

AGRICULTURAL EDUCATION AND GENERAL AGRICULTURE

The Department of Agricultural Education and General Agriculture combines two programs: Agricultural Sciences and Agricultural Education.

The **Agricultural Sciences Program** is an undergraduate studies program that provides maximum flexibility in designing and structuring a course of study to meet the students' individual needs. Agricultural Sciences should be seriously considered by students desiring programs of study not currently available in any other agricultural subject matter department (such as those involving a minor in communications, recreation, or environmental studies in agriculture); students wishing to pursue two or more areas of specialization (such as students who are returning to farms or ranches and who need substantial background, for example, in animal science, crops, and agricultural business management); students preparing for leadership positions in agriculture that require excellent communication and leadership skills as well as breadth of agricultural background (such as agriculture teachers, lobbyists, commodity liaison persons or extension staff); or students who have not selected a departmental major in the College of Agricultural Sciences but who know they are interested in an agricultural career.

The goal of the Agricultural Sciences Program is to help students identify the agricultural career in which they are most interested and build a course of study that will qualify each student for their chosen profession. Advising is of paramount importance in this process and major emphasis is placed on career advising.

The **Agricultural Education Program** offers course work serving teachers and leaders in agriculture. The MS and MAIS degrees may be pursued with an emphasis in leadership, communication, pedagogy, extension and/or technical agriculture. Candidates work with an advisor to develop programs that meet their specific needs as indicated by their occupational objectives. The Agricultural Education MS degree aligns with an initial teaching license in Oregon.

Three undergraduate minors are available in the Department of Agricultural Education and General Agriculture.

1. The **Agricultural Sciences minor** is available for undergraduate students who have majored in an area that requires the addition of breadth in agriculture to their major program. The minor provides the appropriate technical agriculture background for students interested in agricultural management, communication, environmental studies, etc.
2. The **Comparative International Agriculture minor** provides students with formal instruction in international agricultural concepts and practical experiences through global awareness course work, language immersion via study/research abroad, and/or international fieldwork. The 27-credit curriculum prepares students for successful postbaccalaureate international careers, or those seeking graduate studies in international agriculture programs.
3. The **Leadership minor** is designed for all undergraduates interested in developing premier leadership, enhancing professional competencies, and fostering the skills necessary to meet the local, national, and international needs of our society. The Leadership minor is centered on leadership theory (education), trait/skill development (training), and application (development). It is designed to allow students to

apply the course work in a relevant and relational manner. This minor is also available via Ecampus.

Career Opportunities in Agricultural Sciences

Career opportunities for general agriculture majors are unlimited because of the nature of the program structure. Students can return to home farms or ranches, move into agricultural middle management, become extension staff, move into political lobby positions, work in marketing or international agriculture, become high school teachers of agriculture, or teach agriculture in community colleges. Salaries vary depending on the position a student may strive to achieve.

Undergraduate Studies Curriculum

High school and college transfer students who are admitted to Oregon State University as an undergraduate are eligible to participate in the Agricultural Sciences Program. Agricultural Sciences majors, in consultation with their departmental academic advisor, may plan elective course work to emphasize personal interests, abilities, and career objectives. A leadership and communication area of emphasis is available and is specially designed for those students who will need breadth in their technical agriculture background and excellence in communication and leadership skills. The intent of this area of emphasis within the Agricultural Sciences Program is to prepare agriculture's future leaders in extension, government, and business. A teacher preparation area of emphasis is available and allows for Initial Teacher Licensure within the baccalaureate degree.

Undergraduate Programs

Majors

- Agricultural Sciences (<http://catalog.oregonstate.edu/college-departments/agricultural-sciences/agricultural-education-general-agriculture/agricultural-sciences-bs-hbs>)

Minors

- Agricultural Sciences (<http://catalog.oregonstate.edu/college-departments/agricultural-sciences/agricultural-education-general-agriculture/agricultural-sciences-minor>)
- Comparative International Agriculture (<http://catalog.oregonstate.edu/college-departments/agricultural-sciences/agricultural-education-general-agriculture/comparative-international-agriculture-minor>)
- Leadership (<http://catalog.oregonstate.edu/college-departments/agricultural-sciences/agricultural-education-general-agriculture/leadership-minor>)

Graduate Programs

Majors

- Agricultural Education (<http://catalog.oregonstate.edu/college-departments/agricultural-sciences/agricultural-education-general-agriculture/agricultural-education-ms-mais>)

Minors

- Agricultural Education (<http://catalog.oregonstate.edu/college-departments/agricultural-sciences/agricultural-education-general-agriculture/agricultural-education-graduate-minor>)

Burt, John 1973, Emeritus

Cole, Richard 1977, Emeritus

Haddad, Becky 2017, Instructor

Degrees:

BS, Univ of Wisconsin-Platteville, 2012

MS, North Dakota St U-Main Campus, 2016

Maddy, Deborah 1997, Emeritus

Millhollin, Melissa 2010, Instructor

Degrees:

BS, Oregon State University,

MS, Oregon State University, 2015

Shirley, Lindsey 2016, Associate Professor

Degrees:

BS, Iowa State University, 2001

MED, Univ of Minnesota-Twin Cities, 2002

PHD, Iowa State University, 2007

Stewart, Josh 2014, Instructor

Degrees:

BS, Texas Tech University, 1999

MS, Texas Tech University, 2014

Strawn, Kellie 2001, Instructor

Degrees:

BS, Oregon State University, 2005

MS, Oklahoma State Univ-Okla City, 2008

Sunderland, Paul 1986, Emeritus

Thompson, Gregory 1996, Emeritus

Velez, Jonathan 2008, Interim Department Head, Associate Professor

Degrees:

BS, Oregon State University, 2000

MAT, Oregon State University, 2001

PHD, The Ohio State Univ Main, 2008

Agricultural Education

AED 313. THEORY AND PRACTICUM III: FIELD. (4 Credits)

Field based experience for students preparing to be agricultural teachers. Focus on teaching models.

AED 325. PLANNING AND DELIVERING NON-FORMAL AGRICULTURAL EDUCATION. (3 Credits)

This course uses adult learning theory and practice, including planning non-formal agricultural education programs for youth and adults, methods of instructional delivery, effective use of instructional technology, marketing agricultural education programs, and evaluation of agricultural education outcomes. Microteaching (practice teaching presentations) and group presentations required as part of laboratory assignments.

AED 407. SEMINAR. (1-16 Credits)

This course is repeatable for 16 credits.

AED 499. SPECIAL TOPICS. (1-16 Credits)

This course is repeatable for 16 credits.

AED 501. RESEARCH. (1-16 Credits)

This course is repeatable for 16 credits.

AED 503. THESIS. (1-16 Credits)

This course is repeatable for 999 credits.

AED 505. READING AND CONFERENCE. (1-16 Credits)

This course is repeatable for 16 credits.

AED 507. SEMINAR. (1-16 Credits)

This course is repeatable for 16 credits.

AED 508. WORKSHOP. (1-16 Credits)

This course is repeatable for 16 credits.

AED 509. PRACTICUM. (1-16 Credits)

This course is repeatable for 16 credits.

AED 510. PROFESSIONAL INTERNSHIP: AGRICULTURE EDUCATION. (1-40 Credits)

A field experience in which the intern will integrate academic study with classroom teaching experience to learn specific competencies relating to functioning well in the context of the classroom and the school, and demonstrate this competency through the assessment of work by supervisors and by evidence collected and presented in work samples. *This course is repeatable for 40 credits.*

AED 518. EXTENSION COURSE IN TEACHER EDUCATION/PEDAGOGY. (1-3 Credits)

Enables present and prospective teachers of agriculture to continue their professional development on pedagogical topics of current importance. (This course is limited to 9 credits per term.)

Equivalent to: AG 518

This course is repeatable for 50 credits.

AED 533. RURAL SURVEY METHODS. (3 Credits)

Technique; analyzing, interpreting, and using results of survey data; identifying and utilizing community resources; develop and organize agriculture programs to meet community needs.

AED 552. PROGRAM ORGANIZATION AND MANAGEMENT. (3 Credits)

Explores the foundations of vocational education, essential learning skills, advisory committees, and development of a vocational education philosophy. Students will study the elements of educational reform as they apply to specific service areas. Resource analysis, student organizations, and school-to-work transitions will also be studied.

AED 553. APPLIED INSTRUCTIONAL STRATEGIES. (3 Credits)

Helps students in the identification and development of goals, objectives and units. The course includes the development and application of subject area instructional strategies/models, including applied math, writing, communication skills, measurement and evaluation of achievement, and delivery of instruction to at-risk students. Safety is a primary focus.

AED 554. MICRO-TEACHING. (3 Credits)

Planning, presenting and evaluating lessons in a micro-teaching lab. It includes application of content pedagogy strategies, subject matter principles and media technology. Lessons presented on safety.

AED 555. LABORATORY PEDAGOGY. (3 Credits)

Applications of efficient planning, organizing, and teaching skills within the laboratory setting and utilization of laboratory facilities to optimize learning experiences. Laboratory facilities could include a shop, greenhouse, land laboratories/outdoors, agriscience labs, aquaculture, computer lab, field trips, etc.

AED 556. LINK RESEARCH, TEACHING, AND PRACTICE. (3 Credits)

Links research to teaching. Students will work with cooperating teachers to identify and apply research to teaching.

AED 557. ISSUES AND TRENDS IN CURRICULUM AND INSTRUCTION. (3 Credits)

Emphasizes trends related to subject matter curriculum issues unique to agricultural education at the secondary level.

AED 558. IMPROVING AGRICULTURAL SCIENCE AND TECHNOLOGY PROGRAMS. (3 Credits)

Provides impetus toward evaluation and improvement of local programs of agricultural science and technology (AST), such that they better reflect community, regional, and national needs.

AED 580. COMMUNICATING AGRICULTURAL AND LIFE SCIENCES TO THE PUBLIC. (3 Credits)

Focuses on communicating with the public about research-based science in agricultural and life sciences for the purposes of education, influencing public policy, promoting positive agricultural practices and creating change. Explores various communication outlets and media and how they are appropriate for different messages.

AED 599. SPECIAL TOPICS. (1-16 Credits)

This course is repeatable for 16 credits.

AED 603. DISSERTATION. (1-16 Credits)

Students engage in research and writing related to the completion of their dissertation to fulfill the requirements of the College of Education PhD program.

This course is repeatable for 999 credits.

AED 640. INSTRUMENTATION AND DATA COLLECTION IN SOCIAL SCIENCE. (3 Credits)

Addresses the selection, development, and analysis of various types of quantitative instruments and procedures for collecting research data. The course has a quantitative focus and is oriented toward social science research. Lec/lab.

Recommended: SED 580 or equivalent introductory research methods course.

Agriculture-General

AG 111. INFORMATION TECHNOLOGY IN AGRICULTURE. (3 Credits)

Using information technology in agriculture and agribusiness; practical experience with computer programs applicable to all agricultural disciplines.

Equivalent to: AREC 111

AG 199. SPECIAL STUDIES. (1-16 Credits)

This course is repeatable for 16 credits.

AG 211. SURVEY AND CONSTRUCTION. (3 Credits)

Land measurement and leveling as applied to agricultural uses. Concrete and agricultural building construction including the use of construction power tools, selection of materials and cost estimating.

AG 221. METALS AND WELDING. (3 Credits)

Practices of metal working including the use of metal working machines, metal identification, heat treating and metal properties. Fabrication of metals including arc and oxy-acetylene welding and cutting. Lec/lab.

AG 230. INTRODUCTION TO EXTENSION AND ENGAGEMENT. (3 Credits)

For students interested in pursuing a career with the OSU Extension Service. An introduction to the OSU Extension Service mission, philosophy, history, organization, structure, administration, program areas, Extension program development, Extension teaching and delivery methods, and the involvement and use of volunteers.

This course is repeatable for 6 credits.

AG 301. *ECOSYSTEM SCIENCE OF PACIFIC NW INDIANS. (3 Credits)

Designed and presented in partnership with Pacific Northwest Indians and Alaska Natives, focusing on natural ecosystems, differing views, power relationships, policymaking, and gender roles. (Bacc Core Course)

Attributes: CPDP – Core, Perspective, Difference/Power/Discrimination

AG 311. *NATIVE AMERICAN AGRICULTURE. (3 Credits)

Explores Native North American agriculture and land management—prehistory of important domesticates such as maize, historic change, and contemporary issues including modern stereotypes, women in agriculture, cultural survival, and both the physical and spiritual significance of these crops in Native American communities and around the globe past and present. (Bacc Core Course)

Attributes: CPCD – Core, Pers, Cult Diversity; CPDP – Core, Perspective, Difference/Power/Discrimination

AG 312. ENGINE THEORY AND OPERATION. (3 Credits)

Engine construction, operational theories and principles, lubrication, fuels and oils, emissions and preventive maintenance are taught through the process of small engine lab activities. Engine efficiency theories and measurement are presented.

AG 318. ACCESSING INFORMATION FOR AGRICULTURAL RESEARCH. (1 Credit)

Designed for students at a distance to develop library skills and improve access to information used to conduct technical agricultural research.

AG 351. *COMMUNICATING AGRICULTURE TO THE PUBLIC. (3 Credits)

Students will explore various outlets for communicating with the public about agriculture using appropriate, professional writing. Additionally, students will articulate their thoughts on controversial issues as well as write feature and editorial pieces promoting positive agricultural practices and people in agriculture. (Bacc Core Course)

Attributes: CPSI – Core, Pers, Soc Proc & Inst; CSGI – Core, Synth, Global Issues

AG 391. FARM IMPLEMENTS. (3 Credits)

Power farming implements including operation, maintenance, adjustments, calibration and use are covered. Field trips may be required.

AG 401. RESEARCH. (1-16 Credits)

This course is repeatable for 16 credits.

AG 402. INDEPENDENT STUDIES. (1-16 Credits)

This course is repeatable for 16 credits.

AG 403. THESIS. (1-16 Credits)

This course is repeatable for 16 credits.

AG 405. READING AND CONFERENCE. (1-16 Credits)

This course is repeatable for 16 credits.

AG 406. SPECIAL PROBLEMS. (1-16 Credits)

This course is repeatable for 16 credits.

AG 407. SEMINAR. (1-16 Credits)

This course is repeatable for 16 credits.

AG 409. PRACTICUM. (1-16 Credits)

This course is repeatable for 16 credits.

AG 410. INTERNSHIP. (1-16 Credits)

A work internship to give students practical on-the-job preparation in any of the main facets of agriculture or related industries.

This course is repeatable for 16 credits.

AG 412. AG SAFETY AND HEALTH. (3 Credits)

An examination of various hazards associated with agriculture. Control strategies will be explored and prevention methods identified. Hazards examined include machinery, livestock, controlled spaces, pesticides, and other items common to the agricultural workplace. Lec/lab.

AG 421. WRITING IN AGRICULTURE. (3 Credits)

Students will synthesize their knowledge in various areas of agricultural sciences and analyze how current issues impact the agriculture industry, explore careers in agriculture, and develop their written communication skills. Students will share their ideas and demonstrate their learning primarily in writing. (Writing Intensive Course)

Attributes: CWIC – Core, Skills, WIC

AG 425. DEVELOPMENTS IN AGRICULTURAL MECHANICS. (3 Credits)

Emphasis on the development of instructional units for agricultural instruction programs. Wide applications to agricultural mechanization and biotechnology.

This course is repeatable for 9 credits.

AG 435. PROFESSIONAL PRESENTATIONS IN AGRICULTURE. (3 Credits)

Students will learn to effectively create and deliver professional presentations relevant to careers in agriculture and natural resources. This includes developing skills for both formal and informal presentations, using visual aids effectively, and using appropriate strategies to engage various audiences.

AG 492. TECHNOLOGY TRANSFER IN AGRICULTURE. (3 Credits)

Examination of processes by which formal and informal agricultural instruction programs influence the introduction and acceptance of technology in agriculture. An emphasis in the international arena will be maintained. The focus throughout the course will be on the role of a professional change agent working with technological change.

AG 499. SPECIAL TOPICS. (1-4 Credits)

Topics may vary from term to term and from year to year. May be repeated for credit when topics differ.

This course is repeatable for 12 credits.

AG 507. SEMINAR. (1-16 Credits)

This course is repeatable for 16 credits.

AG 509. PRACTICUM. (1-16 Credits)

This course is repeatable for 16 credits.

AG 518. EXTENSION COURSE IN TEACHER EDUCATION: TECHNICAL. (1-3 Credits)

Enables present and prospective teachers of agriculture to continue their professional development on technical topics of current importance.

Equivalent to: AED 518

This course is repeatable for 9 credits.

AG 521. WRITING IN AGRICULTURE. (3 Credits)

Students will synthesize their knowledge in various areas of agricultural sciences and analyze how current issues impact the agriculture industry, explore careers in agriculture, and develop their written communication skills. Students will share their ideas and demonstrate their learning primarily in writing.

AG 525. DEVELOPMENTS IN AGRICULTURAL MECHANICS. (3 Credits)

Emphasis on the development of instructional units for agricultural instruction programs. Wide applications to agricultural mechanization and biotechnology.

This course is repeatable for 45 credits.

AG 541. COMMUNITY PROGRAMS IN AGRICULTURE. (3 Credits)

Evaluating agricultural education program effectiveness and technical appropriateness. Development of long-range plans for agricultural programs to meet the technical needs of a community.

AG 592. TECHNOLOGY TRANSFER IN AGRICULTURE. (3 Credits)

Examination of processes by which formal and informal agricultural instruction programs influence the introduction and acceptance of technology in agriculture. An emphasis in the international arena will be maintained. The focus throughout the course will be on the role of a professional change agent working with technological change.

AG 808. WORKSHOP. (1-4 Credits)

Designed to enhance professionalism and create a knowledge base to increase personal effectiveness. This course will provide a basis for future leadership by synthesizing theoretical knowledge with practical application. Individuals will have the opportunity to explore their own personality, reflect on their leadership ability, and develop the professional skills and networking abilities necessary to become influential leaders in their home, community and profession.

This course is repeatable for 4 credits.

Leadership

LEAD 242. PERSONAL LEADERSHIP DEVELOPMENT. (3 Credits)

Examines content related to leadership traits, styles, and effective leadership tactics. An introductory course designed to create awareness and develop the employability skills necessary for participants to be productive contributors in their school, home, community and profession.

Equivalent to: AG 242

LEAD 342. TEAM AND ORGANIZATIONAL LEADERSHIP. (3 Credits)

Examines the planning, implementation and evaluation of organizations, and challenges students in the development of effective communication, group dynamics, conflict management, teambuilding and problem solving. Students will be challenged to examine their leadership role in their school, community and profession.

Equivalent to: AG 342

LEAD 401. LEADERSHIP RESEARCH. (1-16 Credits)

This course is repeatable for 16 credits.

LEAD 405. READING AND CONFERENCE. (1-16 Credits)

This course is repeatable for 16 credits.

LEAD 407. SEMINAR. (1-16 Credits)

This course is repeatable for 16 credits.

LEAD 409. PRACTICUM. (1-16 Credits)

This course is repeatable for 16 credits.

LEAD 410. LEADERSHIP INTERNSHIP. (1-16 Credits)

Students apply what they have learned through both the leadership theory and trait/skill development portion of the Leadership minor.

This course is repeatable for 16 credits.

LEAD 442. LEADERSHIP SKILLS FOR CAREER SUCCESS. (3 Credits)

Focuses on the development and refinement of the following leadership skills: utilizing diversity, team building, project management, program planning models, working with difficult people, conflict management, leading change, establishing an effective network, organizational strategies, and emotional intelligence.

Equivalent to: AG 442

LEAD 443. LEADERSHIP THROUGH CONVERSATIONS. (3 Credits)

Engages students in the exploration of conversations as a component of leadership. Students will engage in topics related to developing effective conversations, listening, conversation styles, group dynamics, digital communication, meetings as conversations and interviewing skills.

Equivalent to: AG 442

LEAD 444. LEADERSHIP MINOR CAPSTONE. (2 Credits)

Capstone course for students completing the Leadership minor. Students will reflect on what they have learned through the Leadership minor and how to apply that learning in the context of their future careers.

Equivalent to: AG 444

Recommended: (AG 242 or LEAD 242) and (AG 342 or LEAD 342)

LEAD 501. RESEARCH AND SCHOLARSHIP. (1-16 Credits)

This course is repeatable for 16 credits.

LEAD 502. INDEPENDENT STUDY. (1-16 Credits)

This course is repeatable for 16 credits.

LEAD 505. READING AND CONFERENCE. (1-16 Credits)

This course is repeatable for 16 credits.

LEAD 506. SPECIAL PROBLEMS/SPECIAL PROJECTS. (1-16 Credits)

This course is repeatable for 16 credits.

LEAD 507. SEMINAR. (1-16 Credits)

This course is repeatable for 16 credits.

LEAD 509. PRACTICUM. (1-16 Credits)

This course is repeatable for 16 credits.

LEAD 510. INTERNSHIP. (1-16 Credits)

This course is repeatable for 16 credits.

LEAD 542. LEADERSHIP SKILLS FOR CAREER SUCCESS. (3 Credits)

Focuses on the development and refinement of the following leadership skills: utilizing diversity, team building, project management, program planning models, working with difficult people, conflict management, leading change, establishing an effective network, organizational strategies, and emotional intelligence.

Equivalent to: AG 542

LEAD 543. LEADERSHIP THROUGH CONVERSATIONS. (3 Credits)

Engages students in the exploration of conversations as a component of leadership. Students will engage in topics related to developing effective conversations, listening, conversation styles, group dynamics, digital communication, meetings as conversations and interviewing skills.

Equivalent to: AG 543

LEAD 580. LEADING AUTHENTICALLY: FOUNDATIONS OF LEADERSHIP. (3 Credits)

The foundational course for students in graduate leadership coursework. Students will explore leadership theories to develop an understanding of how to be an authentic leader. Students will analyze and apply course content in relation to their own personal leadership experiences and gain perspectives and tools to influence their future.

LEAD 581. LEADING OTHERS: ENHANCING TEAM AND ORGANIZATIONAL PERFORMANCE. (3 Credits)

A foundational course for group, team, and organizational leadership. Throughout this course, you will become familiar with the necessary conditions for designing effective teams and work groups, best practices and processes needed for maximum productivity, strategies to resolve common issues in teams, and methods to evaluate team performance.

LEAD 582. LEADING CHANGE: LEADING, MOTIVATING, AND EMPOWERING OTHERS. (3 Credits)

Examines and synthesizes leadership content to form a personal and professional foundation for being remarkable. Drawing on 15 different being remarkable qualities, students will be challenged to develop and apply the skills needed for leadership success.