



Agricultural Education
The University of Arizona

Learning • Discovery • Engagement • Leadership

**“21st Century” College
Through A Strategic
Planning Process**

Phase III

May 2012

Purpose:

The Department of Agricultural Education contributes to the College's unique functional role as a leader in the University's land-grant mission by providing an array of programs in formal undergraduate and graduate instruction, research, and service to enable the people of Arizona, the nation, and beyond to improve the quality of their lives.

The strength of the Department is firmly grounded in its nationally and internationally recognized faculty, who in a positive and proactive manner, are committed to educational excellence and to addressing the challenges and opportunities presented by the current climate of change within the College, the University, the nation, and the world.

2021 Vision:

We engage the leadership of the future in Agricultural Education by providing a better quality of life through a knowledge base in agricultural technology management, formal and non-formal education, and leadership for our students, the people of Arizona, and society.

We accomplish this by:

- Providing undergraduate and graduate curricula in agricultural teacher preparation, interdisciplinary agricultural technology management, leadership and communication, and agricultural systems management.
- Coordinating a variety of experiential learning opportunities through student organizations, internships, and domestic and international experiences.
- Providing professional improvement opportunities and instructional support for non-formal educators, and for faculty and administrators in the K through post-secondary education continuum.
- Providing leadership and expertise in shaping and advancing career and technical education.
- Partnering with internal and external stakeholders.
- Seeking extramural funds to deliver needs-based program in agricultural education, and career and technical education, in general.
- Conducting and disseminating research on teaching, learning, and program development and evaluation within agricultural educational systems.

Mission:

The primary mission of the Department is serving a diverse population through teaching, application, integration, and discovery in agriculture, education, and applied science and technology leading to successful careers in agricultural education and related businesses and industries.

Shared Values: We are student centered and value

- Quality teaching and student advising
- High standards of professionalism, performance, and practice
- A positive learning environment for students, staff, and faculty
- Continuous personal development for faculty and staff
- Teamwork & Open communication
- Mutual respect

Departmental Goals:

1. Prepare marketable individuals for careers in agricultural technology, leadership, communication, and education related fields and occupations. (*Career Preparation*)
2. Establish and develop a CALS Center for Excellence in Teaching. (*Professional Service*)
3. Prepare and develop Career and Technical Education (CTE) teachers. (*STEM Teacher Preparation*)
4. Prepare and develop adult and youth educators for occupations within agriculture. (*Academic Certificates*)
5. Establish an Institute for Agricultural Literacy.
 - Extending Arizona Project WET
6. Develop and implement a Ph.D. degree program in Agricultural Education.
7. Contribute to the knowledge base in the agricultural education profession. (*Research*)
8. Obtain sufficient resources to sustain and advance program goals. (*Finance*)

**STRATEGIC GOAL I:
PREPARE MARKETABLE INDIVIDUALS FOR CAREERS IN AGRICULTURAL
TECHNOLOGY, LEADERSHIP, COMMUNICATION, AND EDUCATION RELATED FIELDS
AND OCCUPATIONS.**

A. Current situation (i.e. problem to overcome/opportunity to capitalize on) **and gap between current situation and desired situation:**

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| <p>Current</p> <ul style="list-style-type: none"> • Agricultural education teacher shortage • The Department has the only preparation program in the state. • Alternative certification options are failing. They are a temporary solution. • Aging agricultural leadership • Non-traditional student backgrounds • Aging facilities • Unrealized career opportunity • Low student numbers • High tuition cost • Limited scholarship opportunity • Curriculum (content) changes • Four emphasis areas within the Bachelor of Science degree: <ul style="list-style-type: none"> ○ Agricultural Education (AED) ○ Agricultural Leadership and Communication (AGL&C) ○ Agricultural Systems Management (ASM; Yuma-based) ○ Agricultural Technology Management (AGTM) | <p>Gap</p> | <p>Desired</p> <ul style="list-style-type: none"> • An increased number of students in each option area • Concentrated efforts on recruitment and retention • Increased financial support for students in all option areas • Expanded experiential opportunities • Enhanced facility resources • Increased graduation rate |
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B. Strategy/ies to achieve goal (list if more than 1):

- Establish a recruitment and retention plan to increase student numbers and to retain students in each degree option.

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| <p>C. Actions</p> <ul style="list-style-type: none"> • Prepare and develop recruitment/retention plan • Engage industry, alumni, and education partners • Partner with UA and CALS units for curriculum needs • Hire a recruitment/retention/development officer | <p>FY</p> <p>FY 12</p> <p>FY 12</p> <p>FY 12</p> <p>FY 13</p> |
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D. Inputs needed to achieve the goal (do not limit to financial inputs)

- One recruitment/retention/development officer
- Two graduate teaching assistants
- Stakeholder and advisory group input and collaboration

E. Objective Metrics that will be used to track progress towards attaining goal.

- To increase total undergraduate enrollment in Agricultural Education by 50% in five years; 75% in 10 years; 100% in 15 years.
- To increase total graduate enrollment in Agricultural Education by 30% in five years; 50% in 10 years; 75% in 15 years.
- To increase the retention rate of undergraduate and graduate students by 50% in five years; 75% in 10 years.

Notes (if any)

Use 2012 enrollment and retention data as the benchmark metric.

**STRATEGIC GOAL II:
ESTABLISH AND DEVELOP THE COLLEGE OF AGRICULTURE AND LIFE SCIENCES
(CAL S) CENTER FOR EXCELLENCE IN TEACHING**

A. Current situation (i.e. problem to overcome/opportunity to capitalize on) and gap between current situation and desired situation:

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| <p>Current</p> <ul style="list-style-type: none"> • Office of Academic Programs periodically has workshops • Needs of CALS faculty unknown • Support of the Bart Cardon Academy for Teaching Excellence Fellows • Not enough focus on this | <p>Gap</p> | <p>Desired</p> <p>The Department:</p> <ul style="list-style-type: none"> • Provides the teaching and learning resources for CALS faculty • Provides the contextual background • Provides applied knowledge • Offers philosophical/theoretical/conceptual knowledge • Gives assessment/evaluation |
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B. Strategy/ies to achieve goal (list if more than 1):

- Market faculty expertise in teaching, learning, assessment, and technology

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| <p>C. Actions</p> <ul style="list-style-type: none"> • Establish a needs assessment report • Review peer institutions that have centers for teaching and learning • Create a strategic plan/logic model • Seek extramural and/or philanthropist funding • Communicate and market with stakeholder groups • Implement teaching professional development activities • Provide support for designing and implementing online education • Evaluate and assess impact | <p>FY</p> <p>FY 12</p> <p>FY 12</p> <p>FY 13</p> <p>FY 13</p> <p>FY 13</p> <p>FY 14</p> <p>FY 14</p> <p>FY 15</p> |
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D. Inputs needed to achieve the goal (do not limit to financial inputs)

- One FTE
- One graduate teaching assistant
- One support staff
- Advisory group support
- Facilities (based on the Brenton Center at Iowa State University, <http://www.brenton.iastate.edu/facilities.html>)
 - The Brenton Center is a high-technology instructional center that extends the educational offerings of Iowa State University beyond ISU's physical campus. The state-of-the-art educational facilities can serve as on-campus location for seminars, conferences, the origination site for distance education offerings, or face-to-face classes.
 - A conference room equipped for IP video conferences, telephone audio conferences, and Internet web conferences using Adobe Connect. This would include one large screen, Elmo, computer, instructor camera, student cameras, microphones, and wireless Internet. It would be suitable for graduate student final defenses, presentations, meetings, or

classes. The room would be configured with movable tables and seats 35, and a small attached kitchenette.

- A classroom equipped with two large screens, Elmo, computer, instructor camera, student cameras, microphones, and wireless Internet. It would be equipped with movable tables and seats 35. This room would have multi-point IP video conferencing and Adobe Connect conferencing capabilities.
- Two video capture classrooms that allow for face-to-face class or studio capture using the Accordent Capture Station to capture the instructor and computer desktop simultaneously or Camtasia Relay to capture audio and computer desktop. Course delivery would be streaming video/audio via BlackBoard, iTunesU, or CD/DVD.
- A classroom equipped with four large screens, Elmo, computer, instructor camera, student cameras, microphones, and wireless Internet. This room would have multi-point IP video conferencing and Adobe Connect capabilities. It would have fixed tables that seat 56.

E. Objective Metrics that will be used to track progress towards attaining goal.

- Obtain a record of faculty teaching, student learning, assessment, and technology use within 3 years.
- Offer 2-3 needs-based professional development workshops for CALS faculty annually; increase professional development offerings by 50% within 10 years.
- Increase faculty participation in each workshop by 50% within 5 years, 75% within 10 years; and 10% within 15 years.
- Obtain impact data from faculty participants as measured by teaching and course evaluations.

Notes (if any)

Use FY 2012 professional development activities within CALS as a benchmark metric.

**STRATEGIC GOAL III:
PREPARE AND DEVELOP CAREER TECHNICAL EDUCATION (CTE) TEACHERS**

A. Current situation (i.e. problem to overcome/opportunity to capitalize on) and gap between current situation and desired situation:

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| <p>Current</p> <ul style="list-style-type: none"> • Prepare agricultural education teachers • CTE programs growing in AZ • CTE teacher prep programs have dissolved • ADE alternative certified short-term solution to the growing need for CTE teachers • Loss of CTE philosophy for program delivery from alternatively certified CTE teachers | <p>Gap</p> | <p>Desired</p> <ul style="list-style-type: none"> • Produce an abundant supply of highly qualified CTE teachers • Become the premier provider of certifiable CTE teachers for Arizona and neighboring states |
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B. Strategy/ies to achieve goal (list if more than 1):

1. Utilize the Career and Technical Education (CTE) Administrator Graduate Certificate. The purpose of the CTE Administrator Graduate Certificate is to provide individuals who are employed as CTE Administrators in Arizona schools, or individuals who have plans to be employed as a CTE Administrator, with the opportunity to enhance their knowledge of CTE principles and philosophies, educational leadership, as well as Arizona school finance. Students who enroll in the certificate program will take coursework that can lead to additional administrative certification, particularly the principal and superintendent certification through the College of Education.
2. Establish the CTE emphasis area in the Master of Agricultural Education as a pathway to CTE certification.
3. Utilize the Accelerated Master’s Program (AMP) for CTE Teacher Certification.
4. Market and promote UA/CALS/AED as The CTE teacher preparation program for Arizona.
5. Collaborate with the Arizona Department of Education, Division of Career and Technical Education in developing and marketing the CTE teacher preparation program.

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| <p>C. Actions</p> <ul style="list-style-type: none"> • Work with the Arizona Department of Education (ADE) teacher certification • Work with Local Education Agencies (LEAs) and CTE Directors • Prepare CTE professional knowledge for online delivery • Increase marketing and awareness of CTE pathways • Partnership with LEA/ADE/JTED(Joint Technical Education Districts)/WEDO(Workforce Education Development Office)/Alumni • Promote and enhance the Accelerated Master’s Program (AMP) for CTE Teacher Certification with other units • Engage WEDO for workshop delivery in teacher certification requirements • Provide professional growth opportunities for CTE teachers (WEDO) | <p>FY</p> <p>FY 12</p> <p>FY 12</p> <p>FY 13</p> <p>FY 13</p> <p>FY 13</p> <p>FY 13</p> <p>FY 12</p> <p>FY 12</p> |
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D. Inputs needed to achieve the goal (do not limit to financial inputs)

- The Career and Technical Education option for administrators is in the process of being approved
- Collaboration with other CALS units, LEA, ADE, JTED, Alumni, and WEDO
- Advisory group support

E. Objective Metrics that will be used to track progress towards attaining goal.

- Increase the number of students who enroll/graduate in the CTE graduate program by 30% in five years; 50% in 10 years; 75% in 15 years.
- Increase the number of undergraduate students who seek a non-agriculture CTE teacher certification by 20% in five years, 50% in 10 years, and 100% in 15 years
- Graduate 3-5 non-agriculture CTE teachers within 7 years; 7-10 within 10 years; 14-16 within 15 years

Notes (if any)

Use 2012 enrollment data as the benchmark metric.

**STRATEGIC GOAL IV:
PREPARE AND DEVELOP ADULT AND YOUTH EDUCATORS FOR OCCUPATIONS WITHIN
AGRICULTURE**

A. Current situation (i.e. problem to overcome/opportunity to capitalize on) and gap between current situation and desired situation:

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|--|-------------------|---|
| <p>Current</p> <ul style="list-style-type: none"> • Prepare and develop needs for Extension educators and specialists • Shortage of opportunities to become a qualified Extension educator and 4H youth development specialists • Opportunities for preparation and development training for professionals outside of Agriculture (Farm Bureau, Ag Commodity Groups, Scouts, other non-profit organizations) | <p>Gap</p> | <p>Desired</p> <ul style="list-style-type: none"> • Choice of degree/continuing education program for Extension education such as a Masters or other adult and youth education venues • Recognized as a premier provider through Leadership and Communication and Masters programs |
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B. Strategy/ies to achieve goal (list if more than 1):

- Promote and enhance the curriculum and experiences associated with non-formal instruction of agriculture and leadership topics

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| <p>C. Actions</p> <ul style="list-style-type: none"> • Market the Leadership and Communication option within the AGTE major • Market the Master of Science in professional agriculture • Delivery of the Leadership and Communication option via Distance Education • Partner with the regional campuses and key stakeholder groups (Farm Bureau, Community Groups, etc.) to enhance the student learning experiences | <p>FY FY 12 FY 12 FY 13 FY 13</p> |
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D. Inputs needed to achieve the goal (do not limit to financial inputs)

- One FTE person to provide instruction in, advise students, and promote the Leadership and Communication
- Advisory group support

E. Objective Metrics that will be used to track progress towards attaining goal.

Increase the number of students who are able market-ready with expertise in non-formal education by 10 within five years; 20 within 10 years; and 30 within 15 years

Notes (if any)

**STRATEGIC GOAL Va:
ESTABLISH AN INSTITUTE FOR AGRICULTURAL LITERACY**

A. Current situation (i.e. problem to overcome/opportunity to capitalize on) and gap between current situation and desired situation:

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|---|-------------------|---|
| <p>Current</p> <ul style="list-style-type: none"> • Public, including University students, knowledge awareness base is limited • Increasing interest in growing food and organics • Water conservation issues • Lack of systematic effort to broaden agriculture awareness | <p>Gap</p> | <p>Desired</p> <ul style="list-style-type: none"> • An agriculturally literate society • Systematic delivery systems |
|---|-------------------|---|

B. Strategy/ies to achieve goal (list if more than 1):

1. Develop and grow college course work in agriculture knowledge and issues (Tier II)
2. Maintain quality of offerings and expand opportunities for water education
3. Create a public awareness program via the AGTM option within the AGTE major

| C. Actions | FY |
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| <ul style="list-style-type: none"> • Partner with Agriculture groups, such as Farm Bureau and Agriculture In The Classroom (AITC) and alumni to deliver agriculture literacy programs | FY13 |
| <ul style="list-style-type: none"> • Align with Cooperative Extension in agriculture literacy efforts | FY 13 |
| <ul style="list-style-type: none"> • Maintain a high priority in water education programing in rural and urban settings | FY13 |
| <ul style="list-style-type: none"> • Help agriculture education teachers to better communicate the broad career opportunities in agriculture | FY 13 |
| <ul style="list-style-type: none"> • Align with WR C1006 to conduct research on post-secondary agriculture literacy | FY 13 |
| <ul style="list-style-type: none"> • Seek extramural and/or philanthropist funding | FY 13 |

D. Inputs needed to achieve the goal (do not limit to financial inputs)

- Two graduate teaching assistant positions
- Financial endowment to support activities and operations
- CALS Foundation assistance
- Advisory group support

E. Objective Metrics that will be used to track progress towards attaining goal.

- Establish a \$500k financial endowment to support Institute activities and operations within seven years.
- Deliver annually five major formal and non-formal instructional activities (course offerings, workshops, seminars, etc) that improve the agriculture literacy of students, and the general public within Arizona within five years and deliver annually 10 major instructional activities within 10 years.
- Deliver water education programs by engaging three major cities, four rural communities, and five school districts within the next five years.

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| Standards | |
| <ul style="list-style-type: none"> • Modify project based learning modules based on realized success and lessons learned and build new PBL modules to maintain student interest in interrelated natural and human resources issues | FY 13-14 |
| <ul style="list-style-type: none"> • Increase emphasis on STEM subjects and science and engineering practice | FY 13-14 |
| <ul style="list-style-type: none"> • Develop online learning platform to employ technology more tangibly in to PBL modules | FY 13-14 |
| <ul style="list-style-type: none"> • Build capacity with teachers at the schools where the PBL has taken hold | Annually |
| <ul style="list-style-type: none"> • Interest new businesses and community members; train adults to facilitate student learning | Annually |
| <ul style="list-style-type: none"> • Conduct formative and summative assessment of all program components | Annually |
| <ul style="list-style-type: none"> • Save millions of gallons of water through applied student learning that produces action | Annually |
| <ul style="list-style-type: none"> • Maintain statewide infrastructure with personnel, resources and equipment in four counties | Annually |

D. Inputs needed to achieve the goal (do not limit to financial inputs)

(Fundraising will be ongoing)

- One Faculty Director (\$100,000) annually
- One Program Coordinator (\$60,000) and two half time Community Coordinators (\$24,000) for every 20 teachers and 2000 students
- Twenty Teachers: \$12,000
- Field Experiences for 2000 students: \$20,000
- Student Symposia for 1000 students: \$20,000
- Resources, Books and Equipment: 60,000
- **Total per year to double capacity: \$196,000**
- Online learning platform development: \$100,000

E. Objective Metrics that will be used to track progress towards attaining goal.

- Teachers pre- post- surveys and self-report on ability to facilitate PBL and teach natural resources content will yield positive delta scores
- Pre- post- student surveys on confidence using science and engineering practices and thinking critically will yield positive delta scores
- Rubrics built by UA team and teachers together to assess progress within three years and use annually thereafter.
- Develop observation forms to assess students’ synthesis of understanding and communication skills and forms of evidence (e.g. notebooks) of student achievement within two years and use annually thereafter.

Notes (if any)

**STRATEGIC GOAL VI:
DEVELOP AND IMPLEMENT A PH.D. DEGREE PROGRAM IN AGRICULTURAL
EDUCATION BY 2021**

A. Current situation (i.e. problem to overcome/opportunity to capitalize on) **and gap between current situation and desired situation:**

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|--|-------------------|---|
| <p>Current</p> <ul style="list-style-type: none"> Arizona does not have an Agricultural Education Ph.D. program. | <p>Gap</p> | <p>Desired</p> <p>The Department would offer the only Agricultural Education Ph.D. program in Arizona.</p> |
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B. Strategy/ies to achieve goal (list if more than 1):

Establish a Ph.D. degree program

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| <p>C. Actions</p> <ul style="list-style-type: none"> Conduct a needs assessment/feasibility report Review peer institutions that have Ph.D. programs Create a strategic plan/logic model Implement teaching and learning activities for a Ph.D. program | <p>FY</p> <p>FY 15</p> <p>FY 15</p> <p>FY 15</p> <p>FY 17</p> |
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D. Inputs needed to achieve the goal (do not limit to financial inputs)

- One FTE
- Two graduate teaching assistants
- One support staff
- Scholarships for Ph.D. students
- Advisory group support

E. Objective Metrics that will be used to track progress towards attaining goal.

- Complete a feasibility report for verifying the demand for a Ph.D. degree in Ag Ed in the western coastal area within three years.
- Develop and submit a degree proposal for the Ph.D. degree in Agricultural Education within the next five years.
- Implement the proposal and begin recruiting 2-3 students annually two years after the program approval.

Notes (if any)

**STRATEGIC GOAL VII:
CONTRIBUTE TO THE KNOWLEDGE BASE IN THE AGRICULTURAL EDUCATION
PROFESSION**

A. Current situation (i.e. problem to overcome/opportunity to capitalize on) and gap between current situation and desired situation:

| | | |
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| <p>Current</p> <ul style="list-style-type: none"> • Not enough financial support for social science research • Not recognized for social science research | <p>Gap</p> | <p>Desired</p> <ul style="list-style-type: none"> • The Department will be known for research in the social sciences |
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B. Strategy/ies to achieve goal (list if more than 1):

- Establish an extensive research program
- Align departmental research initiatives with professional association research priorities

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| <p>C. Actions</p> <ul style="list-style-type: none"> • Seek funding for research • Increase and publish research findings in journals, posters, and papers • Promote within CALS the published research findings | <p>FY FY 12 FY 14 FY 14</p> |
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D. Inputs needed to achieve the goal (do not limit to financial inputs)

- Four graduate research assistants
- Grant assistant personnel
- CALS Foundation assistance

E. Objective Metrics that will be used to track progress towards attaining goal.

- Increase the level of research activity within the department establishing 2-3 research multidisciplinary research teams within the University and nationally within five years.
- Increase the number of referred publications and presentations by 10% within five years and 30% within 10 years.
- Seek extramural funding (\$250k) via federal and state grants, as well as private business sponsorships to sustain 3-5 year research projects.

Notes (if any)