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
- Agricultural Sciences and Natural Resources Communications
- Comparative International Agriculture
- Leadership

Minors

- Agricultural Sciences
- Agricultural Sciences and Natural Resources Communications
- Comparative International Agriculture
- Leadership

Graduate Programs

Majors

- Agricultural Education
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, 2012
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, Kelie 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)

**AED 235, INTRODUCTION TO AGRICULTURAL EDUCATION, 2 Credits**
Introduces students to the field of agricultural education. Explore the historical foundations and career pathways in non-formal and school-based agricultural education. Topics will include school-based agricultural education, non-formal and extension education, and agricultural literacy. Develop career skills and a plan to pursue a future career in 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.
Available via Ecampus

**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.
Available via Ecampus

**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.
Available via Ecampus

**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.
Available via Ecampus

**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.
Available via Ecampus
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.
Available via Ecampus

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.

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
Available via Ecampus

AG 199, SPECIAL STUDIES, 1-16 Credits
This course is repeatable for 16 credits.

AG 200, ORIENTATION TO THE AGRICULTURAL SCIENCES MAJOR, 2 Credits
Exploration of Agricultural Sciences major and career opportunities.

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
Available via Ecampus

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, Perspective, Cult Diversity; CPDP – Core, Perspective, Difference/Power/Discrimination
Available via Ecampus

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
Available via Ecampus

AG 391, FARM IMPLEMENTS, 3 Credits
Power farming implements including operation, maintenance, adjustments, calibration and use are covered. Field trips may be required.
Available via Ecampus

AG 401, RESEARCH, 1-16 Credits
This course is repeatable for 16 credits.
Available via Ecampus

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
Available via Ecampus

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.
Available via Ecampus

AG 445, SOCIAL MEDIA ADVOCACY IN AGRI SCIENCES & NATURAL RESOURCES, 3 Credits
Through practice and application, students develop the ability to communicate effectively in writing using social media and other digital platforms for business purposes, including internal communication, stakeholder engagement, educational messaging, event promotion, and product marketing.

AG 455, *RISK AND CRISIS COMMUNICATIONS IN AG SCI & NATURAL RESOURCES, 3 Credits
Examine potential risk and crisis communications scenarios in agriculture, natural resources and environmental sciences, plus the relevant theories, models, and processes involved in addressing these types of situations effectively. Explores the mitigation, management, and response to risks and crises from a communications perspective with special application to natural resources, along with agricultural and environmental sciences, hazardous situations through completing case studies and creating a risk and crisis communications manual. (Bacc Core Course)
Attributes: CPSI – Core, Pers, Soc Proc & Inst
Available via Ecampus

AG 465, AG SCI AND NATURAL RESOURCES COMMUNICATIONS MINOR CAPSTONE, 2 Credits
Reflect on accumulated knowledge and technical/soft skills gained and conceptualize how to apply communication theories and practices in the context of future agricultural and natural resources careers. Integrate real-life agriculture and natural resources communications scenarios, which will allow for the practice of strategy development, proper implementation, and appropriate assessment methods. Helps package and demonstrate skills verbally and in a portfolio.
Prerequisite: AG 351 with D- or better

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.
Leadership (LEAD)

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
Available via Ecampus

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, team building and problem solving. Students will explore the development of successful teams, multiple roles within teams, improving group performance, group decision making, how to manage conflict in teams, enhancing diversity in teams, creating a culture of creativity and innovation, and the evaluation of teams.
Attributes: CPSI – Core, Pers, Soc Proc & Inst
Equivalent to: AG 342
Available via Ecampus

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.
Available via Ecampus

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.
Available via Ecampus

LEAD 430, FOUNDATIONS OF ADVENTURE LEADERSHIP, 3 Credits
Examines leadership concepts utilized in adventure education and provides a foundation for leadership opportunities. Presents an overview of the history, theoretical foundations and utilization of adventure leadership. Focused leadership topics include theoretical foundations of adventure leadership, learning styles in effective leadership, facilitation techniques in leadership activities, and situational leadership tactics.

LEAD 432, BACKCOUNTRY LEADERSHIP, 3 Credits
Prepares students to be leaders in outdoor settings by building the practical and logistical skills needed in the effective delivery of courses and/or trips. Covers the teaching skills and essentials for trip leaders in the wilderness, including trip planning, logistics, risk management, and group interaction in the backcountry. Focuses on leadership development and leading groups, focus on special populations, social justice, and situational leadership skills.
Prerequisite: LEAD 430 with C or better and PAC 325 [C]

LEAD 442, LEADERSHIP SKILLS FOR CAREER SUCCESS, 3 Credits
Focuses on the development and refinement of the following leadership skills: utilizing diversity, team building, program planning models, working with difficult people, conflict management, leading change, establishing an effective network, organizational strategies, and emotional intelligence.
Equivalent to: AG 442
Available via Ecampus

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
Available via Ecampus

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 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 530, FOUNDATIONS OF ADVENTURE LEADERSHIP, 3 Credits
Examines leadership concepts utilized in adventure education and provides a foundation for leadership opportunities. Presents an overview of the history, theoretical foundations and utilization of adventure leadership. Focused leadership topics include theoretical foundations of adventure leadership, learning styles in effective leadership, facilitation techniques in leadership activities, and situational leadership tactics.

LEAD 532, BACKCOUNTRY LEADERSHIP, 3 Credits
Prepares students to be leaders in outdoor settings by building the practical and logistical skills needed in the effective delivery of courses and/or trips. Covers the teaching skills and essentials for trip leaders in the wilderness, including trip planning, logistics, risk management, and group interaction in the backcountry. Focuses on leadership development and leading groups, focus on special populations, social justice, and situational leadership skills.

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
Available via Ecampus

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
Available via Ecampus

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.