for appropriate student learning experiences in a real and simulated employment environment. Due to recent developments in education and agriculture, new and expanded concepts of occupational experience devised. Current research substantiates need and desire of teachers of agriculture for assistance in implementing new concepts. Also designed to develop depth of understanding of theoretical foundations underlying new developments in occupational experiences to stimulate individual growth and creativity in implementing further developments.
Prerequisite: Graduate standing or PBS status
Typically offered in Fall only
AEE 523  Adult Education in Agriculture  (3 credit hours)
Designed to meet needs of leaders in adult education. Opportunity to study issues in working with adult groups. Attention given to the problem of fitting educational program for adults into public school and other educational programs and to methods of teaching adults.

Prerequisite: Graduate standing or PBS status

Typically offered in Spring only

AEE 524  Coordinating the High School Agricultural Education Program  (3 credit hours)
Principles of program planning applied to educational programs about agriculture; theory and field experiences in planning, organizing, and evaluating secondary agricultural education programs; development of plans for conducting all aspects of the complete agricultural education programs.

Typically offered in Spring only

AEE 525  Information Technologies in Agricultural and Extension Education  (3 credit hours)
Principles, theory and techniques of using information technologies to provide instruction to learners, both in person and at a distance, in formal and non formal educational settings.

Typically offered in Spring only

AEE 529  Curriculum Development in Agricultural and Extension Education  (3 credit hours)
Design and development of data based curriculum and curriculum evaluation procedures in agricultural and extension education. Critique of curriculum development models, contemporary trends and issues, curriculum resources and accountability tools. Analysis of the use of national and state standards as well as local community needs in curriculum development.

Typically offered in Spring only

AEE 533/AEE 433  Leadership and Management of Volunteers in Agricultural and Extension Education  (3 credit hours)
This course is intended to prepare students to be effective managers of volunteer programs. Theory will be emphasized in the course because it is essential to be grounded in theory in order to apply it. Major topics of the course will include, but are not limited to: volunteer recruitment, training, evaluation and reward. Students will be required to be active in and outside of class sessions, including a 20-hour field experience. Students must provide their own transportation for field trips and outside of class activities. Cannot receive credit for both AEE 433 and 533.

Prerequisite: Junior standing

Typically offered in Fall and Spring

AEE 535  Teaching Agriculture in Secondary Schools  (3 credit hours)
Application of theoretical models and research on effective teaching in secondary agricultural education programs. Teaching strategies, planning required, and instructional management for students with varying backgrounds. Evaluation of student learning and teacher evaluation of instruction.

Typically offered in Fall only

AEE 545  Methods of Change in Agricultural and Human Sciences  (3 credit hours)
Processes by which professional change agents in agricultural and extension education influence the introduction, adoption, and diffusion of planned change. This course requires admission to any program of the NC State University Graduate School such as full graduate status, graduate unclassified status, post-baccalaureate studies, evening degree programs, etc. It has no other prerequisites, requisites, or restrictions.

Restriction: Graduate Standing or PBS status.

Typically offered in Spring only

AEE 550  Leadership Theory  (3 credit hours)
Leadership is ubiquitous in our society. It remains one of the world's favorite buzz words. However, just because it's everywhere, doesn't mean everything labeled so, is leadership. This graduate course in leadership theory will require you to critically examine your ideas of leadership, and reflect on your own (and society's) notions of "what is leadership". In this class we will separate the skills you gain from going out and doing leadership (the do) and the theories that provide the foundations for leadership (the think). Many successful leaders learn their skills via practice; that is important. AEE 550, however, is a leadership education course where we study leadership theory. We will take those theories, long associated with the academic study of leadership, and deconstruct them using critical theory as our lens. Then, using the text as guide, reconstruct them in new ways to meet today's pressing challenges.

Typically offered in Fall only

AEE 560  Organizational Behavior and Administrative Leadership in Agricultural & Human Science  (3 credit hours)
This course is intended to prepare students to be effective members of organizations, both as team members and team leaders. Theories of organizational behavior will be emphasized in the course; in so much as it is essential to be grounded in theory in order to apply it. Major topics include: motivation, job design, managing diversity, decision making, power, ethics, and organizational design.

Typically offered in Spring only

AEE 565  Community Leadership  (3 credit hours)
The Community Leadership course will prepare graduate students for leadership roles within an array of community settings. The three core competencies for community leadership will be shared which include farming ideas, building and using social capital, and mobilizing resources. Tools associated with each of these competencies will be examined as well as the ways in which to apply these tools to various community situations. Leadership theories that have been learned in AEE 550 will also be discussed to show how to move from theory to practice. This is a course that will require student participation both during class sessions and outside of class where students will be engaged in a team project. The course will be offered in the spring of odd years.

Prerequisite: Graduate student status and AEE 550: Leadership Theory

Typically offered in Spring only
AEE 577 **Evaluation in Agricultural and Extension Education** (3 credit hours)
Evaluation is an important part of many social science disciplines and grant projects. The intent of this course is to teach students how to plan and conduct a meaningful and useful evaluation. Students will gain knowledge and skills in planning evaluations; designing evaluation studies and evaluation instruments; collecting and analyzing data; and using evaluation results. Students will learn evaluation theoretical concepts and their application in real-life situations.

Restriction: Graduate Standing or PBS
Typically offered in Spring only

AEE 578 **Scientific Inquiry in Agricultural and Extension Education** (3 credit hours)
Philosophy, design, interpretation and practice of scientific research in agricultural and extension education, with a particular focus on the skills necessary to be an effective and critical "consumer" of research that is practiced within the field. Web based course.

Typically offered in Fall, Spring, and Summer

AEE 579 **Research Design in Agricultural and Extension Education** (3 credit hours)
Design of Research in Agricultural and Extension education. Development of proposals for thesis research or competitive grants. Critical analyses of research in the field and proposed research.

Typically offered in Fall only

AEE 595 **Special Topics in Agricultural and Extension Education** (1-6 credit hours)
Presentation of material not normally available in regular graduate course offerings or for offerings of new 500 level courses on a trial basis.

Prerequisite: Graduate standing or PBS status
Typically offered in Fall, Spring, and Summer

AEE 601 **Seminar** (1 credit hours)
Current topics and issues in agricultural and extension education. Selection and research of topics, presentation of seminars, and leading group discussions.

Prerequisite: Graduate standing or PBS status
Typically offered in Spring only

AEE 610 **Special Topics** (1-6 credit hours)
Presentation of material not normally available in regular graduate course offerings or for offerings of new 500 level courses on a trial basis.

Prerequisite: Graduate standing or PBS status
Typically offered in Fall, Spring, and Summer

AEE 620 **Special Problems in Agricultural and Extension Education** (1-6 credit hours)
Exploration of topics of special interest not covered by existing courses by individual students under faculty member's directions. Readings and independent study, problems or research not related to a thesis.

Typically offered in Fall, Spring, and Summer

AEE 641 **Practicum In Agricultural and Extension Education** (1-6 credit hours)
Faculty-supervised practicum in an educational, extension or agricultural industry setting.

Typically offered in Fall, Spring, and Summer

AEE 685 **Master's Supervised Teaching** (1-3 credit hours)
Teaching experience under the mentorship of faculty who assist the student in planning for the teaching assignment, observe and provide feedback to the student during the teaching assignment, and evaluate the student upon completion of the assignment.

Prerequisite: Master's student
Typically offered in Fall, Spring, and Summer

AEE 690 **Master's Examination** (1-9 credit hours)
For students in non-thesis master's programs who have completed all other requirements of the degree except preparing for and taking the final master's exam.

Prerequisite: Master's student
Typically offered in Fall, Spring, and Summer

AEE 693 **Master's Supervised Research** (1-9 credit hours)
Instruction in research and research under the mentorship of a member of the Graduate Faculty.

Prerequisite: Master's student
Typically offered in Fall, Spring, and Summer

AEE 695 **Master's Thesis Research** (1-9 credit hours)
Thesis research

Prerequisite: Master's student
Typically offered in Fall, Spring, and Summer

AEE 696 **Summer Thesis Research** (1 credit hours)
For graduate students whose programs of work specify no formal course work during a summer session and who will be devoting full time to thesis research.

Prerequisite: Master's student
Typically offered in Summer only

AEE 699 **Master's Thesis Preparation** (1-9 credit hours)
For students who have completed all credit hour requirements and full-time enrollment for the master's degree and are writing and defending their thesis.

Prerequisite: Master's student
Typically offered in Summer only

AEE 705 **International Agricultural Development** (3 credit hours)
This course provides an opportunity to learn about global agricultural and extension education issues, challenges and opportunities relating to agricultural development. The course emphasis is on building necessary knowledge and skills for analyzing global agricultural and extension education issues and formulating alternatives for agricultural development. This course has been designed to help graduate students understand agriculture and extension education with a global perspective.

Prerequisite: Graduate standing
Typically offered in Fall only

AEE 735 **Effective Teaching in Agriculture and Life Sciences** (3 credit hours)
Theory and practice of effective teaching in agricultural and life sciences. Emphasis on course planning, teaching and learning styles, instructional techniques, laboratory instruction, text construction, student evaluation, instructional technology, and faculty roles and responsibilities.

Prerequisite: Graduate standing
Typically offered in Fall only
AEE 777 Qualitative Research Methods in the Agricultural & Life Sciences (3 credit hours)
Qualitative research methods continue to gain popularity in the disciplines of agricultural & life sciences. It is becoming increasingly important for graduates to have a practical working knowledge of the development, implementation, and evaluation of these methodologies. Topics in the course will include but not be limited to: the foundation of qualitative research, data collection and analysis techniques, and review of qualitative research. Students are encouraged to have completed an introductory research methods course prior to enrolling. Introductory Research Methods course taken at the graduate level.

Typically offered in Fall only

AEE 809/YFCS 809 Colloquium in Agricultural and Human Sciences (1 credit hours)
This course will examine the richness and diversity of scholarship in agricultural and human sciences and its applications to professional practice in a colloquium setting. A primary purpose is to build capacities for individual, professional, and civic work as students apply their learning to develop scholarship and professionalism. The course explores advanced topics and research methods and supports students in presenting and defending their research and research proposals.
In successive fall semesters, graduate students participate in three, one-credit colloquia that engage faculty and students from across the Department of Agricultural and Human Sciences. This course requires admission to any program of the NC State University Graduate School such as full graduate status, graduate unclassified status, post-baccalaureate studies, evening degree programs, etc.

Typically offered in Fall only

AEE 820 Special Problems in Agricultural and Extension Education (1-6 credit hours)
Exploration of topics of special interest not covered by existing courses by individual students under faculty member's directions. Readings and independent study, problems or research not related to a thesis.

Typically offered in Fall, Spring, and Summer

AEE 841 Practicum in Agricultural and Extension Education (1-6 credit hours)
Faculty-supervised practicum in an educational, extension or agricultural industry setting.

Typically offered in Fall, Spring, and Summer

AEE 885 Doctoral Supervised Teaching (1-3 credit hours)
Teaching experience under the mentorship of faculty who assist the student in planning for the teaching assignment, observe and provide feedback to the student during the teaching assignment, and evaluate the student upon completion of the assignment.

Prerequisite: Doctoral student
Typically offered in Fall and Spring

AEE 893 Doctoral Supervised Research (1-9 credit hours)
Instruction in research and research under the mentorship of a member of the Graduate faculty.

Prerequisite: Doctoral student
Typically offered in Fall, Spring, and Summer

AEE 895 Doctoral Dissertation Research (1-9 credit hours)
Dissertation research.

Prerequisite: Doctoral student
Typically offered in Fall, Spring, and Summer

AEE 896 Summer Dissertation Research (1 credit hours)
For graduate students whose programs of work specify no formal course work during a summer session and who will be devoting full time to thesis research.

Prerequisite: Doctoral student
Typically offered in Summer only

AEE 899 Doctoral Dissertation Preparation (1-9 credit hours)
For students who have completed all credit hours, full-time enrollment, preliminary examination, and residency requirements for the doctoral degree, and are writing and defending their dissertations.

Prerequisite: Doctoral student
Typically offered in Fall, Spring, and Summer