

AEC 4228/5227 Laboratory Practices in Agriculture Education

UFIFAS
UNIVERSITY of FLORIDA

AGRICULTURAL
EDUCATION AND
COMMUNICATION

Spring 2016 Section 0182/065E

AEC Agricultural Education Program (TCH) Mission

The Agricultural Education Program at the University of Florida prepares students to be effective leaders of a school-based agriscience program within the community. Graduates demonstrate the requisite knowledge and skills in teaching and learning and in the agricultural sciences to contribute to the development of others. Graduates possess the desire for continuous personal and professional growth.

Values

The Agricultural Education Program values...

- Excellence in teaching.
- The complete school-based agriscience program classroom and laboratory instruction, leadership development, and extended learning.
- Instruction both in and about agriculture.
- Teachers being essential to the success of the local school.
- Teacher involvement in the school, local, and professional communities.
- Passion for agriculture and compassion for learners.
- Professionalism in the attitude and actions of all involved in agricultural education.
- The contributions that agricultural educators can make outside of formal education.
- Agriculture's contribution in addressing societal issues on a local to global scale.

Learning Principles

- 1. Learning is both social and individual.
- 2. Learning best occurs when moving from the concrete to the abstract.
- 3. Learning and performance are enhanced by continuous, explicit reflection and feedback.
- 4. Learning is affected by learner motivation, attitude and values.
- 5. Learning occurs at all levels of cognition.
- 6. Learning is purposeful, contextual, and non-linear.
- 7. Learning is organized around transferable core concepts that guide thinking and integrate new knowledge.
- 8. Learning is enhanced by addressing a student's preferred learning style, prior knowledge, and experiences.
- 9. Learning occurs best in a supportive, challenging, and structured environment.
- 10. Learners reveal and demonstrate their understanding when they can apply, transfer, and adapt their learning to new and novel situations and problems.

Transfer Goals

- 1. Design an instructional program.
- 2. Create an environment conducive to learning.
- 3. Deliver effective instruction.
- 4. Assess student learning.
- 5. Participate in continuous professional development.
- 6. Act professionally and responsibly.

Instructors

Andrew C. Thoron, PhD Assistant Professor 307C Rolfs Hall 352-294-1992 athoron@ufl.edu

Office Hours: Wednesday 2:30-4:00

& By appointment

Blake Colclasure, MS Graduate Teaching Assistant 310 Rolfs Hall 352-392-0502 bcolclasure@ufl.edu Office Hours: By appointment

Time and Location

Wednesday Period 9 (4:05 – 4:55 p.m.) 306 Rolfs Hall
Thursday Periods 7-10 (1:55 – 6:00 p.m.) 306 Rolfs Hall or designated time & location

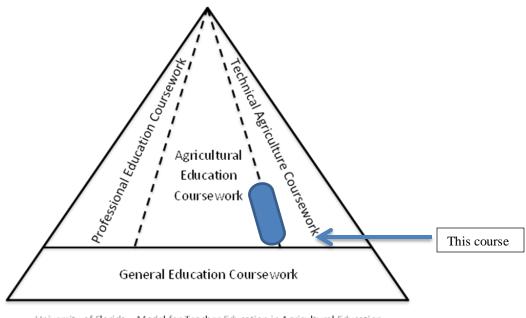
Course Description

This course is designed to introduce pre-service agricultural education teachers to laboratory integration into the agricultural education curriculum at the middle school and secondary school level. Emphasis will be placed on skill acquisition, developing knowledge of laboratory components in agriscience, laboratory utilization, facilitating student learning in the laboratory setting, appropriate teaching methods and techniques, curriculum applications, and classroom resources. Course content will be presented during the semester-long course & travel to off-campus sites will be required.

Course Essential Questions & Objectives

At the completion of the course, the learner will be able to: Essential Question: What is the role of the laboratory in SBAE? Objective:

- 1. Assess the role of laboratory integration in agricultural education. Essential Question: How do I design, manage, and evaluate agriscience activities? Objectives:
 - 2. Properly design and manage student agriscience projects.
- 3. Develop a system by which to evaluate agriscience laboratory activities and projects. Essential Question: What safety concerns should I be aware of during laboratory instruction? Objective:
 - 4. Develop and implement an agriscience laboratory safety instructional program.



University of Florida - Model for Teacher Education in Agricultural Education

Transportation

Students are expected to provide their own transportation to and from laboratory sites. If special circumstances exist please contact the instructor.

Required Texts

Course packet of required readings will be handed out per class session (electronically or student will need to purchase a 1.5inch three ring binder)

DESCRIPTION OF COURSE ASSIGNMENTS

Discussion Posting

First discussion: On the discussion board, post your beliefs about why and how agriculture teachers utilize laboratory settings. In addition, post how you plan to use laboratory settings and what key aspects of laboratory settings you have questions/concerns regarding their use. This should be completed by January 13th. Your posting should be thorough, including examples, personal experiences, and justification for your beliefs.

Final discussion: After your experiences in this class, your beliefs about how and why teachers utilize laboratory settings may have changed. Add a thread to your original post on the discussion board reflecting on how your views have changed and why you now think differently. Again, this posting should contain examples and personal experiences to support your views.

Facility Design

You will design a facility of your choice to be utilized by a secondary school agriculture program. The facility should be drawn to scale from a birds-eye view and be adequately labeled. Additional requirements are listed on the assignment rubric.

Portfolio

You will develop two components/sections regarding agricultural laboratories. The topic outline will be:

- Agricultural Laboratory Tools (Pictures and Prices)
- Agricultural Laboratory Articles (1 per week on the topic)

Each section includes distinct assignments related to each laboratory setting discussed in class. Individual components to be included on each page are itemized on the rubric. Sections should each be created according to the rubric requirements. More information can be found on the assignment rubric. Note - It is recommended that you work on this assignment throughout the class rather than wait until right before the due date. It is possible there will be two announced portfolio checks during the semester.

Skills Assessment Tool

You and a partner will be responsible for developing a skills assessment that assesses students' skills during one of the class laboratory trips. You will be assigned one laboratory experience to assess. Due dates will be one week after the trip to the laboratory, due dates will vary. The assessment should adequately measure students' skills in the particular laboratory setting selected. You are responsible for having a working draft of your assessment constructed one week prior to the lab through the use of a Google Doc. and shared with Mr. Colclasure for review purposes. Specific requirements are included on the rubric.

Questions for Laboratory Site Visits

You will be responsible for creating a minimum of 2 unique questions for each weekly on-site laboratory visit. You will post your unique questions on Canvas by Wednesday at 12:00 PM (Noon) prior to each laboratory site visit. You should not post a similar question that has been previously posted.

Safety Exam

You will design a safety exam for the laboratory of your choice. The safety exam should be set up to be taken by students before they are permitted to work in the laboratory. The exam should be of appropriate length to adequately assess necessary safety aspects, and should include a variety of question formats as is warranted by the safety aspects. You are responsible for meeting with Dr. Thoron 1 week prior to your laboratory site visit. You should have a working draft of your safety exam

constructed prior to your meeting. Additional requirements are included in the rubric. Your safety exam is due the Wednesday following the laboratory experience.

Participation, Attendance, Reflection, Quizzes and Twitter Feed

Attendance is mandatory, and you are expected be an active participant in the class discussions and exercises. Barring a major emergency, each Thursday absence will result in a 5% reduction in your final grade. If you must miss class, please let me know as soon as possible to see if circumstances warrant an exception. Instructions for other assignments will be given in class. Following each laboratory site visit, you will be required to complete a half-page reflection that is due prior to Wednesday's class submission through Canvas. Reflections should account for the following: how information gathered during the laboratory site visit can be used within your classroom instruction, curriculum, SAE, and FFA. The mentioned topics are strongly suggested, but not comprehensive. There will be random quizzes on Wednesday's to assess comprehension of that week's assigned readings.

Twitter Feed: you will be required to take one action photo during each laboratory visit and upload the photo to Twitter. Include #AEC4228 and a caption that educates the public on one aspect related to the photo. Extra credit for each tweet re-tweeted by AEC/CALS/UF/UFPrez

COURSE ASSIGNMENTS	Contact	Percent of Final Grade	Due Dates by Midnight*
Portfolio	Dr. Thoron	20	April 28 th
Safety Test	Dr. Thoron	15	My date:
Skills Assessment Tool	Mr. Colclasure	15	My date:
Design of Laboratory Facility	Mr. Colclasure	10	Apr. 9 th
Discussion Posting (2)	Dr. Thoron	10	Jan 13 th & Apr 22 nd
Active Participation, Attendance, Reflections, Quizzes & Twitter Feed	Either	20	Continuous
Developed questions for each laboratory experience	Either	10	Continuous *by NOON*
Re-tweets, Food Science, Livestock, & Meat Evaluation CDE BONUS POINTS	Dr. Thoron	+5ea	Sat. Jan. 30 Sat. April 9 Sat. April 16

Grading Scale

A = 97-100%	B = 83-87%	D = 65-74%
A- = 92-96%	C+ = 78-82%	E = below 65%
B+ = 88-91%	C = 74-77%	

Note: This Web address references the UF grades and grading policies: http://www.registrar.ufl.edu/catalog/policies/regulationgrades.html

Attendance and Assignments

Students' class attendance and participation are required. There are a total of 29 potential class meetings. *Missing more than 2 Thursday class meetings will result in failure of the course.* No work will be accepted past the deadline set by the syllabus unless noted by the instructor. No consideration of extending a due date will be considered on the day an assignment is due, students should contact the instructor or assistant if they are expecting to be unable to meet a deadline.

Any time instruction is missed, for any reason, it will count as an absence. College approved field trips, and competitive and leadership development events (with prior instructor approval) are considered legitimate and with proper documentation will not be considered an absence. Seeking an extended deadline due to the above mentioned absences should be arranged before missing the course meeting. In case of emergencies, arrangements for completing assignments should be made immediately upon return to campus.

Use of technology during instruction

The use of personal cell phones, ipads, computers, and other electronic devices may be utilized during instruction. However, the use of these items should be limited to appropriate and designated times during the course. Misplaced text messaging will be noted by the instructor, ONE warning will be given, after which unauthorized texting (use of an electronic device) will be counted as an absence and will result in a 5% total reduction of the final course grade.

Academic Honesty

In 1995 the UF student body enacted a new honor code and voluntarily committed itself to the highest standards of honesty and integrity. When students enroll at the university, they commit themselves to the standard drafted and enacted by students.

In adopting this honor code, the students of the University of Florida recognize that academic honesty and integrity are fundamental values of the university community. Students who enroll at the university commit to holding themselves and their peers to the high standard of honor required by the honor code. Any individual who becomes aware of a violation of the honor code is bound by honor to take corrective action. The quality of a University of Florida education is dependent upon community acceptance and enforcement of the honor code.

The Honor Pledge: We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity.

On all work submitted for credit by students at the university, the following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment."

The university requires all members of its community to be honest in all endeavors. A fundamental principle is that the whole process of learning and pursuit of knowledge is diminished by cheating, plagiarism and other acts of academic dishonesty. In addition, every dishonest act in the academic environment affects other students adversely, from the skewing of the grading curve to giving unfair advantage for honors or for professional or graduate school admission. Therefore, the university will take severe action against dishonest students. Similarly, measures will be taken against faculty, staff and administrators who practice dishonest or demeaning behavior.

Students should report any condition that facilitates dishonesty to the instructor, department chair, college dean or Student Honor Court.

(Source: 2012-2013 Undergraduate Catalog)

It is assumed all work will be completed independently unless the assignment is defined as a group project, in writing by the instructor. This policy will be vigorously upheld at all times in this course.

Software Use:

All faculty, staff and students of the university are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against university policies and rules, disciplinary action will be taken as appropriate.

Campus Helping Resources

Students experiencing crises or personal problems that interfere with their general well-being are encouraged to utilize the university's counseling resources. Both the Counseling Center and Student Mental Health Services provide confidential counseling services at no cost for currently enrolled students. Resources are available on campus for students having personal problems or lacking clear career or academic goals, which interfere with their academic performance. The Counseling Center is located at 301 Peabody Hall (next to Criser Hall). Student Mental Health Services is located on the second floor of the Student Health Care Center in the Infirmary.

- University Counseling Center, 301 Peabody Hall, 392-1575, www.counsel.ufl.edu
- Career Resource Center, CR-100 JWRU, 392-1601 ext: 0, www.crc.ufl.edu/
- Student Mental Health Services, Rm. 245 Student Health Care Center, 392-1171, www.shcc.ufl.edu/smhs/

Alcohol and Substance Abuse Program (ASAP)
Attention Deficit Hyperactivity Disorder (ADHD)
Center for Sexual Assault / Abuse Recovery & Education (CARE)
Eating Disorders Program
Employee Assistance Program
Suicide Prevention Program

Students with Disabilities

The Disability Resource Center coordinates the needed accommodations of students with disabilities. This includes registering disabilities, recommending academic accommodations within the classroom, accessing special adaptive computer equipment, providing interpretation services and mediating faculty-student disability related issues.

0001 Reid Hall, 392-8565, www.dso.ufl.edu/drc/

Florida Educator Accomplished Practices (FEAPs)

In this course, one or more assignments have been selected at "Key Tasks" that will assess your mastery of knowledge, skill, and/or dispositions that the State of Florida requires of all entry-level educators. These assignments were specifically selected as Key Tasks because they align with the 6 Florida Educator Accomplished Practices (FEAPs).

Your mastery of each Indicator will be measured by your performance on a Key Task. To pass this course, you must successfully complete all Key Tasks and receive a rating of "Developing," "Accomplished," or "Exceptional." No exceptions will be made to this rule, even if you do not plan to practice in Florida after graduation or do not apply for state certification.

Students who receive an "Unsatisfactory" rating will be offered a chance to redo the Key Task or, in some cases, to complete a comparable task assigned by the instructor. Students who do not complete their makeup work satisfactorily will receive a failing grade at the instructor's discretion.

The rating guide framework below will be used to evaluate your performance on tasks assessing specific FEAP Indicators covered in this course. The language of each FEAP Indicator completes the statements. For more information, please visit the Educator Assessment System Student Portal at: https://my.education.ufl.edu/.

Exceptional	The candidate extensively integrates knowledge to be able to	
	The candidate is prepared to apply this skill in a practical setting.	
Accomplished	The candidate demonstrates knowledge of how to	The
	candidate is prepared to apply this skill in a practical setting.	
Developing	The candidate is acquiring the necessary knowledge to	The
	candidate is not yet prepared to apply this skill in a practical setting.	
Unsatisfactory	The candidate demonstrates little knowledge of how to	
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FEAPs Assessed in this course

- 1f Develops learning experiences that require students to demonstrate a variety of applicable skills and competencies
- 2a Organizes, allocates, and manages the resources of time, space, and attention
- 3e Relate & integrate the subject matter with other disciplines and life experiences

Tentative AEC 4228/5227 Course Calendar

Class Meeting	Topic	Location
W - Jan 6 th	Introduction & Lab	Rolfs Hall 306
R - Jan 7 th	Scientific method, Inquiry, and lab	Rolfs Hall 306
	instruction & Syllabus questions	
W – Jan. 13 th	Laboratory safety & Assignment	Rolfs Hall 306
	questions	
R - Jan 14 th	Food Science – Keith Schneider	Rolfs Hall 306
W - Jan 20 th	Evaluating student work in the Lab	Rolfs Hall 306
R – Jan 21 st	Rotation (electricity, welding,	Trenton High School
3:30-6:30pm	construction, & bio tech)	_
W - Jan 27 th	Swine Prep	Rolfs Hall 306
R - Jan 28 th	Swine Facilities – w/ Dr. Brendemuhl	UF Swine Facilities
W - Feb. 3 rd	Using simulations in SBAE	McCarty B
R – Feb. 4 th	Rotation (electricity, welding,	Trenton High School
3:30-6:30pm	construction, & bio tech)	_
W - Feb 10 th	Using simulations in SBAE	McCarty B
R - Feb. 11 th	Rotation (electricity, welding,	Trenton High School
3:30-6:30pm	construction, & bio tech)	
W - Feb 17 th	Using resources for labs	McCarty B
R - Feb. 18 th	Rotation (electricity, welding,	Trenton High School
3:30-6:30pm	construction, & bio tech)	
W - Feb 24 th	Trenton Wrap -Up	Rolfs Hall 306
R - Feb. 25 th	Using CASE in the laboratory setting	Rolfs Hall 306
	– w/ Anna Warner	
W - March 2 nd	No Class – Spring Break	Cancun, Mexico
R - March 3 rd	No Class – Spring Break	Snowbird, UT
W - March 9 th	The science behind an experience	Classroom Rolfs Hall 306
R - March 10 th	Designing in-class labs – w/ Dr.	Rolfs Hall 306
2:30-5:30pm	Osborne	
W - March 16 th	Turf grass preparation	Rolfs Hall 306
R - March 17 th	Turf Grass – w/ Dr. Kruse	On location
W - March 23 rd	Tractor Driving Prep/Field Trip	Rolfs Hall 306
	Preparation	
R - March 24 th	Tractor Driving & Implements	Citra REC
W – March 30 th	Management of the lab facility	Rolfs Hall 306
R – March 31 st	Plant propagation and Greenhouse – w/ Mrs. Alvarez	On location
W - April 6 th	Live Animal Prep	Rolfs Hall 306
R - April 7 th	Live Animal Eval – w/ Dr. Carr	Animal Sciences Bldg.
W - April 13 th	Meat Evaluation Prep	Rolfs Hall 306
R - April 14 th	Meat Evaluation – w/ Dr. Carr	Animal Sciences Bldg. (Locker)
W - April 20 th	Course Wrap-up	Rolfs Hall 306
	L	