

**AEC 4228**

**Laboratory Practices in Agriculture**

Fall 2025

Section 3260

# 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.



# Instructor

Dr. Debra Barry

Assistant Professor

101C PEPC

[dmbarry@ufl.edu](mailto:dmbarry@ufl.edu)

Office Hours: Wednesdays from 11:00am-1:00pm



# Time and Location

Wednesday: 12:50-3:50pm. Some meeting times may vary slightly, depending on the lab topic and location. Please refer to modules and be sure to regularly check your Canvas course announcements and UF email.

# 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 developing knowledge of laboratory components in agriscience, laboratory design and set-up, laboratory utilization, facilitating student learning in the laboratory setting, appropriate teaching methods and techniques, curriculum applications, and classroom resources.

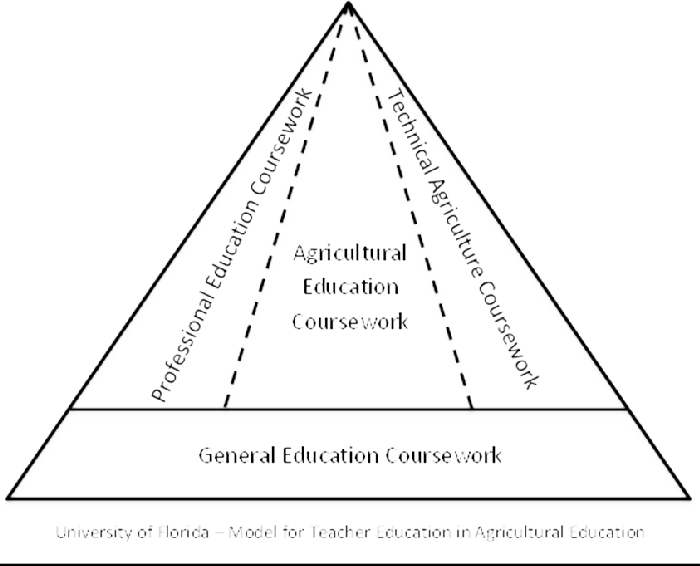
Course content will be presented during the semester-long course & travel to off-campus sites will be required.

# 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.



This course

# Transportation

Students are expected to provide their own transportation to and from laboratory sites, if the transportation is not being coordinated by the instructor. If special circumstances exist, please contact the instructor.

# Required Texts

Any required readings will be handed out per class session.

# DESCRIPTION OF COURSE ASSIGNMENTS

**Teaching Laboratory Facility Proposal and Design**

You will create a complete proposal and design of facilities for a middle or high school agriscience program based on the guidelines in the rubric provided on Canvas. The overall project will be completed in stages with individual draft deadlines. Assignments will have feedback provided as they are turned in with the final products to consist of all the assignments assembled in a portfolio format. Please see the rubrics for individual requirements, deadlines, and grading.

# Laboratory Reflections

Following each laboratory site visit, you will be required to complete a half-page **reflection** that is **due by 11:59pm the Wednesday following the lab experience**, submitted 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.

Students are expected to attend program visit(s) to SBAE programs in Florida as part of the Agriscience Teacher Education Symposium. This event is tentatively planned for Thursday, September 18- Saturday, September 20, 2025. Following the program visits/symposium event, a written reflection (1-2 pages; double spaced; Times New Roman; 12 pt font; 1 inch margins) should be completed and submitted via Canvas. Please see Canvas for details.

# Lab Lesson Presentations

Students will develop lesson plans with laboratory components as part of their facility proposal submission. Students will develop a 25-30-minute lesson plan, which must include a hands-on laboratory component. Lessons should be designed, so that they can be implemented in the 4228 classroom with class peers acting as the students in the class. The lesson plan can be related to any agriscience topic that can be incorporated into your specific program that is being designed for their Teaching Facility Proposal and Design assignment. For a High School--Agritechnology standards should be followed, and can be accessed on the Canvas assignment description. For a Middle School program, you can follow any of the courses/standards listed on [Agriculture Food & Natural Resources (fldoe.org).](https://www.fldoe.org/academics/career-adult-edu/career-tech-edu/curriculum-frameworks/2021-22-frameworks/agriculture-food-natural-resources.stml) Lesson plans should be aligned to a specific AFNR course and course standards, and should be created using the template on Canvas. The lesson materials, including instructor directions, handouts or other supporting materials should be uploaded two days before the lesson is presented in class.

# Final Laboratory Practicum

All students will participate in a final, written practicum at a new laboratory location where they can demonstrate skills learned over the course of the semester. The practicum will be in place of a final exam. The location and requirements of the final practicum will be announced at the conclusion of the semester.

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| --- | --- | --- |
| **Assignment** | **Percentage** | **Due Dates** |
| Facility Proposal - Individual Drafts | 12.5% | See Schedule |
| Facility Proposal - Final Submission | 37.5% | Dec. 5th |
| Lesson Plan Presentation #1, #2 & #3 | 10% | Sept. 24th, Oct. 15th & Nov.12th |
| Attendance and Engagement | 10% | Weekly |
| Reflections (Weekly & Symposium) | 20% | Weekly |
| Final Laboratory Practicum | 10% | Dec. 3rd |

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| **Grading Scale** |  | |
| A = 93-100% | B- = 80-82% | D+ = 66-69% |
| A- = 90-92% | C+ = 76-79% | D = 63-65% |
| B+ = 86-89% | C = 73-75% | D- = 60-62% |
| B = 83-85% | C- = 70-72% | E = below 60% |

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

# Engagement, Attendance and Assignments

**Attendance** is mandatory, and you are expected to be engaged and an **active participant** in the class discussions and exercises. You are required to let Dr. Barry know of any absences *prior* to the start of the class session. Failure to inform the instructor of an absence *prior* to the start of class (1:00pm or as noted in syllabus), or failure to notify of an absence at all, will result in a 5% total reduction in the **overall grade for the course for *each* absence.** If meeting virtually, on-time arrival and attendance are expected and noted, even in a virtual setting. What is engagement, you ask? It’s a combination of the following:

• Preparation (reviewing readings and material before class)

• Focus (avoiding distractions during in-person and online activities)

• Presence (engaged and responsive during group activities)

• Asking questions (in class, out of class, online, offline)

• Listening (hearing what others say, and also what they’re not saying)

• Specificity (referring to specific ideas from readings and discussions)

• Synthesizing (making connections between readings and discussions)”

**No facility draft assignment will be accepted past the deadline set by the syllabus unless noted by the instructor.** There is a 2 days late policy in place at -10% per day for reflections, as well as the final submission for the facility proposal. 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.

# Communication, Assignment Feedback and Grades

The best way to reach your instructor is through email: [dmbarry@ufl.edu.](mailto:dmbarry@ufl.edu) Responses will be given on weekdays within 48 hours. If you email on a weekend, you may not receive a response until Monday. Assignment feedback and grades will be given within 7-10 days, but most often within one week. Please don’t hesitate to reach out if you have any course or assignment questions throughout the semester.

# Participation, Attendance, and other assignments

On-time arrival and attendance are expected and noted. Your participation in discussions that take place during synchronous sessions is vital. Please contribute to class discussions, and don’t hesitate to ask questions! Please notify the instructor of any upcoming need to miss synchronous sessions, or extenuating circumstances. Assignments will be accepted past the deadline for two days, at a reduction of 10% each day it is late. For presentations during synchronous class time, unless prior arrangements have been made before the day of the presentation, they are required to be presented on the due date. 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. In case of emergencies, arrangements for completing assignments should be made immediately upon return to campus.

Please see the UF Attendance Policy for more information: [https://catalog.ufl.edu/UGRD/academic-](https://catalog.ufl.edu/UGRD/academic-regulations/attendance-policies/) [regulations/attendance-policies/](https://catalog.ufl.edu/UGRD/academic-regulations/attendance-policies/)

# In Class Recording

Students are allowed to record video or audio of class lectures. However, the purposes for which these recordings may be used are strictly controlled. The only allowable purposes are (1) for personal educational use, (2) in connection with a complaint to the university, or (3) as evidence in, or in preparation for, a criminal or civil proceeding. All other purposes are prohibited. Specifically, students may not publish recorded lectures without the written consent of the instructor.

A “class lecture” is an educational presentation intended to inform or teach enrolled students about a particular subject, including any instructor-led discussions that form part of the presentation, and delivered by any instructor hired or appointed by the University, or by a guest instructor, as part of a University of Florida course. A class lecture does not include lab sessions, student presentations, clinical presentations such as patient history, academic exercises involving solely student participation, assessments (quizzes, tests, exams), field trips, private conversations between students in the class or between a student and the faculty or lecturer during a class session.

Publication without permission of the instructor is prohibited. To “publish” means to share, transmit, circulate, distribute, or provide access to a recording, regardless of format or medium, to another person (or persons), including but not limited to another student within the same class section. Additionally, a recording, or transcript of a recording, is considered published if it is posted on or uploaded to, in whole or in part, any media platform, including but not limited to social media, book, magazine, newspaper, leaflet, or third-party note/tutoring services. A student who publishes a recording without written consent may be subject to a civil cause of action instituted by a person injured by the publication and/or discipline under UF Regulation 4.040 Student Policy on Course Syllabi 3 UF, Academic Affairs, July 28th, 2021 Honor Code and Student Conduct Code.

**Use of technology during instruction & technology failure**

The use of personal cell phones, I-pads, computers, and other electronic devices may only be utilized for instructional

purposes. Inappropriate use of these items distracts learning for all individuals and creates an unprofessional

environment. Using such devices in an unapproved manner will negatively impact the participation portion of the

course. If you experience technology fail during any type of zoom connection (when applicable), or when accessing

course materials, please email Dr. Barry as soon as possible.

# 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.

# Course Evaluations:

Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online. Students can complete evaluations in three ways:

1. The email they receive from GatorEvals,

2. Their Canvas course menu under GatorEvals, or

3. The central portal at https://my-ufl.bluera.com

Guidance on how to provide constructive feedback is available at https://gatorevals.aa.ufl.edu/students/. Students will be notified when the evaluation period opens. Summaries of course evaluation results are available to students at <https://gatorevals.aa.ufl.edu/public-results/>.

**University-Wide Policies and Student Support Service**

As part of the updated University of Florida Syllabus Policy, this course syllabus refers students to a central

online resource that contains the most current university-wide academic policies and student support services.

Using this shared link helps ensure that all students receive accurate, consistent, and up-to-date information.

Students are expected to visit and review the centralized UF Syllabus Policy page at: [UF Syllabus Policy Link](https://syllabus.ufl.edu/syllabus-policy/uf-syllabus-policy-links/). Throughout the term, students are strongly encouraged to return to this page regularly to stay updated on

Important University expectations and explore available resources. The page includes information on topics

such as:

Academic Policies

· Attendance requirements and make-up work procedures

· Academic accommodations for students with disabilities

· Grading standards and grade point policies

· Course evaluation instructions and portals

· Student Honor Code and University Honesty Policy

· Guidelines governing the recording and use of class lectures

Academic Resources

· E-learning support and technology assistance

· Career and counseling services (Career Connections Center)

· Library access and help services

· Study skills support and tutoring (Teaching Center)

· Writing support (Writing Studio)

· Complaint procedures and academic grievance resources

· UF Student Success Initiative resources

Campus Health & Wellness

· Physical, mental, and emotional health services

· Safety and support programs

· UF Whole Gator wellness tools

* *Writing Studio*: 2215 Turlington Hall, 352-846-1138. Help brainstorming, formatting, and writing papers.
* *Student Complaints On-Campus*: Visit the Student Honor Code and Student Conduct Code webpage for more information.
* *On-Line Students Complaints*: View the Distance Learning Student Complaint Process

# Canvas Technology Requirements

To succeed in this course, you must have access to the following technology:

· Desktop Computer or Laptop

o Audio Capabilities

o Webcam and Microphone for synchronous sessions

· Microsoft Office Programs

[Microsoft Privacy Statement – Microsoft privacy](https://www.microsoft.com/en-us/privacy/privacystatement)

[Microsoft Accessibility Info](https://www.microsoft.com/en-us/trust-center/compliance/accessibility)

Word: [Microsoft 365 basics video training - Microsoft Support](https://support.microsoft.com/en-us/office/microsoft-365-basics-video-training-396b8d9e-e118-42d0-8a0d-87d1f2f055fb)

· Adobe Reader

[Acrobat tutorials](https://www.adobe.com/learn/acrobat)

[Adobe Privacy Statement](https://www.adobe.com/privacy/policy.html)

[Adobe Accessibility Statement](https://www.adobe.com/trust/accessibility.html)

· Zoom

[Zoom Privacy Policy](https://www.zoom.com/en/trust/privacy/privacy-statement/)

[Zoom Accessibility Information](https://www.zoom.com/en/accessibility/)

· Internet Connection with access to Canvas

Canvas is the course management system at the University of Florida in which students will find course content, links to video lectures, assignments, quizzes, discussions, and grades. The use of this system will vary by instructor, but the following videos describe the most common tools in Canvas. [The full student guide](https://community.canvaslms.com/t5/Student-Guide/tkb-p/student) is provided if you have additional questions.

[Canvas Privacy Policy](https://www.instructure.com/privacy-security)

[Canvas Accessibility Standards](https://community.canvaslms.com/t5/Canvas-Basics-Guide/What-are-the-Canvas-accessibility-standards/ta-p/1564)

If you encounter technical difficulties in this course, contact the UF Computing Help Desk right away to troubleshoot. <https://helpdesk.ufl.edu/> or (352) 392-HELP. If the problem cannot be fixed immediately, notify your instructor, and provide them with the Help Desk ticket number.

**Expected Technical & Digital Literacy Skills:**

Minimum skills required:

· Proficiency in utilizing Canvas and navigating the internet effectively.

· Competence in using email for communication purposes, including sending and receiving messages and managing attachments.

· Familiarity with commonly used word processing applications (such as Microsoft Word or Google Docs), including the ability to create, edit, and format documents.

· Basic computer skills, including understanding fundamental operations like file management, using menus and toolbars, and navigating between different applications.

· Using online search tools for specific academic purposes, including the ability to use search criteria, keywords, and filters.

· Analyzing digital information for credibility, currency, and bias.

**Artificial Intelligence (A.I.) Use:**

You may use AI programs e.g. ChatGPT to help generate ideas and brainstorm. However, you should note that the material generated by these programs may be inaccurate, incomplete, or otherwise problematic. Beware that use may also stifle your own independent thinking and creativity.

You may not submit any work generated by an AI program as your own. If you include material generated by an AI program, it should be cited like any other reference material (with due consideration for the quality of the reference, which may be poor). Any plagiarism or other form of cheating will be dealt with severely under relevant UF policies.

# 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/>.

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| 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 ap 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 . |

FEAPs Assessed in this course

1f , 2a, & 3e

***Tentative* AEC 4228 Course Calendar**

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| --- | --- | --- | --- |
| **Class Meeting Date** | **Topic** | **Location** | **Item(s) Due That Week** |
| Aug. 27 | Purposes of Lab Instruction | PEPC 102 |  |
| Sept. 3 | Livestock: Kathleen MS   * Julianne Ream | 2:00pm |  8/27 reflection |
| Sept. 10 | Nature of Lab Instruction | PEPC 102 |  9/3 reflection   Facility drawings DRAFT |
| Sept. 17 | Planning for Lab Instruction | PEPC 102 |  9/10 reflection   Emergency Plan DRAFT |
| Sept 18-20 | 9th Annual Agriscience Teacher Education Symposium | Panhandle sites |  |
| Sept. 24 | **Lab Lesson Presentations #1** | PEPC 102 |  Symposium reflection   9/17 reflection   Upload Lesson Materials by 9/22 |
| Oct. 1 | Florida Ag In The Classroom  \*Jen Morgenthal | PEPC 102  1pm |  Tools and Equipment DRAFT |
| Oct. 8 | Vet Assisting  Karly Cohenour | Braden River HS  6545 SR 70 E.  Bradenton, Fl. 34203  1-4pm |  10/1 Reflection   Grading Tool DRAFT |
| Oct. 15 | **Lab Lesson Presentations #2** | PEPC 102 |  CTE Panelist Questions   10/8 Reflection   Upload Lesson Materials by 10/13 |
| Oct. 22 | CTE Panel & Laws/Liability   * Kelli Kennedy * Jessica Anderson | PEPC 102 |  Student Jobs DRAFT |
| Oct. 29 | Aquaculture   * Eric Cassiano | UF Tropical RC  1408 24th St SE  Ruskin, FL 33570  1:30pm |  10/22 Reflection   Distribution of Materials DRAFT |
| Nov. 5 | NO CLASS  FL AG EXPO: Nov. 7th  GCREC 100yr Anniversary! |  |  10/29 Reflection   Narrative Explanation DRAFT |
| Nov. 12 | **Lab Lesson Presentations #3** | PEPC 102 |  Upload Lesson  Materials by 11/10 |
| Nov. 19 | Facility layout & Tractor Operations:  Gulf Coast Research & Education Center | 14625 County Road 672  Wimauma, FL 33598  1:30pm |  |
| Nov. 26 | NO CLASSES: FALL HOLIDAY |  |  |
| Dec. 3 | Final Design Practicum  Brandon HS | 1:00pm |  11/19 Reflection   Final Facility  Project: **Due Dec.5th** |

A group of people with leaves

AI-generated content may be incorrect.